CONNECTED

IN THIS ISSUE ⟩⟩⟩

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GAME

Gorilla Spotting

When someone says that there's an 800-pound gorilla in the room, it's a metaphor for an obvious problem or risk that everyone is aware of but no one wants to talk about. Throughout this issue of Connected, we explore ways merchants can compete with the "800-pound gorillas in the room" of retail. In fact, in "The New Disruptors," it is suggested that merchants need to act a little more like 800-pound gorillas, making big changes that today's consumers can't ignore. In that spirit, we've hidden gorillas throughout the issue. As you're reading, keep an eye out for the gorillas and count them up. Then, send your total to CONNECTED@firstdata.com by Nov. 30, 2017. We'll gather all the correct answers and randomly select five winners to receive a $200 Gyft® digital gift card. **LET THE SAFARI BEGIN!**

First Data®

CONNECTED
THE CENTER OF COMMERCE

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PERSPECTIVE

Change is all around us. The speed of innovation in recent decades—particularly since the advent of the smartphone—has fundamentally changed society. Every day, new technologies are introduced that have the potential to reshape industries, impact consumer behavior, and alter how we interact with one another. Companies must adapt to the breakneck speed of innovation or risk being left behind.

The consumer experience is not exempt from this evolution. What used to be a relationship built on the quality of a product, the shopping experience, and in-store customer service has been spread across dozens of channels, providing businesses with additional opportunities while also posing a number of new obstacles.

We are living in the Age of the Consumer.

At First Data, our clients are primarily businesses—from the largest global merchants and financial institutions to local dry cleaners and corner pizza shops. We understand, however, that global companies and local small businesses are comprised of people, the same type of individuals who are driving the evolution of the consumer experience.

Social media, customer service, store design and experiences, a brand's mission and values, and online presence all influence how today's consumers evaluate brands. It only takes a poor mark in one of these areas for a customer to quickly decide to take their business elsewhere.

As people reach across their town lines, state borders, and around the world, they are presented with more purchasing options than ever before. Businesses must put the customer at the heart of every decision, every step of the way, to ensure customers are satisfied and keep coming back.

The pace of innovation is not slowing down, so we must all understand how to use technology to excel in this shifting landscape. This edition of *Connected* explores the way businesses are delighting their customers, the evolution of the shopping experience, and how consumers decide which businesses succeed and which do not.

I hope that you enjoy it.

Regards,

Guy Chiarello
President, First Data

> "The speed of innovation in recent decades, particularly since the advent of the smartphone, has fundamentally changed society."

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 also makes everyone accountable for company growth. Thankfully, the collective expertise of our team supports our ability to innovate and deliver solutions that help drive the new world of connected commerce.

Ashish Bahl
First Data, EVP, Head of Debit Solutions
Ashish is a proven Financial Services Technology entrepreneur with three significant ventures in the e-invoicing, debit routing, eCommerce, and home banking verticals to his credit. In his current role on the First Data Executive Team, Ashish brings a relentless focus on growing First Data's global eCommerce merchant base by adding a variety of debit payment options. The debit payment options currently in the Debit Solutions portfolio include PIN-less acceptance, authenticated acceptance, and debit payouts and have applicability on a fully global basis.

Alain Barbet
First Data, SVP, Head of TeleCheck
Alain is presently in charge of TeleCheck®, the leader in ACH transaction authorizations in the U.S. The business unit, a part of First Data's Network and Security Solutions segment, is also leading the field in developing extremely sophisticated proprietary data solutions for financial and non-financial organizations. Alain joined First Data in 2013, following a career in which he held various leadership roles in fast-moving consumer goods (FMCG) companies.

Eric Brinker
First Data, OTG, VP, Customer Experience
Eric is OTG's Vice President of Experience. He's responsible for the company's marketing, communications, branding and social media strategies.

Pete Cavicchia
First Data, SVP, Global Cyber Security & Enterprise Fraud
Peter Cavicchia brings 9 years of law enforcement and 9 years of Financial Services IT Risk and Fraud Management to First Data. As a leader in the US Secret Service's multinational electronic crimes task force, Peter led various initiatives to uncover cyber-criminal activity around the world and protect the critical infrastructure of the United States. He left his law enforcement career to become an executive at JP Morgan Chase, bringing his experience and perspective to bear in protecting millions of clients from fraud across Chase's various lines of business and organizing strategy to protect one of the largest information technology infrastructures in the world.

Dan Charron
First Data, EVP, Head of Global Business Solutions
Dan is the Executive Vice President and Head of Global Business Solutions for First Data, with operations in North America, Europe, the Middle East and Africa (EMEA), Asia-Pacific (APAC) and Latin America (LATAM). Dan is responsible for First Data's client and partner relationships worldwide and will target strategic expansion of the firm's footprint, both in terms of geographic reach and the depth and breadth of solutions for clients all around the globe.

Guy Chiarello
First Data, President
Guy is the President of First Data Corporation. Among his responsibilities, Guy leads global technology and product development with an 8,000+ person team that builds technology solutions for 6 million businesses and 4,000 financial institutions around the world. First Data's proprietary technology is at the epicenter of the commerce ecosystem, powering more than 2,800 transactions per second and $2.2 trillion in annual transactions.

Shane Fitzpatrick
First Data, SVP, Global Head of eCommerce
Based in Dublin, Shane is a prominent eCommerce industry expert and a highly regarded leader with over 25 years of 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
First Data, 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.

Edward "EJ" Jackson
First Data, SVP, Head of Integrated Solutions Group (ISG)
Edward heads the ISG, a new group created to deepen engagement with independent software vendors (ISV), value-added resellers (VAR), 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
First Data, SVP, NSS Product Innovation and Commercialization
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.

Leslie Klein
First Data, VP, Head of Marketing for Global Commerce and Enterprise Sales
Leslie joined First Data in July 2016 and currently serves as the Head of Marketing for Global Commerce and Enterprise Sales. In this role, Leslie leads marketing efforts targeting large merchants and government entities, as well as leading marketing for eCommerce and mobile commerce solutions.

Christine Larsen
First Data, EVP, Chief Operations Officer
Christine leads First Data's global operations, overseeing 13,000 employees and drives a global initiative to re-engineer the company's systems, to improve the total client experience, and drive revenue growth. Before joining First Data, Christine was Managing Director at Citigroup and Executive Vice President at JPMorgan Chase and COO for treasury and securities services, overseeing more than 20,000 operations and technology resources globally in payments, trade, and investor services.

Kevin Lewis
First Data, VP, Innovation
Kevin leads the Innovation Lab for First Data, utilizing a process founded in Design Thinking methodology to deliver meaningful and innovative solutions for First Data, explore commerce-related spaces for unmet needs, and catalyze innovation in OAs. He is also an adjunct professor at Georgia Institute of Technology's College of Design.

Scott Mackay
First Data, 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
First Data, 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.

Bob Nadeau
First Data, SVP, Enterprise Solutions
Bob has over 27 years of payment industry experience managing various aspects of the business. As the Senior Vice President, Enterprise Solutions for First Data, Bob leads several teams that are responsible for developing First Data's products and services across all business lines to prospective clients and existing merchants in the enterprise and mid-market segments. He is also responsible for driving Global product direction for current and future solutions and services.

Jonathan O'Connor
First Data, Sales Leader, New Markets & Hotel
Jonathan is First Data's Sales Leader for New Markets and Hotels. Known as a "driver of change," he spends his days working to get himself and his team to move from "good to great" in blowing up his team's sales and revenue quotas with a firm focus on our clients and prospects.

Heather Ruff
First Data, VP, Product Engagement
As Vice President of Product Management at First Data, Heather is responsible for the strategic direction and profit and loss management for the Loan and Private Label markets. Heather has over 20 years of experience providing business leadership and operational excellence.

Nandan Sheth
First Data, SVP, Debit Solutions
Nandan is a seasoned innovator with over 20 years of FinTech experience within large corporations and high-growth, venture capital-backed companies. He is the founder of three disruptive FinTech ventures: CollectionsX, Harbor Payments, and Debit Solutions. His expertise includes cross-border commerce, online/mobile commerce, debit/alternative payments, B2B receivables/payables, and online bill pay.

Mike Spriggs
First Data, Director, Information & Analytics Solutions
Mike is a director on the Information & Analytics Solutions team at First Data. Mike manages the SpendTrend MacroEconomic Reporting service, as well the creation and delivery of other advanced analytics and customized data solutions. As a 22-year veteran in big data and business intelligence, Mike has worked with a broad variety of companies, including some of the biggest names in consumer research, financial market intelligence, and big box retailing.

Jack Stephenson
First Data, SVP, Digital Commerce Solutions
Jack leads our Digital Commerce Solutions team, which provides enterprise solutions and advisory services to FIs, merchants and technology companies. Prior to joining First Data in 2014, Jack held leadership roles for digital banking and payments for JPMorgan Chase, PayPal, and McKinsey & Company.

Steve Trehern
First Data, SVP, Human Resources
Steve leads human resources for the Technology and Product Development organization of First Data. Based in Atlanta, he has been with First Data since November of 2009. Prior to First Data, Steve enjoyed a 24-year career with Unisys, where he led Talent Acquisition, Unisys University, and various business unit human resources organizations.

Teresa Younger
Girls Who Code, Site Leader
Teresa is a tech-savvy teacher who became involved with Girls Who Code (GWC) as a parent seeking an inclusive coding program for this essential 21st century skill. Grateful for an amazing GWC Club experience, she jumped at the opportunity to serve GWC's mission as Atlanta Site Lead. Teresa is currently helping to bring GWC Club to Girls For A Change in the greater Richmond, Virginia area.

Ken Kong
VP, Disruption Services
In his early years, Ken studied at the London Conservatory of Music, garnering rave reviews for his mastery of antique instruments including the lute and harpsichord. A famed author, his book, *Bananas Are Currency*, has been published in seven languages, and he has been a keynote speaker at BananaCon for the past three years. Ken also hates crowded elevators, preferring to have them all to himself.

A LIGHT IN THE SHADOWS

DETECTING CRIME ON THE DARK WEB.

RIGHT NOW, CRIMINALS ARE COMBINING THE PERSONAL DATA AND CREDIT CARD NUMBERS STOLEN FROM 145.5 MILLION PEOPLE[1] AND TRANSFERRING THE DATA TO THE HIDDEN AUCTION BLOCKS ON THE DARK WEB.

Their techniques are advanced, leveraging the same technology that the largest eCommerce giants use today.

The hackers who stole the data have had weeks to prepare, because the breach wasn't made public until just recently. Data is stolen by criminals to be monetized and brought to the underground market for sale. First Data's cyber security team in New York can use proprietary technology and unique data analytics skills to identify accounts and other types of data in this market. They uncover where it was stolen and predict what types of fraud may occur as a result.

By now, most consumers have heard about the massive data breach at a leading credit report provider that exposed the personal information of countless Americans, including many who have never heard of the service. Hackers gained access to the data using a pathway through open-source software running the company's website.[2]

While it isn't the biggest breach by sheer numbers of people affected, it could prove the be the most serious. In addition to documents and credit card numbers, the hackers retrieved personal information like names, Social Security numbers, and birth dates. This personal information is the key to unlocking more sensitive files like bank account information and employee databases.[3]

Just in the last five years, hackers have accessed the data of three billion users of a popular web portal,[4] retrieved tens of millions of credit card numbers from retail and home improvement chains and even hacked federal government systems at the IRS and Securities and Exchange Commission.[5] In at least one case, the breach happened years before it was discovered and made public.[6]

Earlier this year, First Data expanded its risk management and cyber security solutions to include Advanced Fraud Intelligence Solutions (AFIS), a tool that monitors the dark web to improve fraud alerting for financial institutions. The system uses machine learning to mine the parts of the internet that are hidden from normal view, where stolen data ends up. The algorithms operate independently, without human guidance, to ferret out anomalies that signal fraud.

"Typically, an issuer's cycle of fraud management is reliant on customer disputes and fraud that is detected through the identification of a pattern of emerging unauthorized transactions," Pete Cavicchia, First Data's Senior Vice President, Head of Global Cyber Security & Fraud Investigations, explains. "By that time the damage has already been done. AFIS allows an issuer to enter the fraud management cycle way earlier in the game, by providing them early warning on parts of their portfolio that are already in the hands of criminals before fraud can occur, and even let them know when the cards have been tested—prior to fraudulent use."

AFIS's independence allows the program to respond more quickly as hackers continuously change their methods.[7] The system spots potentially compromised accounts to initiate breach detection and card testing operations that identify wider fraud trends. Once the suspect accounts are identified, they're immediately scrubbed and new cards are issued, while the attached assets are protected.

Considering the intrusive, and seemingly unrelenting data breaches, financial institutions are hearing from anxious customers demanding increased protection and timelier notification about the attacks themselves.[8] Not just in the U.S., either—the European Union has started the clock ticking on new regulations that come into effect next Spring, governing how companies acquire and protect customer data. One consulting firm estimates companies could face up to $6.4 billion in fines just among FTSE 100 companies, if they don't comply.[9]

Because of the financial risks, and their desire to protect their valuable customers' data, many of those companies and financial institutions have turned to First Data to create an additional protective shield acting as an early warning system to mitigate potential risk. Marianne Johnson, Senior Vice President of the company's Network and Security Solutions Product Innovation, Technology and Enterprise Commercialization, says a global perspective division is needed to spot any problems. "Financial institutions and merchants are relying on us for our reach and scale. We're able to spot macro trends, and then follow the footprints back to our clients."

While federal agencies and private businesses try to tackle the problems of the hacks themselves, there are seemingly few solutions in sight. For now, the most companies and customers can hope for is to keep the stolen data out of the dark web marketplace. If they're successful, they can render these types of cyber-attacks harmless, by promptly removing the potential value of the stolen goods.◀

In This Article:

#AFIS
#DarkWeb
#CyberSecurity
#NotTodayCyberCrooks
#PreventDetectResolve

Looking Inside the Numbers With First Data's Most Powerful Marketing Tool

In this edition of *Connected*, we bring you a series of pieces that focus on **The Age of the Consumer**, a time when buyers are making demands they don't know they're making, for products that sometimes, don't even exist. For entrepreneurs and **New Disruptors**, it's an exciting time, with teams of eager marketers and designers creating new pathways to the consumer that offer experiences that make the shopper feel fully served. Together with the consumers themselves, they are reshaping everything we always thought we knew about retail.

But these teams—like the ones featured in **Fueling for the Future**, who are creating connected cars and cities—aren't just guessing where the shopping trends are headed. They use massive amounts of data and call on real-time transactions to deliver spending statistics as macro as the GDP or as honed as pastry sales in a Boston neighborhood. Using SpendTrend®, they now can know the consumers creating the marketplace.

SpendTrend is a proprietary reporting service from First Data, with timely, accurate insights and analysis of U.S. consumer buying behavior. It's based on the over 60 billion card-based transactions processed across First Data's network of over 4 million U.S. merchants and over 1 billion unique cards. That data is delivered in customizable data sets and subscription-based standardized reports, which helps facilitate forecasting, benchmarking, and business decisions. The built-in flexibility of SpendTrend enables insights at merchant category, region, and payment type levels.

That's the kind of power that enables global POS merchants to reach **Invisible Borders** and global eCommerce merchants to realize **It's a Small World**.

We start off each edition of *Connected* by focusing on numbers. We *were* going to blow you away with all the macro—the big important stuff. But that's no fun. Besides, if you want the latest macroeconomic news for free, search #SpendTrend on Twitter.

Instead, we asked Mike Spriggs, First Data's Director of Information and Analytic Solutions, to give us some examples of some of his favorite client statistics—and just FYI, these are all real. "My favorite stat? How about, the best state to be a pet in at Christmastime is Florida, because they are 17% more likely to get gifts!"

BRAD RHOADS · GREG GATLIN

SPENDTREND

7-18%
Americans spend 7-18% more on home furnishings during the summer than in winter.

10%
Californians get 10% of their total out-of-state spending from Texas.

28%
Californians spend 28% more for sporting goods than other Americans.

40%
Californians spend 40% more than the national average on holiday jewelry transactions.

10%
Illinoisans spend 10% more per clothing transaction than Texans.

20%
New Yorkers pay 20% more than the national average in tire stores.

18%
New Yorkers spend 18% more than the national average on each shoe transaction.

12%
Hawaiians spend 12% more than any other U.S. tourists in New York.

46%
Texans spend 46% more per transaction at hardware stores than Illinoisans.

17%
Florida pets are 17% more likely than those in other states to get Christmas gifts.

THE NEW DIS-RUP-TORS

^ OPPORTUNITY

✏ BRAD RHOADS   📷 GREG GATLIN

"I'M SO EXCITED! YOU HAVE NO IDEA. I'M OBSESSED"

"I'm so excited. You have no idea. I'm obsessed!" Hailey Williams bounds back to her kitchen, cradling a shoebox-sized pink package imprinted with a small white heart and a stylized, cursive "E." Seconds before, she'd torn it from the hands of a UPS driver who offered a smile and a friendly, unrequited, "Have a nice day."

Williams lives in suburban Atlanta and works as a freelance paralegal. At 32, she falls solidly in the midrange of the coveted millennial shopper's age range. For up to 12 hours a day, she sits quietly at a desk—serious and subdued—filing research for a half-dozen clients. But now she's ready to erupt with unfettered glee.

"Yes!" she shouts at a pair of capri workout pants and a matching tank top, this month's offering from the activewear apparel-in-a-box startup, Ellie.[1] There's also an ab-roller and a "super-cute chilling towel" are included in the $49 price. Under the box's flap is a message, "Hey Girl! Post a pic of your outfit on Insta, and we'll send you our fave water bottle for free!"

Ellie is one of dozens of niche companies that occupy a unique retail space: They are small enough to fly below the radar of Amazon[2] and Walmart[3] but impactful enough, perhaps, to chip away at their dominance. Their marketing strategy focuses on the shopping experience. With humorous and catchy TV ads and viral videos, these companies leverage social media and fun, engaging mobile apps to compete against the big boys.

Around 40 years ago, Walmart disrupted the retail space by offering thousands of consumer goods at reduced prices. It then created a successful business model that others have tried to match: one-stop convenience for buying everything from food to flowers to bikes. It eventually expanded its offerings to tire and oil-change shops, optical centers, one-hour photo processing labs, and portrait studios, while also providing space for in-store partners like banks, mobile phone dealers, hair and nail salons, toy stores, and fast food outlets.

800 POUND GORILLA

Then along came Amazon, the online bookseller that took only two decades to disrupt the retail space yet again, by diversifying its offerings and becoming one of the world's biggest retailers.

Mature brands attempting to stay competitive had to deal with these two 800-pound gorillas in the room—one sitting in the brick-and-mortar footprint and the other online. The way forward and the business model were clear. Those who wanted to survive had to become 800-pound gorillas too.

EXPERIENCES, MONEY, TIME AND MONEY IN EACH THERE'S VALUE IN EACH OF THOSE.

DISRUPTION

"It's not just Walmart. It's Home Depot[4] and Costco[5]—even Target[6]. It's the whole big-box retail trend. That's where the true disruption is," says Jack Stephenson, First Data's Senior Vice President for Digital Commerce. He finds ways to innovate every one from micro-merchants on up. "You're actually looking at two different consumer needs. The big-box companies respond to the shoppers' demands for convenience at a low price." But, Stephenson says, "We're hearing from customers who also want value and engaging experiences."

It's that second type of consumer demand that's driving a new wave of disruptors. For instance, airline travel has been decidedly non-experiential for anyone except first class and business travelers who pay a premium. They're rewarded with special boarding privileges, upgrades, and relaxing airport lounges to wait and dine in, while everyone else watches jealously from the cheap seats. Some passengers are willing to spend $60 or more for a few hours of the lounge life. That's the value they place on being treated like they are special.

This has led innovators at a company called OTG[7] to rethink and redesign the common areas of several U.S. airports, where passengers can now use banks of iPads to check the news, get flight reminders, and order fresh local food and drinks that are brought right to their seats.

OTG says it wanted to create amazing restaurants, featuring gourmet food from each city. But, they also wanted the layout to fit within existing airport designs, and they purposely avoided creating an app for everything. "People don't want another app; they want relaxing, seamless experiences," says Eric Brinker, OTG's Vice President of Customer Experience. "Plus, removing the app frees up their personal phones and devices to check mail and get recharged."

Another company creating this new value for its customers is Laurel & Wolfe.[8] Rather than asking customers to spend $1,500 on an interior designer, Laurel & Wolfe flips the script, charging as little as $60 for an online consultation. That gives homeowners a taste of luxury without crushing their budget, saving money which can then be used to buy furnishings the designer suggests.

Scott Mackay is First Data's Vice President for Digital Commerce Solutions. He uncovers innovations that will drive future commerce. "You always need to ask yourself, 'How am I bringing value to customers?' It starts with understanding what they're asking for, which might not always be an app. It's reflecting the world back to the consumer in ways that they can understand and digest—are they getting experiences, or are they saving time and money? There's value in each of those."

That's why shoppers like Hailey Williams and thousands of others get so excited when a small box arrives each month loaded with fitness-conscious treats. She could save money, of course, by buying each of the items separately at Walmart or on Amazon. But where's the value in that? What she really wants is to be delighted—to belong to an elite group of athletes who have custom clothes and gear hand-delivered to them each month with special surprises inside, like a free water bottle. She wants to feel special.

When the new disruptors look out at the landscape, they can't help but notice the 800-pound gorillas. Their choice, though, isn't to charge headlong into the pack, trying to compete on scale. They don't want to follow the gorillas' all-in-one, big-box, convenient and cheap business model. Rather, they're content to roam the jungles, scooping up the bananas.

CREATING NEW VALUE

WE'RE HEARING FROM CUSTOMERS WHO WANT VALUE AND ENGAGING EXPERIENCES

CLOSE ENCOUNTERS
OF THE EXPERIENTIAL KIND

After a foot massage and a tasty cocktail, you step onto the deck of a 3,000-passenger cruise ship drifting softly through the waves, a kilometer off the coast of Mexico. The sun is so bright and unexpected that you squint up at its warmth and feel the salty breeze on your face. Hours before, the frigid bite of a Chicago winter froze your face, which was covered with a thick scarf just to prevent frostbite.

In a remarkable accomplishment of brand partnership and experiential marketing, three companies collaborated last year at the flagship AT&T store on Chicago's Magnificent Mile to do what they do best—wow, entertain, and sell. AT&T partnered with Carnival Cruises and Samsung to promote the Gear VR headsets and to let frozen Chicagoans enter a sweepstakes to win passage on a real cruise ship in the Gulf of Mexico.[1]

These major players in their industries understand the same things as new disruptors: experiential sells. And while smaller companies offer fun, new ways of buying on the scale of a shoebox-sized package or a ride in a branded car, big companies go bigger.

For example, Gillette's® dominant market share was eroded by Dollar Shave Club®, the service that sends new razorblades to subscribers' houses every month at a fraction of the cost. To push back, Gillette® introduced Gillette on Demand, which lets users order new blades with just a text[2].

To promote the service, Gillette® mailed out thousands of new razors, timing shipments to arrive on the customer's 18th birthday proclaiming, "Welcome to Manhood." Inside, a booklet pitched millennials with taglines like, "Your first shave won't make you a man, but your first real shave will get you pretty darn close."

That's right; industry giants are letting it be known they won't automatically cede experiential shopping to upstarts. Consumers fell in love with Blue Apron®, the largest player in online meal-kit delivery.[3] Amazon responded by adding meal kits to its own AmazonFresh® service. The timing also coincides with Amazon's purchase of Whole Foods, giving it a potential advantage with hundreds of brick-and-mortar distribution centers.

"In any new, dynamic marketplace, there will be many entrants, and many will fail," says Glenn Fodor, who heads Corporate Strategy and Intelligence at First Data. "The winner will be the one or two who are able to scale quickly to meet the demand."

Fodor says because established companies have the resources to either create a new company or acquire an existing one, they have an advantage over young upstarts. In Southeast Asia, ride-hailing service called Grab quickly took off when it added motorbikes that to its offerings, helping riders dart through congested traffic. The most dominant ride-hailing player in the market, China's Didi Chuxing, didn't hesitate to show interest, when it invested in Grab.[4]

But established companies aren't necessarily waiting for upstarts to lead the way. They're already using the latest technology to make user experiences more memorable. Lowe's introduced autonomous robots to help shoppers in San Francisco[5], and Amazon is experimenting with checkout-free grocery stores called Amazon Go.

Fodor says whether these shopping experiences win or lose will be based on how well companies listen to customers. "You can't force onto shoppers what you think they want. You need to understand what they actually want, based on what they say and do. Otherwise, it's a recipe for failure."

And what customers really want is value. They either value experiences, like a virtual cruise or robot shopping assistants, or they value convenience, like zipping past commuters in congested Saigon. Either way, consumers want closer connections to companies, and to feel their needs are being met. The challenge is maintaining close ties with individual customers while simultaneously scaling to meet new demand.

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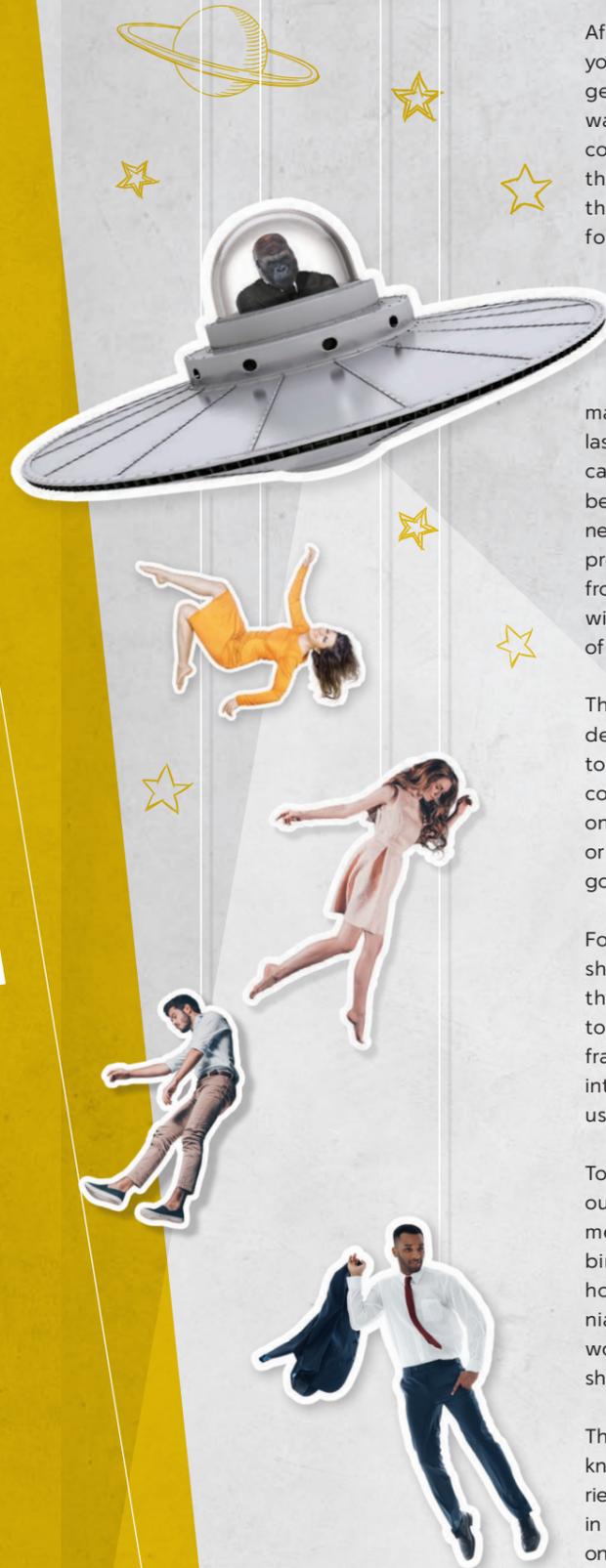
INVISIBLE BORDERS

TRAVEL LIKE A TOURIST. PAY LIKE YOU'RE HOME.

Let's say a family of five visits Disneyland. They've traveled thousands of miles from Mumbai to southern California to play with Mickey, Goofy, and Elsa. Tomorrow, it'll be Hollywood, a Lakers game, and—if they get lucky—a selfie with a star. But today, it's Main Street USA, sunshine, and plenty of thrill rides. There's just one problem. Before they left home, they forgot to add one more day—today—to their Disney Pass.

Only a couple of years ago, that problem would have been costly. Back then, making changes to reservations meant getting out of line, going to guest relations, comparing emails and itineraries, and then trying to contact a Mumbai travel agent (whose office could already be closed.) And, if the family had no access to Mastercard or Visa, they were out of luck. Most of their vacation day would be wasted before they had the chance to enjoy it.

But this family wants to see Tomorrowland today. As they walk toward the entrance, the mother pulls up her Disney app, taps the existing reservation, adds five passes, and pays with her preferred method, RuPay, all before reaching the gate. The process is familiar and safe, like any of the hundreds of other transactions she'd make back home. And it's exactly the type of transaction consumers today demand—the ability to "take your country with you."

This is made possible by First Data's partnerships with millions of vendors, all connected through their latest acquisition, Debit Solutions, which enables payment types like AliPay, RuPay, and China Union Pay, and through First Data's Local Payments solution, which will soon provide online clients access to 195 different payment options.

In countries like Brazil, India, and China, hundreds of millions of people have joined the middle class, and they are seeking the same rewarding experiences as consumers in more developed nations, including travel, a rise in personal status, and access to brand name goods. As a country's population moves into greater affluence, it triggers an adjustment in Maslow's classic hierarchy of needs, where esteem and the ability to showcase that new wealth become paramount concerns.

IN COUNTRIES LIKE BRAZIL, INDIA, AND CHINA, HUNDREDS OF MILLIONS OF PEOPLE HAVE JOINED THE MIDDLE CLASS.

In Brazil, the 100 million members of the middle class make up over half the population.[1] China's middle class will soon reach half a billion people, with consumption rising at 9% per year.[2] And India's population will surpass China's in the next five years, creating the world's largest middle class, currently at more than 600 million people.[3] They'll want to see the world, take cruises, visit theme parks, and dine at fancy restaurants. And importantly, they'll want to make transactions like they do in their home countries, using the same payment methods and the same currency.

First Data already has a wide footprint among those global entertainment and travel providers, and the company is working on ways to integrate the "take your country with you" concept into even more companies' websites and apps. The goal is to ensure that the profile of an international consumer booking travel on cruise or hotel websites won't change as the traveler crosses borders. In the Age of the Consumer, it is the traveler who chooses all the options and pays however he or she wants.

The process also works in the other direction—for the vendor. "The way an AliPay wallet is transacted is materially different from how a China Union Pay credit card is authenticated," says Ashish Bahl, Executive Vice President and Head of Debit Solutions at First Data. "But for the merchant, all those differences are hidden, and what shows up is one standard transaction, which comes through First Data. Down the road, businesses can add 10 or 20 new payment type options with no hassle."

THEY'LL WANT TO BE ABLE TO MAKE TRANSACTIONS LIKE THEY DO IN THEIR HOME COUNTRIES.

TRAVELERS WANT UNIQUE, SEAMLESS EXPERIENCES. BUT WHEN IT COMES TIME TO PAY, CONSUMERS ARE SAYING THERE'S NO PLACE LIKE HOME.

Of course, should consumers decide they want to be in another country after all, that can also be arranged. "If you book a ticket on Delta in the U.S., it's 25% cheaper than booking it as a cross-border transaction," Bahl says. "Now, with all that information loaded in their wallets, they have access to cheaper card-not-present transactions. If they decide they want to zip off to Las Vegas—they can."

When customers trust a transaction, they're more at ease and more able to enjoy their vacations, so, they'll shop more. The merchants who tap into that understanding of the global middle class will differentiate themselves from their competitors. They understand that travelers want unique, seamless experiences. But, when it comes time to pay, consumers are saying, there's no place like home. ◀

In This Article:

#DebitSolutions
#CrossBorderPayments
#LocalPayments
#ICanShowYouTheWorld
#FinishEachOthersSandwiches
#ThatsWhatIWasGunnaSay

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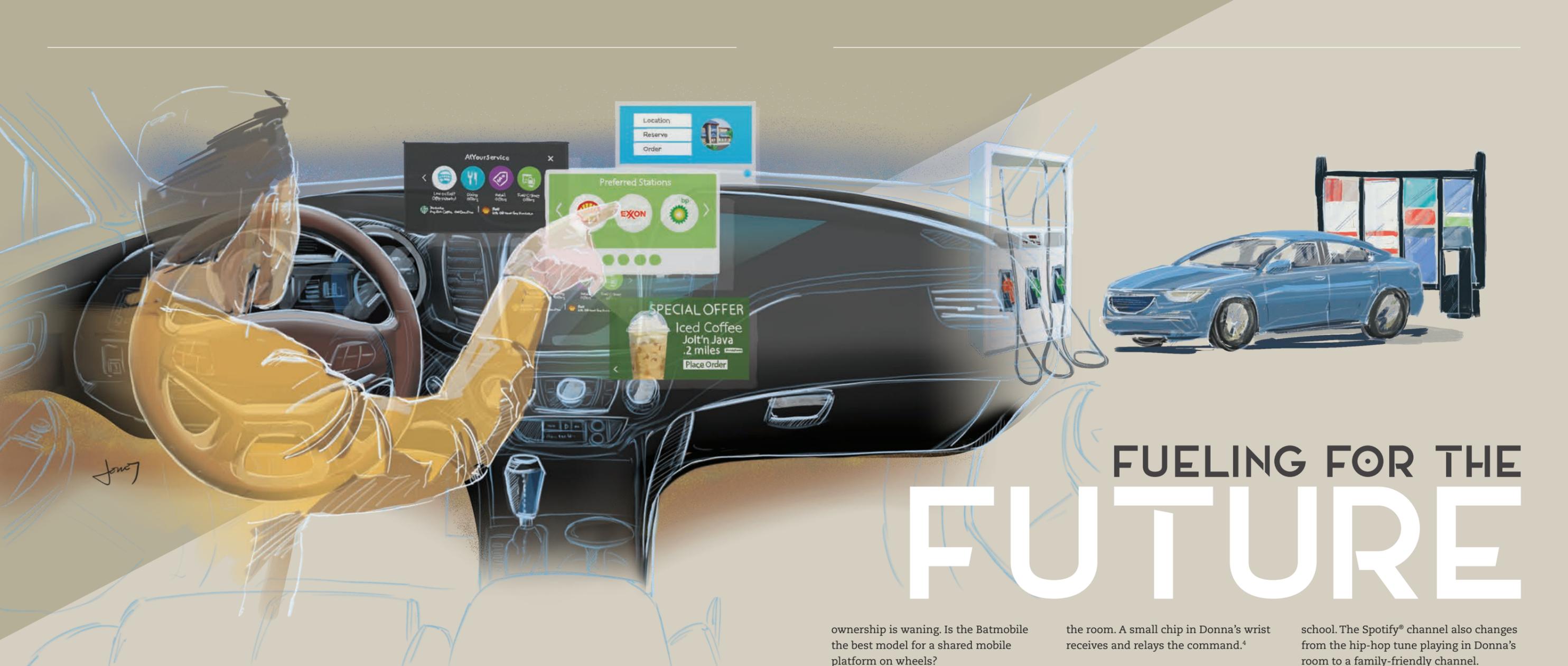
FUELING FOR THE
FUTURE

UNVEILING THE TRULY MOBILE CONNECTION

The earliest self-driving cars most people remember from their childhood are Chitty Chitty Bang Bang and Herbie the Love Bug.

One car could fly, although that's never fully explained. And, they were both powered by some sort of supernatural forces. Then there was the Batmobile, which has stayed awesome through the years, going back to the 60's. But, it wasn't until the 1980s that we saw the first autonomous, fully-connected, AI-powered car: KITT from Knight Rider. It spoke, solved crimes, and gave David Hasselhoff a hard time. As a bonus, it was a sweet-looking Pontiac Trans Am.

Often when artists conceptualize the cars of the future, they imagine sleek, low-riding, high-speed capsules of carbon fiber that resist wind and conserve energy. But that vision conflicts with one stark reality: cars are taking on more utilitarian functions, and personal car ownership is waning. Is the Batmobile the best model for a shared mobile platform on wheels?

The truth is, the way we think about cars and car ownership is changing dramatically. Consider this: After housing, transportation represents most families' second biggest expenditure, which includes gas, oil changes, tires and everything else.[1] And despite that, cars sit idle 95% of the day.[2] Soon, you might not even own one.[3]

THE VISION.

To understand why car ownership is on the decline, imagine it's morning in 2027 in a New Jersey suburb. A mother, let's call her Donna, is getting ready for work. She says, "Hey, Alexa, I need a car in 20 minutes." There's no Amazon Echo® in the room. A small chip in Donna's wrist receives and relays the command.[4]

Eighteen minutes later, as Donna finishes dressing, the room's hip-hop music is interrupted by a digital car horn—a two-minute warning for the kids. When the car arrives, it is driverless and autonomous, and it features the logo of companies like Ford, Lyft, Amazon, or Apple. Donna's company leases the service for a fraction of the cost of giving her a personal car.

As she and her kids pile inside, her favorite Starbucks® drink and a bagel are waiting for her. It's a gift from Starbucks for being a loyal customer, and it was retrieved minutes before when Starbucks used contextual analysis to divert the car to the nearest drive-thru. The car senses the extra, smaller passengers inside, so it adjusts its route to drop off the children at school. The Spotify® channel also changes from the hip-hop tune playing in Donna's room to a family-friendly channel.

Everyone buckles up. Accidents are rare, and even "dumb" cars have sensors that help cars avoid collisions.[5] And, because speed limits and traffic patterns are coordinated, travel times can be predicted down to the minute.

Inside, the seating looks like a small conference room, with monitors and tablets for everyone. Because Donna's company pays for the lease, she's expected to be "productive" while she rides. But she puts that off for a few minutes to help her youngest with a homework problem

✎ BRAD RHOADS   ⬚ DON JOLLEY   ⬚ JASON ABBOTT

shown on their shared screens, one that "follows" them from their rooms to the breakfast table, to the car, and to the classroom without the need for separate connected devices.

When school drop-off is done, Donna's children wave goodbye, and they see Mom pulling away in a car that looks like an oversized Volkswagen Beetle. Its dome is energy efficient and allows for maximum roominess.

Alone now, and headed to the train station, Donna begins her work, answering emails and confirming appointments from her connected device. An alert pops up, and Donna quickly sends a suggested gift to her son's best friend, whose birthday party is that weekend. The car pays for the gift from a mobile wallet activated from within any vehicle she uses, even public transport. When she chooses a low-cost ACH transfer, the business rewards her with a discount.

As she approaches the dry cleaner, the car asks her if she'd like to pick up her clothes. She declines, but accepts the option to stop there on the way home. With the few minutes she has left, she uses voice commands to give the car a shopping list. Before the car picks her up later in the day, it will pull in to a Walmart Grocery section, where employees will load her order identified and paid for with the car's system.

The car has timed her arrival at the train station to minimize her wait, paying for the ticket automatically as she drives into the lot. It gives her the option of carrying on working until another train arrives 20 minutes later. Donna decides to take her tablet to the platform. Her work and payment options will follow her throughout the day. In the meantime, the car drives to the nearest charging station, where it connects automatically and waits for any changes to her schedule.

THE FUTURE IS HAPPENING NOW.

To realize this vision, carmakers like General Motors (GM) and Ford, with the help of First Data, are introducing connectivity into vehicles through nodes that rely on more than just smartphones and have the ability to integrate software changes in the future.

Sensing the shift away from car ownership and toward car sharing, Ford has announced that it is refocusing its business model to become a provider of connected transportation services. The company has hired hundreds of engineers from Blackberry and invested hundreds of millions of dollars in a Canadian research center, including a new center focused on connectivity.

Ford's SYNC 3® system is part entertainment, and part mobile platform for payments and diagnostics. It utilizes its own AppLink system that allows drivers to use voice control for their compatible mobile phone apps. Much of it is built on technology from Blackberry's QNX division.[6]

However, there is growing concern that a connected car could introduce security vulnerabilities. QNX is building a firewall between the connected devices and the driving functions. Division Chief John Wall says security and safety are the main concern of both companies. "As cars get more connected, [we need] security to ensure external threats can not get access to critical functions of the car and endanger the driver in public."[7]

Along with autonomous driving and mobile connectivity, the third—and often most overlooked—feature of a connected car is the ability for car dealers to communicate directly with drivers. Most new cars today have preset alerts that tell you when an oil change is needed or when it's time to rotate the tires. But

what if the car could self-diagnose bigger problems and alert both the owner and the nearest dealership? The dealership could then send out a message the next time the car passes by, inviting the owner to come in for a free inspection.

GM has been collecting diagnostics for over a decade and using that data to improve safety features like lane alerts and automatic braking responses. It has an advantage in the marketplace with 12 million cars already connected to OnStar®. GM's Director of Advanced Development, Steve Schwinke, says customers value convenience above all else. "Now if you see a potential issue going on with your vehicle, you simply hit the OnStar button and a trained advisor will query the vehicle and see if there's a trouble code and advise the customer on what action to take."[8]

Now that connected technology is here, automakers are less dependent on third-party apps to enhance the connected driving experience. They can partner directly with other companies to sell virtual marketing. Ford has already teamed up with ExxonMobil to integrate the SpeedPass+® app into its SYNC 3 system. Drivers use voice commands to locate ExxonMobil stations. They can then tell the vehicle to pay for their gas with whichever payment method they choose.

And the number of payment options is growing. First Data's ConnectPay gives drivers the ability to use ACH "Pay-With-My-Bank" transactions without the normal wait-time for deposits to clear. Alain Barbet heads First Data's TeleCheck business, which oversees the project: "Since businesses are charged much less for ACH transactions than traditional credit card transaction fees, we believe they will reward their ACH customers with discounts and enhanced services."

First Data's uCom unit is also working with GM to fully explore contextual commerce. They're building "smart" applications into the vehicle's head unit, which contains both infotainment and connectivity modules. There, real-time analytics create new opportunities.

"For instance, the sensors know if there is a passenger in the car," says Scott Mackay, First Data's Vice President of Digital Commerce Solutions. "So, a company like

Starbucks can send out an early-morning two-for-one coffee offer as the driver approaches his favorite location."

Mackay says systems can also help the consumer save money. "Let's say you're at a quarter tank of gas. Without even needing a prompt, the vehicle can start searching for the cheapest refueling options, or the options that will bring the driver the most reward points."

GM has just signed a marketing agreement with First Data to sell four dedicated buttons on connected head units. They can be controlled contextually—offering different options for different times of day. Now, merchants can "buy" the space inside the vehicle. With a touch, the driver links to that location for directions, menus, and payment options.

First Data is in a unique position to connect carmakers with new partners because of the thousands of relationships it already has. "When merchants want to reach consumers in new ways, wherever they are, including their cars, that platform is ready to use, and we have the relationship to help make the introduction," says Leslie Klein, First Data's Head of Marketing for Global Commerce and Enterprise Sales.

Klein points out the first railroad companies never realized the value of their land until after they'd let telegraph and telephone companies put up poles along the tracks for free. She says it was the most precious resource they had if they'd only had the vision to develop it. Klein compares this to the development of mobile platforms inside vehicles. Now that carmakers realize its value, she predicts this space will soon be the most coveted platform. ◢

In This Article:

#UniversalCommerce
#Mobile
#TeleCheck
#ConnectedCar
#Seamless
#TheFutureIsHere
#Connectivity

CONNECTED CITY

While connected cars may be grabbing the headlines, there's another revolution taking place that is quietly changing the way we live and work. Connected cities have become a reality, and the technology that powers them is advancing at breakneck speed.

Hundreds of cities around the world, including dozens in North America, provide free Wi-Fi for public use. From that platform, add-on technologies have begun to arise. The White House created a $160 million initiative in 2015 to accelerate the development of these smart cities[1], improving traffic, detecting crime, and managing waste.

To fully empower connected cars, cities will first need to gather real-time data to improve traffic flow. Sensors on street corners and intersections will measure congestion and the timing of traffic lights. Eventually, two-way communication can be used to reroute autonomous cars to less-congested areas and optimize public transportation routes. Cities can also save energy costs by dimming streetlights when no vehicles are nearby, and limit pollution by routing cars to open street parking or to specific spaces in parking garages so that drivers don't need to circle, looking for available spots.[2]

Small changes can have a big impact. UPS became a pioneer in using algorithms to lay out the best routes between pick-up and drop-offs. By eliminating most left turns, it saved $300 to $400 million annually in fuel, wages and vehicle running costs.[3]

Using those same methods, city workers can be alerted only when garbage cans are full. Trucks can then be routed more efficiently. Eventually, they will become autonomous too, hunting city streets for pick-up opportunities.[4]

In South Bend, Indiana, sewers are outfitted with dynamic water-pressure sensors that prevent flooding and can sense and relieve backups before problems arise.[5] City officials estimate they've saved $100 million in sewer expansion costs while creating a safer, cleaner environment.

First responders are also detecting crime earlier and responding more quickly. Dozens of U.S. cities now use microphones on rooftops to identify gunshots. They relay the exact location to city police, who can respond immediately.[6] Soon, firefighters and police could carry sensors that monitor vital signs and send out alerts in medical emergencies.

As other technologies emerge, additional forms of efficiency will benefit both city workers and citizens. Ultimately, it could be the residents of the cities who have the final word. Like everything else in the **Age of the Consumer**, connectivity must bring them tangible benefits before they buy into the process. If it all works, they'll download the apps and drive further demand. If not, city planners could have a difficult time trying to convince consumers to change.

Imagine

A future where a driverless car picks you up and takes you to work so you can do the important stuff: emails, phone calls, text messages, and social media.

Imagine that on the way there, the car pulls in to a donut shop for a chocolate glazed and a hot cup of Joe— a surprise gift from your spouse who ordered a pit stop from their phone.

Imagine the car talks to traffic, times stoplights from miles away, finds the closest parking, and pays the meter, saving you time and fuel.

Imagine a car that senses that you're low on fuel and takes you to the gas station with the lowest cost per gallon, one that orders and pays for carry-out before you get there, one that knows when your flight is delayed, and one that tells you the part you ordered is ready when you drive by the garage—all without you lifting a finger.

Then, the car picks you up and stops at your favorite store for groceries, and you pay for it all without rolling down a window.

Soon, you won't have to imagine. Working with the world's top automakers, First Data® is developing touchless payments for thousands of businesses, ranging from your favorite fast food restaurants to the place where you get your oil changed.

So, welcome to the future.
We've been expecting you.

First Data.
The Power Behind Payments.

FirstData.com

The Age of the Consumer

How We Got to "Quick It or Quit It"

Thirty years ago, I took a trip to New York City with some journalism friends from the University of Maryland.

We'd just turned old enough to get into the Manhattan bars, and we were planning on thoroughly enjoying ourselves before crashing at someone's house in Mount Vernon. That was the plan. There was one problem—the last train left Manhattan about a half hour before midnight, not at midnight as we'd thought. We were stuck with no cash for a cab. Back then using a credit card in a taxi just wasn't a thing.

Our cold, merry band started walking in whichever direction seemed logical in search of an ATM—one that would work with our out-of-state cards. Laws allowing banks to have branches in multiple states were still a decade away.[1] In 1987, the best we could hope for was a local bank that was connected to our bank through a brand-new network like STAR®.[2]

After we passed a half-dozen ATMs without success, someone joked that I should just put my card in the next ATM we saw. "Any card works in any machine now," she said. ATMs had only arrived in my small town a few years before, and the idea that I could use one in New York was laughable.

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A wager was negotiated, the card went in, the PIN was entered, and the ATM's green monochrome CRT monitor blinked, "Transaction in Progress…" It seemed to size up our group, the transaction, and the existential meaning of life. Then, the words "Transaction Complete" appeared along with $100 in 20s. We shouted in disbelief. The impossible was actually possible.

It works.

That trip to New York City took place in the middle of the Information Age.[3] There was so much possibility, but the platforms didn't always work. We were forced to upgrade our computer operating systems every few years with software that famously failed[4], and we tended not to blame the company but to blame

ourselves for not being computer literate.

30 years later, the idea of sticking with a product that doesn't always work is difficult to comprehend. We now live in the Age of the Consumer, where every transaction must delight, every company must compete, and, most importantly, everything must work.

It's not an age of brand loyalty. If people love Apple, it's only because they believe Apple works. If they get directions using Google on their iPhone, it's because they believe Google Maps works better than Apple Maps. And, if in the next brief moment—even for only a few seconds—they're convinced Waze works better than Google, they'll switch again.

Those decisive seconds aren't just perceived. First Data's Innovation Lab, led by Kevin Lewis, did an extensive study to determine just how long customers tried out new apps. "Companies have a surprisingly short period of time, really a matter of seconds, to delight potential converts," Lewis says. "If the app doesn't work or it's hard to understand, users will delete it, and they'll never try it again."
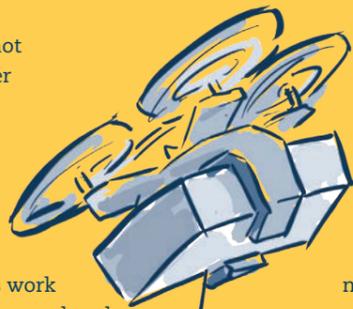
Quick it –or– quit it.

That makes the launch of any new product, even a non-app, extremely important. Lewis advises all of First Data's partners to get to their key messages fast and to keep customers immersed in a unique shopping experience until they're ready to buy. "We tell them 'quick it or quit it,' which is what customers will do if we don't listen to what they're asking for." But deciphering what

really wanted was to avoid the long lines."

In response, the team started working on an "order ahead" feature combined with a separate pick-up experience where mobile customers could grab their food and go. This work was especially handy when First Data and Chick-fil-A began working together on what would become the new Chick-fil-A One app. It became the most downloaded free app in the iTunes App Store for a time in mid-2016.

customers actually want from what they say they want isn't always easy. When First Data began working on a new experience for quick service restaurants, customers said they wanted to use their phones to pay for their food. The team created some prototypes that included a tap-to-pay system like Apple Pay® and Samsung Pay®. However, when testing the prototypes with consumers, they noticed a different frustration. Lewis says, "What customers

> First Data created enabling technologies based on the real needs and desires of consumers.

Creating an experience that provided convenient payment and loyalty was exactly what Chick-fil-A wanted. First Data created enabling technologies based on the real needs and desires of consumers.

First Data's Head of Corporate Strategy and Intelligence, Glenn Fodor, plans corporate strategies around the demands of customers. "In the Age of the Consumer, businesses need to be engaged with the customers, anticipate what they want, get their attention amid

unprecedented competition, and then present them with a unique buying experience—when they want it, where they want it, and how they want it. You either do that or perish."

Convenience versus experience.

The hunt for new customers begins with understanding today's mobile lifestyle and then leveraging a company's strengths. "Roughly half of Home Depot's online sales are fulfilled in the local store," says Fodor. "Effectively, Home Depot has thousands of distribution centers across the country, which when used with a proper interface is a clear competitive advantage versus other retailers. So, when Home Depot added the mobile element, enabling customers to search and pay for products before they get to the store—that's how they combined convenience with a great experience."

Conversely, quick service restaurants don't need to work on convenience— it's already one of their strengths. But add a great mobile app, and they can easily win market share. Fodor says, "Just look at the continuum of retail brands, ranging from those that are growing to those that aren't—nearly all those at the top of the

growth chart are food or some derivative thereof. Food service is at the forefront of getting digital right!"

If convenience isn't a company's strength, it must compete based on experience, such as making shopping fun, decadent, wholesome… whatever the customer wants. REI has a half-dozen apps that cater to its customers' love of the outdoors, from finding the best hiking trails to a comprehensive guide of US national parks.[5] And unsurprisingly, REI ranks near the top for customer experience.[6]

They want it now.

The final frontier in the Age of the Consumer is meeting the demand for seamless purchases at the point of sale without keeping the customer waiting, and without asking the buyer to take on credit card debt. Millennials came of age during the Great Recession, and they are known for avoiding credit card debt and high-interest payments.[7]

Several mobile phone manufacturers and retailers have responded by allowing customers—both in store and online—to choose from several different financing options, including point-of-sale (POS) loans that offer interest-free installment payments. This same process can break up the cost of customers' major purchases with installments through monthly bills.

First Data developed a POS loan processing program to meet market demand and provide its clients with ongoing support. Heather Ruff, First Data's Vice President of Loans Processing Solutions, says the benefit of a POS loan is to make the buying process seamless. "By the time you get to the sale, the customer is comfortable and familiar with all the payment options, and they're eager to buy, not anxious about debt."

Looking forward.

The rush to fulfill consumers' desires has dramatically reshaped the way we make payments and has allowed new market disruptors to form. Four students in New York City today would never face the same

predicament as me and my friends 30 years ago. Today, they'd point their smartphone at any train station or bus stop to get the next departure time. And if they wanted to get home faster, one touch would summon a Lyft or an Uber.

And even those experiences are getting better. Lyft has announced a deal with Taco Bell that lets riders go into "Taco Mode." An app will prompt the driver to take the passengers to the nearest Taco Bell, which will light up with the words "Taco Mode" when the car arrives. For the rider, there's a special in-car menu and free Doritos Locos tacos.[8]

For any college student heading home after a night on the town, that's the pinnacle of giving the consumer what they want, when they want it, and how they want it.

IT'S A SMALL WORLD

THE THREE THINGS THAT MATTER IN GLOBAL ECOMMERCE:
TRUST.
TRUST.
TRUST.

In a connected world, where more than half of frequent eCommerce consumers reach across borders to buy whatever they like, a merchant's location has become less important.[1] The three things that matter in global eCommerce are: trust, trust, trust.

That trust is built on many factors, including familiarity with the brand, experience with the merchant, and the ease with which the online shopper can complete a transaction. "As consumers, when we see payment methods we are familiar with, we have more trust in the brand," says Bob Nadeau, First Data's Senior Vice President for Enterprise Solutions. "That trust helps to reduce shopping cart abandonment."

For global merchants, that means creating sites in local languages and selling goods in local currency, all while being sensitive to how different cultures make payments. In the US, online buyers are comfortable using credit cards. But in Latin America, customers prefer electronic cash payments, and in northern Europe, direct debit is most popular.[2]

"There has been a significant increase in cross-border shopping in recent years, and while geography is no longer a transactional barrier for eCommerce, payment methods can be a hurdle," says Shane Fitzpatrick, First Data's Global Head of eCommerce.

First Data offers its online clients a solution through Local Payments, which will soon give them access to 195 different payment options that are all presented in a single interface.[3] Nandan Sheth is First Data's Senior Vice President of Debit Solutions, a company that First Data acquired in 2017. Sheth notes that previously, payments were complicated, and they stifled growth and the promise of eCommerce.

"Now, with this new technology and First Data's ability to scale globally, we can help them truly realize their cross-border aspirations." Sheth says four countries are primarily driving cross-border commerce, both as buyers and sellers: the US, the UK, China, and India. Competition for Indian customers, for example, means that merchants must be able to accept payments using RuPay. That's the alternative payment method created by National Payments Corporation of India to compete with US-based credit card companies, and it's accepted by thousands of eCommerce sites within India.[4] Even

bigger is China's AliPay, a subsidiary of the eCommerce king, Alibaba, which boasts 450 million users. After inking a deal with First Data earlier this year, AliPay users now have the ability to pay with their preferred method at millions of First Data point-of-sale devices.[5] That's particularly good news for US hotels, theme parks, and cruise ships, which have dedicated programs catering to Chinese travelers.

Getting AliPay acceptance into Las Vegas casinos was a much-needed boon for an industry known to pull out all the stops for high rollers. Many Las Vegas casinos now have special concierges who speak both Mandarin and Cantonese, and at least one chain has started booking rooms directly through China's social media.[6]

Reaching customers in new ways and making their shopping experiences as seamless as possible is the key to growing cross-border connections. Jonathan O'Connor, First Data's Sales Leader for New Markets, says the relationships in the travel industry have changed dramatically. Tourists no longer walk into an agent's office and explain what they want, pulling information from the provider. Now, they log on to travel websites that push those services toward the customer, offering discounts for hotels and flights booked together, and suggesting a car rental might be in order.

What has not changed, O'Connor says, is the bottom line. "Whether it's a push or a pull relationship, it's important that the traveler feels comfortable paying. That's where we come in. We facilitate the payment and close the transaction. If every journey begins with a single step, we get you past that last mile."

There's a certain ease to being able to browse world markets and select from an infinite number of goods, all from a device cradled in your hand. But without the ability to connect to customers in ways that make them comfortable, the images and offers popping up on our devices are nothing more than window dressing. To move them from the storefront to the cart and ultimately across borders, vendors need the payment options, the currency choices, and the scale only First Data can provide. ◥

> " "
>
> ## While geography is no longer a transactional barrier for eCommerce, payment methods can be a hurdle.
>
> **Shane Fitzpatrick**
> First Data's Global Head of eCommerce

In This Article:

#eCommerce
#DebitSolutions
#AlternativeMarkets
#Trust

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NAVIGATING THE GLOBAL LANDSCAPE

First Data®

First Data's global scale allows merchants and financial institutions to seamlessly connect with consumers in ways they know and trust. Showing all possible points of entry, this map is a glimpse into the possibilities that connected commerce brings to merchants, financial institutions, and consumers.

ANYTHING

ANYWHERE

ANYONE

Map Labels

- Payroll Card
- PAYROLL DELIVERY
- LOYALTY
- INCENTIVE
- ENCRYPTION
- Digital Gift
- Security & Fraud
- Mobile Commerce
- Disbursements
- SINGLE INTEGRATION POINT
- Global Accounts
- Network Enablement
- Currency Solutions
- LEAST-COST BILLING
- Local Payments
- SEAMLESS eCOMMERCE
- MULTI-CURRENCY
- FAMILIAR PAYMENT METHODS
- Payment Facilitator Solutions
- Processing
- Sponsorships
- Payment Acceptance
- Sales & Support
- 24/7

Case Study - NPCI

Problem
> NPCI only participating in ATM, POS
> Visa/Mastercard lead CNP payments in India with few local substitutions
> Required comprehensive issuer/merchant facing platform for CNP

Solution
> Leveraged Total eCommerce Debit Solutions stack deployed in India
> Authentication engine, issuer connectors and MPI all leveraged
> Supporting web, mobile and app

Impact (Expected)
> Over 200M cards issued and activated for online acceptance
> RuPay achieving 10% CNP marketshare in 3 years
> RuPay generating new CNP revenue

Case Study - Transport Company

Problem
> Competing for driver mindshare
> Solve driver cash flow issues to increase reliability
> Implement on-demand driver payouts

Solution
> First Data + GreenDot deliver comprehensive payout solution
> Single connection for Visa/Mastercard + EFT + Prepaid card coverage
> Greatest instant payout coverage

Impact
> Over 30% registration from drivers for on-demand debit payouts
> Expected to increase driver satisfaction
> Launchpad for international market

Case Study - priceline.com

Problem
> OTA market highly competitive
> Growing unregulated debit volume
> International payment methods becoming important

Solution
> Single connection for LCR of all debit
> Single back office including reporting
> Expansion to international debit
> Process signature debit as default

Impact (Expected)
> Over 35% savings over Visa/MC
> 0.4% increase in approval rates
> Currently converting 55% of all debit
> Launchpad for international market

SOLUTIONS KEY

Global Accounts: Single point for integration, consolidated reporting, and reconciliation, interchange optimization, charge back management, settlement, and a single price point and funding stream.

Local Payments: Single source that enables familiar methods of payments, including bank transfers, direct debit, prepaid vouchers, eWallets, and cash-based solutions.

Security & Fraud: Deploying best-in-class security and fraud solutions to help protect merchants, financial institutions, and consumers within the payments ecosystem and help them focus on growing their business.

Payment Facilitator Solutions: Full range of seamless eCommerce payment processing solutions allowing partners to have a single contracting/integration experience, flexible payment options, easy integration/fast boarding, industry-leading security/fraud detection; and innovative tools to help drive revenue, decrease costs, and enhance customer loyalty.

Currency Solutions: Dynamic currency conversion and presentment solutions that create consumer wallets with multiple methods of payment, including dynamic currency conversion, dynamic pricing, and global e-pricing.

Mobile Commerce: uCommerce mobile payment solutions enabling payments in the Internet of Things, in-app payments, social integration, wearables, and third party/social integration.

Payroll Card: Banking alternative for the millennial consumer.

Sales & Support: With 24/7 Sales and Support teams, First Data is always here when you need us.

Payment Acceptance: A single connection to access all domestic EFT networks for dynamic, least cost routing of Visa and MasterCard debit.

Digital Gift: A leader in gift card processing, both physical and digital.

Processing: Proprietary solution empowering acquires with transaction management & reporting, authorization services, dispute management, merchant billing/funding and clearing/settlement.

Sponsorships: Powering acceptance by leveraging bank relationships globally.

Disbursements: Merchants can push funds instantly to debit cards. Used to pay out commissions, insurance claims, loan origination, dividends, and other corporate disbursements.

Network Enablement: Unlocking global scheme debit/ATM networks for local, and cross-border eCommerce via Debit Solutions.

✎ LEXI KOUTRELAKOS 📷 GREG GATLIN

DESIGNING THE MOBILE MOMENT

A Look Inside First Data's Innovation Lab

✎ BRAD RHOADS   📷 CHRISTOPHER AMARAL

At First Data's headquarters in Atlanta, you can find the company's Innovation Lab. Home to the "labsters," a group of user-experience researchers, designers and technologists, product managers, and client innovation leaders use a process called "Design Thinking" to disrupt the future of commerce and solve problems consumers and businesses can't yet imagine. The space looks and feels like the home of any creative genius—it's edgy, inspired, and eclectic.

There's a palpable energy in the Innovation Lab. Conversations begin in rolling chairs and then spread across the room, as others weigh in with new thoughts and contradicting opinions, scrawled on mobile dry erase boards to conceptualize, create, and design the solutions that will drive the future of commerce.

Off to one side of the room, not so much directing the chaos as living within it, is Kevin Lewis, First Data's Vice President of Innovation. Wearing a white polo and faded blue jeans, he looks less like a corporate vice president and more like a favorite college professor (he also happens to be on the faculty of the Georgia Tech College of Design).

Lewis has the pace of someone starting a new adventure; there's excitement and a sense of anticipation in his voice. "So, you want to know about Design Thinking?" He gestures toward a diagram, this one drawn on an open wall with the words *empathy, define, ideate, prototype,* and *test sitting* arranged as a perpetual circle.

Lewis is leveraging the principles of Design Thinking here at the First Data Innovation Lab, where eager colleagues use its nuances and techniques. The purpose is to truly understand the user by listening to what they are *saying*, going further by observing what they are *doing*, and then finally connecting the dots to arrive at what the end user truly *wants*. With an informed point of view focused on empathy, the labsters narrow their scope, endure intense brainstorming sessions, and create prototypes to take back into the field and test with real end-users. Each iteration helps them learn more about their end-users' needs and how to solve them. The results are products that delight users because they satisfy their actual desires.

At the center of the Innovation Lab is a long white table. On it are Sharpie-covered blocks of wood, bits of wire, and other props suggesting the size, shape, and form of electronic devices. Lewis lifts a twisted pipe cleaner and jams it into his smartphone. "This was the first dongle we designed for Pogo™ as we were looking at how to make it more stable when plugged into the phone." At the end of the table is a sleek, compact credit card reader—the Clover Go. "It took some time, but this became that," he says, holding the before and after versions side by side.

Ideas can become functional through Design Thinking. For example, in this age of giving the consumers what they want when they want it, the Lab has used Design Thinking to make First Data's electronic payroll-delivery solution, Money Network®, more user-friendly. This change came from customers asking for access to features that rivaled mainstream banking offerings, because many were underserved by the banking community.

As part of this process, the labsters followed and observed actual Money Network users as they went about their daily lives. The team noticed some users became anxious at check-out. Lewis says, "They were doing all these calculations in their heads, trying to work out how much they had to spend. Would the check they just mailed take two days to reach the gas company, and what did that do to their balance?"

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> **Kevin Lewis**
> **First Data, Vice President of Innovation**

So, the team reconvened and used Design Thinking to brainstorm the problem. The result was a Quick View feature that displays the current amount available for a user to spend. Transactions like dinner out, buying gas, or buying groceries are deducted instantly from what's available, rather than taking time to clear. "That was such a huge sigh of relief for them—and it made us feel great," says Lewis. "There's such a stigma attached to having a card declined because of inadequate funds, and this enhancement put the consumer back in control anytime, anywhere."

Lewis says his team's proudest moment came during the final round of retooling and observations. "When we went into their homes, we noticed many people had these marked envelopes to save for something they wanted to buy. They would bring home cash, put a bit into each envelope, and then tuck it away in a freezer or cookie jar."

Another round of Design Thinking resulted in a feature called the Piggy Bank. Users can either make automatic deposits each pay period or move specific amounts into their Piggy Bank anytime. They can create up to three Piggy Banks to set aside money for the things that matter to them the most. Lewis says he has heard from so many grateful customers. "One lady told me she'd never been able to save a penny in 23 years, and now she does it regularly."

In Design Thinking, this would be called the "a-ha moment." Lewis says his team released the app only when customers were delighted with its design and function. "You need to go out and observe people in action," Lewis says. "Is there observable behavior that leads to solutions?"

But wouldn't it be easier to just ask people what they want? Lewis grins. "Sure, you can ask them—go ahead. People at the end of the 19th century would tell you they wanted faster horses. So, instead of building cars, Ford would have invented horse steroids."

"What people want is often very different from what they *say* they want," Lewis says. "We believe in 'show me better than tell me.' It lets us deliver awesome new products and solutions."

In This Article:

#InnovationLab
#DesignThinking
#MoneyNetwork
#Mobile

In 1986, the year Melinda Gates got her degree from Duke, 39% of computer sciences graduates nationwide were women.[1] That was the highwater mark for women, who became the vanguard of the dot-com boom that was just around the corner.

It was a time of unrivaled creativity, risk-taking, and eureka moments, when prospectors became rich, and young, idealistic minds challenged social convention. They saw the world differently, and had the audacity to change it. Stereotypes of nerdy boys working alone in basements hacking their high school grades hadn't yet developed. Coding was artistic and collaborative—almost poetic.

Since the 1980s, the gender gap in computing has surprisingly widened. Today, women account for only 18% of computer science graduates each year in the U.S.[2] One common theory—shared by Melinda Gates—is that starting in the 1990s, the games on home computers stopped being neutral, like Pong, and began to appeal more exclusively to boys and men. Gates recently told CNN, "The video games became very male oriented, and women started to drop out of the industry in droves."[3]

When TechCrunch interviewed successful female coders and asked them why they pursued careers in the field, a frequent answer was that it was fun. Other common reasons included teamwork, problem-solving, and helping people. None mentioned "getting rich"—it was their ability to create solutions that affected change that kept these women engaged.[4] Christine Larsen, Executive Vice President and Chief Operating Officer for First Data, talked with us about how knowing how to code helped her throughout her career: "My master's degree is in information management and I spent the first 10 years of my career building systems—first as a coder and then growing into a manager of clients and multiple projects. Systems thinking—the ability to see the pattern—is fundamental to commercial work at scale. I use my foundational knowledge in how the 'tech stack' works together every day to solve problems for our clients."

Getting with the Program.

In the summer of 2017, First Data partnered with **Girls Who Code,** a non-profit that aims to close the gender gap in technology. Together, they hosted a seven-week summer immersion program at the company's headquarters in Atlanta. Girls Who Code is trying to capture that sense of fun and engagement to reignite the imaginations of girls who are interested in technology. According to Girls Who Code, while 66% of six to 12-year-old girls are interested or enrolled in computing programs, the number drops to 32% for 13 to 17-year-old girls, and further drops to 4% for college freshmen.[5] Girls Who Code offers after-school clubs and camps for 6th to 12th grade girls and links them to supportive peers and mentors who teach them computer science skills.
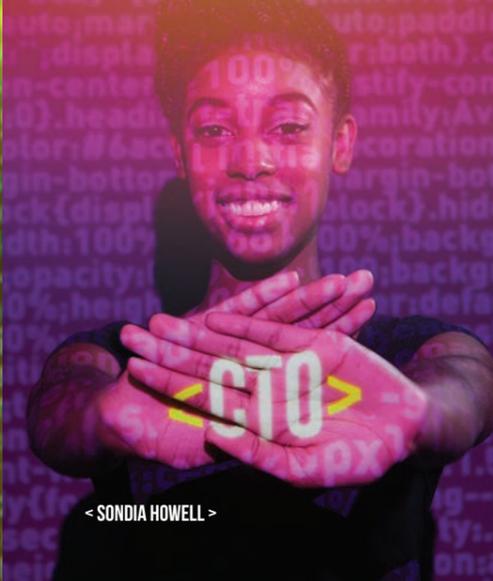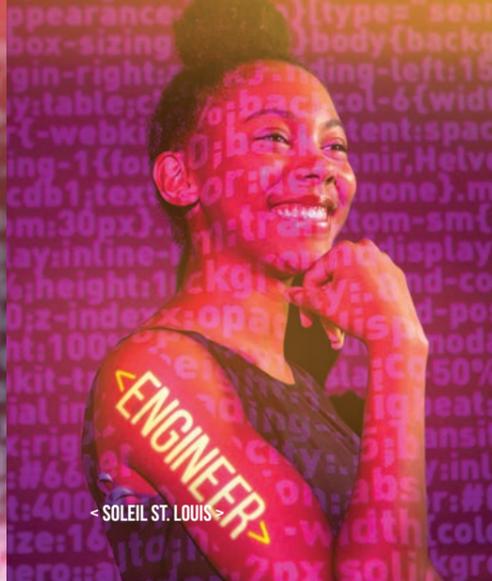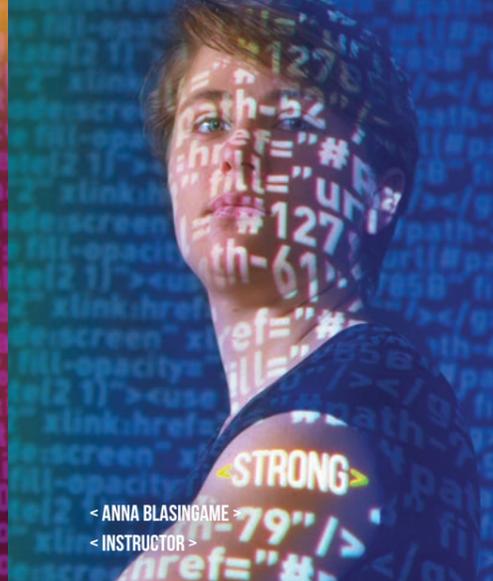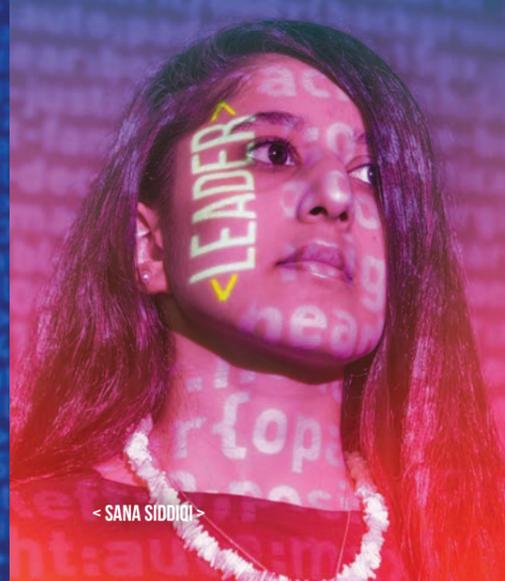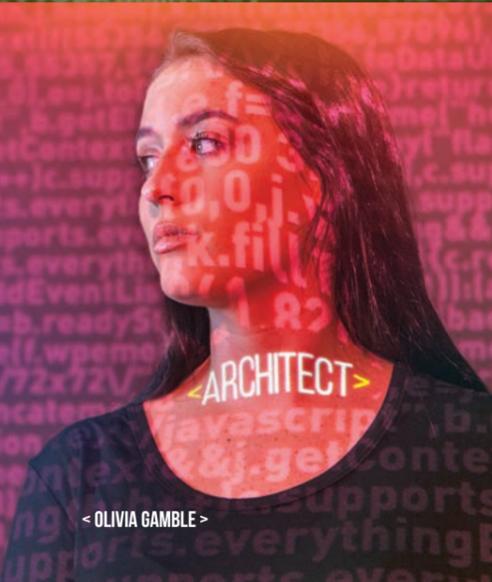
Closing the Tech Gender Divide

✏️ ROBYN WARE
📷 CHRISTOPHER AMARAL
🖼️ CHRISTOPHER SANNA

< MADISON CERPA >

< EMILY REES >

< POWERFUL >

< JORDAN WHITAKER >

INSPIRED

< MIKHA NAIK >
< INSTRUCTOR >

FUTURIST

< OLUWAKEMI BAKAR >
< SONDIA HOWELL >
< KAI JOSEPH >
< SOLEIL ST. LOUIS >
< ANNA BLASINGAME >
< INSTRUCTOR >
< SANA SIDDIQI >
< OLIVIA GAMBLE >
< FAVOUR AGABI >
< NNEOMA EMEKA >
< TAYLOR DANIELS >
< TOBENNA OBI >
< MATT TURNER >
< INSTRUCTOR >

"This program presented the unique opportunity for us to introduce girls to computer science at such a pivotal age."

Steve Trehern
Senior Vice President of Human Resources
First Data
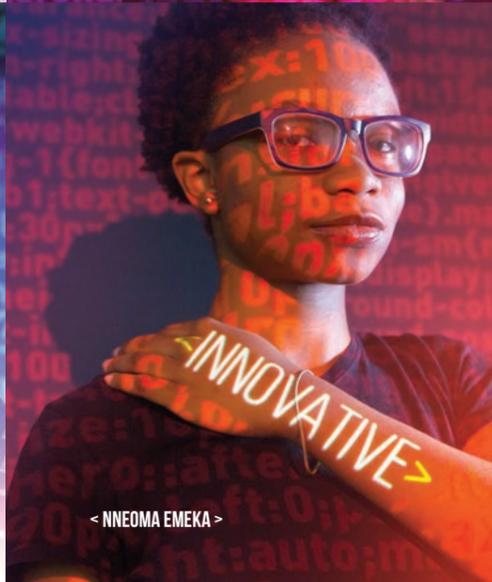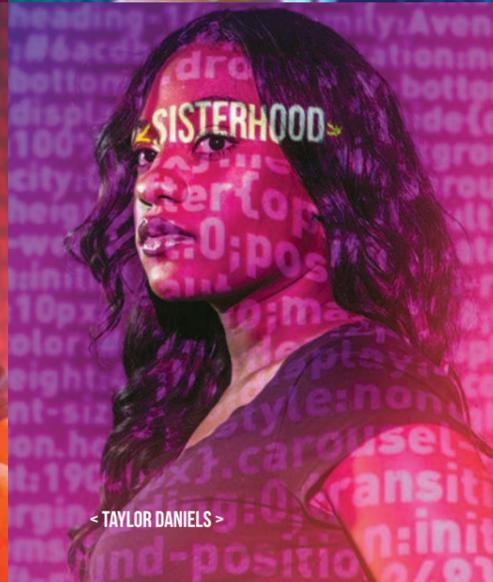
"Out of all the classrooms we've worked in for this program, this has been the most impressive," says Teresa Younger, site lead for the Girls Who Code program. "First Data has gone above and beyond with every step, from the software and the computers to the support and even the lunches. This level of care has made all the difference in these girls' experiences."

Each week, the program covered projects related to computer science, such as CG art, storytelling, robotics, video games, websites, and apps. Students heard from guest speakers, participated in workshops, connected with female engineers and entrepreneurs, and went on field trips. hey also worked in teams to create their own websites and apps and wrapped it all into a final project.

Along with providing technical training, First Data hopes to challenge the stereotypes around successful women, who often feel like they have to trade likeability for success. Facebook COO Sheryl Sandberg discussed that dichotomy during a popular TED Talk. She says schoolgirls feel less empowered when they get out-shouted by more aggressive boys, but when women take on more aggressive behavior themselves, they become shunned. "The data shows one thing. Success and likeability are positively correlated for men and negatively correlated for women."[6]

The President of Harvey Mudd College, Maria Klawe, is seeking to combat those issues by changing the learning environment at the school's ultra-prestigious computer science program. Klawe has re-engineered the curriculum to emphasize practical uses for computers to improve communities. She has also asked professors to be more inclusive, not letting students with more experience dominate their classes. In addition, the professors at Mudd emphasize fun. Klawe says, "When you make computer science about creative problem-solving, when you make it social, when it's not scary and intimidating, and when you show people who look like real human beings rather than people who've been stuck in a basement coding, more girls will be attracted to it."[7] That approach has worked. Today, more than half of Harvey Mudd's computer science graduates are women.[8]

Steve Trehern, Senior Vice President of Human Resources at First Data, directed the Girls Who Code summer immersion program. As the father of a female engineer, his interest in bringing more women into technology hits close to home. "First Data is a company that's founded on principles of diversity and inclusion. And if you truly believe in the importance of that, you have to actively create opportunities for people who might otherwise be out of reach," Trehern says. "This program presented the unique opportunity for us to introduce girls to computer science at such a pivotal age. I'd love to have the chance to hire every one of these girls after they graduate from college."

What the girls have to say.

"To any girls who think computer science isn't for them—there's nothing out there that isn't for you. Try everything at least once; maybe you'll hate it, but you might just surprise yourself. That's what happened to me. I've always been interested in computers, but after this program I know I want to work with servers. Connecting one person to another, that's what I love."
-Jordan Whitaker, Atlanta

"The unique qualities that girls bring to coding are the confidence and creativity to solve problems independently and the humility to ask for help when necessary. This camp opened my eyes to my ability to work through time-consuming and often frustrating problems. If the answer isn't within me, it's usually within reach, either online or with a mentor."
-Madison Cerpa, Nicaragua

In This Article:

#FirstData

#GirlsWhoCode

#Code

#Sisterhood

#GivingBack
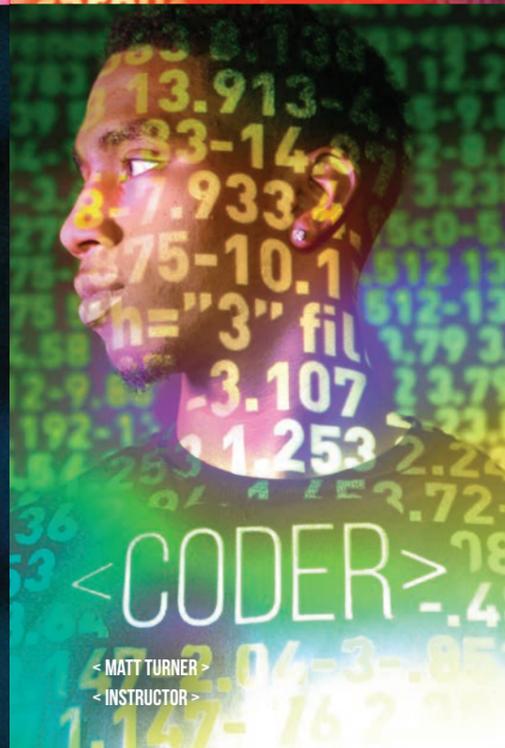
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