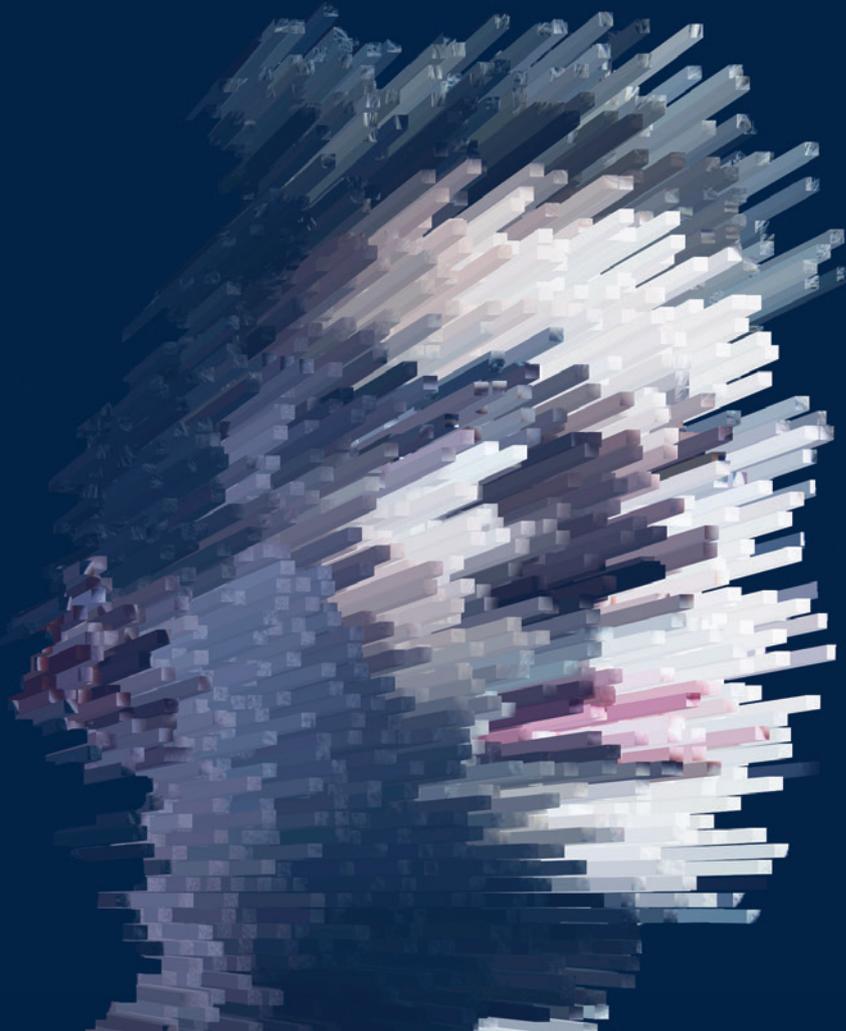


CONNECTED

T H E C E N T E R O F C O M M E R C E



THE FUTURE OF FRAUD

Using AI and Machine Learning to Catch the Bad Guys

PAGE 50

▶ **The Big Shift**
Commerce in the ever-changing new payments ecosystem

PAGE 34

▶ **The M-Word**
How Millennials are helping to reinvent the modern shopping experience

PAGE 28

▶ **Let's Get Personal**
How the number one trend in marketing translates to the payments industry

PAGE 66



How Do You Want to Grow?

Every idea, no matter how small, starts with a desire to innovate, to disrupt, to drive change. Turning an idea into reality often requires having partners with the scale, resources, people and technology to help you get where you want to be.

That's where First Data comes in, our solutions are designed to enable every client, whether they're a small business or a global brand, to thrive.

First Data[®]

Commerce for a Connected World.

FirstData.com



The New First Data.

We live in a world of connected commerce where businesses and financial institutions are finding new ways to engage with their customers like never before, and First Data is in the middle of it.

As behaviors change, and innovation transforms how people interact with technology and commerce, transactions are happening around the clock. If my son needs a new baseball, it's a good bet that our car will stay in the driveway rather than head to the sporting goods store. A few movements of my thumb can get a new baseball delivered to our house the next day.

It was just a few years ago that First Data was known to those who heard of us as simply a "payments processor." But our clients needed more from us, and we needed to innovate to grow.

The banks that rely on us to personalize their cards and print their cardholder statements needed us to power their loyalty programs and provide loan programs, among many other solutions.

The business owners who once used one of our simple point-of-sale systems on their counter to take card swipes now needed our state-of-the-art technology to help them manage their entire enterprise.

And, if an entrepreneur wanted to take payments on-the-go by swiping a card, dipping a chip-enabled card, or having a smartphone tap the device, they needed us for that, too.

In all of these cases, and many more, we have driven ourselves to innovate for them. After four years of transforming First Data, we are a stronger, faster, and better company for constantly listening to our clients. We are always working with them on "what's next," whether it's the connected car or the Internet of Things, and in our relentless pursuit of helping them get there, First Data's transformation continues.

We are on a journey with our clients, working together to meet the needs of their customers, this year and beyond. Over the course of my career, I have seen thousands of innovations change the nature of the financial services industry, but from where I sit inside First Data, I know there's much more to come.

In the pages that follow, you'll see some of those innovations come to life. And, in future issues of *Connected*, you'll read more of what's in store – and what's online, on our phones, and in our cars. I couldn't be more excited about launching this magazine for our clients and partners, or more excited about the future of commerce that our work together represents.

I hope you enjoy the magazine.

Regards,

Frank Bisignano
Chairman and CEO, First Data



14

INNOVATION TO COLLABORATION

Glenn Fodor explains how First Data is acting as the “Grand Collaborator” to help merchants excel in the new world of commerce.



20

IT'S ABOUT TIME

There are never enough hours in a day to get everything done – but thankfully today, there are smart solutions designed to help consumers capitalize on the clock.

28

THE M WORD

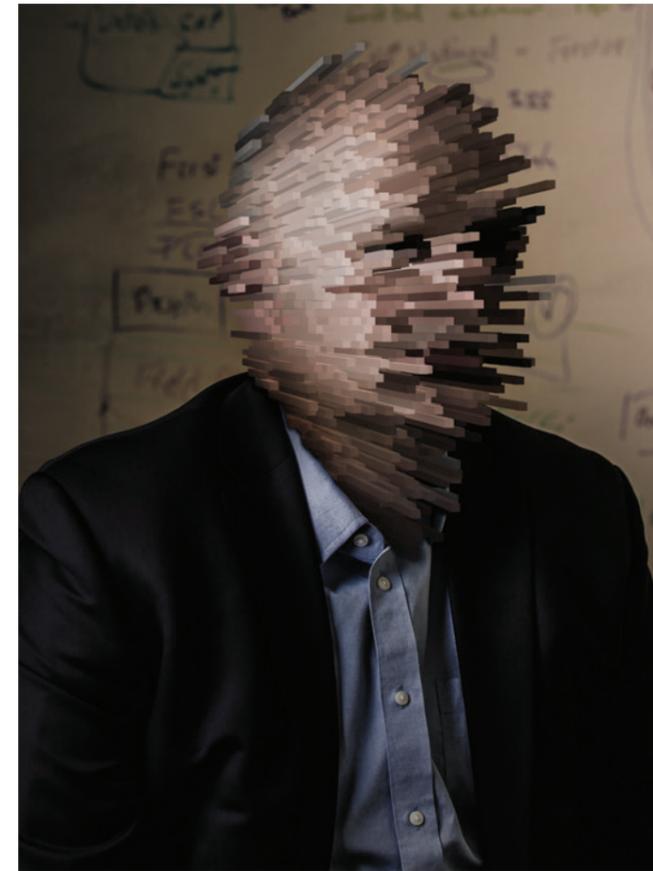
Either a brand meets the largest living generation inside their daily routine and on their smartphones, or they risk being dismissed for a more connected player.



34

THE BIG SHIFT

Renting, rather than owning, has grown into a full-blown economy, with consumers leveraging technology to get what they need without the burden of ownership.

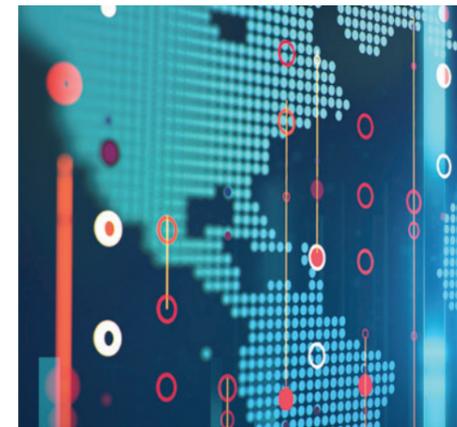


COVER

50

THE FUTURE OF FRAUD

Outsmarting fraudsters is an ongoing battle, but First Data is winning by using AI and machine learning to detect fraud almost before it happens.



62

WELCOME TO THE 1-CLICK WORLD

As soon as Amazon's patent on 1-Click payments expires this year, U.S. merchants are ready to make online shopping quicker, easier and more enjoyable.

- ▶ **12** First Data: By The Numbers
- ▶ **18** The Four Keys to Success
- ▶ **25** The Digital Jolt
- ▶ **26** Chicken of the Future
- ▶ **32** The Growth of the Gift Card
- ▶ **40** Case Study: The Power of the Piggy Bank
- ▶ **46** Enterprise: Profiting from Partnership

- ▶ **48** Going Global
- ▶ **55** What is the Deep and Dark Web?
- ▶ **56** Why Machine Learning Works
- ▶ **58** Where Can Debit Take Us?
- ▶ **66** Let's Get Personal
- ▶ **68** Champion of Diversity
- ▶ **72** Future Telling

Just as “no man is an island,” the success of a company does not stand on a single person.

This is especially true at First Data, where every employee is considered an “Owner-Associate”. This not only gives them a stake in the company, but it makes everyone accountable for company growth. Thankfully, the collective expertise of our team is what’s behind our ability to innovate and deliver solutions that help drive the new world of connected commerce.



Basil Abifaker

SVP, Head of Gift Solutions Product

Basil’s role encompasses all of Closed Loop gift card assets, including the ValueLink stored value processing platform, the Gyft consumer-branded applications and the Transaction Wireless digital distribution platform. His entrepreneurial vision is helping lead the transformation of Gift Solutions from its transactional processing roots to its expansion into new digital distribution and marketing models.



Cindy Armine-Klein

EVP, Global Chief Control Officer

In her role, Cindy is responsible for overseeing Compliance, Credit Risk, Audit, Third Party Oversight, and Privacy for the company. She also leads the LGBT program as part of First Data UNITY, which is focused on insuring inclusion and diversity in the workplace.



Frank Bisignano

Chairman and CEO

Since joining the company in 2013, Frank has rapidly transformed the 40+ year old company from its position as the world’s largest traditional payment processor to a technology solutions innovator, bringing an array of new products and services designed to help millions of merchants and financial institutions – large and small – grow their business.



Amy Chan

Manager, Head of First Data Walmart Marketing

Amy serves as a marketing lead for Money Network and oversees the partnership with Walmart. She is responsible for budget, development and execution of marketing campaigns to drive acquisition and cardholder communication.



Chris Cox

VP, Head of Digital Banking

Chris leads First Data’s digital banking business and has over 20 years of experience in financial services, payments, mobile commerce, product innovation and technology strategy.



Brian DuCharme

VP, Head of STAR Network Product & Innovation

Brian leads the product organization for STAR, the largest independent debit network. His focus is on overseeing the development of innovative features that make electronic payments safer, faster and more economical for all participants while delighting end users.



Barbara Else

VP, Head of EMV® & Plastics

A 24-year veteran of First Data, Barbara has held a series of senior product development roles, across multiple business areas. Currently responsible for client strategy, Barbara is involved with card security and personalization advancements, and most recently has worked with clients on EMV card issuance.



Shane Fitzpatrick

SVP, Global Head of eCommerce

Based in Dublin, Shane is a prominent eCommerce industry expert and a highly regarded leader with over 25 years experience. Prior to joining First Data, Shane served as Chairman of the Board, President and Managing Director at Chase Paymentech Europe Limited, a JP Morgan Chase firm. He has also held a number of board and senior management positions with AOL-Time Warner and the Aer Lingus Group.



Glenn Fodor

SVP, Head of Corporate Strategy & Intelligence

Glenn’s primary role is to monitor industry trends and map First Data’s strategic direction in order to capture new growth opportunities. Previously, he was a partner at Autonomous Research, a firm focusing on the financial and payment technology industries. He has also held equity analyst roles at Morgan Stanley, UBS and JP Morgan, and has worked in retail payment strategy at Chase. In 2012, Glenn was named one of Institutional Investor’s “Up-and-Coming” analysts.



Chris Foskett

EVP, Global Head of Corporate & Business Development

Chris’ responsibilities include defining priorities and aligning strategies that drive corporate growth and increase shareholder value. He reports directly to the Chairman and CEO and is a member of First Data’s Management Committee.



Ajay Guru

VP, Head of Merchant Fraud Solutions

An expert in risk management and eCommerce fraud/risk, Ajay is responsible for building innovative fraud detection and prevention solutions and services that provide industry-leading security to First Data’s merchant community.



Edward “EJ” Jackson

SVP, Head of Integrated Solutions Group (ISG)

Edward heads up the ISG, a new group created to deepen engagements with independent software vendors (ISVs), value-added resellers (VARs), software developers, system integrators and other market participants to expand the company’s commerce capabilities globally. His focus is on collaborating with these partners to leverage their agility, combined with the distribution, scale and innovation of First Data to deliver best-in-class solutions to the marketplace.



Marianne Johnson

SVP, Global Head of Product & Innovation

Marianne’s belief in strong leadership, efficient processes and consistent teamwork has contributed to the company’s impressive transformation. Her responsibilities at First Data include overseeing new product development, leading customer implementation teams and supporting existing systems.



Kenlyn Klamper

Director, Security & Fraud Solutions Intelligence Production

Kenlyn is a cybersecurity and communications specialist with a decade of experience in both the federal and commercial sectors. She works in First Data’s NYC offices, where she focuses on global cybersecurity.



Krista Lee

Director, Gift Solutions Marketing

Krista heads up the marketing efforts for three of the industry’s leading Closed Loop brands — ValueLink, the Gyft consumer app and Transaction Wireless. She has 10+ years of Fintech marketing experience and specializes in developing strategic marketing solutions for prepaid cards in retail and online.



Scott Mackay

VP, Digital Commerce Solutions

Scott’s focus is on directing the development of digital commerce solutions, targeting innovations that meld the traditional components of financial services and payments with emerging mobile, marketing and web-enabled technologies. He also manages the commercialization and sales processes necessary to bring these new solutions to market.



Barry McCarthy

EVP, Head of Network & Security Solutions

A 12-year veteran of First Data, Barry is known for his ability to deliver results and turn around businesses. He currently oversees the \$1.6 billion Network and Security Solutions business unit, which includes Gyft and Gift Solutions, TeleCheck, Money Network, and the STAR Network, as well as all network, debit, ACH/check, fraud, security, secure digital distribution, online and mobile banking, and government solutions.



Dale McCrory

VP, Digital Commerce & Innovation

Dale has over 17 years experience driving innovation in commerce, loyalty and marketing technologies for global retailers, financial institutions and digital advertisers. She currently leads a global digital commerce product team that has delivered mobile applications for clients such as ExxonMobil, Chick-fil-A, Tim Hortons and McDonald’s with remote ordering, payments, loyalty and promotional capabilities.



Charles McGinnis

Director, TeleCheck® Product

Charles is the product owner for CONNECTPAY™, First Data’s next generation ACH on File solution, and he has over 18 years of check and ACH experience in the product and risk management fields.



Dom Morea

SVP, Head of Gift Solutions

Currently, Dom oversees First Data’s Prepaid Closed Loop product suite, including ValueLink, Gyft and Transaction Wireless. He was formerly First Data’s SVP, Business Development, where he was responsible for the creation and growth of enterprise-level transformational mobile commerce and loyalty solutions initiatives and he headed First Data’s Innovation Lab & User Experience team.



Peter O’Halloran

VP, Global eCommerce Product

Peter is responsible for First Data’s eCommerce strategy and the commercialization of the eCommerce value proposition throughout Europe, the Middle East and Africa. This includes partnership formations, top-line eCommerce revenue growth through existing First Data sales channels, and increasing the addressable market through product innovation and client acquisition.



Steven Petrevski

SVP, Head of Security & Fraud Solutions

Steve is responsible for supporting the needs of over 1,000 financial institutions and over one million merchants, from local businesses to the world’s largest retailers. He oversees First Data’s comprehensive portfolio of fraud products, which encompasses authorization platforms, analytics services, and alerting and next-generation fraud tools that utilize the latest developments across machine learning and analytics.



Dean Vance

Director, Plastics Product

Dean Vance is the Plastics Product Owner and has been with First Data for over 15 years. He has responsibility for product innovation, product enhancements and strategy.



Dan Weber

Director, Security & Fraud Solutions Product

An expert in project and process management, Dan’s focus is on working with merchants and financial institutions to ensure the company is delivering data security and fraud detection/prevention solutions that fit changing needs.



Charles Williams

VP, TeleCheck® Product

Charles has over 20 years of experience in product and technology involving check and ACH solutions. In his current position, he is leading the transformation of TeleCheck solutions to fit future commerce trends.

GUEST CONTRIBUTORS



Dr. Pedro Bizarro

Co-founder and Chief Science Officer, Feedzai

Pedro is a researcher-turned-entrepreneur. After a 10-year research career (Computer Science Ph.D. at the University of Madison - Wisconsin, Fulbright Fellow, Marie Curie Fellow and winner of the BES Innovation National Competition), Pedro was a founding member of Feedzai, and now leads the research team in developing the best fraud prevention algorithms and tools.



Roy Nallapeta

Commerce Solutions consultant, Head of Product Marketing at Reimu Commerce & Beveel

Roy is an experienced analyst, programmer and project lead with extensive expertise in designing and building eCommerce platforms, as well as in developing and executing strategic go-to-market campaigns. He currently creates business plans for technology-driven startups, providing guidance through organizational setup as well as initial marketing, sales and partner development.



Marina Hodges

Director of Treasury Operations, Walmart

Marina Hodges directs strategy and development for Walmart's global closed loop programs, finding innovative ways to use the Walmart gift card to create multi-channel experiences while ensuring compliance and efficiency. She also manages the paycard program which provides a debit card with rich features and free access to pay for all Walmart Associates.



Karen Robinovitz

Co-founder, Chief Creative Officer, Digital Brand Architects

A former journalist and on-air TV personality, Karen has consulted for brands including Estee Lauder, Coach and Tiffany & Co. She began focusing on digital and content strategy long before the term "social media" became ingrained in culture. She has been listed by Forbes as one of the top 20 best branded women on Twitter, and in 2016 she was named one of Variety magazine's 80 Women of Power. She currently heads up Digital Brand Architects, a boutique agency that juxtaposes digital communications and curation marketing with talent management of online influencers.



Ben Jackson

Director, Mercator Advisory Group, Prepaid Advisory Services

Ben has advised financial institutions on launching prepaid programs, helped retailers evaluate closed-loop strategies, and worked with third-party processors and program managers on all aspects of their programs. He has also been instrumental in producing Mercator Advisory Group's annual prepaid industry benchmarks that document the size and shape of the overall prepaid market.



G. Gallus Domesticus, Ph.D.

Bak Bagaak Bak-Bak, Baaaagak Bak Bak Bagaak

Bakakak-bagaaaak, bak bak bak bagak. Bak-bagak. Buk buk buk buk brrr-Bakakak-bagaaaak, bak bak bak bagak. Buk buk buk buk brrr-awk, buk bak bragawk bak bak bawk bagaaaak.



Cynthia Kounaris

Chief Strategy Officer, FitForCommerce, an Omni-channel and Digital Consultancy

Leveraging her Wall Street, retail and eCommerce experience, Cynthia provides strategic direction and senior management for FitForCommerce; she also sources top talent both internally for the team and for clients. In addition, she heads up organizational development for key company initiatives.

Make It Count

Which came first, the chicken or the egg? Easy. It was the egg – Google it.

But, when we first developed the concept for **Connected**, there was a lot of talk about chickens. Of course, this makes sense: Chick-fil-A is an important First Data client. So, inevitably, there are several references to – and images of – chickens in this magazine. **And we thought, why not have some fun with this, and create a contest?**

Here's how it works – as you're reading, look for chickens (and yes, we've gotten a little sneaky and hidden a few) and keep count of how many you find. Then, send us an email by **June 30, 2017** to connected@firstdata.com with your guess of the total number of chickens. We'll gather all the correct answers and randomly select

Five winners to receive a \$200 Gyft digital gift card.

Happy counting!

Count Your Chickens

GAME

First Data.

CONNECTED

THE CENTER OF COMMERCE

Executive Editor
Mia Shernoff

Editor-in-Chief
Euphemia Erikson

Executive Design Director
Jamie Kasman

Executive Creative Director
Christopher Sanna

Senior Art Director
Greg Gatlin

Deputy Editor
Anita J. Finkelstein

Managing Editor
Brad Rhoads

Associate Editor
Hally Sheldon

Graphic Designers & Illustrators
Jason Abbott, Brandhi Asadi, Don Jolley, Willie Ryan

Integrated Marketing Manager
Jamieson Cox

Editorial Business Manager
Lexi Koutrelakos

Senior Copy Editors
Francine Bronstein, Amy Chan, Krista Lee, Julie Lyons, Jaime Mercer, Jean Park, Kirsten Reed, Melanie Skotarski

Contributing Writers
Stephanie Gilman, Robyn Ware

Contributing Photographers
Jamieson Cox, Tom Fahey, Joe Vericker

Special Thanks
John Blevin, Amy Carlson, Kelly Coughlin, Michelle Douglas, David French, Marina Hodges, Marianne Johnson, Josh King, Jenny Lambert, Barry McCarthy, Sean McNeece, Mark Murphy, Rick Stone, Dave Tomlinson, Laura Valdespino

Connect with First Data
 FirstData.com

First-Data-Corporation

@FirstData

Connected Magazine is a publication of the First Data Corporation, 5565 Glenridge Connector NE, Atlanta, GA 30342.

Reproduction of any part of the publication is strictly prohibited without prior consent from the publisher. ©2017 First Data Corporation. All Rights Reserved. The First Data® name, logo and related trademarks and service marks are owned by First Data Corporation and are registered or used in the U.S. and many foreign countries. The Clover® name and logo are trademarks owned by Clover Network, Inc., a wholly owned subsidiary of First Data Corporation, and registered or used in the U.S. and many foreign countries. All trademarks, service marks and trade names referenced in this material are the property of their respective owners. See Sources for additional trademark information.

Printed in Atlanta, Georgia U.S.A.



Connected was produced in cooperation with Atomic Wash, a branding and marketing agency. AtomicWash.com

First Data®

BY THE NUMB3RS

Being a global leader in payment technology and service solutions means ensuring secure, seamless transactions for everyone involved in the commerce ecosystem — from consumers to merchants and financial institutions. First Data's systems and solutions enable payments every day, regardless of where, when or how the transaction is being made. To truly understand what a daunting task that is, let's talk scale.



U.S.

42% of card transactions in the U.S. are processed by First Data

1.9 TRILLION Total dollar value of acquired global payment volume in 2016, equivalent to over 10% of the U.S. gross domestic product (GDP)

22 Number of general purpose card issuers in the U.S. using First Data to process transactions, along with five of the top U.S. private label card issuers

45 Companies in the Top 50 Fortune 500 are First Data clients

LATAM

300 MILLION Total revenue in U.S. dollars

32 Countries that use First Data services

7 Countries that use First Data processing operations

APAC

241 MILLION Total revenue in U.S. dollars

>50% Credit card share in Australia, India, Hong Kong, Singapore, Thailand, including 150M cards on the VisionPLUS platform

17 Countries that use First Data services

250,000 POS terminals

8 Countries that use First Data processing operations

EMEA

1 BILLION Total revenue in U.S. dollars

66 Countries that use First Data services

20 Countries that use First Data processing operations

#1
MERCHANT
ACQUIRER

#1
ISSUER
PROCESSOR

GLOBAL

88 BILLION

Transactions processed each year, about 2,800 transactions every second

2.2 TRILLION

Dollar amount processed each year

16 BILLION

Signature transactions processed annually



4,000

Financial institutions in worldwide that are First Data clients

6 MILLION

Business locations

100+

Countries that use First Data

17.9 BILLION

Transactions secured annually

24,000 +

Number of Owner-Associates working for First Data

ADD IT UP

Of course you don't become a global leader just by processing payments. The solutions First Data delivers touch every aspect of commerce, from gift cards, loyalty programs and mobile apps, to personal checks, payroll and more. Every day, all day long, consumers use First Data solutions to help them accomplish their daily tasks quickly and easily.

5 MILLION

Number of people who downloaded the Chick-fil-A One™ App within the first month of its June 2016 launch.

[LEARN MORE ON PAGE 26](#)

2.1 BILLION

Dollars that consumers loaded onto their Starbucks Cards in the first quarter of 2017 to make it easy to order, pay and get rewarded.¹

[LEARN MORE ON PAGE 25](#)

3.4 BILLION

Number of Gift Solutions, digital and plastic gift cards, transactions recognizing over 350 national brands and thousands of midsize and small businesses in 52 countries.

[LEARN MORE ON PAGE 32](#)

110 MILLION

Consumer debit cards on the STAR Network, linking to over 3,500 financial institutions.

[LEARN MORE ON PAGE 58](#)

150+

Number of fraud risk triggers Fraud Detect analyzes to determine the fraud risk score for every transaction.

\$18 BILLION

Total dollar amount of payroll funds delivered annually by Money Network, the #1 payroll provider in the marketplace.

[LEARN MORE ON PAGE 40](#)

32 BILLION

Total dollar amount of guaranteed payments made to merchants in 2015 from the 500 million checks processed by TeleCheck.

[LEARN MORE ON PAGE 20](#)

1 SECOND

Amount of time it took to sell 20,000 gift cards, which racked up \$2 million in sales during an online "Flash Store," managed by First Data's Gift Solutions.

[LEARN MORE ON PAGE 28](#)



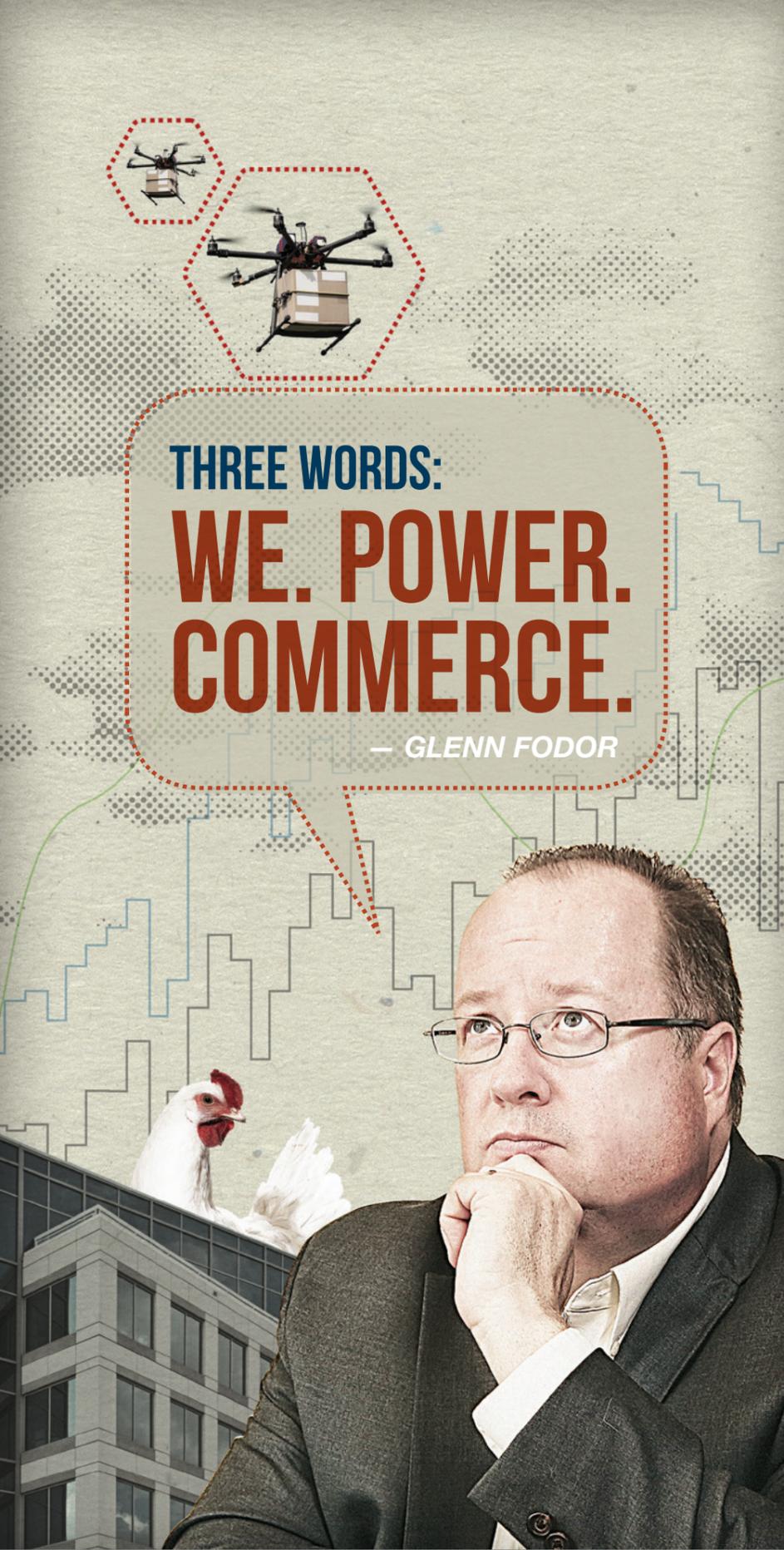
Industry Overview

INNOVATION TO COLLABORATION

First Data's Glenn Fodor welcomes you to the new world of commerce.

He's been expecting you.

BRAD RHOADS + ANITA J. FINKELSTEIN JOE VERICKER CHRISTOPHER SANNA



THREE WORDS:

WE. POWER. COMMERCE.

— GLENN FODOR

When the idea for *Connected* magazine was born over a year ago, commerce was (and continues to be) undergoing a significant period of change. Consumers were interacting with merchants in new ways and merchants increasingly realized they could no longer operate in a “siloe” environment. In this new world, merchants needed to reach consumers wherever they were, whether it be social media, mobile, online, or in-store, and give them a seamless experience that felt less like shopping, and more like a lifestyle choice.

Welcome to the new world of commerce. Coined *Universal Commerce* or *uCom* in 2012, it’s integrated, personalized, quick, secure and smart. In many ways First Data has become the flagbearer for this new type of commerce. First Data dove in early, creating platforms for industry leaders like Chick-fil-A® and ExxonMobil® to speed the delivery of their products to eager customers, and do it seamlessly, in ways that didn’t disrupt their increasingly mobile lifestyles.

First Data understood that the complexities of this new vein of commerce meant it wasn’t enough to simply have a presence on mobile platforms – a new app wasn’t enough – businesses needed a complete engagement strategy. First Data works closely with its clients and partners to take a macro approach, solving many issues at once, and creating uniquely tailored experiences for each buyer, through customization.

Glenn Fodor, First Data’s SVP, and Head of Corporate Strategy & Intelligence, has one of the most interesting mandates: provide insight and direction that drives the creation of unique client solutions that are scalable, strategic, and most importantly – secure.

When *Connected* sat down to interview Fodor, we started by asking what innovation looks like at the world’s largest payment processor. “Well, let’s start right there,” Fodor smiled.

“”

We haven’t considered ourselves merely a ‘payment processor’ for a few years. We’re the largest merchant acquirer, issuer processor, and independent network services provider in the world. And all this can be summed up in three words. We. Power. Commerce.

Fodor isn’t the only executive at First Data drawing this distinction. The dozens of people we spoke with all seemed hyper-focused on the new First Data and on further transforming the commerce landscape they helped create. The changes started, simply enough, within their own company, which evolved from a hidden-from-view payments processor to a global player that’s innovating all sorts of payment solutions.

That new thinking bleeds over into how First Data approaches its global partnerships. It’s open to any solution and structure that makes good business sense. “That’s our M.O.,” Fodor says. “As our leadership has stated, we’re the Grand Collaborator of our industry. We are willing to work with everybody. We will build it where we have an advantage in building it, partner where we don’t, or acquire it where we think we can scale.”

And this is another theme that runs deep at First Data – because it already has unmatched global reach, it can connect companies with partners anywhere in the world.

First Data’s *uCom* solution is a prime example of how the company collaborates with partners, and is what enables it to power omni-channel commerce for some of the largest merchants in the world. From major card networks, digital wallet providers and loyalty program providers, to gift card issuers, private label card issuers, point-of-sale equipment providers, and third party developers, First Data has relationships with the full commerce ecosystem. *uCom* seamlessly links services in real-time to deliver a frictionless shopping experience to consumers, from any channel the consumer chooses – mobile, online, in-store, at the pump, or in their car, from any connected device.

First Data understands that today’s shoppers expect to be courted without being interrupted. Merchants are turning to First Data to help them generate loyalty programs like a leading global coffee chain’s highly-successful Rewards program, which triggers customized real-time messages to nearby customers. Other solutions, like online gift cards, and even conversational commerce are bridging the gap between what the shopper wants, and what the merchant can deliver. “The industry is changing fast,” Fodor says. “There are a lot of different technologies taking hold. Not all of them are going to succeed. Commerce has not only become more complex, it’s also going global as well, creating the need for technology partners with capabilities to match.” Of course, for all their branching out into the broader world of global commerce, companies are continuously concerned with security and fraud protection. And that, in a way, brings us full-circle, back

to First Data’s roots, and its greatest strength. “Those needs require a special company,” Fodor says. “First Data brings a scale that’s unmatched, we have best-in-class security features and technologies, and we have, hands-down, the widest, broadest, deepest product set.”

We still wanted to know though, just who does First Data consider its competition? Fodor remains true to the company’s nomenclature as the Grand Collaborator and the spirit of partnering with those willing to work together to advance commerce.

“The advice I’d give any business right now is to be open to innovation and collaboration – you can’t think narrowly anymore – the right strategy, the perfect solution, may involve a partnership with someone you never thought about before, or perhaps even considered to be your competitor in the past.”



In This Article:

#FirstData
#uCom
#ConnectedCommerce
#FrictionlessCommerce

KEYS TO SUCCESS
IN THE WORLD
OF CONNECTED
GLOBAL COMMERCE

Ask any customer-facing business owner or corporate CEO and they'll tell you there's no single path to success.

Here, in no particular order, are what First Data believes to be the four most important issues businesses need to focus on today, in order to not only ensure your success tomorrow, but well into the future.

ONE: LOYALTY

Consumers have more choices than ever. You have to constantly give them reasons to choose you – whether that means delivering incentives, rewards, superior products or customer service – or a combination of many things.

TWO: MOBILITY

It's pretty simple. Be where your customers are, or cease to be. It's not enough to just have a mobile-friendly website and social media presence, your strategy has to include mobile purchasing and payment solutions.

THREE: SECURITY

The world of connected commerce has opened new fraud opportunities. It's scary for consumers and challenging for merchants. The risks are too great for merchants to not invest in security solutions that protect their data and prevent fraud.

FOUR: GLOBALIZATION

You don't have to be a global business to conduct commerce like a global business. Commerce has no boundaries anymore – consumers can find you no matter how small you are. You have the ability to turn them into customers.

A recent social media survey asked,

What are some things Millennials will never experience?"

"What are some things Millennials will never experience?" The answers ranged from "replacing a diamond stylus on a turntable," to "buying a Disney® eTicket." And one response, almost certainly written by a nostalgic banker, read, "People rushing to the bank before it closed on Friday."

By the early 1980s, drive-through banks had been around for a half-century. But when ATMs came into widespread use in the early 1990s, everything changed, from the way we used banks to the way we thought about cash. For those lucky enough to have missed the transition, it's hard to overemphasize how truly breathtaking it was — suddenly

being able to access your cash from anywhere in the world, at any time.

Today's younger consumers are far more immersed in technology than those of us who remember the first ATMs. For Millennials, even the most high-tech advances have ceased to be breathtaking. They're simply tools to save money and time. Brand loyalty means less than, "Who's got the best app?"

Of course, the best of both worlds is saving time and money. But more and more, research shows that if there needs to be a trade-off, people are willing to spend more to save time.

Last year, researchers Hal E. Hershfield, Cassie Mogilner Holmes, and Uri Barnea conducted a study for the Social Psychological and Personality Science Journal, posing a question to more than 4,000 diverse Americans of varying ages, "Which leads to greater happiness — money or time?" Their findings showed that choosing time over money was associated with greater happiness.¹

One only has to look at the popularity of Amazon Prime® for proof that consumers don't mind paying a little more if it saves them time. Uber, UberEATS and a plethora of new "copycat" companies were also born of the idea that consumers want what they want, and they want it immediately. Whether it's a ride, a dog walker, a house painter or a package delivery — people are willing to spend more for convenience.

This shift in priorities from saving money to saving time has changed the ways businesses approach developing and delivering technology solutions. Over the past five years, First Data has invested in digital banking, mobile payment apps, and even pay-by-car technology. Now, it's introducing new products to merchants and financial institutions that deliver "time-savings" across the board.

Launched in December 2016, Digital Banking Reimagined is an online and mobile banking solution for financial institutions designed specifically for the way consumers want to bank today. Chris Cox, First Data's Head of Digital Banking and Vice President of Mobile Payments, says his team dedicated 15 months talking to consumers, and they used what they learned to reinvent the banking experience. "In addition to deeply understanding the needs of our financial institution clients, we realized we needed to talk to their customers to understand exactly what they needed."

Cox points out that because more people are using their phones to do their banking it was important to design a visual, user-friendly experience that could provide fast access to the most important functions and a quick overview of their finances. "The time element was key. Consumers told us they wanted to be able to do everything — from depositing checks and transferring funds, to paying bills and analyzing spending — in 15 minutes or less, so we considered that at every stage of development."

The time element was key. Consumers told us they wanted to be able to do everything — from depositing checks and transferring funds, to paying bills and analyzing spending in 15 minutes or less.

Chris Cox, Head of Digital Banking and Vice President of Mobile Payments

The result is a powerful tool with features that address the mobility needs of consumers today. "It really delivers a new experience — one that's engaging and cohesive, with innovative tools that put users in full control of their finances — and, most importantly, can fit in their pocket," says Cox.

On the heels of the Digital Banking Reimagined launch, First Data made significant enhancements to ConnectPay™, a mobile solution designed to make the payment process faster and easier, connecting merchants to their customers' ACH bank account information. Created and managed by TeleCheck®, ConnectPay enables merchants to safely store their customers' bank account information, with First Data securing the customers' information. As Charles Williams, First Data VP of Product explains, "Consumers are already comfortable storing their credit card information with retailers, so we thought we

should give them the option of paying directly from their bank accounts and keeping that information on record for further use."

Williams says the true value of ConnectPay is its flexibility. The solution is designed to work across all channels. Whether a customer is making the purchase in a store, at the pump, online or on a mobile app, ConnectPay simply accesses the information through a loyalty card, a keychain fob, an app or even

the customer's phone number, and processes the payment. "It's a win-win for merchants and customers. Customers' checkouts are faster, which makes them happy, and because ACH is less expensive to process, the merchant can offer rewards to customers who use ConnectPay, which builds loyalty."

First Data is also rethinking other technology to save time. The company is working with clients to deliver a range of Universal Commerce solutions specifically designed to enable consumers to pay wherever they are, however they want, and to do it easily and quickly. Scott Mackay, First Data's VP of Digital Commerce Solutions, outlines the vision. "The industry today looks at omni-channel commerce as the ability to pay at the POS, online or via a mobile phone, but we look at it more broadly than that. We look at the consumer interaction throughout the entire commerce experience and contextually enable



It's a win-win for Merchants and Customers when the Checkout is Faster



the 'correct services' at the 'correct point in time.' The payments, the service, the interaction — everything is consistent, and the consumers never have to pull out their wallet or swipe a card — that's what our uCom solutions deliver."

First Data's uCom journey began with pilot programs and launches of mobile apps from major players such as ExxonMobil®, Taco Bell®, Chick-fil-A® and McDonald's. Though branded for the merchant, First Data is responsible for the payment infrastructure behind each brand's apps. When the Chick-fil-A One™ app launched and was downloaded more than a million times in just three days, it was up to First Data to handle the volume of "skip the line" customer transactions that immediately poured in. "All of these apps are designed to get customers what they want, faster," explains Mackay.

Beyond apps that enable ordering, payment processing and rewards tracking, First Data is most excited about the work it is doing to link together First Data Marketplace clients across multiple verticals (automotive, QSR, petroleum and convenience stores, and banks) together to launch new-to-world commerce solutions. An example of this is what First Data is doing to integrate these vertical clients with a major car manufacturer, to bring the "connected car" to consumers. Today's connected car is part of the exploding Internet of Things (IoT) that authenticates drivers by the technology built into their cars. That way, customers don't even need a phone when they go through a drive-thru. "We're bringing a lot of other services to original equipment manufacturer (OEM) companies to include paying online, paying via mobile, delivering recommendations and offers based on geolocators,

getting repairs done, even interacting with the dealership; the automotive side isn't just the connected car, it's the full ecosystem of it," says Mackay.

"The things we're bringing to market are innovative and exciting, but more importantly, they're really delivering the convenience, optionality and flexibility consumers are demanding today. When you look at the brands that are exploding right now — consumers are making it pretty clear that if a merchant delivers a fast solution, there is a greater chance of developing loyal, happy customers." ▼

In This Article:

#FirstData
#ConnectPay
#DigitalBankingReimagined
#ACH

THE DIGITAL JOLT

The App Revolutionizing Customer Loyalty

As much as coffee is part of our morning routine, it is also ingrained in our culture. It impacts the way we interact as human beings — or don't interact at all, at least until we've had our coffee. In today's world, the same thing can be said about technology: It's become an integral part of our lives and our world. For most of us, our phones are the first thing we reach for when we wake up, and they keep us going all day long.

So, the idea of building technology around coffee makes sense — particularly mobile technology, as people are constantly on the go. And, who better than Starbucks®, a pioneer in the coffee industry, to lead us in the direction of integrating our "cup of joe" with our mobile phones?

Every year, since launching its loyalty program and mobile payment program, Starbucks has introduced new technology-enabled capabilities that better meet the needs of consumers. "They're driving the direction all merchants are going with mobile payments, loyalty and consumer engagement," says Basil Abifaker, SVP, Head of Gift Solutions Product at First Data.

Today, more and more of the chain's customers rely on the Starbucks app for their daily coffee fix. So much so, according to Starbucks president and CEO Kevin Johnson, that mobile payments increased to 20 percent of total transactions in the first quarter of 2017.¹ Not only that, but its gift card program is thriving, with a \$2.1 billion surge in new gift card purchases and reloads in the first quarter, both digitally and online. "Those numbers are a reflection of the strength of our brand, as well as the power of our digital [innovation]," Johnson said.

Scott Maw, Starbucks EVP and CFO, said at a recent conference that the company's latest innovation increases interaction with consumers by pushing personalized real-time messages through the mobile app.²

Abifaker explained, "The rich data behind every account number provides Starbucks with valuable information about who their customers are, where they're located and how often they interact with their gift cards. So, it is allowing them to convert traditional stored-value programs into marketing opportunities."

And, according to Starbucks, these new one-to-one real-time messages are proving to accelerate spend per card member. At the same time, they're also helping to increase customer loyalty and build brand awareness. In fact, Adam Brotman, Starbucks EVP, Global Retail Operations, recently predicted on an earnings call that the company's mobile app will soon account for more than half of all transactions in its U.S. stores.³ Just more proof that merging coffee and mobile was one of the company's best decisions. ▼

STEPHANIE GILMAN GREG GATLIN





CHICKEN OF THE FUTURE

**How the
Chick-fil-A One™ App
is speeding up the
fast food experience**

 STEPHANIE GILMAN

 CHRISTOPHER SANNA

If Chick-fil-A's biggest struggle is keeping up with the constant drive-thru line wrapped around the building, it must be doing something right – or at least, serving up a good chicken sandwich.

According to *QSR Magazine*, Chick-fil-A® entices more chicken sandwich customers than any other fast-food chain, with average sales per restaurant in 2015 of \$3.9 million. By comparison, in the same year, sales at its biggest fast-food chicken competitor were about a quarter of that.

To manage this high volume of sales, the chain had to find innovative ways to handle the daily influx of people. For starters, some locations started to send their customer service team outside to take face-to-face orders during busy periods. They also added more drive-thru lanes. But what the chain really needed was a scalable solution that could make the ordering and transaction process as seamless as possible. Enter First Data,

which developed an entire strategy built around Universal Commerce (uCom), and brought it to Chick-fil-A in the form of a mobile app.

According to Dale McCrory, VP, Digital Commerce Innovation at First Data, “Chick-fil-A wasn’t worried about getting new customers. Its issue wasn’t even that the kitchen couldn’t keep up with orders – it was that its point-of-sale system could not keep up.” She explains that First Data’s Innovation Lab used a design-thinking approach to solve the problem. “[We] created a mobile app that ultimately became a new point-of-sale, allowing customers to pre-order the food and even pay within the phone app. From there, they could skip the line entirely and pick up their food [at] curbside.”

Of course, that app, Chick-fil-A One, has famously risen to No. 1 in the Apple App Store® and has been downloaded more than eight million times since it launched in June 2016.¹ Chick-fil-A is just one company

“ ”

We created a mobile app that ultimately became a new point of sale, allowing customers to pre-order the food and even pay within the phone app. From there, they could skip the line entirely and pick up their food at curbside.

Dale McCrory
VP, Digital Commerce Innovation

First Data is helping to develop next-generation commerce solutions. As more customers go mobile, other quick-service restaurants are following suit, each for its own unique reasons.

McCrory explains, “We hope to lead merchants and consumers in this uCom

space and bring value to both. Next-generation commerce today means creating mobile apps at the merchant location. Most people still haven’t connected the digital with the brick-and-mortar, or physical location. First Data is working to connect these. It’s not just around an eCommerce transaction; uCom allows the consumer to interact digitally and then interact physically within that very same transaction.”

For Chick-fil-A, that means a better customer experience for every transaction – and undoubtedly, an even more enjoyable chicken sandwich. ▾

In This Article:

#ChickfilA
#uCom
#FrictionlessCommerce
#ConnectedCommerce



HOW THE MOST
CONNECTED,
CONVENIENCE-
CONSESSED
OBSESSED
GENERATION IS
GENERATION
IN HISTORY
REINVENTING
REIN SHOPPING
THE EXPERIENCE.

THIRTY YEARS AGO, TWO RESEARCHERS, WILLIAM STRAUSS AND NEIL HOWE, COINED THE TERM

MILLENNIALS.

They were describing the generation of children set to graduate high school around the new millennium. Today, this group is dominating American culture, changing the workforce and causing retailers to rethink decades of once-proven practices.

Millennials represent a significant population – 75 million in the United States alone, according to the Pew Research Center and the U.S. Census Bureau. Just last year, they surpassed Baby Boomers and Gen-Xers as America’s largest living generation. By 2020, it is expected that they’ll make up nearly half of the U.S. workforce.

By sheer size alone, Millennials can’t help but shake things up a bit. That’s why virtually every industry segment, and particularly the retail world, is scrambling to define them, understand them, and, most importantly, meet their expectations. If there’s anything that has become resoundingly clear, it’s that for Millennials, convenience and connectivity reign supreme. Either a brand integrates into their daily routine via their smartphones, or the brand risks being dismissed for a more connected player.

It’s essential to recognize that Millennials have never known a world without technology. It’s not that they don’t value in-person interaction; many just don’t see the point in showing up for something unless their physical presence is

absolutely required. They are, in corporate-speak, “maximizing their ROI” to achieve desired results from the least amount of time and energy.

As Jim Cramer, host of “Mad Money” on CNBC, explained in a recent newscast, “Retail isn’t dead — Millennials are changing the game. They’ve demonstrated they are not traditional shoppers. Cell phones are their own personal mall, and we know from Facebook and Amazon it is where they do their shopping.”

Meeting in the Middle
Regardless of the product they’re selling, retailers have no choice but to adopt new strategies and solutions that connect to Millennials. Establishing eCommerce capabilities and building an online presence will only get them so far. It’s also important for retailers to understand that Millennials prefer experiences over products. Broadly speaking, the more fun a retailer’s marketing is, the more reach it will have among Millennials. In fact, in a recent report published by The Intelligence Group, one-third of Millennials say they have more fun browsing for items than buying them¹. And, according to the report, when they do decide to make a purchase, 84 percent say that user-generated content has an influence on what they buy.

“They use their mobile devices for everything — it’s only natural that they would turn to social media outlets to help them make shopping decisions. The more a brand delivers engaging photos and videos and connects with the right influencers, the better it will connect with Millennials,” explains Karen Robinovitz, co-founder of Digital Brand Architects, an agency that matches influencers to brands.

Dom Morea, SVP, Head of Gift Solutions at First Data, explains, “It’s the retailers’ job to figure out how to connect with these customers in fun ways that benefit them without disrupting their lifestyle.”

First Data at the Forefront of the Millennial-Merchant Connection
The fact that Millennials are driving the popularity of digital gift card sales is no surprise to Morea. “This is a group that grew up getting gift cards as gifts, and a lot of them don’t have (and don’t want) credit cards. As a result, First Data put the purchasing power exactly where Millennials want it – on their phones.”

Morea challenges his team to innovate gift card marketing solutions that help merchants deliver fun experiences in ways that also drive sales. For example, Gyft®, First Data’s consumer-facing app that allows users to buy, send, redeem and manage gift cards right from their mobile device, now has a feature that enables users to attach a video, picture or message to any gift card they send. “This is just the kind of interaction that makes Gyft so popular with Millennials and helps increase digital gift card sales.”

Basil Abifaker, SVP, Head of Gift Solutions Product, also points to Cheesecake Factory’s popular “Tweet-A-Slice” app as another great example of what works with Millennials. Using First Data’s Gift Solutions platform, customers can tweet each other slices of cheesecake delivered via a digital gift card. The restaurant’s marketing team also uses the app — tweeting free slices to Twitter users who mention the company in a positive way. Gift Solutions’ newest offering, the Flash

Store, allows merchants to create highly customizable, promotional gift card campaigns, and is also designed to fill the desire for an experience. The first Flash Store launched was designed to enable a fast, casual restaurant to promote sales of a single product via an “All You Can Eat” gift card. A limited number of cards were made available, and a specific time was set for the store to open. When the cards sold out, the Flash Store closed. It was a hugely successful promotion, which is why Gift Solutions is now introducing the program to additional merchants. Abifaker believes it is a perfect fit for the Millennial audience. “It’s mobile-focused, gift-card driven, has a ‘limited time offer’ approach — and delivers that insider exclusivity Millennials are looking for.”

BY 2020, THEY’LL MAKE UP NEARLY HALF OF THE U.S. WORKFORCE

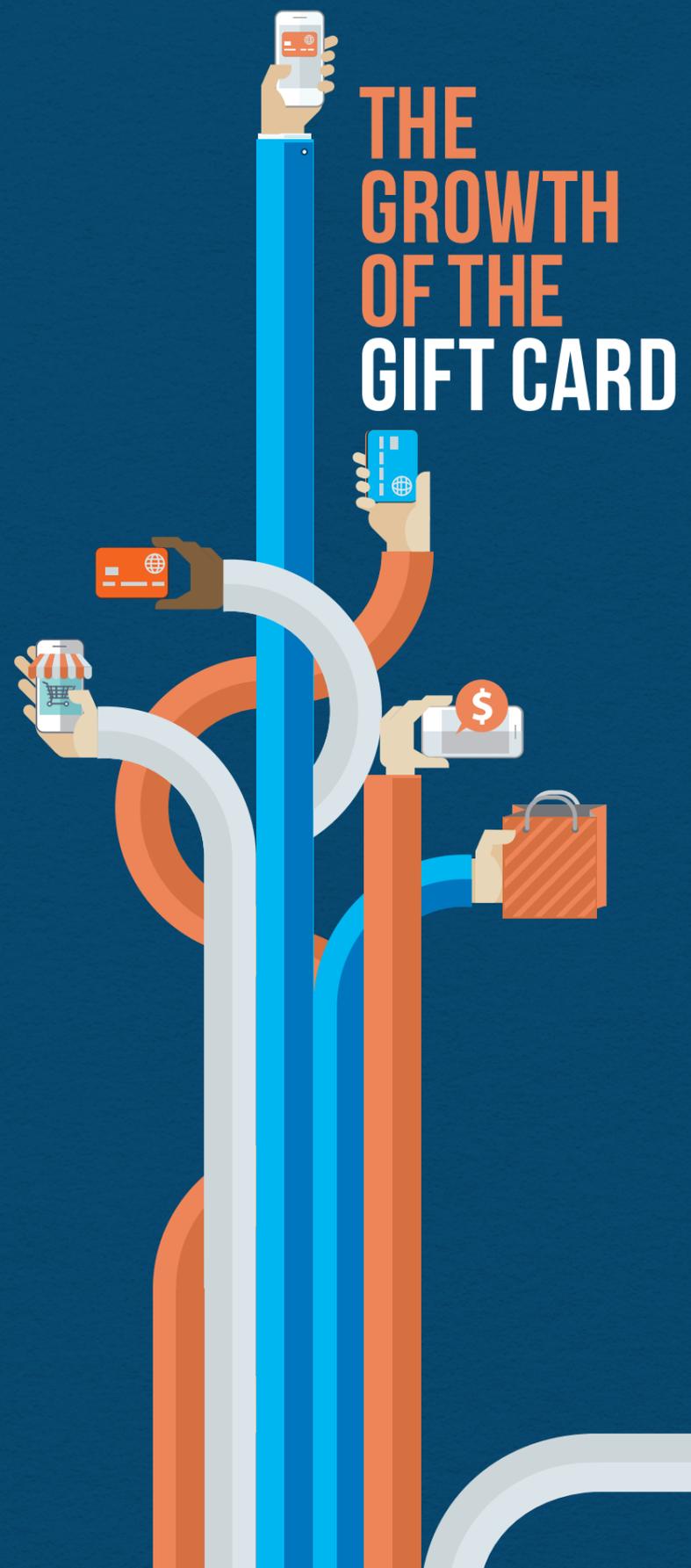
The Future of Millennial Marketing
As the largest living segment of the population, there’s no denying the influence Millennials have, and will continue to have, on the economy and on the way commerce is conducted. However, “retailers have always had to respond to the wants and needs of different generations,” says Digital Brand Architect’s Robinovitz. “It’s always been about figuring out who their biggest audience is, crafting messages that will appeal to them, and putting it out on the right communication channel. Today, the channels of engagement are just different.”

As new technologies continue to emerge, it is essential for retailers to explore every opportunity to position their brands exactly where Millennials will find them — right where convenience and connectivity intersect. ▽

In This Article:

- #tweetaslice
- #CheesecakeFactory
- #GYFTapp
- #GiftSolutions





THE GROWTH OF THE GIFT CARD

The gift card as we know it is now transforming into something bigger.

Make no mistake, the gifting of physical cards is as strong as ever. But today, more buyers are adopting digital cards, embracing the convenience of mobile apps, purchasing gift cards — especially reloadable ones — for themselves, and using them as a new form of currency.

Since 2010, gift card sales have steadily increased at a rate of about 5 to 6 percent per year, and their growing popularity has left many retail professionals with more questions than answers. Who's buying our gift cards? Are they buying plastic cards or digital cards? How are they using them? And... maybe most important, what's driving their popularity and how do I capitalize on it?

To answer these questions and others, First Data conducted a Consumer Insights Study in 2016, in which 3,650 consumers across all age groups were surveyed about their habits and preferences regarding the use of gift cards.

GIFT CARD HIGHLIGHTS

13%	Purchasing cards for personal use has grown by 13% for digital cards and 9% for physical cards since 2015.
50%	Half of consumers said they like the idea of storing gift card information on an app, like First Data's Cyft.
\$28	75% of respondents said they spend on average \$28 more than the amount on the card, a 6% increase from the previous year.
35%	Over a third of consumers are interested in being able to automatically reload their gift card online or through an app.

Perhaps the most noteworthy finding of the study, however, is that three distinct groups of gift card purchasers emerged — each one purchasing and spending very differently, and in ways that can largely be predicted by their age group.

The Socializers (ages 18-34)

As expected, Millennials are the early adopters. They were first to embrace the concept of digital gift cards, both giving and receiving them. They love good value, expect convenience and appreciate that a gift card helps control their spending.

The MTV Generation (ages 35-54)

This group is most likely to purchase a gift card for personal use, usually when a retailer is offering loyalty points or discounts. They're the most skeptical, and spend the most time researching brands before making a purchase, but are the most brand-loyal when they finally decide on a purchase.

The Maturists (age 55+)

While these senior shoppers are the biggest purchasers of physical gift cards, they're the most cautious and least likely to purchase digital gift cards. What's also interesting is that — although they primarily buy gift cards for others — when they make a purchase with a gift card, they are the most likely to overspend.

So how does all this information help a merchant?

Well, it's clear from the study that of these three groups, one buys the most, one spends the most, and one leads the way in self-purchasing. "Having this knowledge gives a tremendous advantage to merchants looking to increase the value of their gift card programs," says Krista Lee, Marketing Director for First Data's Gift Solutions. "Instead of trying to engage all audiences by using the same approach, they can consider customizing marketing that appeals to each individual group, which ultimately will increase engagement and be more effective."

Read more findings from First Data's 2016 Prepaid Consumer Insights Study at: https://www.firstdata.com/en_us/all-features/consumer-insights.html

THE BIG



**CONNECTING
COMMERCE
IN THE NEW
SHARING
ECONOMY**



a particularly hilarious episode of the TV comedy “Parks and Recreation,” relentless, yet often failed entrepreneur Tom Haverford (played by Aziz Ansari) presented his latest venture to co-workers:

“Are you tired of watching your middle-school age children grow out of the nice clothes you buy for them? Then rent them! From Rent-A-Swag. I own it. You rent it. You wear it. You clean it. You return it. I get rich.”¹

Of all Tom’s ideas, this one seemed to stick the longest, his brick-and-mortar location receiving ample foot traffic. Renting clothes for your kids? It might sound unlikely, but in the real world, concepts like Tom’s are popping up worldwide at incredible speed and are experiencing great success. Cars, bridesmaids’ dresses, formal wear of all kinds, baby gear, furniture and travel/lodging are just a few items consumers can now rent instead of buy — turning the idea of consumers forming noncommittal relationships with “things” — into a full-blown economy. Appropriately coined the “Sharing Economy,” this shift from full ownership to simple access, still only in its infancy, has already made a huge impact on the global economy. PricewaterhouseCoopers, which valued the global sharing economy at about \$15 billion in 2014, predicts the industry will grow to \$335 billion by 2025.¹

What’s clear already is that this movement, which enables consumers to make short-term purchases of everything but the kitchen sink (though that’s probably coming), is changing the way people think about material goods.

Products are now being considered for their utility and immediate value rather than for how much they sparkle (but sit stagnant) in the corner of the room or closet. As Jennifer Hyman, CEO of Rent the Runway, explained recently on a “Recode Decode” podcast, the world we used to live in accepted that everything we purchased we owned for the rest of our lives, but that’s an outdated concept. “All that Rent the Runway has really done is opened up the technology and logistics to make it possible to have the customer decide how long she needs an article of clothing for,” pointing out that 50 percent of the clothes in a woman’s closet are things she’s only worn two or three times. “Rental is a substitution for that 50 percent at a much lower price, so either they save that money or use it on other things, like paying for school or food or other things that are important.”

Of course, this new “sharing” mentality requires a different perspective on payments. “There are unique issues that you don’t have with typical ‘buy it, own it’ transactions,” says Scott Mackay, Vice President of Digital Commerce Solutions at First Data. From a larger merchant standpoint, with ride-share companies like Uber and Lyft or home-share companies like VRBO and Airbnb, the focus is on building payment solutions that work on a “follow-me” system, tracking consumers as they move from one shared area to another. He notes that this is where the Universal Commerce concept, or uCom, comes into play. uCom encompasses multiple types of payments, as well as multiple merchants and interfaces, and works to bring them into alignment — making the consumer experience as frictionless as possible.

“It’s a consumer’s world, and we’re trying to take limitations away from the consumer and create optionality,” Mackay explains. “It’s about letting them pay with their bank account via ACH, PayPal®, Visa®, MasterCard®, Amex®, Discover®, Apple Pay®, Samsung Pay®, whatever they want, with one device. This drives merchants to offer loyalty discounting to the consumer, to create desired consumer behavior. With analytics, and understanding what,



how, when and why the consumers are doing things, merchants can serve them in a better way. Ultimately, the consumer reaps the rewards.”

ConnectPay™, developed by TeleCheck®, is part of the uCom ecosystem and enables merchants to set up recurring payments directly out of a customer’s bank account via ACH. Creating this option was important, says Charles McGinnis, First Data Director, TeleCheck Product, who helped develop the product. “Almost every sharing-based app out there requires consumers to put their payment information on file. With ConnectPay, they don’t have to have a credit card or debit card anymore to do that. It offers a fast, easy way to link to their bank account.”

He adds that ConnectPay also helps support the “trust” element that’s so important to the success of these new business models. “While consumers, whether they’re the ones renting or sharing, are getting used to inputting more information in order to enjoy the benefits of sharing, managing the security of that data can be a huge burden to merchants. ConnectPay has the power of First Data on the back end to safely store and protect the data.”

The growing success of the sharing economy is even driving major corporations like Ford to tap into

It’s about letting them pay with their ACH bank account, PayPal, Visa, MasterCard, Amex, Discover, ApplePay, SamsungPay, whatever they want, with one device.

SCOTT MACKAY
FIRST DATA
VP, DIGITAL COMMERCE SOLUTIONS



We have to create super simple transaction processes, or people won't use them.

Scott Mackay
FIRST DATA - Vice President of Digital Commerce Solutions

the opportunities it offers. The car manufacturer recently acquired Chariot, an Uber®-like van service. This created the need to expand its “connected car” strategy to incorporate “consumer in motion” engagement, not only connecting consumers when they are in their vehicle, but facilitating the process of getting them from point A to point B.

Marianne Johnson, Global Head of Product and Innovation at First Data, explains that her team is helping to do that. “[Ford] is still focused on further developing the connected car, but it’s bigger than that now. From the connected car, we’re looking at solutions to help consumers transition to a transit authority where they take a bus to the city, then grab a bike share, and after that, they need to utilize a service like Chariot.”

She says that when First Data met with Ford, it quickly became apparent they were the perfect partner. “As a global company, Ford wanted to take the experience beyond just the U.S. “We are the only platform with the scale and the partnerships to do that for them.

Our payment technologies will facilitate whatever the consumers are using their connected car for, regardless of where the car is or what currency is being used.”

What may be most interesting about the sharing economy is that it is turning everyday consumers — the ones who are sharing their homes, bikes and cars — into instant micro-sized merchants. And this new merchant, Mackay is quick to point out, is just as important to First Data as its biggest customers. “We now have to explore solutions that can work more on an individual consumer level. We have to create super simple transaction processes or people won’t use them.”

Mackay added that he believes the trend will continue moving down market to individuals as they begin their own microbusinesses. “This new sharing economy is creating entirely new business models, and payments can be very complex — there are individual payments, split payments and international payments to consider, along with a host of unique scenarios. We’re innovating.”

Sidebar



The Library of the Future

The shift to a sharing economy is not only being adopted across a wide range of industries, it’s also being explored within communities. Cities like London, Sacramento and Berlin, along with smaller towns like Hillsboro, Oregon, and Reading, Massachusetts, have all established a “Library of Things,” where members purchase items together — from lawn mowers and sewing machines to bounce houses and boats — and arrange for them to be checked out on loan through the local library.

Of course, this movement is spinning off new businesses like myTurn.com, which provides a platform that helps people create their own lending systems. Gene Homicki, the co-founder and CEO, explained in a blog recently that: “The most successful Libraries of Things do more than just lend items; they also create a strong sense of community.” His vision with myTurn is to take the movement one step further by linking libraries together on the same platform. “We’re helping build a future in which anywhere you live, anywhere you work and anywhere you travel, you’ll be able to access what you want and need at a Library of Things in our network.”

In This Article:

- #ConnectPay
- #Internetofthings
- #ACH
- #ConnectedCar
- #SharingEconomy

Reach.
Reward.
Recognize.
Incentivize.
Brand.

Gift cards are the perfect way to connect with consumers, employees, and B2B partners.

First Data’s Gift Solutions can help you create, build and manage a complete gift card program.

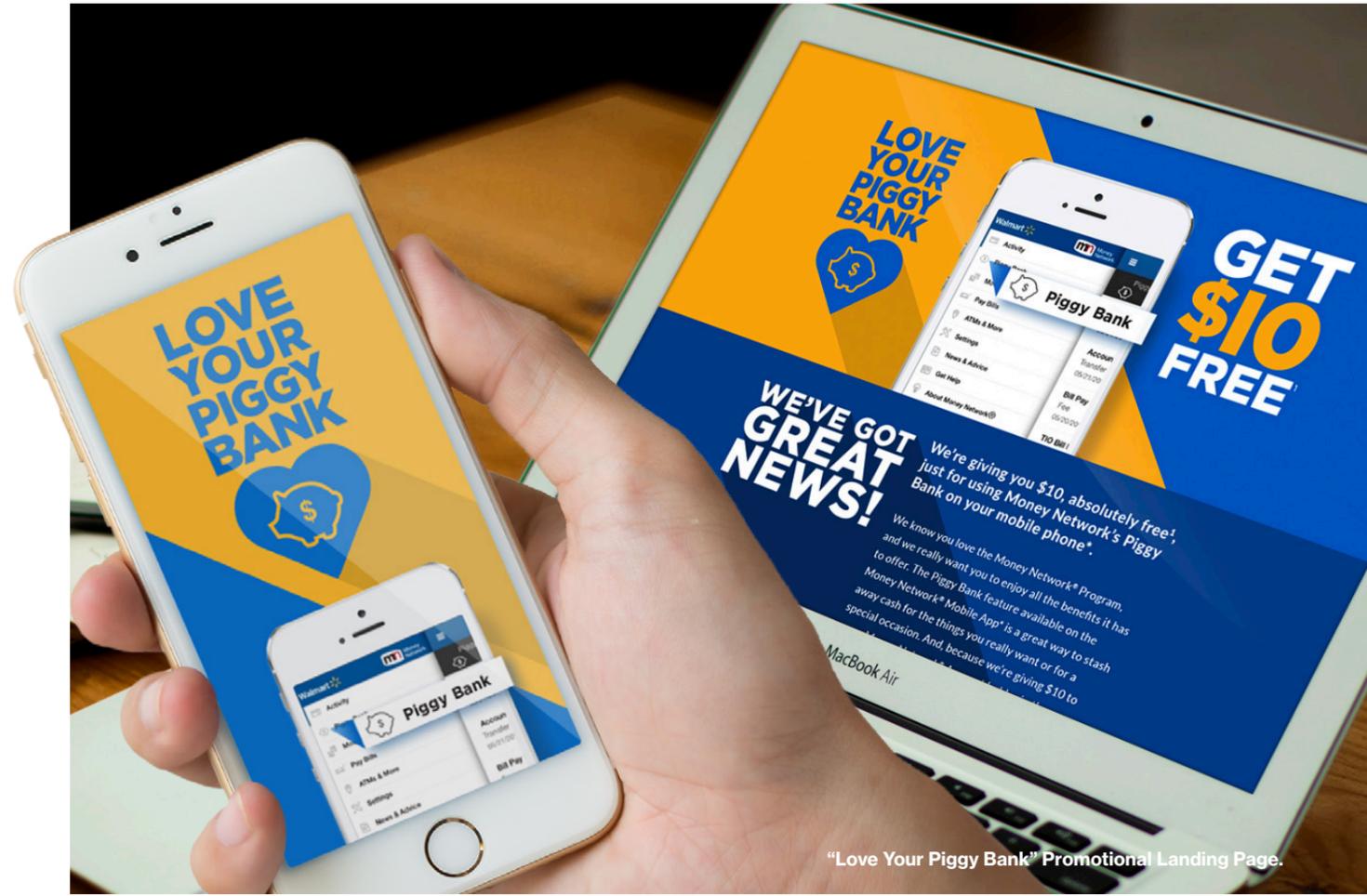
To learn more, contact us at giftsolutions@firstdata.com



THE POWER OF THE PIGGY BANK

HOW A PARTNERSHIP, A PROMOTIONAL CAMPAIGN, AND A PIG JOINED FORCES TO ENGAGE WALMART ASSOCIATES AND EDUCATE THEM ABOUT SAVING MONEY.

ANITA J. FINKELSTEIN GREG GATLIN + JASON ABBOTT



"Love Your Piggy Bank" Promotional Landing Page.

What does it take to engage a massive number of employees and inspire them to save? Well, for Walmart, it took a \$10 offer, a multichannel marketing campaign led by First Data's Money Network®, and a little pink pig. Together, the team successfully reached 350,000 Walmart associates and got more than 75,000 of them to "Love Your Piggy Bank."

The whole initiative can be traced back to 2009. At the time, Walmart had 1.4 million U.S. employees. About half of them didn't use direct deposit. The company was also using an extra 250,000 pounds of paper each year on checks and trying to move toward a greener footprint. With payroll costs growing, Walmart turned to First Data for an answer, and found First Data's Money Network Service.

Money Network includes an FDIC-insured financial account where an employer directly deposits weekly pay to employees. Employees can access the funds in their account by using an optional Money Network Debit Card or Money Network Checks™. They can also use the Money Network mobile app to check their balance, pay bills and transfer funds. When associates sign up, they get an EXCEED Card and Money Network Checks to access available funds in their account. Walmart feels the program will make life easier for its associates and have a positive influence on society, from a sustainability standpoint.¹

Amy Chan, Manager, Head of Walmart Marketing, says that, while the service offers benefits for all employees, such as no overdraft

IT'S VERY IMPORTANT TO US THAT WE BRING OUR ASSOCIATES THE LATEST AND GREATEST ENHANCEMENTS.

Marina Hodges
Walmart | Director of Treasury Operations

charges, free checks and the ability to use the Money Network Debit Card without incurring a fee, it is especially valuable to those without checking accounts. "With Money Network, they don't have to wait for a paper check, and wait in line and pay fees to get it cashed, or pay for money orders for their bills. It can make their lives easier."

Walmart's position of having associates that don't take advantage of electronic pay isn't unique to the largest private employer in the United States. It has a presence in small

towns where there are few banking options. It also has many teenage and young adult associates entering the workforce who don't yet have access to traditional bank accounts. In such situations, many often turn to payday loan stores that advance them money and then charge interest of up to 400 percent APR when the checks are cashed.²

It is important to Walmart that their associates are aware of good financial practices and understand that payday loan vendors aren't always the best option. So, Walmart



“Love Your Piggy Bank” Promotional Facebook Campaign

decided to take the money it saved on payroll costs and invest in a financial education program. Walmart wanted to highlight the value of saving money to its associates. For that, it turned again to First Data’s Money Network and the little pink pig.

The Money Network “Love Your Piggy Bank” promotion offered associates a \$10 bonus for trying the Piggy Bank feature on their Money Network app. It was a simple proposition for the associates, set up a Piggy Bank with any amount of money, leave it there and get your cash. As Marina Hodges, Director of Treasury Operations for Walmart, explained, the vision was to show associates how easy it was to start saving, and to partner with them on that journey. She says that timing the launch right before the holidays was intentional. “We know at that time of year, the idea of saving is top of mind for our associates, so we wanted to help them take that first step and reward them for doing it, really let them know we’re there with them, and we’ll do what we can to help them save.”

The theme “Love Your Piggy Bank” was only the start. The final campaign included three different direct mail

“”

THE “LOVE YOUR PIGGY BANK” FACEBOOK PAGE WAS A BIG WIN – WE LEARNED THAT OUR ASSOCIATES ARE EAGER TO SHARE THEIR STORIES AND THEY SHARED A LOT!

Marina Hodges Walmart | Director of Treasury Operations

pieces, each targeted at a specific audience, a series of email blasts, intranet advertising banners, a promotional T-shirt giveaway and an aggressive Facebook promotion that included a “Love Your Piggy Bank” fan page. All the materials incorporated a call to action that drove the associates to an online landing page where they were led through the setup steps.

Hodges says it was important to show associates that changing financial habits, while hard, can also be easy and fun. “The ‘Love Your Piggy Bank’ Facebook page was the biggest win — we learned that Walmart associates are eager to share their stories, and they shared a lot! Giving them a way to feel good about saving with their fellow associates really made a difference.”

Over the course of a month, the page gained more than 150 Walmart associate fans each day. They “liked”

the page’s posts more than 5,800 times, shared more than 320 posts and made more than 1,270 comments. Chan says that one of the most popular things the page did was to give away “Love Your Piggy Bank” T-shirts as prizes for answering trivia questions. Chan laughs: “Associates were asking if they were going to be sold in stores, and when they could buy one.”

At the end of the campaign, Money Network deposited \$750,000 into participating associate accounts. The campaign was so successful that the team is already rolling out a host of other initiatives designed to promote the new EXCEED Card and recruit new Walmart associates to sign up for Money Network — with a \$10 bonus for associates who participate.

Hodges says Walmart was impressed with the promotion the Money Network team brought to them.



“Their team always executes initiatives in a way that is unique to our program. They spend the time to fully understand the key objectives we are trying to accomplish, versus handing us a cookie-cutter program from a menu of options.”

And Money Network continuously improves as it grows. “It’s very important to us that we bring our associates the latest and greatest enhancements,” Hodges says. “We hear from our associates how they want to be able to save and budget their money. That means we must keep improving, staying up with the latest trends and features. Launching the Piggy Bank in 2015 was a great success for us, because we were able to deliver on their No. 1 ask of us.”

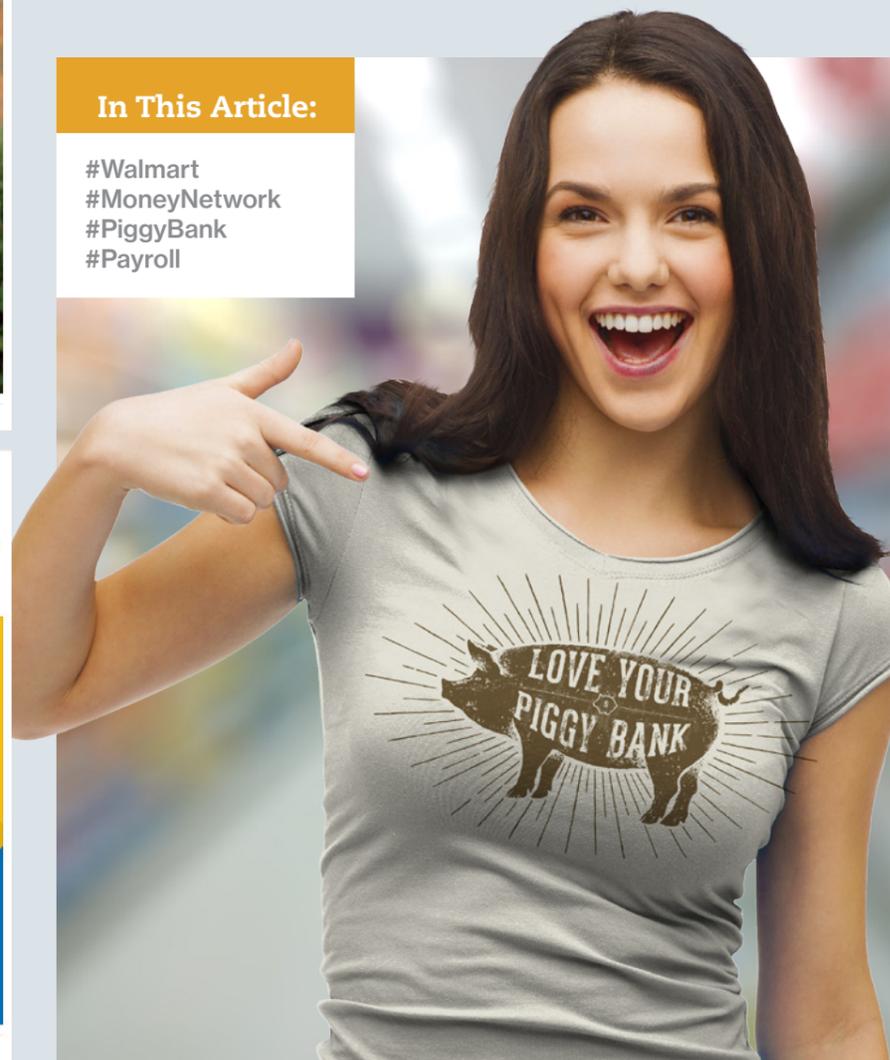
Hodges says it is all part of Walmart’s dedication to providing its associates with best-in-class programs. She points

out that Money Network is just one of the First Data solutions that her company uses to support operations. “First Data is a great partner for us for many reasons. Obviously, being able to handle our scale is necessary; the ability to execute across our businesses, at our size, without missing a beat is something not everyone can do. And they do it with programs and services that support our philosophy of *Save money. Live better.* They understand what we are trying to do — and they bring products and services that support us across the globe.”

Pay Awards named First Data 2017’s “Best Marketing Campaign” for Money Network “Love Your Piggy Bank”.

In This Article:

- #Walmart
- #MoneyNetwork
- #PiggyBank
- #Payroll



Love Your Piggy Bank T-Shirts



Money Matters.

Helping people get the most out of their hard-earned pay...that's Money Network®!

Money Network is thankful to have been selected for the 2017 Outstanding Pay Solution Award. Convenient, secure and cost effective, Money Network is helping companies, like Walmart, save money, while providing their employees solutions that can improve their financial lives.

Contact us to learn how Money Network can work for your business.



moneynetwork.com/learnmore

© 2017 Money Network Financial, LLC. All Rights Reserved. All trademarks, service marks, and trade names referenced in this material are the property of their respective owners.



PROFITING FROM PARTNERSHIP

Why the power of partnership matters.

NO ONE COMPANY CAN DO IT ALL.

Even the largest and most sophisticated organizations rely on partners to add value and provide expertise. Whether it's a law firm or a technology services company, an IT vendor or an architecture firm, all companies benefit when they bring in experts.

First Data works with companies around the world to help power commerce for clients and their end users. "We're in the middle of building new commerce solutions every day, innovating and providing our clients with the ability to keep up with the pace of change," says Christopher Foskett, Executive Vice President and Head of Corporate and Business Development. "We help our clients by providing them with the latest technology and services they need to stay ahead in today's business environment."

As businesses look to grow or provide new experiences for their customers, First Data helps provide the insight and solutions to make it possible. Foskett points to First Data's analytics platform, which can be customized for large clients wanting to expand into new geographic areas, as an example of a unique solution that differentiates the company. "We process approximately 40% of credit card transactions in the U.S., and we have more than 800 million cards on our credit issuing platforms. We have massive amounts of data that we can analyze to find pockets of opportunity for our clients that they wouldn't have access to otherwise."

Foskett says partnerships are the key to empowering clients to create a holistic, tailored strategy. "When they look at the broad base of First Data products and services, they should think about them as if they owned them themselves. And if they did, how would they want to use them? Then First Data will help execute on that."

The importance of partnership goes both ways. First Data, which believes in being "The Grand Collaborator," recognizes the value of partners. The company recently launched its Integrated Solutions Group that is focused on expanding relationships with independent software vendors and value-added resellers to make it easier for developers to integrate with its platforms.

In This Article:

- #FirstData
- #Clover
- #MoneyNetwork
- #FraudDetect

“”

We help our clients by providing them with the latest technology and services they need to stay ahead in today's business environment.

Chris Foskett,
EVP and Head of Corporate & Business Development

Earlier this year, First Data teamed up with Bypass to create an integrated solution with Clover point-of-sale devices and Bypass's back-office management tools to expand into sports and entertainment venues. The partnership is helping stadiums across the country, including the Seattle Seahawks' CenturyLink Field, to create a better fan experience with shorter lines and secure and flexible payment options. Clover, which has traditionally been thought of as a small business solution, is scaling into larger merchant locations and more verticals with collaboration.

The power of partnership and finding the right partner is critical to a company's success. As businesses evaluate the assets that a partner brings to the table, they need to think about not only the assets available, but also the value the other party places partnerships. ▾

GOING GLOBAL



EXPLORING THE BRAVE NEW WORLD OF GLOBAL ECOMMERCE

Less than a decade ago, when the first smartphones hit the market, global online retail sales were approximately \$236 billion. By next year, that number is projected to reach \$2.5 trillion, and the main driver behind that growth is going to be global connectivity.

Using a device cradled in the palm of their hands, people interact instantly over social media from anywhere in the world. It follows that they are looking for their financial transactions to be just as seamless. Shane Fitzpatrick, Global Head of eCommerce at First Data, spends the majority of his time thinking of ways to help merchants enhance the consumer experience. “The merchants don’t want to frustrate customers by requiring them to tap in multiple digits and characters on a mobile app while using public transport. Such experiences drive cart abandonment. The businesses want to sell and go. It has to be quick and easy.”

Today, approximately two billion people are connecting over social media¹ and more than three billion people are connected to the internet.² As a result, dozens of social media sites are

now offering direct payment services. Fitzpatrick says that trend is prompting vendors to rethink their business models.

“”
Digital connectivity is a way of life, so when we think of eCommerce and the opportunities, we have to think of those macro digital trends.

Consumers are using mobile wallets to store credit card information and connect to services like Apple Pay[®] and Alipay[®], and they’re adding charges to their wireless bill through vendors like Zong and Boku. Companies like PayPal are offering short-term transactional financing. All of these options are great for the consumer, but they can become real obstacles for businesses hoping to expand.

“Many of our prospective clients are dealing with a portfolio of partners, solutions and complexities — for them, this labyrinth is way too confusing and difficult to navigate,” Fitzpatrick explains. First Data’s mission is to declutter the marketplace by using what Fitzpatrick calls the “power of one.” “We’re giving merchants the ability to simplify their business models by using us as their single-source solution to connect to a full range of markets and payment methods globally.”

With clients in more than 100+ countries and operations in 37 countries, First Data offers an unbeatable global footprint. As Fitzpatrick points out, “Our solutions are infinitely scalable, using a common code base for all business units.”

The market potential is so promising that First Data recently realigned its own business model to better serve clients. Previously, global eCommerce solutions were handled by local units. Now, Fitzpatrick runs a new division that concentrates exclusively on preparing First Data’s merchants for the world market.

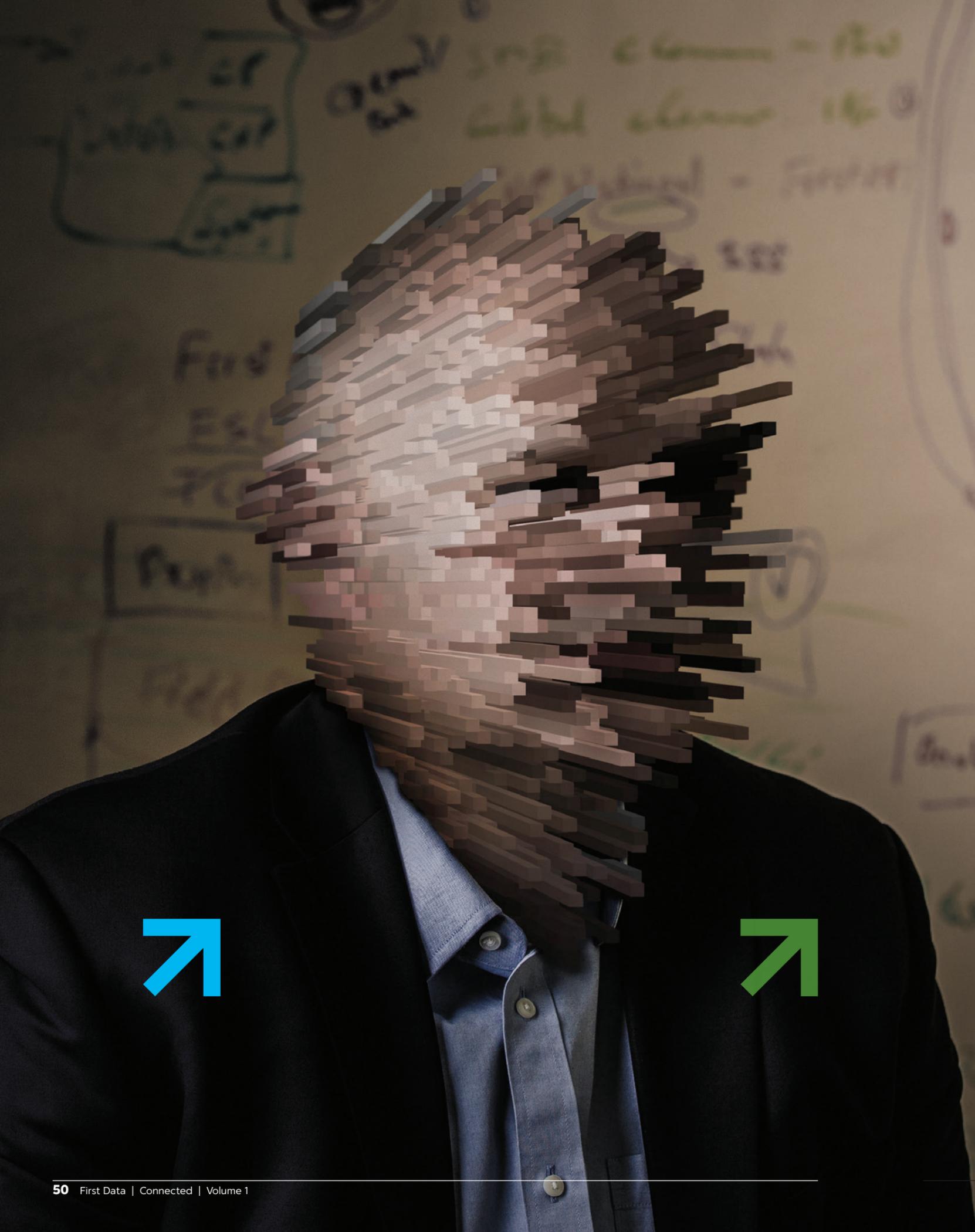
“It’s not just about knowing our own customers; it’s about understanding our customers’ customers. It’s about asking ourselves what we can do each day to continuously delight our clients. With the tools we have, our global reach and our experience, we really are preferred for powering global commerce.” ▼

“”
It’s not just about knowing our own customers; it’s about understanding our customers’ customers.

Shane Fitzpatrick
First Data
Global Head of eCommerce

In This Article:

#ApplePay #SamsungPay
#AliPay #b2b2c
#eCommerce



THE FUTURE OF FRAUD

IN THE AGE OF
CONNECTED COMMERCE



USING AI AND MACHINE
LEARNING TO CATCH
THE BAD GUYS



““””

First Data has the size, the analytics, and the technologies needed to create the most secure global commerce platforms in the world.

Steven Petrevski
First Data
SVP, Head of Security & Fraud Solutions



THERE IS A WAR WAGING IN THE UNSEEN CORNERS OF THE DARK WEB.

On one side are criminals intent on selling stolen credit cards, Social Security numbers, online bank passwords, and passports. On the other side are security and fraud professionals creating solutions to predict criminal maneuvers before they happen. At the center of all of this activity are companies and governments being impacted every day.

The threat is real, and growing. The FBI says cybercriminals are using international borders and the protection of the Dark Web to sow their criminal activities. “Like farmers who plant crops to be sold in grocery stores, hackers plant malware to harvest stolen information that’s taken to the marketplace to sell,” says former Secret Service investigator Mark Lanterman. He’s now the CTO at Computer Forensic Services, where he monitors those activities. “The Department of Justice estimates that the Dark Web is responsible for 85 percent of stolen credit card numbers,” Lanterman says. “They have created the Amazon.com for stolen credit card numbers.”¹

The good news for merchants and consumers is that First Data is helping to turn the tide against cybercrime advances in artificial intelligence and machine learning with the new Fraud Detect™ platform. The goal of the platform is three-fold: reduce the merchant’s risk to fraud, increase payment acceptance, and create a better customer experience.

“With Fraud Detect, First Data is giving companies top of the line defense across all commerce channels, allowing these businesses to enhance the way they interact with their own customers,” says Steve Petrevski, SVP, General Manager, Security & Fraud Solutions at First Data. “As businesses move into new channels on mobile, online, and through other connected experiences, they are often wary of how the changes will impact fraud patterns. However, with a solution like Fraud Detect, they can put that to the side and place the customer at the center of the decision to create better commerce experiences.”

One of the key aspects of the solution is data. Each year, First Data powers trillions of dollars of transactions, meaning that the company has enormous amounts of data. The solution leverages artificial intelligence and machine learning, coupled with the information mined from the Dark Web and First Data’s professional services, to create a robust look across the whole ecosystem to prevent fraud.

The concept of machine learning itself has been around for decades. Instead of relying on human inputs to make decisions, machines “learn” patterns on their own. The more data, the better the result and the faster the machine learns. Last year, First Data handled 88 billion transactions.

Merchants and financial institutions are extending their reach well beyond the point of sale.



DAN WEBER, DIRECTOR, PRODUCT MANAGEMENT, SECURITY & FRAUD SOLUTIONS AND AJAY GURU, VICE PRESIDENT, HEAD OF MERCHANT FRAUD SOLUTIONS, FINE-TUNING A FRAUD SOLUTION.

Whether it is at the pump, in the car, on mobile, online, or in-store, businesses are looking to deliver solutions that make it easier for consumers to buy.

Merchants and financial institutions are extending their reach well beyond the point of sale. We are living in a world where connected commerce is becoming more important to the ways companies and customers interact. Whether it is at the pump, in the car, on mobile, online, or in-store, businesses are looking to deliver solutions that make it easier for consumers to buy.

With the emergence of Universal Commerce, customers, and more importantly, potential customers, can be in any physical location, but they share the commonality of being connected through app-driven mobile devices, connected cars, social media platforms, and other means. Merchants are desperate to tap into those connected markets. But they are looking for a partner who can help them provide customers with unique buying experiences, while protecting themselves from fraud.

With Fraud Detect, each time a customer makes an electronic purchase, a series of analytics kick in to rate transactions in real-time. The system takes a macro look through the data available to First Data's billions of transactions to examine whether it is fraudulent or not.

According to Ajay Guru, VP, Head of Merchant Fraud Solutions for First Data, in beta tests, the platform has been able to significantly reduce fraudulent activity before the transaction takes place. "What you're seeing is holistic integration with First Data, our device authentication, and most importantly, our professional services, which are able to give the support needed to help stop fraud before it happens."

Petrevski and his fraud teams are meeting the challenges head on. "The landscape of how commerce is conducted is increasingly complex," he says. "First Data has the size, the analytics, and the technologies needed to create the most secure global commerce platforms in the world."

And the future for artificial intelligence is growing. "We're seeing it now in everything from self-driving cars to how we use medicine and within open source programs." Petrevski says. "We will continue to innovate, making the end-customer experience even more frictionless. We'll offer our clients new channels to drive revenue and mitigate their fraud risk to stay on top of these advances." ▾

WHAT IS THE DEEP AND DARK WEB?



We often hear the terms "Deep Web" and "Dark Web" used interchangeably. But they aren't synonymous.

The Deep Web is any place on the internet that's not readily reachable by search engines. That's where the vast majority of the data coursing across the internet flows, including private medical records, bank transactions, registration-based forums, and data that needs a secure database.¹

The Dark Web is a colloquialism for a small corner of the Deep Web used by, among others, hackers, cybercriminals, and traditional organized crime outfits to hide their activities from detection.² There, users can buy illegal drugs, sell stolen identities and financial information, and organize cyberattacks.

To get to the Dark Web, users often use 16-digit URLs and a special router called Tor®, an acronym for The Onion Router, so named for the layers used to protect the users' identities. ▾

In This Article:

- #FraudDetect
- #EMV
- #MachineLearning
- #FraudPrevention
- #DeepWeb
- #DarkWeb

WHY MACHINE LEARNING WORKS

AN INTERVIEW WITH FEEDZAI
CO-FOUNDER AND CHIEF SCIENCE
OFFICER, DR. PEDRO BIZARRO

The concepts of Machine Learning and Artificial Intelligence, and their applications for fighting fraud, have been around for decades. So, what's happened in the last couple of years that's made Machine Learning such a potent weapon?

Portugal's capital is one of the new epicenters for entrepreneurial technology startups. So much so, that the city coaxed the Web Summit away from Dublin last year. It is not surprising that Feedzai, a global leader in fraud detection that processes over \$3 billion per day, was founded there. Today, Feedzai is leveraging Lisbon's appeal and aiming to hire "the top one percent of the data scientists, engineers and developers in the market."

Dr. Pedro Bizarro, Feedzai's Chief Science Officer teamed up with other Lisbon natives back in 2009 to form the company. **Connected** asked him what has allowed the company to build AI technology that is used by the world's largest banks and payment processors.

"Two major changes have happened in the last five years. One was the advent of Big Data – the amount of data that's available has increased hundreds of times, or even thousands, or millions of times in some cases. And that's important, because there seems to be a threshold below which data does not yield relevant results. Typically, with machine learning, in challenging cases, you need at least one million examples to be successful."

"THE AMOUNT OF DATA THAT'S AVAILABLE HAS INCREASED MILLIONS OF TIMES"

"And secondly, we now have enough computing power. Because of the historic limits in computing power, it would have taken months or years to do what we can do in just a few hours today. We can now run clusters of machines and multiple GPUs (graphics processing units) to analyze billions of data points."

Bizarro is also quick to point out that all the data in the world is useless, unless clients can understand what they're getting. In the past, evidence of possible fraud would generate what's known as a "black box" outcome which would tell the financial institution only that a customer payment had been rejected. But it couldn't say why.

Feedzai decided to help clients with a technological approach it calls "Whitebox" explanations. Now, when a payment is rejected, the client not only gets the score but also understands the reasoning behind the rejection. "By developing the Whitebox capability, clients became much more willing to trust the computer model." Bizarro says. "Now, they can fully comprehend what's going on inside the machine." ▼

Secure Commerce for a Connected World

Guiding your business into the future is no easy task. It makes sense to partner with an experienced leader that knows next-generation technology inside and out.

Our innovative solutions enable commerce to be conducted more securely and intelligently across the globe, helping you deliver better experiences to your customers and drive more value to your business.

First Data[®]
FirstData.com



WHERE CAN **DEBIT** TAKE US?

STAR® Network was once predominantly a PIN-only debit network with limited single-message PINless transaction use for bill payment and eCommerce. First Data transformed STAR into a full-service debit network complete with PIN, PINless and signature functionality.

IN 2015,

THE COMMITMENT BEGAN TO SHOW PROGRESS WHEN STAR SAW 20 PERCENT TRANSACTION GROWTH AND THE NUMBER OF STAR-ISSUED CARDS INCREASED 14 PERCENT. ALREADY IN USE AT THE APPROXIMATELY 250,000 LOCATIONS OF FIRST DATA MERCHANT ACQUIRING CLIENTS, STAR PINLESS ACCEPTANCE AT POINT-OF-SALE FOR TRANSACTIONS UNDER \$50 CONTINUES TO GROW.

Today, STAR® Network is stronger and capable of supporting more merchant verticals and transaction types. According to the Federal Reserve Payments Study in 2016, debit card payments grew at an annual rate of 7.1 percent from 2012 to 2015.¹ As debit usage continues to grow, STAR Network is positioned to help banks, credit unions and merchants benefit.

Connected sat down with Brian DuCharme, VP, Head of STAR Network Product & Innovation, at First Data's headquarters in Atlanta to get a better picture of where debit has been, where it is now and where it is going.

STAR Network was launched to provide banking customers with a way to access their money via an ATM card whenever the bank was closed. That card became an extension of the bank branch. Is that important anymore?

Yes. Cash will always be important, even though the adoption of card payments in the United States passed the halfway mark several years ago. Debit payments are a natural extension of cash, so I expect we will continue to see growth.

Now that there are so many other payment options, how is it that debit is still growing?

Debit card use is on the rise because it's the preferred payment method for Millennials. They grew up with debit. Millennials also have this mentality that they don't want to be in debt — many watched their parents drown in it. As a result, a lot of them don't want a credit card because they believe in spending only what you have. They have a totally different perception of money than previous generations.

How do you think consumers are reacting to all the options?

How we pay will continue to evolve. Think about it — payment cards pretty much started because of a need to replace the grocer's "I owe you" from customers at the time of purchase. The first payment cards were paper, then plastic, then the magnetic stripe, and now the United States has moved to the EMV® chip card. It's an evolution. I think debit as a payment tender is going to continue to grow for years to come because it's the digital version of cash.

When faster ACH becomes available, it will help debit transactions settle faster, and that is also a needed improvement for the ecosystem.

I've heard soon you'll be able to get money out of an ATM just by tapping your phone or entering a unique code.

There's a lot of new technology being introduced to the market, and the ATM isn't an exception. The verification of the user is expanding — including entry of a one-time unique code, NFC [near-field communication, which enables two devices placed within inches of each other to exchange data], tapping your contactless smartphone, and, of course, the plastic card. Regardless of what is used to authenticate the user, the transaction is still going to come through a payment network. Even if the debit card never comes out of the owner's wallet, those verification methods are still a natural extension of that cardholder-issuer relationship. Adopting new form factors for debit payments will still rely on consumers having trust in their bank or credit union.

Speaking of trust, fraud is such a major issue for merchants today. How does STAR Network address that?

Well, debit is historically a safer transaction than credit — especially if it's a PIN-enabled transaction. That said, card-not-present (CNP) transactions are only going to grow, and we have to be a part of that — we have to invest to protect merchants and STAR debit card users and issuers. It is about doing our part to protect the payments ecosystem.

How does STAR Network think about global commerce?

STAR Network is a domestic debit card network. Even though we hear a lot about global payments in the industry, the reality is that over 50 percent of Americans have never left the country and over 25 percent never plan to.² Most consumers make the majority of their purchases locally, so even those cardholders that do travel outside the country are still doing their day-to-day spending in the United States. As a result, domestic debit networks can actually provide cost-effective alternatives.

So what is STAR Network doing to reinforce its value and differentiate itself?

We're investing in world-class capabilities and adapting the network to anticipate industry trends, which begins with helping financial institutions and merchants support consumer expectations. We are finding new ways to authenticate CNP transactions to prevent fraud. We are exploring how we can enrich the cardholder experience through benefits like manufacturer rebates. And, we're watching how the Internet of Things (IoT) factors in payments and building systems to address this new level of "connectedness."

“”

AS A FULL-SERVICE DEBIT NETWORK, STAR IS POSITIONED TO SERVE EVERY DEBIT TRANSACTION.

Brian DuCharme
First Data
VP, Head of STAR Network Product & Innovation

So, you're pretty confident that debit can still take us pretty far, aren't you?

I'm an incrementalist and a disciple of Frans Johansson's Medici Effect, which explains that when there are intersections across different sectors, innovation occurs. Debit is the digital equivalent of cash — and when you look at how things are paid locally, all across the world, it is still largely with cash. In fact, 85 percent³ of the world's consumer payments are paid with cash. So yes, I think debit will continue to be the incremental improvement of one's personal spend in the digital form, especially as change occurs in a consumer's life. ▾

In This Article:

#StarNetwork
#FraudDetect
#Debit
#CNP
#Cash

WELCOME TO THE 1-CLICK WORLD

BRAD RHOADS

It's arguably the single most important invention in the history of eCommerce, helping to transform an online bookseller into the second biggest retailer in America.¹ But today, few customers realize how revolutionary it was.

Just a couple of years after Amazon.com[®] launched, the company created and patented "1-Click" shopping, removing a crucial step from the buying process. Before 1-Click, customers would browse for what they wanted on several competing sites. Once they were certain they had found the best deals, customers would add items into the winning site's shopping cart. However the competition wasn't over. Somewhere between searching for their wallet and punching in their credit card details, buyers would abandon their cart almost 70% of the time.²

Amazon[®] had an idea. Why not securely store customers' credit card numbers, shipping address, and delivery preferences, then present a 1-Click option to complete the transaction? The company introduced it, and it worked. Abandonment rates dropped and impulse buyers rejoiced. Ugly Christmas sweater? Click. That gourmet coffee you have been dying to try? Click. A new collar for Fido? Click.

For almost two decades, Amazon has been a world leader in frictionless commerce. But that U.S. patent, which Amazon calls a

"business method,"³ expires in just a few months. By September, all U.S. online retailers will have access to implementing 1-click purchasing, something that Europe has been able to utilize since Amazon never secured a patent in that region.⁴

However, in some ways, frictionless commerce has outgrown its humble online beginnings. Driven by the explosion of mobile eCommerce and the Internet of Things, businesses have realized what Amazon learned in 1997: if you can make shopping easier,

faster, and more enjoyable, you'll succeed. Today, the easiest way to reach millions of potential customers is through their mobile devices.

A recent Nielsen study showed that smartphone users, on average, accessed about 27 apps per month. During the month, they stayed engaged with the apps for more than 37 hours – or, more than an hour a day. However, while the average number of apps used per month has stayed stagnant, the number of hours spent on them has skyrocketed.⁵

THE EASIEST WAY TO REACH MILLIONS OF POTENTIAL CUSTOMERS IS THROUGH THEIR MOBILE DEVICES. >

Peter O'Halloran, First Data's VP of Global eCommerce Product, says the best model is the Chinese social media app, WeChat. "It was quite telling that in 2015, WeChat generated \$1.8 billion in revenue through their app service. They achieved this by driving the ability to book other services without ever leaving your messaging app. You can book your dental appointment, you can book a taxi, or even a pet sitter."

Beyond messaging, O'Halloran sees other frictionless opportunities and successes, many made possible by First Data. "We are working with large car manufacturers on the development of the Connected Car. Imagine, for example, you're going to a Detroit Lions football game in your new Ford Explorer. You use voice commands to get directions to the stadium. The car responds, informing you there is insufficient petrol in the tank to make it there. So, it finds the cheapest fuel along the way, at Exxon, which is another great First Data partner. Exxon recognizes you through your car and all you do is fuel up and go, without ever touching your wallet. The best part is when you get to Ford Field, the car is automatically redirected to the VIP lot, exclusively for Ford owners."

That may seem futuristic, but all that O'Halloran described is possible now. First Data is working with companies to develop even more forward-thinking frictionless opportunities, through Contextual Commerce.

O'Halloran says the best examples of how that works can be seen at Uber. "When you book a car, you punch in the address of where you want to go. Uber has partnered with specific hotels in that city and recognizes the address, and while you're sitting in the back of the car, an option pops up through the Uber app that lets you check in before you arrive. You skip the queues and go straight to your room."

Meanwhile, in Europe, there is a new challenge coming to the frictionless environment called the Second Payment Service Directive, or PSD2.

Starting next year, banks will be required to share their customers' account information with any third-party vendor who wins approval from regulators.

O'Halloran explains that this means apps like Facebook could be authorized to push payments directly from bank accounts. Which also means, companies will be able to analyze spending patterns and offer financial advice – something banks now do exclusively.⁶

As competition explodes among thousands of new vendors, the EU wants to protect against fraud. "PSD2 will require that every payment over €30 will need two-factor authentication," O'Halloran says.

"That will be a password and a form of biometric identification. Unless the directive is modified, it will force a physical intervention in the payment process and completely disrupt frictionless commerce."

Beyond Europe, and looking forward, there's a promising, but uncertain, future for frictionless commerce. As O'Halloran likes to tell, "There's been fraud at every phase when new payment methods are introduced. The ancient Greeks had coin shaving. The first paper money in China was made from the bark of mulberry trees, and guards were stationed around the trees to keep counterfeiters away."

So, the lesson?

"We just can't be complacent," O'Halloran says. "Merchants and consumers will always move to the next option if there's a tangible benefit. Therefore, we need to constantly innovate. If we don't, someone else will." ▼

In This Article:

#eCommerce
#FrictionlessCommerce
#FraudDetect
#Globalization
#ConnectedCar

2017 Pay Awards selected First Data's Universal Commerce Solutions, as a winner in the Outstanding Commerce Innovation category.

LET'S GET Personal

THE PAYMENT INDUSTRY JOINS
MARKETING'S LATEST TREND



BRAD RHOADS

GREG GATLIN

JAMIESON COX

GEORGE BERNARD SHAW, THE GREAT IRISH PLAYWRIGHT, ONCE OBSERVED, "IT IS THE MARK OF A TRULY INTELLIGENT PERSON TO BE MOVED BY STATISTICS."

So, here are two statistics: The American family has an ideal average of 2.6 children, and the average American also has 2.6 credit cards in his or her wallet. Coincidence? Absolutely. But, consider this: A recent study at the University of California-Davis found that 70 percent of fathers and 74 percent of mothers admit they have a favorite child, and overwhelmingly it's their first child.

Credit card issuers have long understood that customers also have favorites among their 2.6 cards, and they vie for the top slot. Favorite cards get used more, and cards that get used more make more money for their issuers. Financial institutions are doing what they can to get their cards to the top, and one way is through personalization, which is one of the "Top Marketing Trends of 2017" according to Forbes.

"Our clients are asking us to produce cards that will be meaningful to the customer," says Dean Vance, Director of Product for Global Financial Solutions at First Data. "It's gone from the mass production of many cards that look the same, to a target market of one highly personalized card."

This shift has taken almost a decade, mainly because merchants were skeptical of the early changes. "Banks started introducing personalized flat cards in the late 1990s to early 2000," Vance says. "But merchants weren't on board because they immediately thought the new cards might be fraudulent."

The introduction of cards with cardholder photos mainly protected against fraud, and it wasn't intended to be a marketing

tool. Additionally, when higher-spending customers got stylized cards with the embossed numbers removed, merchants thought those smooth cards were fakes. It was only over time that flat personalized cards gained greater acceptance.

The other big change that led to the trend of personalizing cards came when new technology brought down the costs of creating bespoke cards. First Data introduced laser personalization last year, and then expanded its production facilities to meet the anticipated demand. It was a good decision. Last year, its Omaha facility produced just over 300,000 laser-personalized cards. This year, that number will balloon to over 6 million cards personalized with laser technology, and production has expanded further at the First Data's Virginia facility.

Today, personalized options are limitless. Customers can get cards with preset designs, logos of their favorite sports teams, military insignia, company slogans, and images of their favorite hobbies and interests. One of the most popular options allows customers to add family photos or pictures of their pets to the front of their cards. That level of personalization creates customer loyalty and drives up card usage. "There's a demand for authentic, relevant products that reflect the cardholder's preferences and lifestyles," says Barbara Else, Vice President of EMV and Plastics at First Data. "Most importantly though, companies are connecting better with their cardholders and demonstrating how important each cardholder is to their business."

High spenders aren't being left behind either. For them, there are more expensive and exclusive options, such as cards made from heavier plastics with metal inlays, and wood laminate. "There are some cardholders who just like carrying a card with more weight or a unique texture," says Vance. "These cards better identify with the cardholders and their lifestyle."

The new technology has security benefits as well. When properly applied, First Data laser personalization protects against alteration and reproduction.

With the success of these bank cards, other merchants are coming around to the utility of personalization. Companies now customize loyalty and rewards cards,

and retailers can co-brand cards with banks. There's also an upsurge of personalized cards in the healthcare industry.

Which brings us full circle, back to statistics. With customers getting choices that reflect their personalities and lifestyles, we need to ask, statistically, does personalization lead to more card usage? Else sums it up well, "Clients ask me all the time if allowing customers to pick their own card style, rewards preferences, and even card material really increases loyalty. The short answer is, 'Yes, it does.'" ▾



IN THIS ARTICLE:

#CreditCards
#EMV
#Personalization
#Plastics



CHAMPION *of* DIVERSITY

First Data's EVP, Global Chief Control Officer, Cindy Armine-Klein brings her "whole self" to work every day.

When Frank Bisignano came on as First Data's Chairman and CEO, one of the first challenges to his team was to build a diverse and inclusive workforce by inculcating diversity into its DNA. Bisignano understood from his time at Citigroup that employees who felt heard and included tended to be happier and more productive. First, he made all First Data employees

"Owner Associates," and gave them each a piece of the company. He also created Employee Resource Groups (ERGs) that mentored Owner Associates with all sorts of backgrounds. One of the first ERGs was First Data Salutes, which supports veterans looking for work and trying to start their own businesses. When Frank hired Executive VP & Chief Control Officer, Cindy Armine-Klein, he knew

that she should also develop an LGBT initiative. Like Bisignano, Armine-Klein is a born-and-raised Brooklynite with Italian roots. She followed Bisignano over to First Data after working closely with him at JPMorgan Chase and Citigroup, where she spent more than 30 years, rising to the rank of Global Chief Control Officer.

Connected sat down with Armine-Klein at her New York office to talk about why she was a good fit for the Unity ERG.

Connected: One of your favorite sayings is, "Employees should embrace the idea of bringing their whole selves to work. That's something I do every day."
Armine-Klein: (Laughs) One of my more quotable moments!

Connected: Yes, good quote. But it also seems to have done a lot of good over the years. Have you always had that philosophy?
Armine-Klein: Well, that comes with a story. Can I tell it?

Connected: Of course!
Armine-Klein: I've been with my wife now for 25 years, long before I came out in the workplace, even at Citigroup. And what I felt there, every day, and what anybody who's still closeted feels, is that you're constantly on guard. You're on guard about what pronouns you use, you're on guard about fully disclosing who you are to your colleagues, and all sorts of issues like that. So, when you're closeted, it impacts the way you operate

day-to-day, because you're not who you are. You're hidden, you're cloistered. And that affects you. And to be honest, I only came out late in my career, and only because I was about to have my first child. I just didn't want to be "mommy" at home, an "no one" at work.



Once I came out, not only was I more relaxed at work, I could be my best self, and be my most creative, because I wasn't worried about hiding a piece of myself.

Connected: What was that like, after you came out?
Armine-Klein: Oh, my life changed dramatically. Because once I came out, not only was I more relaxed at work, I could be my best self, and be my most creative, because I wasn't worried about hiding a piece of myself. I got much more active in the organization, and in the Compliance community. And you know, it goes beyond work. After establishing UNITY, our LGBT resource group, I spoke with different groups and colleagues, and they would talk about the tension at home, because one spouse was out, and the other wasn't. I was told that because of UNITY, people started feeling comfortable coming out, and when that happened, there was this release. One colleague told me that she can now walk down the street with her wife, and when she sees somebody from the office, she doesn't pretend like she doesn't know her.

Connected: Wow, that must have been rewarding to make that change happen. I can see why the ERGs would help people cope with situations like that. But let's say you're just a straight white guy, what does it mean to be your whole self or your best self then?

Armine-Klein: Exactly, that's important, because bringing your best self to work is all about speaking up and having a voice, no matter who you are... your creative self, your inspired self... that's what it means. When you feel like you have a voice, magic happens. Frank [Bisignano] has an amazing expression. He calls it The Art of the Possible. It comes from the feeling that you have enough power to change the outcome for the greater benefit. And that's what we work on every single day.

Connected: So, help me out here. I've always struggled with this. I want to be inclusive, I want to listen and gather everyone's thoughts and ideas. But at the end of the day, I need to be a leader, don't I? I need to be true to my own vision and not get knocked off my path. How do you do both?
Armine-Klein: Great question. And, I'm sorry

you're struggling. I think I can call again on Frank as a good example. It's the difference between planning and execution. Frank is very inclusive every step of the way. He walks you through, he explains it thoroughly, he shows you examples of what he's trying to achieve and why, he's asking you for your input. So, by the time you get to execution, everybody's clear and on the same path, and it's formed. So, it's not just a mandate – "go get it done." It's the vision, the inclusion, and getting to the common understanding of what the impact would be if you achieve the goal. Then, you have to measure it. Because when you measure the success, people get excited, they see the impact they're having on the process. And that's when you start to see people getting excited and executing, and then more people want to be part of the transformation to get the mission done. And that's how you change cultures, right?

Connected: Thanks for that – that helps. Now, let me ask, are you being so nice about your boss because he's going to read this?
Armine-Klein: (Laughs) Seems like that, right? No, you know, all of this – my own decisions about my openness at work, and my thinking about why you should bring your best self to work – all of that has its roots in Frank's understanding of people, and in his allowing them the space to grow. That all inspired me to be the best professional I can be. So yeah, I tend to give him a lot of the credit.



Connected: I want to know your whole self. Can I ask you a bunch of random questions?

Armine-Klein: Of course.

Connected: Your favorite music?

Armine-Klein: I love opera. And I love jazz. But not progressive jazz.

Connected: Did you see La La Land?

Armine-Klein: No, I didn't see La La Land.

Connected: Oh, sore spot?

Armine-Klein: No, not at all. Just not my thing. My favorite filmmaker is Hayao Miyazaki. I like Japanese anime, but not the cartoon stuff. I love storytelling, beautifully hand-drawn anime.

Connected: No cartoon stuff. I'll make a note. Did you pick up your love for Miyazaki in college?

Armine-Klein: I never went to college. It just wasn't in my family's culture. My father was a cop, my mother was a waitress. We were very working-class and it was the 60's. And, you know, I wasn't supposed to go to college. I was expected to go get married, have some guy take care of me. So, hah, hah! Fooled them.

Connected: Can I write that you never went to college?

Armine-Klein: Yes, I'm also open about that!

Connected: You were named Champion of Diversity for your work. What did you get for that?

Armine-Klein: Oh, that was amazing. It's just an honor to have our work recognized.



We put in the right policies, we made sure we had the right benefits, and we put out communications that reinforced it all. And just a few months later, our score on the Human Rights Campaign Corporate Equality Index came back and they gave us 100%. They named us one of the best places to work for LGBT.

You know, right after I joined First Data, our Human Rights Campaign Equality Index wasn't where it needed to be. And I just said, "This is crazy, let's get this thing to 100%." We put in the right policies, we made sure we had the right benefits, and we put out communications that reinforced it all. And just a few months later, the Human Rights Campaign came back and they gave us 100%. They named us one of the best places to work for LGBT. Then, DiversityInc named us one of their Top 25 notable companies two years in a row.

Connected: That's great! So, what did you get for being named Champion of Diversity?

Armine-Klein: It's just an honor!

Connected: So, you didn't get anything? A medal? A crown? A Starbucks card?

Armine-Klein: (Laughs) They gave me a very nice Tiffany crystal award with my name on it. Although... a Starbucks card would have been nice, too. ▽

Today, First Data has eight ERGs: Asian Leadership Council, Black Leadership Council, Juntos (Hispanic & Latino Leadership Council), Salutes (Military Leadership Council), Thrive (Disability Leadership Council), Unity (LGBT Leadership Council), Women's Leadership Council, YoPro (Young Professionals Group).

In This Article:

#FirstData
#Diversity
#LGBT
#HumanRights

EVERYONE SHOPS HERE



First Data is dedicated to spreading the message of diversity to the merchants who work with us as well as the consumers who support their businesses. Together, we can spur change, make things better and foster acceptance of all people.

First Data.

#EveryoneShopsHere



FUTURE TELLING

INDUSTRY EXPERTS
TELL US WHAT WE CAN
LOOK FORWARD TO

If we could go back to 2007 and make predictions about the future of retail and the payments industry, it's unlikely that we'd read about how EMV® (Europay, MasterCard and Visa) cards would just be creeping onto the scene in the United States, with full acceptance still years away. And we'd probably read quite a bit about how radio frequency identification (RFID) tags will revolutionize the retail industry and commerce. But that's the great thing about predictions: You can always go back and check who got it right, and who was way off.

So, with the full understanding that years from now they'll either be ridiculed or revered for their understanding of the future, we asked several industry experts the same question.

THINGS ARE CHANGING SO FAST, IT'S HARD FOR A MERCHANT TO DECIDE WHAT TO FOCUS ON. IF YOU HAD TO ENVISION THE WORLD OF RETAIL COMMERCE IN 10 YEARS, WHAT DOES IT LOOK LIKE?

BARRY MCCARTHY

EVP, HEAD OF NETWORK & SECURITY SOLUTIONS,
FIRST DATA

One area where I see big changes ahead is with gift solutions. Decades ago, the first iteration of the gift card (or what I like to call version 1.0) came in the form of paper cards. Then came the second iteration (or 2.0), with the introduction of plastic and moving distribution to additional locations such as pharmacies and gas stations with "gift malls." The next version, which I think we are beginning to enter and will be fully realized in 10 years, is version 3.0 — the shift to digital. Digital will serve as a platform, transforming gift solutions to go beyond "traditional" gifting. It will allow businesses to offer incentives, loyalty offerings, promotions, point redemptions, regifting options and new ways to make announcements. Most importantly, a digital gift solutions platform means flexibility to adapt and add additional services and offerings if, and when, trends change.

MARIANNE JOHNSON

SVP, GLOBAL HEAD OF PRODUCT & INNOVATION,
FIRST DATA

Over the next decade, the promise of the Internet of Things (IoT) will be more fully realized, with connected and self-driving cars, smart stores and goods delivered over 3D printers dramatically changing both the demand and supply chains. Customers will have seamless and frictionless experiences that more closely connect the physical world to the digital. Also, companies will soon settle on common protocols that will replace Wi-Fi, radio frequency (RF), and Bluetooth®, and allow all these devices to communicate within the same ecosystem. And importantly, especially for First Data, all that new data — gathered from Fitbit® devices, appliances that make grocery lists, and medical monitors transmitting real-time updates — will need to be protected with common and secure encryption standards.

✍️ BRAD RHOADS
📷 DONAL JOLLEY



EDWARD “EJ” JACKSON

SVP, HEAD OF INTEGRATED SOLUTIONS GROUP (ISG), FIRST DATA

While there is still debate over whether mobile wallets will achieve mass consumer adoption, one thing is certain: Mobile point-of-sale (mPOS) devices have taken off among merchants. BI Intelligence forecasts that there will be 27.7 million mPOS devices in the United States in 2021, up from 3.2 million in 2014. That said, merchants who want the flexibility that mPOS devices offer will still expect to have access to the comprehensive business management toolset that a traditional POS provides. Within the next 10 years, I expect the focus to continue to shift away from POS hardware and toward fully integrated payment platforms that can act as a “one-stop-shop” for all of a merchant’s needs.

CYNTHIA KOUNARIS

CHIEF STRATEGY OFFICER, FITFORCOMMERCE, AN OMNI-CHANNEL AND DIGITAL CONSULTANCY

Due to improvements in machine learning and cloud computing, artificial intelligence (AI) is allowing retailers and brands to use “chatbots,” or automated messaging software. We see marketers increasingly looking to messaging apps and chatbots to expand their reach and to engage with consumers, especially Millennials. Users of China’s leading messaging app, WeChat®, already use the app for everything from booking medical appointments to shopping for clothes. According to last year’s FitForCommerce Retail Executive Survey, 14 percent of the surveyed brands and retailers were actively using chat commerce, while 7 percent were testing it and 24 percent stated they plan to implement in the next 12 months. Today’s innovations from companies using chatbots to connect with consumers will be common practice in a few years.

PETER O’HALLORAN

VP, GLOBAL ECOMMERCE PRODUCT, FIRST DATA

If you look around the world, the cost of managing money for countries is quite expensive. The Scandinavian countries in particular have been quite progressive in this regard. Denmark is no longer minting any money, and it’s trying to basically force all transactions to go electronic — the same with Sweden. So, I can see in the near future those countries becoming completely cashless societies. And once the benefits, economic and otherwise, of that example have been proven, we’ll see still more countries move to adopt that method.

“14% OF THE SURVEYED BRANDS AND RETAILERS WERE ACTIVELY USING CHAT COMMERCE”

BEN JACKSON

DIRECTOR, MERCATOR ADVISORY GROUP, PREPAID ADVISORY SERVICE

Ten years from now, merchants will become curators of customer experiences. Omnichannel retail and a diversity of payments will mean that customers will be able to find the goods and services they want almost anywhere. The data revolution will be the biggest trend driving business. Merchants need to be thinking about how they can use all the data that will be available to them to help customers achieve their goals — whether that goal is finding clothes that fit, a nice meal or completing a marathon. Success will come to the companies that can provide engagement that resonates most with their customers.

ROY NALLAPETA

COMMERCE SOLUTIONS CONSULTANT, HEAD OF PRODUCT MARKETING AT REIMU COMMERCE & BEVEEL

Frictionless commerce will be fully realized. By 2027, all customer engagement moments and experiences will be effortless and seamless without the friction of a transaction. Apps like eBay’s ShopBot (which allows consumers to take a photo of any product they see and the app will search eBay’s database for a matching product they can purchase) will be commonplace. The brands I am currently working with are all focused on reducing friction in commerce today by allowing video viewers to fill a shopping basket without detracting from the engaged moment and by personalizing experiences to help customers find the right product more quickly.

SOURCES

12 By The Numbers

*All statistics presented compiled by First Data. Retrieved from: <https://investor.firstdata.com>, <https://investor.firstdata.com/sec-filings>
¹<https://seekingalpha.com/pr/16725086-starbucks-reports-record-holiday-record-q1-fy17-results>

20 It’s About Time

¹Hershfield, H., Holmes, C. (2016, September 9). What Should You Choose: Time or Money? The New York Times. Retrieved from <https://www.nytimes.com/2016/09/11/opinion/sunday/what-should-you-choose-time-or-money.html>

25 The Digital Jolt

¹Starbucks (SBUX) Q1 2017 Results – Earnings Call Transcript. (2017, January 27). Retrieved March 14, 2017, from <https://seekingalpha.com/article/4066519-starbucks-sbux-q2-2017-results-earnings-call-transcript>
²Starbucks (SBUX) Presents at UBS Global Consumer & Retail Conference (Transcript). (2017, March 09). Retrieved March 14, 2017, from <https://www.bloomberg.com/news/articles/2016-03-30/starbucks-takes-its-pioneering-mobile-phone-app-to-grande-level>
³O. Kharif & L. Patton (2016, March 30). Starbucks Takes Its Pioneering Mobile-Phone App to Grande Level. Retrieved March 14, 2017, from <https://www.bloomberg.com/news/articles/2016-03-30/starbucks-takes-its-pioneering-mobile-phone-app-to-grande-level>

26 Chicken of the Future

¹<https://www.entrepreneur.com/article/284826>

28 The M Word

¹<https://www.spredfast.com/social-marketing-blog/5-stats-millennial-buying-habits>

34 The Big Shift

¹<https://www.pwc.com/us/en/technology/publications/assets/pwc-consumer-intelligence-series-the-sharing-economy.pdf>

40 The Power of the Piggy Bank

¹<http://www.creditcards.com/credit-card-news/payroll-cards-pay-cards-walmart-1271.php>
²What is a payday loan? Consumer Finance Protection Bureau. Accessed April 4, 2017. <https://www.consumerfinance.gov/askcfpb/1567/what-payday-loan.html>

48 Going Global

¹<https://www.statista.com/topics/1164/social-networks/>
²<http://www.internetworldstats.com/stats.htm>

50 The Future of Fraud in the Age of Connected Commerce

¹E-Commerce, Retail Security and the Dark Web, Boardroom Events Blog, August 25, 2016 <http://boardroomevents.com/e-commerce-retail-security-and-the-dark-web/>

55 What is the Deep and Dark Web?

¹What is the Dark Web and Deep Web? Matt Egan. TechAdvisor from IDG. Apr 6, 2017. <http://www.pcadvisor.co.uk/how-to/internet/what-is-dark-web-deep-web-3593569/>

²NPR Staff (25 May 2014). “Going Dark: The Internet Behind the Internet”. <http://www.npr.org/sections/alltechconsidered/2014/05/25/315821415/going-dark-the-internet-behind-the-internet>

56 Where can Debit Take Us?

¹<https://www.federalreserve.gov/newsevents/press/other/2016-payments-study-20161222.pdf>
²Source: <http://www.dailymail.co.uk/femail/article-2329298/More-half-Americans-NEVER-traveled-outside-country--passport.html>
³<http://www.mastercardadvisors.com/cashlessjourney/>

58 Welcome to the 1-Click World

¹The World’s Largest Retailers 2016: Wal-Mart Dominates but Amazon Is Catching Up. Forbes.com. Lauren Gensler. May 27, 2016 <https://www.forbes.com/sites/laurengensler/2016/05/27/global-2000-worlds-largest-retailers/#516f8cbbdbb0>

²37 Cart Abandonment Rate Statistics. Baymard Institute. January 9, 2017. <https://baymard.com/lists/cart-abandonment-rate>

³What Amazon’s 1-Click Patent Expiration Means. Business2Community.com. Alice Chen. February 2, 2017 <http://www.business2community.com/ecommerce/amazons-1-click-patent-expiration-means-01769718>

⁴How Valuable is Amazon’s 1-Click Patent? It’s Worth Billions. Rejoinder.com. Mike Arsenault. Retrieved April 6, 2017. <http://rejoinder.com/resources/amazon-1clickpatent/>

⁵So Many Apps, So Much More Time for Entertainment. Nielsen. June 11, 2015. <http://www.nielsen.com/us/en/insights/news/2015/so-many-apps-so-much-more-time-for-entertainment.html>

⁶PSD2 - the directive that will change banking as we know it. Evry.com. Viola Hellström. Retrieved Apr. 6, 2017. <https://www.evry.com/en/news/articles/psd2-the-directive-that-will-change-banking-as-we-know-it/>

66 Let’s Get Personal

¹1994 January 31, Forbes, Volume 153, Thoughts on the Business of Life, Quote Page 148, Column 3, Forbes Inc., New York. <http://quoteinvestigator.com/2013/02/20/moved-by-stats/#return-note-5485-15>

²Americans’ ideal family size is smaller than it used to be. George Gao. Pew Research Center. May 8, 2015. <http://www.pewresearch.org/fact-tank/2015/05/08/ideal-size-of-the-american-family/>

³Americans Rely Less on Credit Cards Than in Previous Years. Art Swift. Gallup. April 25, 2014. <http://www.gallup.com/poll/168668/americans-rely-less-credit-cards-previous-years.aspx>

⁴Science proves that parents really do play favorites. Jenny Anderson. Quartz. March 31, 2016. <https://qz.com/650783/science-proves-that-parents-really-do-play-favorites/>

⁵Reciprocal links among differential parenting, perceived partiality, and self-worth: a three-wave longitudinal study. B. Shebloski. Family Research Group, Department of Human and Community Development, University of California-Davis. Dec. 19, 2005. <https://www.ncbi.nlm.nih.gov/pubmed/16402879>

⁶The Top 10 Trends Driving Marketing In 2017. Daniel Newman. Forbes. October 18, 2016. <https://www.forbes.com/sites/danielnewman/2016/10/18/the-top-10-trends-driving-marketing-in-2017/#687d7ef33ade>

68 Champion of Diversity

¹http://www2.warwick.ac.uk/newsandevents/pressreleases/new_study_shows/

Apple® and Apple Pay® are trademarks of Apple, Inc.

AMAZON is a trademark of Amazon Services LLC and/or its affiliates

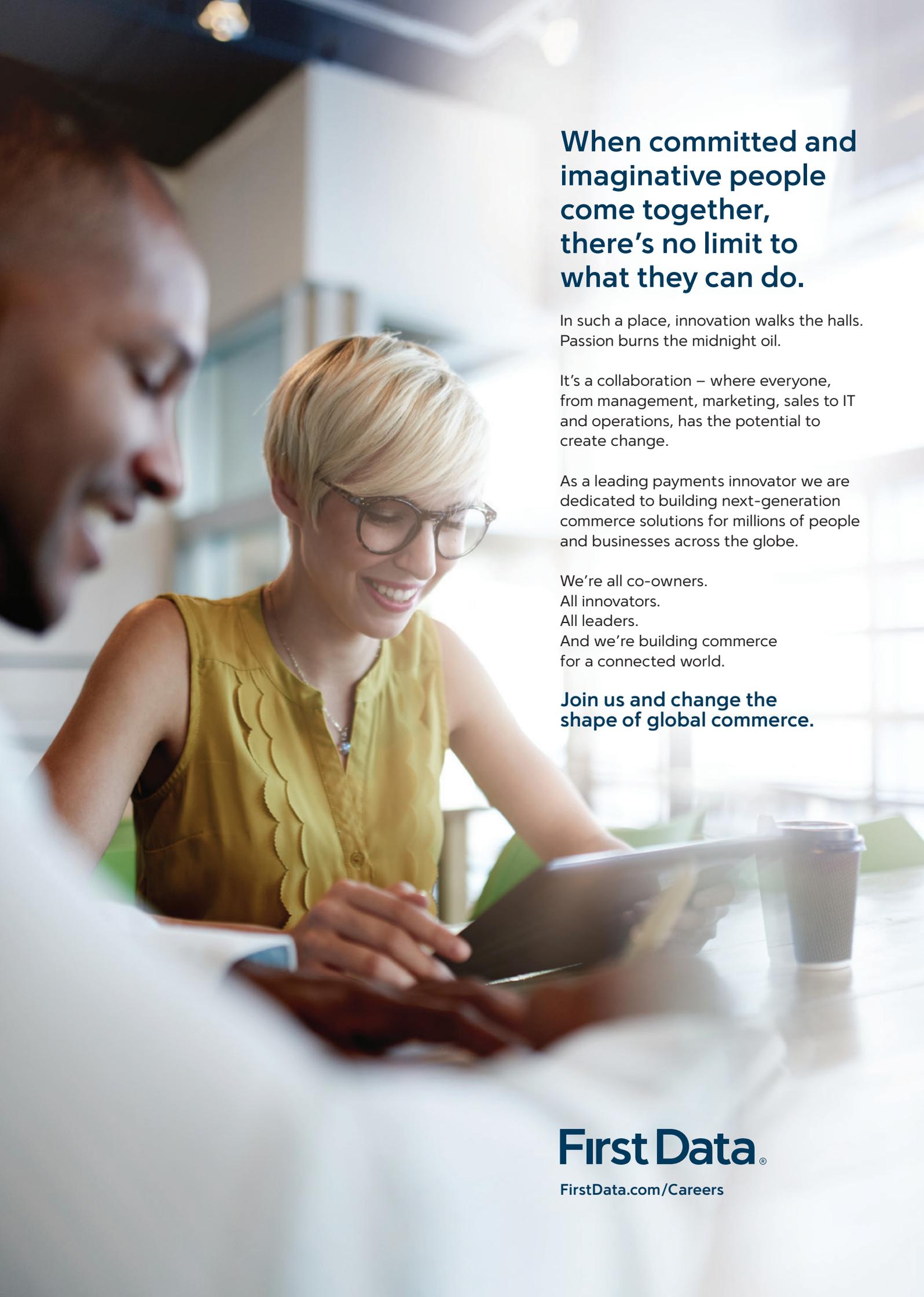
Android is a trademark of Google, Inc.

The Bluetooth® word mark is a registered trademark owned by Bluetooth SIG, Inc.

EMV® is a registered trademark or trademark of EMVCo LLC in the United States and other countries. www.emvco.com.

Google is a registered trademark of Google, Inc.

Visa is a trademark owned by Visa International Service Association and used under license.



**When committed and
imaginative people
come together,
there's no limit to
what they can do.**

In such a place, innovation walks the halls.
Passion burns the midnight oil.

It's a collaboration – where everyone,
from management, marketing, sales to IT
and operations, has the potential to
create change.

As a leading payments innovator we are
dedicated to building next-generation
commerce solutions for millions of people
and businesses across the globe.

We're all co-owners.
All innovators.
All leaders.
And we're building commerce
for a connected world.

**Join us and change the
shape of global commerce.**

First Data[®]

[FirstData.com/Careers](https://www.FirstData.com/Careers)