



From AI to e-commerce: We're delivering

We've just completed a spectacular peak due to your commitment to the Purple Promise. On one of our busiest days during peak we shipped a record number of packages that was twice our average daily volume. You made this happen, and I'm always inspired by your dedication — no one delivers the holidays better than our FedEx team. Thank you for everything you do to represent the great FedEx brand.

Every new year brings new opportunities. For FedEx that means more opportunities in 2019 to connect people and possibilities everywhere.

These FedEx connections help companies reach the global marketplace, bring unique resources to small businesses, and deliver new benefits to our customers, team members, and communities. The recent FedEx TV commercials you've been watching emphasize the ways we broaden possibilities for people around the world.

However, we must double down to meet several challenges in 2019 in order to generate *more* and *better* possibilities for the future. Here's our focus in the new year:

- 1) The efficient handling of the growth of e-commerce and reducing the costs of residential and rural deliveries resulting from that growth.
- 2) Improving the delivery experience in every respect.
- 3) Using AI, robotics, and automation to improve the customer experience and increase team member productivity.

B2C e-commerce growth: Good for volume, challenging for costs

One thing that helped us set records this past peak was the growth of e-commerce, particularly business-to-consumer (B2C) transactions.

Between now and 2021, global retail e-commerce sales are expected to continue to grow by double-digit percentages, and mobile-commerce (orders made on mobile devices) is projected to nearly double over the same time period. That's \$2.3 trillion in 2017 projected to grow to \$4.88 trillion in 2021.

With B2C booming, we're making more deliveries to residences and rural locations — and those stops are generally far apart. That's great for volume but hard on costs. Why? Because those residential locations lack the density of commercial stops where we deliver multiple packages and pick up shipments as well. B2C requires more time, fuel, and miles driven between stops, and we deliver fewer pieces per stop than business to business (B2B). As financial investment company Barclays observed recently, "While B2C growth has helped revenue and volume outcomes, the lower average density per stop is weighing on profitability." Add to that the "law of rising expectations," in which consumers expect more and more from those they do business with. There's never been a larger, more demanding group of consumers than today.

The good news is that we're developing new ways to meet these shifts in expectations.

One approach is the creation of a flexible work team to handle surges in e-commerce volumes. Within FedEx Express U.S. Domestic, we already have employees who deliver on Saturdays or only during peak. Now we're instituting QUEST (Quality E-commerce Solutions Today), utilizing supplemental, delivery-only personnel who provide on-demand driving capacity to adapt to the ever-changing e-commerce market. Due to QUEST, Express can now more easily adjust staffing up or down according to the volume fluctuations that are greater for B2C than B2B.

Another great e-commerce solution is the launch of our FedEx One Rate® Special Pricing program. This offering was developed to target shippers of lightweight e-commerce packages, who are predominantly served by the U.S. Postal Service. We know shippers want simplicity, dependability, and competitive prices. This program hits all three criteria. It allows participants to send a package, let's say, from San Francisco to Atlanta, for less than \$8 for two-day delivery. Thanks to outstanding engagement from Sales, we've tripled our One Rate volumes since August.

In December, we launched FedEx Extra Hours. This new service enables participating retailers to fulfill e-commerce orders well into the evening hours and receive late pickups by FedEx Express with next-day local delivery and two-day shipping to any address in the continental United States. It's a great convenience for shippers and meets the consumer expectation of evening shopping with next- or two-day delivery.

In addition, we continue to grow our retail network to make it convenient for consumers to ship and have shipments held for pickup. Today, U.S. consumers can get their packages at any of 12,000 convenient, secure locations, including nearly 9,000 FedEx OnSite locations in Walgreens stores. As a result, 80% of the U.S. population is within 5 miles of a FedEx hold location.

Now, an opportunity remains to better serve rural customers who make up about one-fifth of the U.S. population. Rural recipients depend heavily on goods being delivered since there are few retailers in sparsely populated geographies. A recent *New York Times* article reported on the continuing decline of rural populations, with rural jobs migrating to metropolitan areas. As populations shift, we are developing creative new methods to reach these important but difficult-to-serve areas. It's another way we'll bring FedEx closer to e-commerce consumers no matter where they live and meet the challenges of more expensive rural deliveries.

On the receiving end

All e-commerce customers want and expect a perfect delivery experience. Research shows that almost 50% of a purchase decision is based on emotion. Our recent satisfaction and loyalty research indicates that we outperform competitors on emotional attachment among our e-commerce *shippers*, but we have a lot of work to do when it comes to consumer *recipients*.

Customer Service cases indicate 87% of all calls are related to delivery experience



As you see in the chart, 87% of all customer service calls relate to the delivery experience. Each call represents a question or a problem, and we must work hard to make those calls unnecessary. Here are some ways we're improving the end-to-end recipient experience.

Customer Services is leading an effort across Customer EXperience, Marketing, Sales, and IT to transform the recipient experience. Called REFLEX (Recipient EffortLess EXperience), it will pull together currently isolated and independent efforts to work in unison to transform the recipient experience. REFLEX will identify capability gaps and consolidate benefits across work streams.

REFLEX recently launched the Recipient Contact Center, which is piloting new technology to make the recipient's call-in experience better. In one pilot, customer service reps use an application that guides them through all the options they can offer customers to solve their problems. The result: quicker problem resolution and shorter calls.

A corollary of service-call help is online self-help tools and interactive phone response (IVR) for customers. For instance, 7% of FedEx SmartPost® calls were from recipients confused about the status of USPS- and FedEx SmartPost-delivered packages. By updating guidance on fedex.com and on our interactive phone responses, about half of these customers were able to locate their packages without talking to a representative.

Given the improved technology of mobile telephones, our customers want more specific package-arrival information than "before 8 p.m." We're now able to provide them with a more precise estimated time of delivery (ETD), based on the type of service requested, so they can better plan their day. This is an additional enhancement of the FedEx recipient experience!

It's important to emphasize the bedrock importance of accurate scanning of each shipment through all FedEx networks. To solve customer problems or give an accurate ETD, we *must* have timely location information for each package or pallet.

Package and freight loss or damage results in very unhappy customers, and we're making strides to improve in that area despite the fact we have, percentage-wise, few such problems. Our state-of-the-art Packaging Lab designs innovative custom packaging solutions to keep shipments protected through transit. The lab has developed general shipping materials such as enhanced labels that stick to recycled material and withstand extreme temperature changes. In addition, our field packaging engineers conduct 2,000-plus consultations a year with large customers across

both parcel and freight to educate them on best-practices shipping. The packaging engineering teams help Sales retain at-risk business and assist with right-sizing packages for sustainability and density improvements. Based on this work, the number of packages without labels rate has dropped 16% as of last October, year-over-year.

We've established a customer-driven design team to define what an outstanding delivery experience is for recipients. At the same time we're working to reduce our costs in serving customers. One outcome so far is that we're reimagining the door tag experience. In the coming months, we'll roll out new door tags that are simpler, more intuitive, and give customers a choice of digital channels.

Technology: Accelerating customer satisfaction and team member productivity

In this hyper-connected world, consumers can see an entire universe of products, buy them from anywhere, and get them quicker than ever, maybe even the same day. Order shoes from Nike and follow their journey on your mobile phone from warehouse to doorstep. In essence, it's a tale of *two worlds* — the physical and the digital. The package is a tangible thing, but you can watch its "digital twin" move through time and space online. This scanning and tracking capability was invented by FedEx decades ago and, as noted previously, remains the essential ingredient in providing accurate shipment information to customers.

If you're driving to work, you might check your Waze app to avoid any traffic accidents that could make you late. The experience of driving in your car is the physical world, but the information from Waze is the digital. The route that Waze recommends to you is based on vast amounts of information — big data — that the app has combed through, via artificial intelligence (AI), to yield the best route.

Since day 1, we've applied analytical models to make crucial decisions for our long-term profitability and success. Now, in developing solutions for e-commerce challenges, we're riding



From the Chairman

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a wave of new technologies such as big data, AI, automation, and robotics. They enable us to make good decisions to improve the customer experience and participate profitably in e-commerce.

For example, as e-commerce grows globally, small businesses often have to learn complicated rules for international shipping. FedEx Express, FedEx Logistics, and FedEx Services collaborated to develop International Shipping Assist on fedex.com. It uses AI to continually improve the accuracy of this international paperwork for small business.

FedEx Ground has an in-transit quality assurance process that uses images from the scanning process to make address corrections before a shipment ever arrives at its destination, thus avoiding a bad experience for the customer.

Each day FedEx captures hundreds of millions of scans to accurately collect information about packages and establish custodial control. If a package is delayed, we used AI models to communicate revised day-of-delivery information to the customer, and so far we've improved that notification accuracy by 25%. This visibility work is being expanded to integrate scan data with richer data sources such as the Internet of Things (IoT), GPS, and radio frequency identification (RFID) to create a new "high fidelity" fingerprint for a package or a pallet moving through the supply chain. These advances will continue to lead to better package recovery, lower costs, and an enhanced customer experience.

We're also using these technologies to make our own operations more efficient especially in conjunction with Quality Driven Management (QDM). As you know, the QDM process uses data and metrics to reveal key areas of opportunity or improvement. Add the big data we collect and AI's ability to discern subtle trends or overlooked problems, and we've put QDM on steroids, so to speak. Let's take a look at the use of these new technologies within FedEx.

As the largest LTL fleet in the United States, FedEx Freight burns over 150 million gallons of diesel fuel yearly, so we constantly look for ways to conserve. FedEx Freight built a machine-learning (AI) algorithm to give drivers feedback on their idle times, hard braking, and other behaviors that affect efficiency. So far, in two test locations, the drivers have improved miles-per-gallon by 9%.

Both FedEx Express and FedEx Ground are exploring the use of robotic arms and AI to better handle small packages in daily operations.

Also, the growth in e-commerce has driven an increase in large, odd-shaped shipments, and we continue to look at efficient ways to move such shipments through our networks by using emerging technologies. For example, FedEx Ground is using autonomous tuggers that move non-conveyable items through the sortation process.

Across our operating companies, we are exploring technology solutions that will make every customer experience outstanding by improving FedEx capabilities in on-road transit, in-facility operations, and final-mile delivery.

Remember that innovation, particularly IT innovation, is an integral part of our history and a core competency of FedEx. We are a data- and fact-driven company, and AI and other technologies help us make better decisions. As more information inputs flow into the digital universe, we stand ready to use advanced analytics to improve service, lower costs, and delight our customers.

"Delivering Possibilities," as our ads state, requires a frustration-free experience for the FedEx recipient. In the long run, this means simplifying the delivery experience, reducing call volume, and giving the recipient greater control through more self-service options. It also means reducing our costs for residential and rural deliveries. I urge you to understand and support these goals as we redesign our networks,



From the Chairman

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introduce new technologies, and modernize our processes to achieve them. Through these relentless efforts, we will improve customer satisfaction, enhance long-term loyalty, and connect shippers and recipients to more possibilities around the world.

Best wishes for a happy new year to you and your family.

Frederick W. Smith
Chairman and CEO

Asia Pacific (APAC)

APAC focuses heavily on e-commerce in China

The Asia Pacific (APAC) region is home to four of the world's biggest e-commerce markets, with China in the No. 1 position.¹ It is estimated that by 2021, this region will account for 67% of all e-commerce worldwide.² It's not surprising, then, that our APAC team is heavily focused on e-commerce growth in China.

The sector's rapid growth brings challenges for operators, alongside opportunities. Unlike business-to-business (B2B) customers, business-to-consumer (B2C) customers are more sensitive to price and user experience.³ Consequently, e-merchants are looking for total solutions: planning and setup of their online store; managing e-shop operations; driving store traffic; and managing order fulfillment, shipping and returns.

Our strategy focuses on expanding our value proposition across the consumer journey. An important building block is to provide a deferred, low-cost transportation solution, which APAC is working on.

¹"Retail Ecommerce Sales in Asia-Pacific, 2016-2021," eMarketer, January 2018

²"Asia Pacific Retail and Ecommerce Sales," eMarketer, January 2018, Business.com

³"UPS Pulse of the Online Shopper: A Customer Experience Study," UPS, conducted by Comscore

Canada

FedEx Express Canada expands retail network, improves recipient experience

With the number of its e-commerce residential deliveries growing substantially year over year, FedEx Express Canada expanded its retail network and launched new capabilities and tools. This will improve the last-mile recipient experience and reduce costs for FedEx Express® and FedEx Ground® residential deliveries.

By December 2018, FedEx Express Canada added significantly to the number of retail locations in its network, including a new retail alliance with Kent Building Supplies, which has 40 locations across four Atlantic provinces. In tandem, the FedEx Express Canada marketing team collaborated with FedEx Ground to support expanding FedEx Ground Redirect to Hold (RTH) capabilities from just five to 400 locations.

To improve the residential delivery experience, the marketing and customer experience teams launched new self-serve tools to enable recipients to redirect their packages to a FedEx retail location. These tools include RTH functionality on fedex.ca and the interactive voice recognition tool at 1.800.GoFedEx, as well as expansion of the FedEx Delivery Manager® international solution to support FedEx Ground shipments.

To drive usage of these new tools, FedEx Express Canada launched go-to-market tactics targeting consumers, which included digital advertising and a new fedex.ca landing page dedicated to the recipients' needs. By Black Friday and Cyber Monday, the number of redirect requests made through these low-cost self-serve channels exceeded the number of requests made through the call center.

Latin America and Caribbean (LAC)

Using artificial intelligence to improve logistics

Of all the technologies that are emerging for the logistics industry, artificial intelligence (AI) is undoubtedly one of the most powerful revolutions. Its implementation often results in increased productivity, faster task execution and reduced costs. According to a study conducted by the National Business Research Institute, 38% of companies were using AI technology in 2016. In 2017, that number rose to 61%.

FedEx Express in Brazil is using AI on customized operations with select clients. The local team

developed a chatbot solution through which the end customer confirms their data (i.e., address and business hours) before the courier leaves to deliver their packages. This preventive action improved the success rate on those deliveries by 12% during the pilot project phase.

As a way to improve customer experience, the solution began rolling out to a second wave of customers. According to Fabiano Fração, FedEx vice president of Sales for South America, “This solution is truly innovative and should be expanded to other customers in the country.”

Europe

Supporting small to medium enterprises in Europe

As part of the FedEx Express® Freight strategy, FedEx Express Europe sought to offer packaging solutions to meet the needs of its customers and grow business from the small to medium enterprise (SME) segment. With the goal of finding a solution for non-stackable items and reducing freight damages, FedEx Express Europe launched a test of a FedEx Freight® box in Europe in May 2018 for targeted customers in the UK, France and the Netherlands.

In the pilot, 16 customers shipped 185 shipments and provided excellent feedback. The business also saw a reduction in damaged shipments. With this success, the FedEx Freight box was rolled out to seven additional markets: Belgium, Germany, Ireland, Italy, Luxembourg, Spain and Switzerland.

Following an October awareness campaign for Sales, seven new customers came on board, with the automotive and healthcare industries seeming to be ideal targets for the FedEx Freight box.

In addition, FedEx Express Europe launched a cross-functional task force to seek improvements in the way it handles “awkward freight,” which is freight that is not of a standard shape. The task

force will also test the reusability of the box by using it for hub-to-hub shipments.

Middle East, Indian Subcontinent, and Africa (MEISA)

Meeting the challenges of e-commerce growth in India

With more than 1.3 billion people, India is the largest country in the Middle East, Indian Subcontinent and Africa (MEISA) region. With a growing, internet-savvy customer base, the country’s retailers recognize the purchasing potential of the local domestic and global e-commerce markets. Increasing internet and mobile penetration made e-commerce the fastest growing — and most dynamic — channel for commercial transactions.

Around 1.2 million e-commerce retail transactions occur every day in India, with more than 70% dedicated to sales of electronics and clothing.¹ The value of the Indian e-commerce logistics market is expected to grow from USD \$700 million in 2017 to USD \$2 billion in 2020.²

The services FedEx Express offers to Indian e-commerce businesses and consumers recognize the specific demands of this important sector. To meet these needs, a dedicated operational and commercial structure has been put in place to serve the Indian business-to-consumer (B2C) segment. That structure will also accommodate plans FedEx Express has in India, which include the expansion of reverse pickup solutions, collect on delivery (COD) services and alternate payment options, as well as increasing text message notifications to include more shipment locations across the country.

¹<https://www.export.gov/article?id=India-e-Commerce>

²“India’s ecommerce retail logistics growth story,” August 2016, KPMG