



# IDENTITY

OCTOBER 2015

TRACKER™

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## COVER STORY

“It’s more of a starting line than a finish line.”

Those are the words of Stephanie Ericksen, VP for Risk at Visa, when asked how things are progressing in the U.S. now that October 1 has come and gone. As is well known, October 1 is the date in the U.S. where the liability has shifted from issuers to merchants when consumers present cards with chips on them. Merchants without EMV terminals are liable in the event of fraud.

In isolation, the stats don’t look all that bad a few weeks into the shift.

On the card front, Visa says that there are roughly 152 million chip cards bearing its logo, which it says is a 655 percent increase since last year. Industry sources estimate that there were roughly 250 million total EMV cards in circulation on October 1st - a tally that reflects the efforts of the 8 largest issuers in the market (Bank of America, Capital One, JPMorgan Chase, Citi, Discover, Navy Federal, US Bank and Wells Fargo). Yet, the gap looms large: There are roughly 1.2 billion credit, debit and charge cards in the U.S. market bearing a mag stripe.

### **Terminal Transition**

On the terminal front, there’s a lot of work to be done, too.

There are at least 314,000 chip-enabled terminals now in merchant locations. That’s the good news. At least one source has identified the number of POS locations inside of merchants at 12.2 million, excluding vending and other unattended retail, parking and Laundromat locations that are now equipped to take digital payments. Terminal manufacturers are hoping that the interest on the part of merchants to enable not only secure chip-enabled card-based transactions, but also NFC-enabled transactions via mobile wallets, will move them to adopt much sooner.

Yet, many of those POS terminals are in small merchants that aren’t entirely convinced chip-enabled terminals are a high priority. They don’t see enough consumers with chip cards – and in a recent survey of small businesses, roughly 23 percent think it’s unnecessary because it’s too expensive to adopt, otherwise outweighing the benefits. The card brands and issuers are working hard to create incentives for small merchants and small businesses to adopt this new technology. The chicken and egg game with respect to EMV is real.

### Worldwide EMV Chip Card Deployment and Adoption\*

Region	2013		2014	
	EMV Cards	Adoption Rate	EMV Cards	Adoption Rate
Canada, Latin America, and the Caribbean	471M	54.2%	544M	59.5%
Asia Pacific	942M	17.4%	1,676M	25.4%
Africa & the Middle East	77M	38.9%	116M	50.5%
Europe Zone 1	794M	81.6%	833M	83.5%
Europe Zone 2	84M	24.4%	153M	40.4%
United States	-	-	101M	7.3%

Chip migration’s benefit, of course, is its key promise of a significant uptick in card protection at the physical point of sale by being better able to authenticate the consumer when a card is presented. And, just like every other country in which EMV has been rolled out, it is a multi-year process. Currently, Visa predicts that it will be between four to five years before the U.S. reaches 90 percent chip card transactions.

\*Figures reported in Q4 2013 and Q4 2014, respectively, and represent the latest statistics from American Express, Discover, JCB, MasterCard, UnionPay, and Visa, as reported by their member institutions globally.

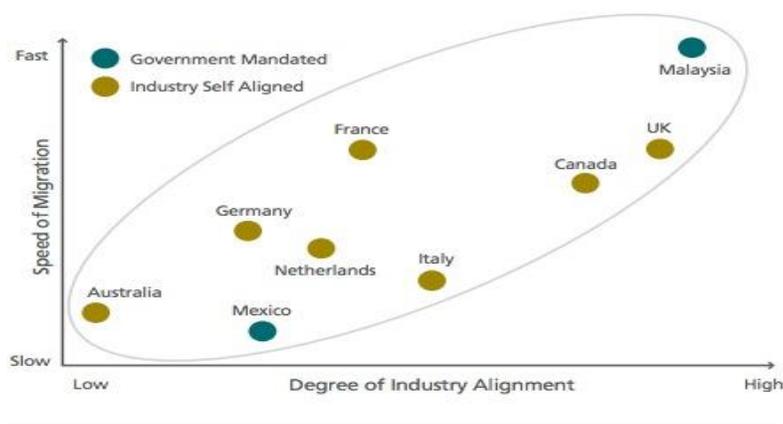
Source: [EMVCo](#)

## COVER STORY CONTINUED

### Lessons From The World

Canada, our neighbor to the North, had a bit of a running head start, with a 2007 [pilot](#) in Kitchener Waterloo. Yet, in a market that has many fewer issuers, and many fewer merchants, it took them 5 years to get to 80 percent penetration of chip-cards. Canada faced the same initial hurdles as US is facing right now: driving merchant adoption, interoperability testing and dispersed merchant locations. And, as the graph below illustrates, even government-mandated EMV migration is a guarantee of a faster adoption cycle.

FIGURE 3: SPEED OF EMV MIGRATION IS INFLUENCED BY DEGREE OF INDUSTRY ALIGNMENT



Consumer awareness and merchant adoption are the key drivers of the speed of adoption, not much else.

The wind beneath its wings right now is how bullish payment companies are in making this succeed. Visa, for instance noted that even though it supports all the choices made by banks regarding cardholder authentication, it believes that EMV technology is the most effective defense against counterfeit fraud.

Source: ['EMV: The Catalyst For a New US Payment Ecosystem'](#)

### EMV Beyond Payments

All agree, however, that educating merchants and issuers about the benefits of EMV must go beyond just security and should be viewed as a catalyst for change to the entire payment ecosystem. If the industry believes that payment cards – and the digital accounts that they enable - are in fact, the platforms for enabling innovation attached to that account, making transacting safer at the physical point of sale is a critical step in bringing that promise to reality.

And part of that is to enable the scaling of the digital credentials that EMV supports. “There’s the potential reuse of EMV credentials in the digital world. Not just for payments, but also more generically for remote authentication,” said David Worthington, principal consultant at Bell ID. “The underlying capabilities of EMV and its distributed security approach can and does already support much wider applications in terms of digital credentials and digital authentication.”

The industry understands that EMV is a process rather than a project. Iterations will follow interest. According to Jamie Topolski, Director, Alternative Payments Strategy at Fiserv, EMV will have no problem adapting. “EMV will transition very nicely to support digital payment methods (for example, payments initiated with a smartphone instead of a physical card),” he said. “There is a need for a payment interaction between the customer and merchant and the security of EMV will add the same value regardless of the payment ‘form factor’.”

## WHAT'S INSIDE

Does less decryption mean more encryption?

Tech companies welcomed Obama administration's move to not [call](#) for legislation that enables the government to access encrypted user data like messages and pictures. A corollary to the decision could mean companies will encrypt data for security. If they don't already, now might be the time to begin.

At present, one in every three companies [fails](#) the security standards for data encryption and information security.

But the encryption software is expected to be a \$4 billion [market](#) by 2019 mostly driven by enterprises. And as the demand gets there, supply is preparing to keep up. Last month, Gemalto unveiled SafeNet ProtectV on the [Azure Marketplace](#), which is a cloud-based encryption solution to encrypt and protect sensitive data and applications in the cloud.

Encrypting user data is most relevant to healthcare and the finance industry which are more prone to data breaches. And companies are finding a fix. Athenahealth, provider of cloud-based services and mobile applications for medical groups and health systems partnered with Elavon to upgrade its [payment solutions](#). Elavon, a global payments provider and subsidiary of U.S. Bancorp, will provide EMV, Point-to-Point Encryption (P2PE) and tokenization technology for Athenahealth. Elavon's Simplify payment software resides on the PIN pad and seamlessly integrates all of the security components. Simplify bypasses the healthcare provider's software and systems, securely sending encrypted cardholder data directly to Elavon and eliminating the need for the point-of-sale system to transmit or process sensitive cardholder data.

Separately, data security firm Thales [acquired](#) San Jose-based Vormetric which provides data protection technology for physical, virtual and cloud. This deal will allow Vormetric to expand in other markets.

IT security provider ESET acquired data [encryption](#) company, DESlock+ based in Taunton, England. It specializes in advanced encryption solutions. Both companies have been partners since 2013 when DESlock+ joined the ESET Technology Alliance. With the acquisition ESET plans to fully integrate the DESlock+ core technology into its existing business and consumer product lines.

Microsoft also acquired cloud security company, [Adallom](#), which secures data on the cloud. Adallom expands on Microsoft's existing identity assets to protect user and company data across all cloud platforms.

### October Tracker Updates

This issue also includes the profiles of 78 industry players, with 5 new profiles — AU10TIX, Bell ID, Tascent, Telesign and Vasco — and updated four companies : Brighterion, Gemalto, Microsoft and Morpho. We updated Microsoft to include it in the "Secure" category, and Gemalto, Brighterion and Morpho were updated for company description.

# THE DIGITAL IDENTITY ECOSYSTEM

The Digital Identity Ecosystem lists the new providers added in each of the four key digital identity capability areas.

## STORE

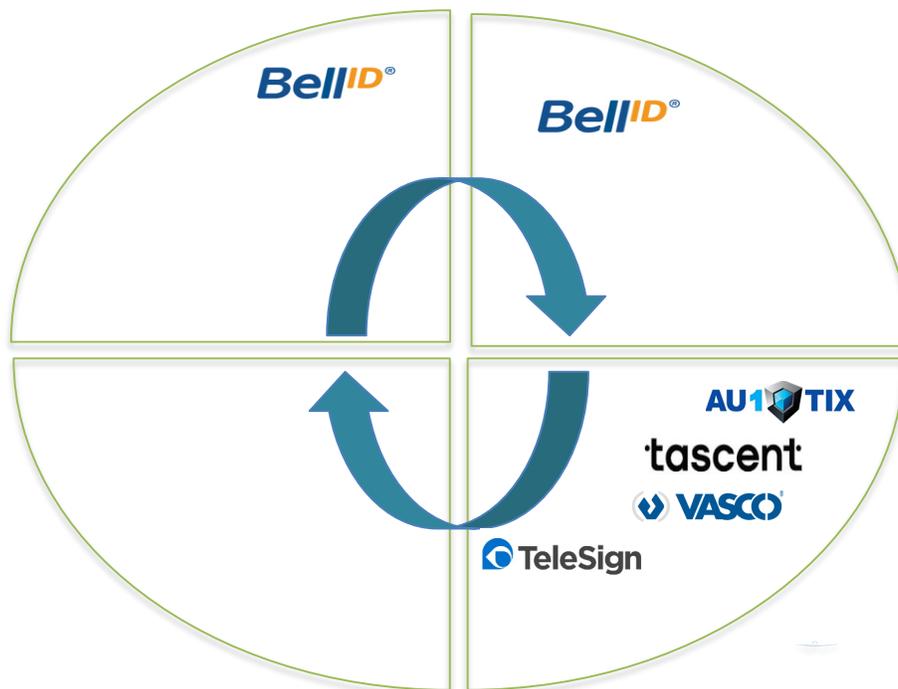
Safely store sensitive information

- Big data and analytics
- Cloud storage
- Data encryption
- EMV card and chip providers

## INTERACT

Manage the process of moving sensitive data between entities

- End-to-end encryption services
- Networks/gateways/ecosystem
- Payment services



## GENERATE

Create account number, ID or credentials used to access account or transaction

- Certification authorities
- Tokenization providers

## SECURE

Ensure the user is who they say they are

- EMV and smart card technology and software solutions
- Data and device profiling
- Biometric companies

## NEWS AND TRENDS

### Generate

*Creating the identities and credentials that allow individuals to digitally identify themselves in a host of environments*

#### **HID Global and Microsoft working on tap for authentication**

HID Global, secure identity solutions provider collaborated with Microsoft to enable easy [authentication](#). Healthcare organizations can use this for electronic prescription signing. ActivID Tap Authentication for Microsoft supports Microsoft Windows 7 laptops and desktops, Android™-based tablets and other mobile devices via NFC.

#### **Saudi Arabia gets first contactless EMV card**

Saudi Arabia's Riyadh Bank offered the country's first contactless card with Gemalto's Clarisa Contactless [EMV card](#). ABI Research predicts there will be 100,000 contactless payment terminals across Saudi Arabia by the end of 2015, rising to 500,000 by 2019

#### **MasterCard launches Digital Enablement Express (MDES) program**

MasterCard launched Digital Enablement Express program to expedite the process of digitizing and [tokenizing](#) MasterCard accounts through the MasterCard Digital Enablement Service (MDES). With participants like Google and Samsung, the financial institutions who get onboard will gain immediate access to the latest digital payments services by MasterCard.

#### **Google launches android pay in the US**

Google rolled out [Android Pay](#) across the US in September, enabling in-store NFC mobile payments using the system at more than one million locations including Macy's, Whole Foods and Jamba Juice. Android Pay is an open platform that adds tokenization and fingerprint verification to Google's existing support for host card emulation (HCE) and NFC payments.

#### **Entrust Datacard released new version of software used for credentials**

Entrust Datacard released a new version of Datacard [TruCredential Suite Software](#), which is used to issue a variety of credentials such as student, faculty or visitor IDs, credentials for local government programs and transit passes. The new version includes additional pre-built workflows for enrollment, credential issuance, and credential management and integrates smart card personalization support.

## NEWS AND TRENDS CONT'D

### Store

*Storing identity and credential data on physical devices and in the cloud*

#### **Microsoft acquires cloud security provider Adallom**

Microsoft acquired cloud security company, [Adallom](#). This acquisition is in line with Microsoft's commitment to delivering innovative identity and security capabilities to its customers, across both on-premises and multiple clouds. Adallom expands on Microsoft's existing identity assets, and delivers a cloud access security broker, to give customers visibility and control over application access as well as their critical company data stored across cloud services.

#### **Oberthur inks deal with Nepal government, Softbank**

Digital security solutions provider Oberthur inked deal with [Softbank](#) for Internet of Things (IoT) and connected devices in Japan. Separately, the company will also provide 2.5 million machine-readable passports and 50 enrollment stations to the [Nepal government](#) across 10 different locations.

#### **Gemalto's unveils new encryption solution for Microsoft Azure marketplace**

Gemalto unveiled SafeNet ProtectV on the [Azure Marketplace](#), the online store for applications and services ready to deploy in Microsoft Azure. This cloud-based encryption solution enables Azure customers to encrypt and protect their sensitive data and applications in the cloud while maintaining compliance requirements. The software encrypts entire virtual machine instances and attached storage volumes, enforces granular controls and establishes clear accountability with audit trails and detailed compliance reporting.

#### **ESET acquires encryption solutions provider DESlock+**

ESET, a global pioneer in IT security acquired data [encryption](#) company, DESlock+ based in Taunton, England. It specializes in advanced encryption solutions. Both companies have been partners since 2013 when DESlock+ joined the ESET Technology Alliance. With the acquisition ESET plans to fully integrate the DESlock+ core technology into its existing business and consumer product lines.

#### **Yahoo wants to eliminate passwords for more security**

Yahoo mail users can forget their [passwords](#) for a new security feature called Account Key which will use smartphones for verification instead of passwords. The user can deny and accept login request sent to their phones.

## NEWS AND TRENDS CONT'D

### Interact

*Sharing identity credentials between originating and relying parties*

#### **Oberthur helps Allstar's EMV migration**

Oberthur Technologies will support Allstar, UK's leading fuel card provider's support the migration of their fuel cards from magnetic stripe to EMV chip cards. Allstar has 1.1 million cardholders will be able to use the chip card in over 7,600 filling stations all across the UK.

#### **HID offers long-range option for parking and door access**

HID Global included long-range ultra-high-frequency (UHF) solutions, [enabling](#) organizations to combine parking gate and door access control on a single card. Solution portfolio includes a new reader optimized for outdoor use and features encryption along with end-to-end communications technology for the industry's highest level of UHF access control security.

#### **Bell ID gets HCE certification from global payment schemes**

Mobile payments specialist Bell ID's host card emulation (HCE) solution has been [certified](#) by three of the largest global payment schemes, making it the first vendor to receive approval from all three schemes for its HCE platform. The platform is aligned with global requirements supporting, for example, multiple application identifiers (AIDs) in the same funding account, in line with the specific requirements of the US market.

#### **Elavon to provide Athenahealth with EMV, P2P encryption**

Athenahealth, provider of cloud-based services and mobile applications for medical groups and health systems partnered with Elavon to upgrade its [payment solutions](#). Elavon, a global payments provider and subsidiary of U.S. Bancorp, will provide EMV, Point-to-Point Encryption (P2PE) and tokenization technology for Athenahealth. Elavon's Simplify payment software resides on the PIN pad and seamlessly integrates all of the security components. Simplify bypasses the healthcare provider's software and systems, securely sending encrypted cardholder data directly to Elavon and eliminating the need for the point-of-sale system to transmit or process sensitive cardholder data.

## NEWS AND TRENDS CONT'D

### Secure

*Authenticating digital identities and keeping data safe*

#### **Bank of America adds biometrics to its mobile app**

Bank of America (BofA) is the latest to add FIDO Alliance approved biometrics which includes [fingerprint](#) and Touch ID sign-in. In addition, the bank also launched an Apple Watch app and the ability to add two-factor authentication for access. Fingerprint and Touch ID sign-in capabilities enable customers to log into the BofA mobile banking app using their fingerprint.

#### **Biometrics, key trends to watch out for**

A new [white paper](#) analyzing the biometrics market found market drivers converging on biometrics. Non-consumer use cases tend to dominate revenue. The study also predicts finance to continue being a strong vertical market with healthcare biometrics emerging as the next big thing. Developing economies represent a good market opportunity with voice and speech recognition as strong modalities.

#### **TeleSign launches API for authentication**

TeleSign, a company that develops mobile identity solutions, launched Smart Verify, a new [API](#) to simplify end-user verification for online and mobile app-based accounts. The company developed proprietary "Smart Decision Engine" that provides a configurable workflow to determine the optimal sequencing of verification and authentication methods choosing between SMS, voice or push notifications, helping increase completion rates and better manage costs.

#### **Iris recognition focused biometrics startup sees big funding**

Global biometrics and identity company Tascent raised \$18.5 million in series A [funding](#) to expand upon its biometric technology platform and continue to develop its new iris recognition and [mobile biometric identity](#) solutions. Along with growing its product lineup, it plans to further expand its presence in government, enterprise and other market sectors.

#### **Morpho launches slim fingerprint terminals**

Morpho (Safran) [introduced](#) new biometric access control and time solutions. Slim and sleek fingerprint readers embed a web server that enables users of laptop, tablet or smartphones to connect, then trigger on-device enrollment, configure terminals or retrieve transaction logs. They are designed to equip narrow mounting surfaces on glass/aluminum door mullions, turnstiles, or server rack doors.

#### **SecureKey allows online authentication with in market credentials**

SecureKey Technologies launched its Secure Concierge service in the United States. It allows consumers to choose a [trusted credential](#) they already have and use it frequently to access online applications, eliminating the need for additional usernames and passwords. The company also launched a multi-tenant service [platform](#) which provides network infrastructure for industry groups and other organizations to build from.



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CUSTOMERS/VOLUME	17,000 merchant accounts 30,000 users handling corporate, government and eCommerce payments
CUSTOMER FOCUS	Manufacturing, Consulting, Engineering, Transportation, Supply
LAUNCH DATE	1999

3Delta Systems, Inc., based in Chantilly, Virginia, is an innovative payment solutions company. 3DSI recently surpassed a lifetime processing milestone of \$100 billion. Since 1999, 3DSI has served more than 7,000 corporations and government agencies.



CUSTOMER FOCUS	Financial Institutions, Payment Services Providers, eCommerce, Travel
GEOGRAPHIES	North America, Germany, United Kingdom, Asia
LAUNCH DATE	2004

41st Parameter, part of Experian, is the global leader in device recognition and intelligence using patented technologies and have years of expertise to identify devices without cookies, without compromising privacy and without impacting performance.



LAUNCH DATE	1795
CUSTOMER FOCUS	Retail, Financial, Government, Hospitality, Education, Transit
GEOGRAPHIES	North America, Europe, Africa, and Australia

ABnote's primary products include financial cards, identification and credential cards, transit cards, hotel, facility and theme park access cards and membership programs, retail plastic cards, barcodes and labels, and secure documents.



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KEY PRODUCTS	Fraud Protection, Chargeback Management, Payment Gateway Solutions
CUSTOMER FOCUS	Travel, Retail, Digital Download, Social Network
LAUNCH DATE	2007

Accertify, Inc., a wholly-owned subsidiary of American Express, offers a suite of products and services that help eCommerce companies grow their businesses by driving down the total cost of fraud, simplifying business processes, and ultimately increasing revenue.



CUSTOMER FOCUS	Consumers, Merchants, Issuers and Financial Institutions
KEY PRODUCTS	Internet PIN Debit, Authentication Services
LAUNCH DATE	2008

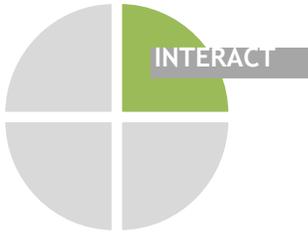
Acculynk secures online transactions with a suite of software-only services backed by a patented authentication and encryption framework that provides greater security for issuers, EFT networks, merchants and payment processors.



CUSTOMERS/VOLUME	ACI has more than 5,600 customers, including 18 of the Top 20 banks and 300 of the leading retailers globally.
CUSTOMER FOCUS	Banks, Retailers, Billers and Processors
LAUNCH DATE	1975

ACI Worldwide, the Universal Payments company, powers electronic payments and banking, processing \$13 trillion each day in payments and securities transactions.

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LAUNCH DATE	2009
CUSTOMER FOCUS	eCommerce, Mobile Commerce, Mail/Phone Order, Call Center and Brick-and-Mortar channels

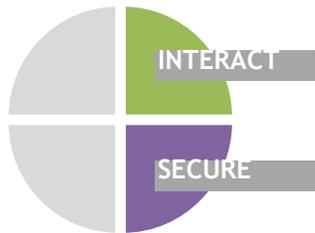
Adaptive Payments is a payment authentication company that enables easy, safe, secure and authenticated transactions to occur using the cardholders' PIN or other data known to the cardholder, to authenticate debit and credit transactions.



CUSTOMER FOCUS	Government (Criminal Identification), Contact Centers, Financial Services, Telecommunications and Enterprises
GEOGRAPHIES	35 Countries
LAUNCH DATE	2004

AGNITIO offers worldwide market Voice ID products. AGNITIO's Voice ID is used by government organizations to prevent crime, identify criminals and provide evidence for lawsuits in over 35 countries. AGNITIO's Voice ID Products are also used by a number of leading customers and partners in contact centers, financial services, telecommunications and enterprise security sectors.

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CUSTOMERS/VOLUME	107.2 Million cards in force
CUSTOMER FOCUS	Consumer, Small Business, Merchant
GEOGRAPHIES	137 Countries

American Express, incorporated on June 10, 1965, is a global financial services company. The company's principal products and services are charge and credit payment card products and travel-related services offered to consumers and businesses worldwide.

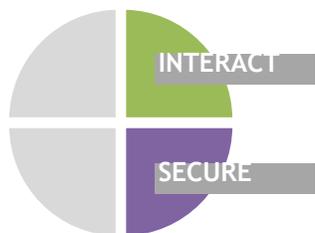


REVENUE	\$182.8 Billion
KEY PRODUCTS	Touch ID Apple Pay
GEOGRAPHIES	147 Countries

Apple Inc. designs, manufactures, and markets personal computers and related personal computing and mobile communication devices along with a variety of related software, services, peripherals, and networking solutions. Apple introduced Touch ID, a fingerprint recognition feature, available on iPhone 5S, 6, and 6 Plus.

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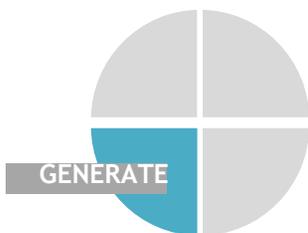
## ARM



CUSTOMER FOCUS	Automotive, Consumer Entertainment, Digital Imaging, Mass Storage, Networking, Security, Wireless Industries.
KEY PRODUCTS	Processors, Multimedia, Physical & System IP, Development Tools, Security, Internet of Things
LAUNCH DATE	1990

ARM designs scalable, energy efficient-processors and related technologies to deliver the intelligence in applications ranging from sensors to servers, including smartphones, tablets, enterprise infrastructure and the Internet of Things. The ARM business model involves the designing and licensing of IP rather than the manufacturing and selling of actual semiconductor chips.

## arroweye



CUSTOMER FOCUS	Financial Services, Retail and Merchant Services
KEY PRODUCTS	Payment Card Solutions, On-demand, Customized Card Marketing and Production
LAUNCH DATE	2000

Arroweye offers the first fully digital card solution approved by Visa, MasterCard, American Express and Discover, and the company continues to partner with some of the largest prepaid, credit/debit card programs in the financial and card services industries.

## AU1TIX



CUSTOMER FOCUS	Airports, Secured facilities, Regulated Commercial and Public Services
PRODUCTS	Front end solutions (ID Identification), online solutions

AU10TIX Limited is a pioneer of multi-channel (front-end, online, mobile) ID authentication and record generation solutions. The company develops and implements solutions that automate the capture, authentication, validation and generation of digital records of identifying documents such as Passports, identity cards, driving licenses etc. AU10TIX Limited is a subsidiary of ICTS International B.V (Established 1982; Nasdaq symbol ICTSF) - a global provider of security services and solutions for airports, border crossings and sensitive facilities.

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CUSTOMER FOCUS	Financial Services, Government, Health Care
KEY PRODUCTS	Authentication
LAUNCH DATE	2009

Authasas was founded in 2009 and is headquartered in Amsterdam, The Netherlands. Authasas is a software development and marketing company dedicated to delivering strong authentication to the global marketplace.



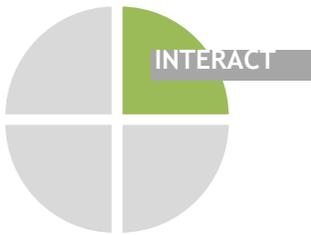
CUSTOMER FOCUS	Banks, Payment Processors, Perso. Bureaus, Mobile Network Operators, Government
PRODUCTS	HCE, Tokenization, Secure Element and Smart Card Management, EMV Migration
LAUNCH DATE	1993

Bell ID's software issues and manages credentials on smartphones, smart cards and connected devices. It integrates with third party technology and simplifies the issuing complexities of payment, identity, loyalty and transit applications. Bell ID has the expertise to manage the lifecycle of any application on chip card as well as NFC-enabled mobile device.

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Bitnet



CUSTOMER FOCUS	Enterprise-Scale Merchants
PRODUCTS	Digital Commerce Platform
LAUNCH DATE	2013

Bitnet provides a digital commerce platform enabling enterprise-scale merchants to accept bitcoin payments. Bitnet has offices in San Francisco, California, and Belfast, Northern Ireland.

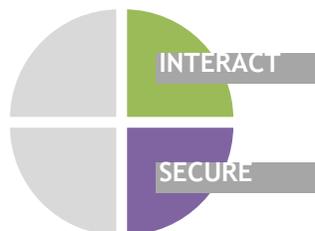
Brighterion.



CUSTOMER FOCUS	Financial Services, Homeland Security, Mobile Payments, Hardware, Software, Marketing, Health Care, Identity Fraud
CUSTOMERS/VOLUME	6 of the Top 10 global banks
PRODUCTS	Omni-channel Fraud Scoring; Credit Risk & Chargeback Prevention; Anti-money Laundering; Data Breach Detection; Others

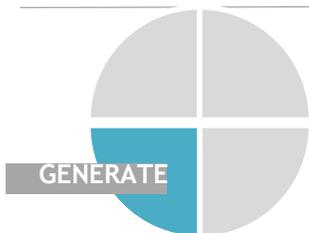
Brighterion offers the world's deepest and broadest portfolio of artificial intelligence and machine learning technologies which provides real-time intelligence that matters from all data sources, regardless of type, complexity and volume.

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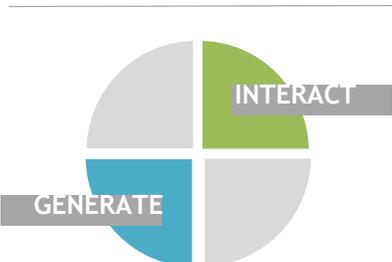
GEOGRAPHIES	United States, Europe and Africa
CUSTOMER FOCUS	Merchants and Banks
KEY PRODUCTS	Consumer Authentication, Alternative Payments, Mobile, Big Data, Solution Design

Cardinal Commerce has been enabling authenticated payment transactions in the card-not-present payments industry since 1999. Cardinal services, partners with and complements providers to deliver their one connection solution to secure transactions.



CUSTOMER FOCUS	National ID, Health Care, Gaming, Stored Value.
GEOGRAPHIES	36 countries
PRODUCTS	Smart Cards, Cards, Software, Readers & Terminals

Since 1998, CardLogix has manufactured cards that have shipped to more than 36 countries around the world. With expertise in card and chip technology, as well as card operating systems, software, development tools, and middleware, CardLogix has been at the forefront of smart card technology.



CUSTOMER FOCUS	OEMs, Banks, MNOs, Merchants, Program Managers
KEY PRODUCTS	Cloud-Based Payments and Host Card Emulation (HCE), Tokenization, and Value-Added Services
LAUNCH DATE	2007

Carta Worldwide is an award-winning leader in digital transaction processing and enablement technologies, including cloud-based payments and host card emulation (HCE), tokenization, and value-added services such as digital offers, loyalty and stored value solutions. Carta empowers OEMs, banks, MNOs, merchants, program managers and others to enable existing cardholder accounts or issue new and innovative products for the digital world.

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CUSTOMER FOCUS	Mobile
KEY PRODUCTS	Mobile TrackPad, Touch Solutions, Mobile Flash Solutions
LAUNCH DATE	2001

Ciptor is a value-added specialty distributor of IT Security – taking award-winning vendors to customers in Scandinavia, EMEA and Asia Pacific. Ciptor supplies software and solutions to enterprise, business and government customers in the region.



CUSTOMER FOCUS	Bank Operators, Telco Operators, Integrators, Cybersecurity Companies, Retailers
KEY PRODUCTS	Payment, Proximity Detection, Access & Security, IoT
LAUNCH DATE	2013

CopSonic is a carried spin-off launched in September 2013. CopSonic develops and markets a SDK for sonic and ultrasonic multi-factor authentication. The CopSonic technology is a new universal contactless communication protocol for security, payment and tracking. It is already available for 30 billion smart devices existing worldwide, including: feature phones, smartphones, tablets, TV-box, computers, game consoles, and Internet of Things devices.

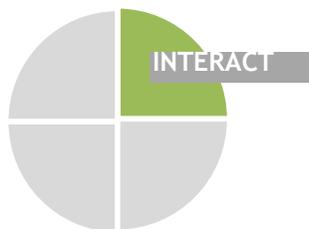


CUSTOMER FOCUS	Mobile
KEY PRODUCTS	Mobile TrackPad, Touch Solutions, Mobile Flash Solutions
LAUNCH DATE	2001

CrucialTec, a business dedicated to mobile input solutions, developed TSP (Matrix Switching-Touchscreen Panel), a new capacitive touchscreen. The company supplies products along with UI and software, and produces its MFM (Mobile Flash Module), an associated business, based on optical technology.

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## cryptoV<sup>ision</sup>



CUSTOMER FOCUS	Defense, Automotive, Financial, Government, Retails, Industry
KEY PRODUCTS	Smart card middleware, JAVA Card framework, PKI
LAUNCH DATE	2000

cryptoV<sup>ision</sup> is a specialist for cryptography and electronic identity solutions. The Germany-based company has been specializing in this field for 15 years, with hundreds of successful projects delivered. More than 100 million people worldwide make use of cryptoV<sup>ision</sup> products everyday in such diverse sectors as defense, automotive, financial, government, retail and more.

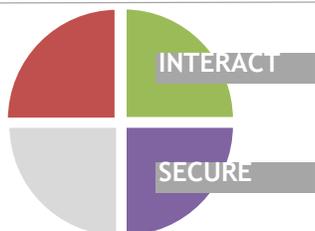
## X Daon



CUSTOMER FOCUS	Government, Commercial Enterprises
GEOGRAPHIES	Australia, Europe, Africa, the Middle East, Asia, and the Americas
LAUNCH DATE	2002

As a privately held software company and biometrics industry major, Daon was founded to build biometric software products that would allow people to authenticate themselves in person or online in a secure, convenient and flexible manner, thus eliminating the threat of security breaches and device fraud.

## dashlane

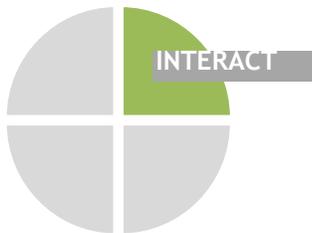


CUSTOMER FOCUS	Persons
KEY PRODUCTS	Password Manager, Automatic Filling, Digital Wallet
LAUNCH DATE	2009

Dashlane makes identity and payments simple and secure through its world-leading password manager and secure digital wallet. It is the solution for the common problem encountered by hundreds of millions of Web users worldwide — that of registering, logging in and checking out on every website and every device. Millions of people use Dashlane to manage their passwords, automatically log in, generate strong passwords, pay on any website with any card without typing, and more.



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LAUNCH DATE	1996
CUSTOMER FOCUS	Acquirers, Merchants and Financial Institutions
GEOGRAPHIES	185 Countries

Discover Network offers unique payments solutions through its open, flexible and highly secure network. They are an ever-expanding payments network that markets and supports a full range of innovative payment solutions for customers globally.



CUSTOMERS/VOLUME	\$123 Billion
CUSTOMER FOCUS	Financial Services, Higher Education, Insurance, Automotive, Telecom & Utilities, Retail
KEY PRODUCTS	Marketing & Lead Management, Fraud Protection, Credit Risk Assessment, Collections & Recovery

eBureau provides a suite of predictive analytics and real-time information solutions to help companies acquire customers, manage risks and maintain customer relationships. Clients span across numerous industries and rely on the company's business and consumer scoring, identity verification, authentication, location and monitoring services to make instant, data-driven decisions about consumers and businesses.



GEOGRAPHIES	150+ Countries
CUSTOMER FOCUS	Enterprise, Critical Infrastructure, Financial Institutions, Government, Law Enforcement
REVENUE	\$660 Million

Consumers, citizens and employees increasingly expect “anywhere” and “anytime” experiences — whether they are making purchases, crossing border payments or logging onto corporate networks. They also expect the ecosystems that allow this freedom and flexibility to be entirely reliable and secure. Entrust Datacard offers the trusted identity and secure transaction technologies that make these ecosystems possible.

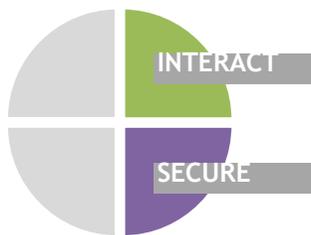


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CUSTOMERS/VOLUME	600 million customers and 81 million businesses
CUSTOMER FOCUS	Retailers, Insurance Firms, Utilities, Government, Banks, Credit Unions, other Financial Institutions
GEOGRAPHIES	19 Countries

Equifax is a global leader in consumer, commercial and workforce information solutions that provides businesses of all sizes and consumers with insight and information they can trust.



CUSTOMERS/VOLUME	Seven of the top ten eCommerce brands, seven of the top nine U.S. card issuers, two of the top five U.K. card issuers and more than 2,100 eCommerce businesses around the world
LAUNCH DATE	2005

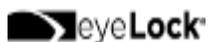
Ethoca is a global provider of collaboration-based technology that enables card issuers, eCommerce merchants and online businesses to increase card acceptance, stop fraud, recover lost revenue and eliminate chargebacks.



GEOGRAPHIES	80 Countries
CUSTOMER FOCUS	Automotive, Public Sector, Health, Communications, Utilities, Credit Unions, Collections
REVENUE	\$4.8 Billion

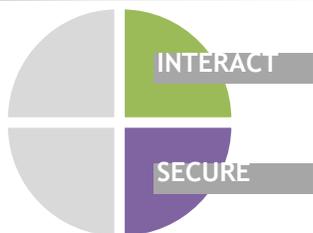
Experian is a global information services company, providing data and analytical tools to clients around the world. They help businesses to manage credit risk, prevent fraud, target marketing offers and automate decision making. Experian also helps people to check their credit report and credit score, and protect against identity theft.

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CUSTOMER FOCUS	Governments, Businesses, Consumers
GEOGRAPHIES	Europe, North America, United Arab Emirates, Latin America, Asia
PRODUCTS	Hardware and software solutions for iris identity

EyeLock Inc. is an iris-based identity management technology company that focuses on developing systems for border control, logical access, global access control, and identity management sectors. The company offers its solutions to eliminate cyber fraud, identity theft, and unauthorized access to secure environments. It serves governments, businesses, and consumers through its distributors in Europe and North America; and partners in the United Arab Emirates, Latin America, and Asia. As of September 1, 2015, EyeLock Inc. operates as a subsidiary of VOXX International Corporation.



CUSTOMER FOCUS	Banking, Payments, Insurance, and Gambling Industries, Police, Security and Local Government
KEY PRODUCTS	Face, Voice and Facial Recognition, Video Chat
LAUNCH DATE	2013

Facebanx has developed fully integrated facial recognition technology that works via webcams, mobile phones and tablets. Facebanx uses cloud-based technology to allow multiple users unlimited access worldwide either on a manual or automated basis. It is a valuable ID verification solution in the registration, single sign-on and KYC process. Facebanx aids AML and helps to minimize chargebacks.



CUSTOMER FOCUS	Retail, Law Enforcement, Airports & Transportation, Commercial Security, Gaming
PRODUCTS	Face Recognition Platform
LAUNCH DATE	2007

FaceFirst, LLC. is a biometric face recognition software company that uses its deep domain knowledge to solve problems of vital importance to the nation and the world in law enforcement, public safety, national security and transportation. It matches individual faces from a live image with the face of an individual contained in the system's database.

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CUSTOMER FOCUS	Acquirers, Issuers, Retailers, and eCommerce
LAUNCH DATE	2008

Feedzai is a data science company that uses real-time, machine-based learning to help payment providers, banks and retailers prevent fraud in omnichannel commerce. Feedzai is a global company, with U.S. headquarters in San Mateo and is backed by SAP Ventures, big data investment firm Data Collective, and other international investors.



GEOGRAPHIES	80+ Countries
CUSTOMER FOCUS	Financial Services, Insurance, Public Sector, Pharma and Life Sciences, Education, Retail, Manufacturing, Technology, Telecommunications, Transportation and Travel
REVENUE	\$789 Million

FICO delivers superior predictive analytics that drive smarter decisions. The company's groundbreaking use of mathematics to predict consumer behavior has transformed entire industries and revolutionized the way risk is managed.

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GEOGRAPHIES	70 Countries
CUSTOMER FOCUS	Merchants, Financial Institutions, Government
CUSTOMERS/VOLUME	6.2 Million Merchant Locations

First Data is a global leader in payment technology and services solutions. With 24,000 owner-associates, the company provides secure and innovative payment technology and services to more than 6 million merchants and financial institutions around the world, from small businesses to the world's largest corporations.



LAUNCH DATE	2013
CUSTOMER FOCUS	Online Merchants
KEY PRODUCTS	Elastic Identity, Cyber Intelligence, Behavioral Analysis

Forter delivers real-time fraud prevention solutions for online merchants. Forter delivers a plug-and-play technology which allows online merchants to get a simple approve/decline answer for every transaction in real-time and delivers full merchant protection in case of a chargeback.



CUSTOMER FOCUS	Financial Services & Retail, Government, Identity & Access Security, Machine to Machine, Mobile, Transport, Training, Buy online
GEOGRAPHIES	180 Countries
LAUNCH DATE	2006

Gemalto offers digital security solutions with 2014 annual revenues of \$2.8 billion and more than 14,000 employees operating out of 99 offices and 34 research and software development centers, located in 46 countries.



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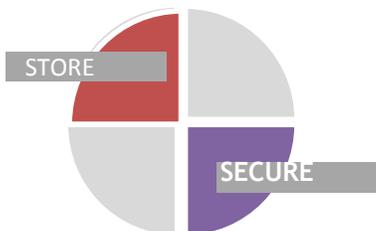
CUSTOMERS/VOLUME	100,000 Customers
CUSTOMER FOCUS	Retail, ISP and Web Host, Education, Financial Services, Health Care, Government, Developer
GEOGRAPHIES	150 Countries

A wholly owned subsidiary of Symantec, Corp., GeoTrust is a low-cost digital certificate provider. GeoTrust's range of digital certificate and trust products enable organizations of all sizes to maximize the security of their digital transactions cost-effectively.



GEOGRAPHIES	32 Countries Across Every Continent
KEY PRODUCTS	Driver's license; electronic EU resident permits; electronic payment; electronic vehicle registration cards; health care cards; national ID cards; passports; payment cards; SIM cards and OTA; strong authentication

Giesecke & Devrient is a global technology provider with its headquarters in Munich, Germany, and 58 subsidiaries, joint ventures, and associated companies in 32 countries across every continent.



KEY PRODUCTS	Web, Mobile, Business, Media, Geo, Specialized Search, Home & Office, Social
REVENUE	\$66 Billion
LAUNCH DATE	1998

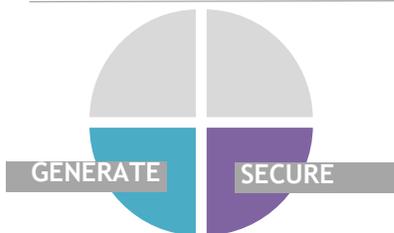
Google is a global technology leader focused on improving the ways people connect with information. Google's innovations in Web search and advertising have made its website a top Internet property and its brand one of the most recognized in the world.

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CUSTOMER FOCUS	Financial, Military, Consumer, Enterprise, and Government
GEOGRAPHIES	10 Countries
LAUNCH DATE	2007

GO-Trust Technology Inc. was the innovator of the secure microSDs and the first company to deliver hardware security for mobile devices using the SD and microSD form factor. Its vision is to provide the most robust, service provider independent, privacy and security solutions for all open architecture mobile devices.



CUSTOMER FOCUS	Banking & Financial, Education, Enterprise & Corporate, Government, Health Care
GEOGRAPHIES	100 countries
PRODUCTS	Access Control, Asset Tracking, Border Protection, Embedded Solutions, Identity Management, Secure Transactions

HID Global is focused on creating customer value and is the supplier of choice for OEMs, integrators, and developers serving a variety of markets that include physical access control; IT security, including strong authentication/credential management; card personalization; visitor management; government ID; and identification technologies for technologies for a range of apps.



CUSTOMER FOCUS	IT, Legal & Compliance, Marketing
KEY PRODUCTS	Information Analytics, Unified Information Access, Information Archiving, eDiscovery, Enterprise Content Management, Data Protection, Marketing Optimization,

HP Autonomy processes human information, or unstructured data, including social media, email, video, audio, text and webpages. Autonomy's management and analytic tools for structured information, together with its ability to extract meaning in real-time from all forms of information, is unique for companies seeking to get the most out of their data.

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CUSTOMER FOCUS	All (Software Developers, Enterprises, Device Manufacturers)
KEY PRODUCTS	Biometric Security SDK, Key Password Manager, Token
LAUNCH DATE	2014

HYPR is a sector agnostic platform enabling secure biometric authentication. From software developers to enterprises and device manufacturers, the company aims to replace the use of passwords with a unified biometric identity protocol. As an end-to-end solution, HYPR is the fundamental framework for securing the Internet of Things.



KEY PRODUCTS	Online Fraud Prevention, Anti-Money Laundering, Merchant Risk
CUSTOMER FOCUS	Online Merchants, Acquiring Banks, Payment Processors and Gateways, Payments Services Providers, Digital Currency Exchanges, and Financial Institutions

IdentityMind's risk management platform builds reputations used in evaluating anti-fraud, merchant account applications, consumer account origination, identity verification services, anti-money laundering, and more. These reputations are shared during analysis, so everyone can benefit from the "network effect" while protecting the privacy of the entities.



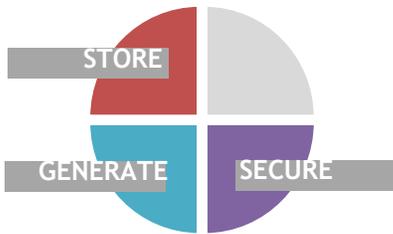
CUSTOMER FOCUS	Global Government, Education, Retail, Transportation, Health Care
KEY PRODUCTS	Digital Certificates, Trusted Authentication, Mobility, and Cloud Services
LAUNCH DATE	2007

Identiv establishes trust in the connected world, including premises, information, and everyday items. CIOs, CSOs, and product departments rely upon Identiv's trust solutions to reduce risk, achieve compliance, and protect brand identity.



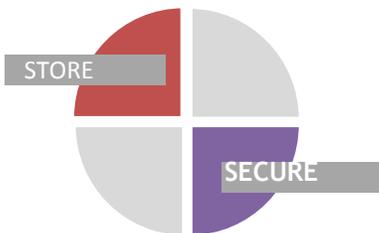
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## IdenTrust



KEY PRODUCTS	Identity Solutions, Authentication, Encryption, Digital Signing
CUSTOMER FOCUS	Banks, Corporates, Government
GEOGRAPHIES	175 Countries

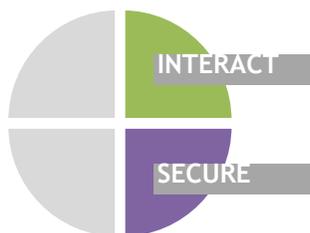
IdenTrust provides a legally and technologically interoperable environment for authenticating and using identities. IdenTrust enables end-users to have a single identity that can be used with any bank, any application, and across any network.



CUSTOMERS/VOLUME	40 installed locations, 35,000 desktop licenses, and repeat Fortune 100 clients
CUSTOMER FOCUS	Medium to Large Contact Centers
LAUNCH DATE	1996

IntraNext provides products and services to the call center industry. The company focuses on helping clients run efficient contact centers for better customer service capabilities.

## JUMIO<sup>®</sup>



CUSTOMER FOCUS	Finance, Retail, Travel, Sharing Economy, Gaming, Telecommunications
GEOGRAPHIES	120 Countries
LAUNCH DATE	2012

Jumio is a credentials management company that utilizes proprietary computer vision technology to authenticate customer ID credentials in real-time Web & mobile transactions to reduce mobile checkout friction.



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## lenovo



CUSTOMER FOCUS	Small Business Store, Large Enterprise, Government, Education, Students, Business Partners, Military
GEOGRAPHIES	160+ Countries
LAUNCH DATE	1984

Lenovo is a \$34 billion personal technology company and the world's largest PC vendor and a global Fortune 500 company. Lenovo has been the fastest growing major PC company for more than four years and creates a full range of personal technology products, including smartphones, tablets and smart TVs.



LAUNCH DATE	2012
GEOGRAPHIES	80 Countries

LiveEnsure® is the interactive authentication innovation company. LiveEnsure® authenticates user security context via their smart devices as they access a site, cloud or app with scan-to-screen, app-to-app, or screen-to-tap engagement.



CUSTOMER FOCUS	Retail, Finance, Government, Health Care
LAUNCH DATE	1972
KEY PRODUCTS	Secure Card Reader Authenticators, Card Personalization and Issuance, PIN Issuance and Management, Small Document Scanners, Protection Services

MagTek is a manufacturer of electronic systems for the reliable issuance, reading, transmission and security of cards, checks, PINs and identification documents. Its products include secure card reader/authenticators, encrypting check scanners, PIN pads and distributed credential personalization systems.



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CUSTOMER FOCUS	Consumers, Merchants, Business Partners, Governments
GEOGRAPHIES	Asia Pacific, Middle East and Africa, Europe, Latin America & Caribbean, and North America; 210 Countries
REVENUE	\$9.5 Billion

MasterCard operates a payments processing network, connecting consumers, financial institutions, merchants, governments and businesses. MasterCard’s products and solutions make everyday commerce activities – such as shopping, traveling, running a business and managing finances – easier, more secure and more efficient for everyone.



REVENUE	\$86.8 Billion
CUSTOMER FOCUS	Communications and Media, Financial Services, Manufacturing and Resources, Retails Consumer Products and Services
GEOGRAPHIES	190 Countries

Founded in 1975, Microsoft is a worldwide leader in software, services, devices and solutions that help people and businesses realize their full potential.



CUSTOMER FOCUS	Government Identity, Public Security, Critical Infrastructure, Transportation and Business Markets
PRODUCTS	Civil Identity (ID), Public & Border Security (Check ID), Digital ID and Smart Transactions, Biometric Terminals
LAUNCH DATE	2005

Morpho employs more than 8,600 people in 55 countries. Morpho is one of the leading suppliers of SIM cards, smart cards, trace detection equipment and gaming terminals. With integrated systems operating in more than 100 countries, Morpho’s solutions simplify and secure the lives of people around the world.



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CUSTOMER FOCUS	Device Manufacturers, Mobile Networks Operators, Identity Service Providers, Security Vendors
KEY PRODUCTS	Multifactor Authentication Client Desktop & Client Edition, Server
LAUNCH DATE	2011

Based in Palo Alto, California, the company was founded in November 2011 to unify the silos that plague current online authentication technologies. Nok Nok Labs' ambition is to fundamentally transform online authentication by enabling end-to-end trust across the Web in a manner that is natural to end-users while providing strong security and proof of identity.



CUSTOMERS/VOLUME	Fortune 100 Companies
KEY PRODUCTS	Early Fraud Detection, Behavior Piercing, Behavioral Analytics, Web Fraud, Advanced Threat Detection
LAUNCH DATE	2008

NuData Security, Inc. provides advanced Web security solutions to enterprises through proprietary behavior analytics and countermeasures. NuDetect examines users in real-time through context aware measures including behavior signatures unique to a customer's business and those common across the NuData security cloud.



CUSTOMER FOCUS	Access Management, Aerospace and Defense, Automatic Fare Collection, Automotive, Computing, Consumer, Cybersecurity, eGovernment, Health Care, Industrial, Lighting, Portable Devices
LAUNCH DATE	2006

NXP Semiconductors has its expertise in high-performance mixed signal electronics and is driving innovation in the areas of connected car, security, portable and wearable, and the Internet of Things.



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CUSTOMERS/VOLUME	2,000 Financial Institutions
CUSTOMER FOCUS	Financial Institutions, Mobile Network Operators, Government and Corporate Entities, Transportation Authorities, Retailers, Internet of Things Providers
GEOGRAPHIES	140 Countries

OT specializes in digital security solutions in the mobility space. Present in the payments, telecommunications and identity markets, Oberthur offers end-to-end solutions in the smart transactions, mobile financial services, machine-to-machine, digital identity and transport & access control fields. OT's international network serves clients in 140 countries.



LAUNCH DATE	1990
CUSTOMER FOCUS	Banks, MNOs, Vending & Unattended, Mass Transit, Petroleum, Parking
GEOGRAPHIES	55 Countries

On Track Innovations Ltd. (oti) is a leader in contactless and near field communications (NFC) applications based on its extensive patent and IP portfolio. Oti markets and supports its solutions through a global network of regional offices and alliances.



CUSTOMER FOCUS	Nonprofits, Education, Political Campaigns, Government, Enterprise
GEOGRAPHIES	203 Countries
CUSTOMERS/VOLUME	165 million active customer accounts

PayPal gives people better ways to send money without sharing their personal financial information and with the flexibility to pay using their PayPal account balances, bank accounts, PayPal Credit and credit cards.



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CUSTOMER FOCUS	Mobile, Automotive, Education, Health Care, Internet of Everything, Networking, Smart Home
KEY PRODUCTS	Digital Communications Products and Services
LAUNCH DATE	1985

QUALCOMM, Inc. manufactures digital wireless communications equipment. The company licenses its code division multiple access (CDMA) and orthogonal frequency division multiplexing access intellectual property to other companies, and produces CDMA-based integrated circuits, and produces equipment and software used to track workers and assets, and software for wireless content enablement.



REVENUE	\$6 Billion
CUSTOMER FOCUS	Communications, Media and Entertainment Solutions, Energy Solutions, Health Care and Life Sciences Solutions, Public Sector

RSA is the security division of EMC. The security partner of more than 90 percent of the Fortune 500, they help the world's leading organizations with security concerns.



CUSTOMER FOCUS	Electronic Equipment, Consumer Electronics
GEOGRAPHIES	90 Countries
LAUNCH DATE	1938

For over 70 years, Samsung has led the global market in high-tech electronics manufacturing and digital media.

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CUSTOMER FOCUS	Persons and business
KEY PRODUCTS	Storage (Hard Drive), Backup & Recovery Services (Cloud, Hybrid Cloud)
LAUNCH DATE	1997

Seagate is a global data storage solutions provider, developing products that enable people and businesses around the world to create, share, and preserve their most critical memories and business data. Over the years the amount of stored information has grown, confirming the need to successfully store and access huge amounts of data. As demand for storage technology grows, the need for greater efficiency and more advanced capabilities continues to evolve.



CUSTOMER FOCUS	Banking & Financial Services, Government, Payments, and Telecoms & Utilities
GEOGRAPHIES	bridge.net Connect, bridge.net Exchange
LAUNCH DATE	2008

SecureKey is the identity and authentication provider for organizations that deliver online consumer services. SecureKey eliminates the need to store passwords by securely linking consumer ID to trusted devices, while providing consumers with the choice, control and convenience over how they access the services they want. SecureKey delivers a high-performance, easy-to-use, strong dynamic authentication platform that reduces the burden, cost, and risks associated with authenticating millions of consumers while also improving the user experience.

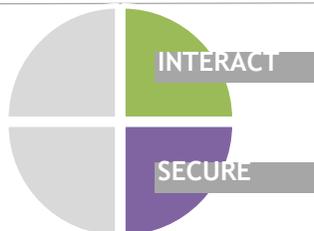


CUSTOMER FOCUS	Financial, Commercial, Federal, Medical
LAUNCH DATE	2000

SecurityMetrics is a leading provider and innovator in data security and compliance for organizations worldwide. The company's mission is to help organizations comply with financial, government, and health care mandates through innovative security tools, caring customer support, and qualified expertise.



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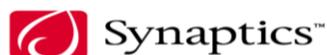
LAUNCH DATE	2012
CUSTOMER FOCUS	Mobile Login & Payments
KEY PRODUCTS	Branded Mobile Payments, Frictionless Payments, FonePrint Technology

SEKUR Me, Inc. eliminates online payment friction for eCommerce and mCommerce sites. Its patented technology combines single-click convenience with multi-factor authentication, providing a high level of security with an unmatched level of convenience by eliminating user IDs and passwords for safer logins.



CUSTOMER FOCUS	Travel, Digital Cash, On-Demand, Online Marketplace, eCommerce, Payment Gateway
PRODUCTS	Machine Learning, Device Fingerprinting
LAUNCH DATE	2011

Using large-scale machine learning technology to predict fraudulent behavior with unparalleled accuracy, Sift Science leverages a global network of fraud data. Our flexible, adaptive, and automated solution helps businesses of all sizes detect and prevent fraud.



CUSTOMER FOCUS	Technology (mobile, tablet, Notebook PC), Automobiles, Wearables
GEOGRAPHIES	China, South Korea, Taiwan, the United States, Japan, and other countries.
LAUNCH DATE	1986

Pioneers and leaders of the human interface revolution, bringing innovative and intuitive user experiences to intelligent devices. From usability and R&D to supply chain and support, Synaptics collaborates with its partners to invent, build and deliver human interface solutions that integrate seamlessly and optimize system value.

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**tascent**

**NEW!**



<b>CUSTOMER FOCUS</b>	Borders and Identity, Law Enforcement and Public Safety, Defense and Humanitarian Aid, Healthcare and Personal Data
<b>PRODUCTS</b>	High Throughput Iris Recognition, Mobile Identity
<b>LAUNCH DATE</b>	2015

Tascent develops and deploys biometric identity products and solutions that excel in challenging real-world environments. Tascent has expertise in iris recognition and multimodal high-throughput and mobile biometrics stemming from its acquisition of AOptix Technologies' Identity Solutions business unit.

**TeleSign**

**NEW!**



<b>PRODUCTS</b>	Verification APIs, Mobile SDKs, Data and Analytics APIs
<b>LAUNCH DATE</b>	2005

TeleSign provides Mobile Identity solutions, helping customers secure and prevent registration fraud, while improving user experience and managing support costs. TeleSign delivers account security and fraud prevention with two-factor authentication based on each user's Mobile Identity (phone number, device and behavior) and driven by real-time, global intelligence, including reputation scoring and device data.

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## ThreatMetrix



CUSTOMER FOCUS	eCommerce, Financial Institutions and FFIEC, Enterprise, Insurance, Social Networks, Government, Health Care
KEY PRODUCTS	Advanced Fraud Protection, Content-Based Authentication
LAUNCH DATE	2005

ThreatMetrix builds trust on the Internet by offering market-leading advanced fraud prevention and frictionless context-based security solutions. These solutions authenticate consumer and workforce access to mission critical applications using real-time identity and access analytics that leverage the world's largest trusted identity network.

## TOKENEX



CUSTOMER FOCUS	Financial, Health Care, Insurance, Not-for-profit, Retail, University/College
PRODUCTS	Batch Tokenization, Data Vaulting, Virtual Terminal Proxy, Web Services, Recurring Payments
LAUNCH DATE	2010

TokenEx is an enterprise-class data security platform that offers flexibility in how customers can access, store and secure data. TokenEx extends flexibility by working with multiple data acceptance channels and by maintaining a processor-agnostic approach. TokenEx can tokenize and secure multiple data types including payment card data, financial account numbers, HIPAA records, and even unstructured data formats.

## Trustwave



CUSTOMER FOCUS	Education, Payment Services, Health Care, Restaurants, Financial Services, Hotels, Public Sector, Retail
GEOGRAPHIES	96 Countries
LAUNCH DATE	1995

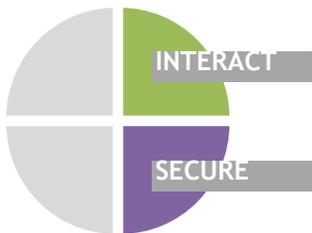
Trustwave helps businesses fight cybercrime, protect data and reduce security risk. With cloud and managed security services, integrated technologies and a team of security experts, ethical hackers and researchers, it enable businesses to transform the way they manage their information security and compliance programs.

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CUSTOMER FOCUS	Financial, Enterprise, E-commerce, Government, Healthcare
GEOGRAPHIES	100 Countries
LAUNCH DATE	1991

VASCO proves two factor authentication and digital signature solutions to financial institutions. VASCO secures access to data and applications in the cloud, and provides tools for application developers to easily integrate security functions into their web-based and mobile applications.



KEY PRODUCTS	CDRN, Chargeback Representation Services, Intelligence Suite, Decline Salvage, Global Payment Gateway, CAMS
LAUNCH DATE	2005

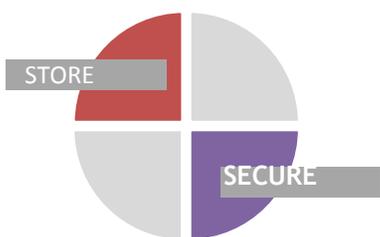
Since 2005, Verifi has been a leading provider of global electronic payment and risk management solutions for card-not-present merchants. The highly customizable payment and real-time reporting platform serves as a foundation for Verifi's suite of fraud solutions and risk management strategies.



CUSTOMER FOCUS	Personal, Small Business, Medium and Large Organizations, Merchants, Government
GEOGRAPHIES	200 Countries
LAUNCH DATE	1958

Visa Inc. (NYSE:V) is a global payments technology company that connects consumers, businesses, financial institutions, and governments in more than 200 countries and territories to fast, secure and reliable electronic payments.

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CUSTOMER FOCUS	Enterprise, Consumer
KEY PRODUCTS	Secure Storage, Mobile Application IPS, Adaptive Token, Secure Mobile Websites, Mobile Threat Intelligence
LAUNCH DATE	2011

V-Key focuses on cutting-edge mobile phone security research and development, studying the latest advanced attacks against mobile phones and inventing solutions to defend against them.



CUSTOMER FOCUS	Financial Services, eCommerce & Retail, Communication Services Providers, Marketing Service Providers
PRODUCTS	Phone Solutions, Identity Solutions
LAUNCH DATE	1997

Whitepages Pro was founded to deliver the most up-to-date identity insights to businesses of all kinds, along with powerful analytics and tools to maximize the power of that information. Products and pricing support businesses of all sizes, from local retailers to the Fortune 50.



CUSTOMER FOCUS	Individuals, Business, Developers
PRODUCTS	YubiKeys, YubiHSM, Services & Software
LAUNCH DATE	2007

Yubico was founded in 2007 with a prototype of its YubiKey invention and the mission to make secure online identities truly ubiquitous. Yubico's vision is to enable Internet users to have one single and secure key for securing access from any device to any number of services.

## ABOUT THE IDENTITY TRACKER™

The PYMNTS.com Identity Tracker™, powered by Oberthur, is designed to be a forum for framing and addressing key issues and trends facing the entities charged with efficiently and securely identifying and granting permission to individuals to access, purchase, transact, or otherwise confirm their identity. The Identity Tracker™ also provides an organizing framework for identifying the many companies that offer key services needed to securely generate, store, transact and authorize or authenticate users in an identity ecosystem.

If you would like to be included in this report and/or would like your information to be updated, please contact us at [identitytracker@pymnts.com](mailto:identitytracker@pymnts.com) and we will send you the data sheet required for submission.

## ABOUT OBERTHUR TECHNOLOGIES

Oberthur Technologies (OT) is a world leader in digital security solutions for the mobility space. OT has always been at the heart of mobility, from the first smart cards to the latest contactless payment technologies which equip millions of smartphones. Present in the Payment, Telecommunications and Identity markets, OT offers end-to-end solutions in the Smart Transactions, Mobile Financial Services, Machine-to-Machine, Digital Identity and Transport & Access Control fields. OT employs over 6,000 employees worldwide, including close to 700 R&D people. With more than 50 sales offices across 5 continents and 1 manufacturing hub by region, OT's international network serves clients in 140 countries. For more information, visit [www.oberthur.com](http://www.oberthur.com).

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