



IDENTITY

TRACKER™

JUNE 2015

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SOCIAL



HEALTHCARE



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BANKING



Having one's sensitive information being compromised has become a more commonplace occurrence. In 2014, there was a record of 783 data [breaches](#) in the U.S. These breaches cost retailers and financial institutions millions in fraud losses, card reissuance, and mitigating future breaches through security enhancements.

One of the most highly publicized cases was Target's [data breach](#) in November 2013, which compromised private information of approximately 70 million customers. The hackers installed malicious software through Target's third-party vendor, who failed to meet acceptable security standards. While Target could have strengthened its security systems and responded faster, the problem with data breaches such as this one is that it often takes many parties, working together, to create strong solutions to combat the problem.

One of these solutions has been EMV implementation. However, once EMV becomes the norm, fraudsters are unlikely to turn from their wanton ways and join the Peace Corps. They will simply move to the next weakest link in the chain.

Another recent data compromise, which affected mobile accounts of [Starbucks customers](#) last month, highlights another point of failure. This compromise was different from the Target incident. Hackers purchased user ID and password data and then systematically attempted to login to Starbucks until they found usable credentials. When they did, they loaded funds onto gift cards in their possession. These could be used directly by the fraudsters as reward for a hard day's work - or they could be turned into cash through resale to unsuspecting, law-abiding consumers. Who doesn't want a \$100 Starbucks gift card for \$75?

Consumers maintain dozens of digital credentials but in the effort to simplify, they often rely on a "primary" one which is easy to remember. A report released earlier this year noted that 45 percent of Americans tend to use the same user name and [passwords](#) for multiple accounts for simplicity. If these credentials are stolen in one place - say Facebook or even your Pinterest account, fraudsters can use them in another such as a consumer's bank or credit account - or retailers - where card data is stored.

These card-on-file accounts have grown tremendously over the past decade as consumers appreciate the convenience of one-click purchasing (Amazon), automatic payments (Netflix) or top-up (Starbucks). And, Starbucks alone processed mobile transactions worth \$2 billion in 2014, much of this coming from automatic top-ups on customers' accounts.

While many merchants are encrypting data at rest and more and more merchants are moving toward point-to-point encryption, does any of that matter if criminals can easily identify themselves as consumers?



Account takeovers occur when a fraudster obtains an individual's personal information such as an account number, password, username or Social Security number and changes the official contact information or adds another user to an existing account. Once accomplished, the fraudster has established a window of opportunity in which transactions are conducted without the victim's knowledge.

As account compromises get more complex and sophisticated, tools to prevent them have to be highly evolved, robust and adaptive. Apart from the oft-mentioned simple tricks like maintaining different passwords for accounts, there are more tools that add a layer of advanced security. Some of them require users' active participation in identifying their credentials such as biometric authentication where the user's retina or fingerprint is registered to validate identity. Others in this regard include CAPTCHAs, challenge questions on websites and One Time Passwords (OTP) that are generated to authorize a payment or logins. The FIDO alliance is one example of an industry-wide consortium which has come together to develop protocol standards for stronger online authentication and essentially eliminate the reliance on passwords in the process.

It becomes crucial that the gatekeeping measures in these systems are fast to respond while minimizing inconvenience. Some additional measures are "passive" in nature and include device identification which sends alerts if the account is being accessed from a foreign device; malware detection software that ensures that a system is secure and immune to malicious software; and usage pattern analysis based on IP address mapping, where one can monitor suspicious activity once the location of the attack is detected.

Given how advanced some of these compromises in the past have been, it portends a future where companies only scale up and go for bigger and better to stay secure and immune and if attacked, to handle it with dexterity and agility.

THE DIGITAL IDENTITY ECOSYSTEM

The Digital Identity Ecosystem lists representative providers in each of the four key digital identity capability areas related to this edition's use case.

STORE

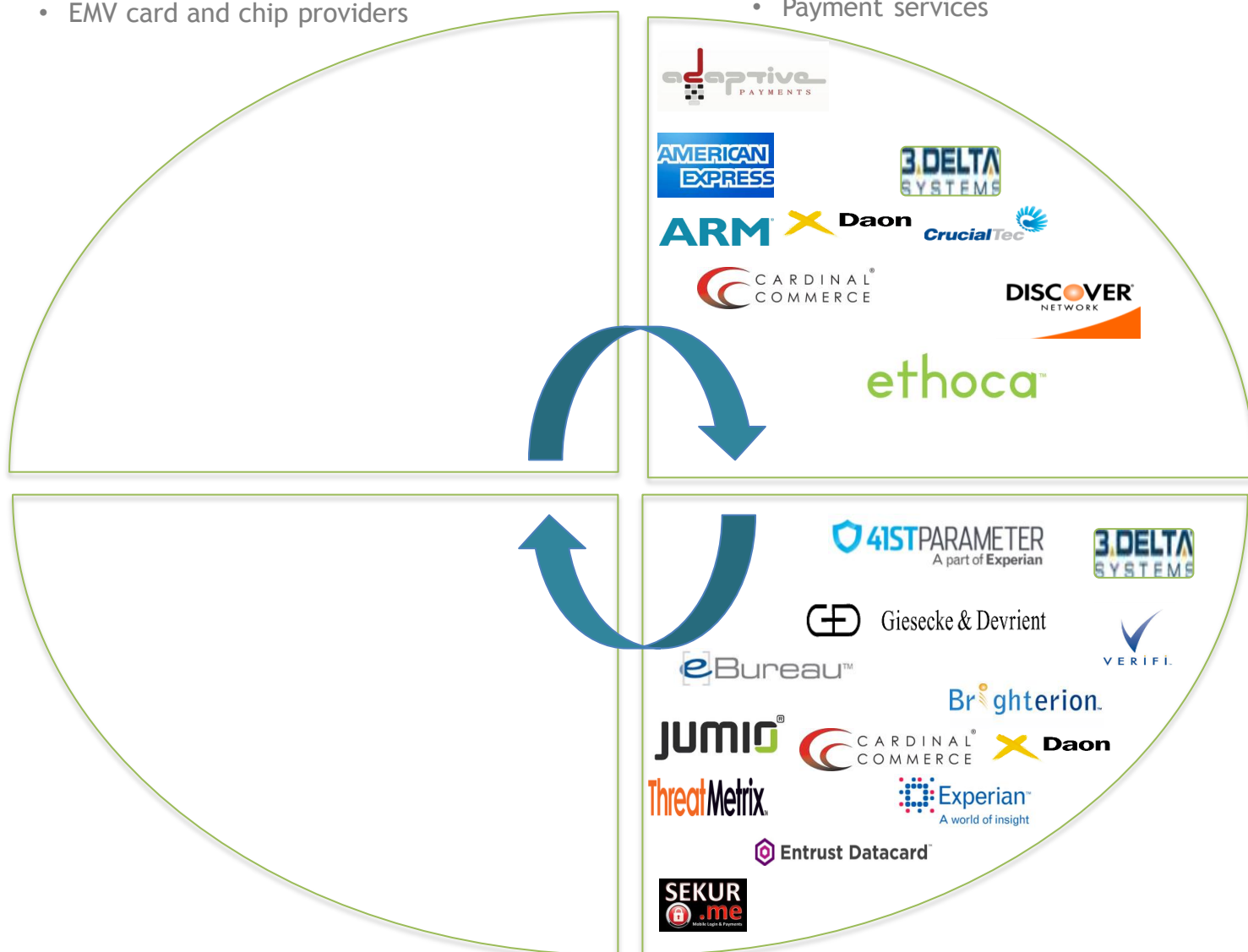
Safely store sensitive information

- 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

WHAT'S INSIDE

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.

Specific news and trends are covered on the following pages. However a few noteworthy trends are highlighted below.

- **Generate:** The need for tokenization for mobile payments was reiterated with the Bank of Nepal launching a NFC mobile payment service using tokenization soon, while Postbank, a German bank, began a pilot of its mobile payment service based on Host Card Emulation, again using tokenization. Meanwhile, HPS and Gemalto partnered to launch a tokenization solution applicable across all devices.
- **Store and managing credentials:** Jumping onto provide secure storage last month were all the big, trustworthy names including Google, which launched its cloud service (as did IBM) while Dropbox for business gets ISO certified. Adapting to EMV, Chase Bank said it will convert 70 percent of its cards to chips by end of this year.
- **Interact:** Samsung wasn't going to be left behind in the mobile wallet game - the company announced that it will launch Samsung Pay in Europe later this year while rival Google revealed Android Pay. Adding a layer of security to Bitcoin, a Bitcoin exchange and a security company created a verification infrastructure.
- **Secure:** Active security seems to be the way it's going — Microsoft is introducing biometric logins in Windows 10 and Google is working on native fingerprint API for Android. LG also said that its next smartphone will have iris recognition capabilities.

This issue also includes the profiles of 60 industry players, with 10 new profiles: ARM, CrucialTec, Daon, Nok Nok Labs, NXP, Qualcomm, Trustwave, Verifi, Whitepages Pro and Yubico. The details on these players can be found in the Player Directory beginning on page 10.

NEWS AND TRENDS

Generate

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

Nuspay collaborates with Nepal's bank to launch mobile payment service

[Nepal Bank](#) will launch the NFC mobile payment service that also uses tokenization. The service uses Nuspay technology Virtual Account Solution, which directly connects to a customer's bank account without the use of cards.

Postbank uses Worldline to launch a pilot of HCE in Germany

The German bank began [pilot of a mobile payment service](#) that is based on Host Card Emulation (HCE). The service allows NFC payments at Visa payWare terminals by using tokenization. The platform is provided by Worldline.

HPS partners with Gemalto for tokenization solution

The companies [launched a tokenization solution](#) that is useful across different consumer devices. Additionally it can be used by any card issuer or other payment scheme.

NEWS AND TRENDS CONT'D

Store

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

Google launched Google Cloud Bigtable

The [tech giant announced the service](#) that will let firms store vast amounts of data online. According to the company, it will be usable across an array of markets, such as financial services, telecommunications, advertising, energy and biomedical industries.

Verifone tested its encryption solution

The company announced that its encryption and tokenization solution was tested by Coalfire Systems, and passed the test. [According to the press release](#), VeriShield Total Protect Solution is able to eliminate the risk of payment card compromise within a merchant's retail environment.

Chase expands chip technology to debit cards and ATMs

The [bank plans to convert](#) the technology of credit and debit cards into chips, reaching at least 70 percent of its cards by the end of 2015. Additionally, it will upgrade ATMs to accept these new cards.

Navy Federal uses Proxama to migrate to EMV

Navy Federal Credit Union, one of the largest credit unions worldwide, [selected Proxama's Payments Application Manager](#) to migrate its cards to the EMV chip card standard.

IBM announces services to power hybrid clouds

The [company will power hybrid clouds](#) with brand new servers, storage and middleware capabilities. These systems are aimed to support the need of mobile, big data and social computer customers. The solutions are free for hybrid cloud customers.

Dropbox adopts cloud privacy standards

Dropbox's cloud service storage for businesses [got an approval from ISO standards](#), achieving the certification ISO 27018, a standard for data protection in the cloud. The standard governs how cloud providers protect and manage personally identifiable information.

SAP presented cloud service for The Internet of Things

The [company released its cloud service HANA Cloud Platform](#), a tool that is usable to power apps in all kinds of environments. The platform combines seamless connectivity integration for businesses, geo-location technology and data analytics.

Marist College partners with BlackRidge Technologies on cybersecurity initiative

[Marist College and BlackRidge Technologies announced](#) a research partnership to develop cybersecurity capabilities for companies that have large scale needs in several markets, such as the financial industry and private cloud providers.

NEWS AND TRENDS CONT'D

Interact

Sharing identity credentials between originating and relying parties

Samsung partners with Oberthur to launch Samsung Pay in Europe

[Samsung will launch](#) the service later this year. Samsung Pay service will allow Samsung Galaxy S6 and S6 Edge users to use their smartphones for contactless payments. Issuers won't need to make significant investments in infrastructure to deploy their NFC services, since Samsung and OT will manage enrollment, provisioning and lifecycle processes for the banks.

Google reveals Android Pay

The company will launch the [NFC mobile payment platform during 2015](#). Android Pay will be available worldwide as an open platform. It will add tokenization and fingerprint verification to Google's current features.

Ingenico adds Vantiv's encryption solution

[Vantiv's EMV processing application will be added](#) on Ingenico's terminals for small and medium size merchants. The application includes EMV and Point-to-Point Encryption (P2PE). Combining the solution with the terminal, small and medium merchants will be able to accept any type of payment.

Bitfinex and Bitgo create infrastructure verification for Bitcoin

Bitfinex, an important Bitcoin exchange, together with Bitgo, a security company specialized in Bitcoins, [created a verification infrastructure](#) that allows checking for balances almost in real-time.

Connect Financial Software Solutions adds P2P payments through Acculynk

[Connect partnered with Acculynk](#) to offer its real-time Person-to-Person service, Payzur. The solution allows a customer to send a real-time P2P payment to mobile phones or email addresses via a bank-issued PIN.

Heartland announced the release of security platform

[Heartland Payment Systems will launch Heartland Secure](#) system, a security platform to protect data of cards. The security solution protects customers against card-present fraud using end-to-end encryption and tokenization.

NEWS AND TRENDS CONT'D

Secure

Authenticating digital identities and keeping data safe

ICICI Bank launches voice recognition for biometric authentication

The [service launched](#) by one of India's largest private banks will authenticate customers based on their voice patterns and will allow them to make bank transactions through the telephone service of the bank in a secure way.

Delta ID behind the recognition technology of NTT DOCOMO

The technology ActiveIRIS, developed by Delta ID, powers the ARROWS NX F-04G smartphone [launched by telecommunications company NTT DOCOMO](#). The Japanese telecommunications company also plans to include the technology to authenticate mobile payments.

Google working on native fingerprint authentication solution

The company is developing the solution for Android. The [fingerprint API](#) could be used by any app of the operating system. Users are going to be able to authenticate Google Wallet payments or even purchases at the Play Store.

Biometric login details in Windows 10

Microsoft [made a demonstration on how biometric logins](#) will work in the next version of its operating system. The system will interact with facial, fingerprints and iris recognition. The company is confident of having a low false acceptance rate and false rejection rate.

An African country will use Iris ID's biometric technology in polling

[Iris ID announced](#) that an unnamed African country will use its iris recognition solution to diminish fraud in the registration of voters. The solution's name is IrisAccelerator, and was selected over other biometric technologies, such as fingerprints biometric solutions, after consultants' advice.

LG partners with Irience to add iris recognition features

The next smartphone release by the Korean tech company, LG G5, will have iris recognition capabilities thanks to a [partnership between LG and Irience](#), a biometric technology developer.

Zwipe will bring its technology to Denmark payments system

[Danske Bank, Denmark's central bank said](#) it is willing to launch within the next year credit cards with biometric technology that verify users' identity via fingerprint authorization. Zwipe is the technology provider and is collaborating with the bank.

TSYS collaborates with Pax Technology in an EMV solution

The [companies produced a semi-integrated solution](#) that can make the EMV certification process faster. The big difference was made in the way the solution connects to the POS terminals. It avoids the lengthy EMV certification process by connecting directly to POS devices.



PLAYER DIRECTORY | ALL PLAYERS ARE LISTED IN ALPHABETICAL ORDER



CUSTOMER FOCUS	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 6,000 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.



PLAYER DIRECTORY | ALL PLAYERS ARE LISTED IN ALPHABETICAL ORDER



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.



CUSTOMER FOCUS

5,000 customers including 21 of the top 25 banks and 14 of the leading retailers globally. ACI also has more than 170 processors as customers.

CUSTOMER FOCUS

Banks, Retailers, Billers and Processors

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



PLAYER DIRECTORY | ALL PLAYERS ARE LISTED IN ALPHABETICAL ORDER



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.



CUSTOMERS	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.



PLAYER DIRECTORY | ALL PLAYERS ARE LISTED IN ALPHABETICAL ORDER

ARM

NEW!


CUSTOMER FOCUS

Automotive, Consumer Entertainment, Digital Imaging, Mass Storage, Networking, Security, Wireless Industries.

KEY PRODUCTS

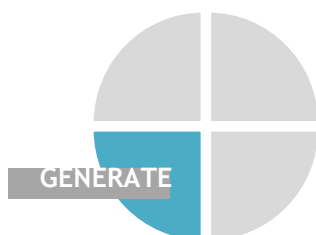
Processors, Multimedia, Physical & System IP, Development Tools, Security, Internet of Things

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



LAUNCH DATE

2000

CUSTOMER FOCUS

Financial Services, Retail and Merchant Services

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.



Bitnet



LAUNCH DATE

2013

CUSTOMER FOCUS

Enterprise-scale merchants

HEADQUARTERS

Belfast, U.K.

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.



PLAYER DIRECTORY | ALL PLAYERS ARE LISTED IN ALPHABETICAL ORDER

Brighterion



CUSTOMER FOCUS

Financial Services, Homeland Security, Mobile Payments, Hardware, Software, Marketing, Healthcare, Identity Fraud

CUSTOMER FOCUS

6 of the top 10 global banks

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.



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.



NEW!



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.



PLAYER DIRECTORY | ALL PLAYERS ARE LISTED IN ALPHABETICAL ORDER


NEW!


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 leader, 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.



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.



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 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.



PLAYER DIRECTORY | ALL PLAYERS ARE LISTED IN ALPHABETICAL ORDER

Entrust Datacard™



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

EQUIFAX®



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

ethoca™



CUSTOMER FOCUS	Nine of the top ten eCommerce brands, seven of the top nine U.S. card issuers, three of the top five U.K. card issuers and more than 1,800 eCommerce businesses around the world
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LAUNCH DATE	2005
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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..



PLAYER DIRECTORY | ALL PLAYERS ARE LISTED IN ALPHABETICAL ORDER



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.



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.



PLAYER DIRECTORY | ALL PLAYERS ARE LISTED IN ALPHABETICAL ORDER



GEOGRAPHIES	70 Countries
CUSTOMER FOCUS	Merchants, Financial Institutions, Government
CUSTOMERS	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 on-line
GEOGRAPHIES	180 Countries

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.



PLAYER DIRECTORY | ALL PLAYERS ARE LISTED IN ALPHABETICAL ORDER



CUSTOMERS	Over 100,000 customers
CUSTOMER FOCUS	Retail, ISP and Web Host, Education, Financial Services, Healthcare, Government, Developer
GEOGRAPHIES	170 Countries

A wholly owned subsidiary of Symantec, Corp., GeoTrust is the world's largest 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.



Giesecke & Devrient



GEOGRAPHIES	32 countries across every continent
KEY PRODUCTS	Driver's license; electronic EU resident permits; electronic payment; electronic vehicle registration cards; healthcare cards; national ID cards; passports; payment cards; SIM cards and OTA; strong authentication

G&D 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.



PLAYER DIRECTORY | ALL PLAYERS ARE LISTED IN ALPHABETICAL ORDER



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.



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, Healthcare

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.



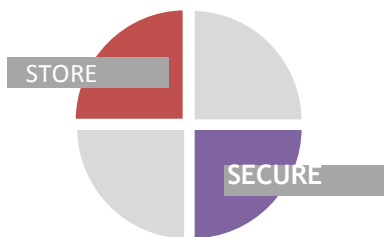
PLAYER DIRECTORY | ALL PLAYERS ARE LISTED IN ALPHABETICAL ORDER

IdenTrust



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

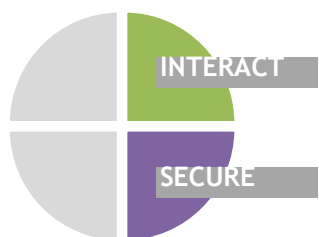
IdenTrust provides a legally and technologically interoperable environment for authenticating and using identities. IdenTrust enables end-users to have a single identity that can be used with any bank, any application, and across any network.



CUSTOMERS	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 more efficient contact centers while impressing their customers with their customer-service capabilities.

Jumio®



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.



PLAYER DIRECTORY | ALL PLAYERS ARE LISTED IN ALPHABETICAL ORDER

lenovo



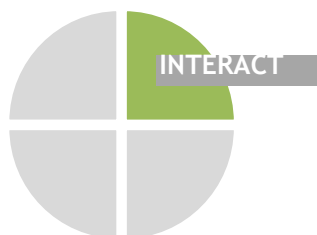
CUSTOMER FOCUS	Small Business Store, Large Enterprise, Government, Education, Students, Business Partners, Military
GEOGRAPHIES	160+ Countries
LAUNCH DATE	1984

Lenovo is a \$34 billion personal technology company and the world's largest PC vendor. A global Fortune 500 company. Lenovo has been the fastest growing major PC company for more than four years, but is much more than a PC company. Lenovo 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, Healthcare
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.



PLAYER DIRECTORY | ALL PLAYERS ARE LISTED IN ALPHABETICAL ORDER



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

LAUNCH DATE

2005

REVENUE

€1.5 Billion

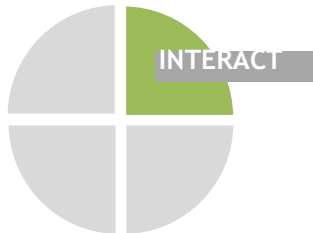
Morpho employs more than 8,400 people in 40 countries. Morpho is one of the leading suppliers of SIM cards, smart cards, trace detection equipment and gaming terminals. With integrated systems operating in more than 100 countries, Morpho's solutions simplify and secure the lives of people around the world.



PLAYER DIRECTORY | ALL PLAYERS ARE LISTED IN ALPHABETICAL ORDER

Nok Nok
LABS

NEW!



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.

NU Data Security



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.

NXP

NEW!



CUSTOMER FOCUS

Access Management, Aerospace and Defense, Automatic Fare Collection, Automotive, Computing, Consumer, Cybersecurity, eGovernment, Healthcare, Industrial, Lighting, Portable Devices

LAUNCH DATE

2006

NXP Semiconductors N.V. creates solutions that enable secure connections for a smarter world. Building on its expertise in high-performance mixed signal electronics, NXP is driving innovation in the areas of connected car, security, portable & wearable, and the Internet of Things.



PLAYER DIRECTORY | ALL PLAYERS ARE LISTED IN ALPHABETICAL ORDER



CUSTOMER FOCUS	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 is a world leader in digital security solutions for the mobility space. 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'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
CUSTOMER FOCUS	165 million active customer accounts

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



PLAYER DIRECTORY | ALL PLAYERS ARE LISTED IN ALPHABETICAL ORDER


NEW!


CUSTOMER FOCUS

Mobile, Automotive, Education, Healthcare, 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, Healthcare 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 succeed by solving their most complex and sensitive security challenges.



CUSTOMER FOCUS

Electronic Equipment, Consumer Electronics

GEOGRAPHIES

90 Countries

LAUNCH DATE

1938

For over 70 years, Samsung has been dedicated to making a better world through diverse businesses. Flagship company, Samsung Electronics, leads the global market in high-tech electronics manufacturing and digital media.



PLAYER DIRECTORY | ALL PLAYERS ARE LISTED IN ALPHABETICAL ORDER

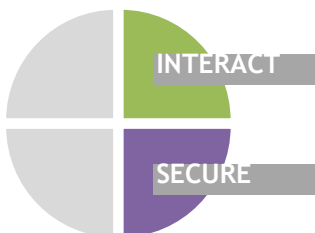
securityMETRICS®



CUSTOMER FOCUS	Financial, Commercial, Federal, Medical
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LAUNCH DATE	2000
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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 healthcare mandates through innovative security tools, caring customer support, and qualified expertise.

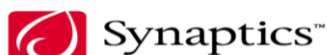


LAUNCH DATE	2012
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CUSTOMER FOCUS	Mobile Login & Payments
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KEY PRODUCTS	Branded Mobile Payments, Frictionless Payments, FonePrint Technology
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SEKUR 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	Technology (mobile, tablet, Notebook PC), Automobiles, Wearables
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GEOGRAPHIES	China, South Korea, Taiwan, the United States, Japan, and other countries.
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LAUNCH DATE	1986
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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.



PLAYER DIRECTORY | ALL PLAYERS ARE LISTED IN ALPHABETICAL ORDER

ThreatMetrix



CUSTOMER FOCUS

eCommerce, Financial Institutions and FFIEC, Enterprise, Insurance, Social Networks, Government, Healthcare

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.



NEW!



CUSTOMER FOCUS

Education, Payment Services, Healthcare, 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..



NEW!



KEY PRODUCTS

CDRN, Chargeback Representment Services, Intelligence Suite, Decline Salvage, Global Payment Gateway, CAMS

LAUNCH DATE

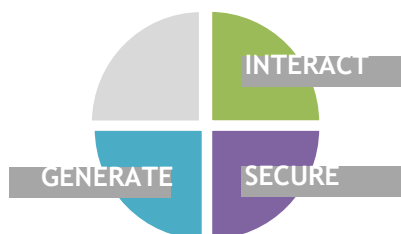
2005

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.



PLAYER DIRECTORY | ALL PLAYERS ARE LISTED IN ALPHABETICAL ORDER

VISA



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.

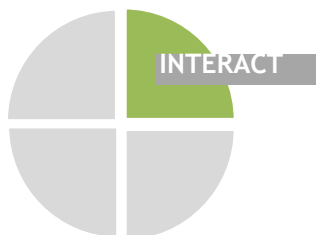
whitepages PRO

NEW!


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

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.

yubico

NEW!


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 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: www.oberthur.com.

ABOUT PYMNTS.COM

PYMNTS.com is reinventing the way in which companies in payments share relevant information about the initiatives that shape the future of payments and commerce and make news.

This powerful B2B platform is the #1 site for the payments and broader commerce ecosystem by traffic and the premier source of information about “what’s next” in payments. C-suite and VP level executives turn to it daily for these insights, making the PYMNTS.com audience the most valuable in the industry. It provides an interactive platform for companies to demonstrate thought leadership, popularize products and, most importantly, capture the mindshare of global decision-makers. PYMNTS.com where the best minds and best content meet on the Web to learn “What’s Next” in Payments and Commerce.



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