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**RETHINKING THE PARCEL DELIVERY VALUE CHAIN:
A RECAP OF THE INTERNATIONAL ROUNDTABLE**

Executive Summary

The parcel delivery value chain is in flux. Once operations-driven and predictable, today's value chain is dynamic, complex, and multi-faceted in response to technology, evolving customer preferences, and booming e-commerce. This changed dynamic means that if postal operators wish to remain competitive in the parcel space, they must understand these changes and adapt.

The U.S. Postal Service Office of Inspector General held an international roundtable on March 9, 2015, to discuss the new parcel value chain and strategic implications for posts. During the event, two trends emerged as particularly transformative:

- ***Increased Customer Power.*** The Internet, social media, and mobile devices have empowered customers with more information, choice, and forums to air their opinions, express their preferences, and compare their buying options. As a result, the power to influence the customer experience has shifted from supplier to recipient. Moreover, both senders and recipients increasingly expect a fast, customized, diversified, and low-cost experience in a “personal logistics network.”
- ***Technology-Driven Business Models.*** New software enables nimble, innovative asset-free start-ups to create flexible business models that can anticipate and quickly respond to emerging customer needs. For instance, Roadie and Shyp, two start-ups, seek to do the same in crowdsourced delivery services as Uber did in crowdsourced passenger transport. Such algorithm-based business models significantly lower barriers to entry and align with emerging customer preferences; a low start-up cost allows these firms to selectively compete with postal operators in the most promising markets.

The trends are threats and opportunities for the Postal Service, which will need to proactively monitor their development. Moreover, appropriate response strategies will be critical if the Postal Service is to remain competitive in a changing marketplace.

The success of these strategies will depend on the ability of postal operators to redesign the parcel value chain in a way that is customer-centric and information-rich. This will involve a multipronged approach: defend and strengthen the last mile, expand along the parcel delivery value chain through strategic partnerships and diversification into complementary business lines, and leverage new technologies and data. Such an approach would help reposition posts at the center of the value chain.



*Promoting Integrity and Accountability
in America's Postal System*

Introduction

Today's parcel value chain is more complex than in the past and rapidly evolving. No longer linear and static, it is being transformed by significant disruptive trends and new, non-traditional players seeking to gain influence in a changing competitive marketplace. This marketplace is characterized by an e-commerce explosion, empowered customers demanding immediate and flexible delivery, an information technology environment with greater focus on mobile, big data analytics software, and complex, global, and increasingly automated logistics supply chains.

Today's parcel value chain is being transformed by significant disrupters and nontraditional players seeking to gain influence in a competitive market.

Instead of being supplier-centric, the present value chain places more emphasis on customers and their expectations — leaving those players clinging to traditional models struggling to keep up. Added to this are algorithmic software platforms coordinating seller-buyer

interactions and a new emphasis on flexible business models. Within a larger context of worldwide demographic change and faster globalization opening up new opportunities for commerce, the upended parcel value chain poses strategic challenges for global operators; it also gives them a unique opportunity to adapt and grow their parcel business.

On March 9, 2015, the U.S. Postal Service Office of Inspector General (OIG), in conjunction with the Postal Innovation Platform, invited experts, postal organizations, and industry representatives to its offices to discuss the transformation of the parcel delivery value chain and strategies posts can adopt in response. This paper recaps the event and further explores some of the trends leading to that transformation, as well as possible response strategies.

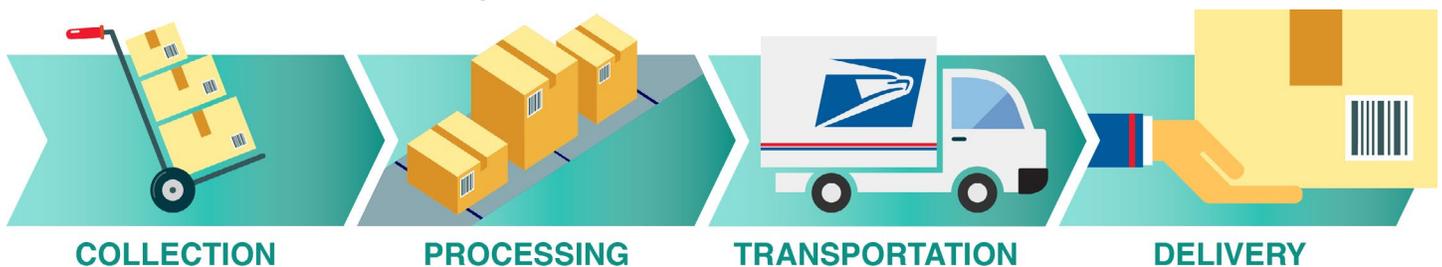
A Value Chain in Flux

The Traditional Value Chain

Before the e-commerce revolution, the value chain was predominantly based on mail, rather than parcels, and defined by four main linear activities reflecting internal processes: item collection, processing, transportation, and delivery (Figure 1). The value chain was also static and supplier-centric; needs of the recipients were not always at the forefront in this model since the power

was held by a string of manufacturers, suppliers, distributors, marketers, and other logistics providers who did not directly interact with the recipient.¹ The U.S. Postal Service largely dominated this traditional value chain, although a universe of intermediaries and competitors developed to provide fulfillment services, share in the work of sorting and transporting mail, and offer package delivery services (such as UPS and FedEx).

Figure 1: Traditional Parcel Value Chain



Source: OIG Analysis.

Today's Complex Value Chain

The value chain is changing. Packages are an increasingly important source of new revenue due to the recent decline of mail and boom in e-commerce. The switch is far from automatic, though; the parcel value chain is very different from the mail value chain. The parcel market is more competitive, the operational and logistical aspects of handling parcels are more complex and diversified,

and the e-commerce market and digital technologies are still evolving. As Postal Service Inspector General David Williams stated in opening the roundtable, these new dynamics could “cause another wave of fairly unwelcome creative destruction to an already traumatized industry.” Posts’ relevance in this changing context will depend on their ability to adjust, evolve, and regain control over the dynamic and complex value chain.

1 William R. Boulton, “United Parcel Service: Moving at the Speed of Business,” 1999, http://www.auburn.edu/~boultwr/UPS_Case.PDF.

Figure 2: Today's Value Chain



Source: Adapted from Brody Buhler, Accenture, OIG roundtable presentation.

To do so, posts must understand today's value chain (Figure 2). As a result of profound disruption from a series of omni-directional pressures that are continuing to shape and transform it, the new value chain is

- **Customer-Centric.** Technology and the Internet have enabled the immediate delivery of information and goods and increased customers' control and choice over the delivery experience. The empowered customer is now at the center.
- **Diversified and Integrated.** Providers are increasingly focused on diversifying the value chain by expanding into new activities, such as fulfillment and payments. These services must be fully integrated, with the help of technology, in an effort to provide the seamless experience the customer desires.
- **Technology-Driven.** Technology has facilitated the collection and analysis of data on a wide scale. This intelligence leads to greater efficiency and near instantaneous action. Technology has also helped break down borders, meaning the value chain extends beyond traditional domestic borders.
- **Shaped by E-Commerce.** A boom in e-commerce has increasingly altered the competitive retail and delivery landscape. E-commerce has exploded, accounting for more than \$300 billion in U.S. retail sales last year — nearly \$840 billion globally — and is increasing the amount of packages moving through the delivery system.² Cross-border international e-commerce is also an important aspect.

2 This represents growth of around 15 percent from the year before. eMarketer, "US Retail Ecommerce Sales, 2013-2019," February 2015 and eMarketer, "Retail Ecommerce Sales Worldwide, 2013-2018," April 2015.

- **Dynamic.** We are only in the beginning of this transformation, since e-commerce growth is expected to continue: by 2019, total U.S. and global e-commerce sales are projected to more than double compared to 2013.³ This evolving retail environment, combined with constantly changing technology, means the value chain is in flux.

As the value chain is still unsettled, it is difficult at this stage to predict how it will develop. Nonetheless, two key trends have emerged from the discussion as being particularly transformative. We look at each trend in turn below and discuss possible actions the Postal Service can take in response.

Major Trends Transforming the Value Chain

If postal operators are to benefit from the evolution in the value chain and stay relevant, they will need to better understand the prime disruptors: increased customer power and the emergence of new, technology-enabled business models.

for free like (nearly) everything else on the Internet. As a result, e-commerce platforms and retailers are refashioning their entire array of offerings to meet these needs while also providing mobile shopping, various delivery options, and free or low-cost shipping.

The Internet, social media, and the rapid proliferation of new technology have disrupted the value chain and changed the power dynamic from supplier- to customer-centric.

Increased Customer Power

The Internet, social media, more competition, and the rapid proliferation of new mobile technologies have disrupted the value chain and changed the power dynamic from supplier- to customer-centric.⁴ In this world, the *customer* encompasses buyers (consumers), sellers (large retailers and small- and medium-sized firms), and e-commerce platforms (like Amazon and eBay). The Internet,

Amazon, for example, has become a major player by responding to these customer demands with free shipping and Prime.⁶ To pursue a low-cost shipping strategy, Amazon and other large customers leverage their tremendous size and market presence to exert severe downward pressure on shippers and deliverers to cut their prices. The result is an effective commoditization of parcel delivery, turning shipping into a low-value commodity, instead of a value-added service.

In addition, Amazon seems to be assembling its own delivery and logistics service in the most profitable areas, contracting-out secondary markets to regional shippers, and employing the Postal Service for the rest of the country — often less-populated or rural locales — where per item delivery costs are the highest.⁷ This cherry-picking is ushering in a race-to-the-bottom as parcel delivery firms struggle to offer the lowest price just to stay in the market.

Cherry-picking and commoditization create a challenging reality for the Postal Service. Although it enjoys a natural network

Major retail platforms such as Amazon are depriving delivery of its value by offering free shipping and fixed-fee shipping services.

for its part, greatly expands the marketplace, increasing the scope of competition by providing more buying choices than ever before. Additionally, social media gives customers a new way to express expectations and opinions, and the wealth of information available through social and mobile channels allows buyers to “take control of their shopping experience.”⁵

Consumers now proactively control where and how to buy and expect that the product they want will be available anywhere at any time — and delivered quickly and

3 To put the projection in context, however, it will still not represent more than 10 percent of total retail sales. eMarketer, “US Retail Ecommerce Sales, 2013-2019,” February 2015 and “Retail Ecommerce Sales Worldwide, 2013-2018,” April 2015.

4 OIG, *The Global Logistics Revolution: A Pivotal Moment for the Postal Service*, Report No. RARC-WP-13-010, June 3, 2013, <https://www.usps.oig.gov/sites/default/files/document-library-files/2013/rarc-wp-13-010.pdf>.

5 Keith Mercier, Bruce Richards, and Rebecca Shockley, “Analytics: The Real-World Use of Big Data in Retail: How Innovative Retailers Extract Value from Uncertain Value,” in *IBM Institute for Business Value* (Oxford: IBM Global Business Services—Business Analytics and Optimization, 2012), p. 1.

6 Prime is Amazon’s subscription shipping service costing \$99 per year. It offers subscribers unlimited 2-day shipping on orders, in addition to free digital content access such as streaming movies. A Prime subscriber is thought to spend more than twice as much on Amazon per year compared to non-Prime subscribers. “About Amazon Prime,” Amazon, <http://www.amazon.com/gp/help/customer/display.html?nodeId=200444160>, Thad Rueter, “Amazon Prime Membership Hits 41 Million in the US,” *Internet Retailer*, <https://www.internetretailer.com/2015/06/09/amazon-prime-membership-hits-41-million-us>.

7 Mohammad Adra, “Package Services: Get Ready, Set, Grow!,” Parcel Shippers Association, conference, October 2, 2014.

advantage in low-cost delivery, its statutory, regulatory, and capital constraints mean it will never be able to *give away* its services: “Low-cost logistics cannot compete with no-cost logistics,” Williams said. Posts will need to quickly adapt their business models and value chains to this new environment by competing not just on price and on the last mile, but also on service quality and variety to provide an experience that is as complete, seamless, and as customized as possible for customers.

Emergence of Technology-Enabled Business Models

The combination of big data, mobile, software technologies, and a more flexible workforce have enabled the development of innovative, asset-free, and algorithm-based business models — the second key trend disrupting the value chain.⁸ Possibly the most well-known example of such a business is Uber, whose algorithm coordinates requests for rides with the location of available independent drivers. Uber does not purchase or maintain a physical vehicle fleet and it varies the price of a ride with supply and demand to maximize revenue.⁹ This business model has allowed Uber to quickly become a multi-billion dollar enterprise, leading to the rise of new delivery businesses such as Instacart and Roadie.¹⁰

The algorithm economy merits attention as a business model since it

- ***Lowers barriers to entry*** by reducing the need for large initial investments from new players to enter the market quickly and easily, increasing overall competition;
- ***Allows for cost variabilization*** by replacing owned assets with third-party operated assets that can be used as needed, and fixed costs such as facilities or labor become variable costs;

- ***Is highly scalable*** because greater variable costs mean that the size of the network can be nearly instantaneously scaled up or down.

These traits are not necessarily unique to algorithm-based business models. For example, variabilization of costs is a strategy that many businesses, including postal operators, have already pursued to attain operational efficiency and flexibility to adapt to a market of rapid technological change.¹¹ At the roundtable, Eurogiro’s CEO Michel Stuijt stated that post offices have largely disappeared in the Netherlands; Dutch citizens often go to a local supermarket or shop that acts as a postal agent. Likewise, Deutsche Post has sold off nearly all of its post offices in Germany; the Postal Service leases or partners for many of its retail outlets in the United States.¹² Nevertheless, technology now enables businesses to reach these goals more quickly, easily, and efficiently.

It emerged from the roundtable discussion that although it may be too early to say whether these businesses pose a significant threat to the delivery industry, posts should monitor their development. The algorithm economy has the potential to revolutionize the parcel delivery value chain. Services and business models such as Uber and Roadie are increasingly seen by both online sellers and buyers as an alternative to traditional deliverers in the last mile, especially for same-day delivery options in big cities.¹³ As the former Chief Marketing Officer of the Postal Service Nagisa Manabe warned during the roundtable, the danger for the Postal Service is that these new businesses are cherry-picking the most profitable ZIP codes — taking customers who are willing to pay for premium service away from the Postal Service.

8 Marshall Van Alstyne, “The Rise of the Platform: How Today’s Connected Users are Powering a Seismic Shift in Business Models,” *MIT blog*, 2013, http://digitalcommunity.mit.edu/community/featured_content/platform-economics/blog/2013/10/28/the-rise-of-the-platform-how-today-s-connected-users-are-powering-a-seismic-shift-in-business-models.

9 Tracey Lien, “Uber and Lyft May Have to Treat Their Drivers as Employees, Judge Says,” *Los Angeles Times*, January 30, 2015.

10 Al Ramadan, Christopher Lochhead, and Dave Peterson, “Behind Uber’s Soaring Value,” *Fortune*, December 11, 2014, <http://fortune.com/2014/12/11/behind-ubers-soaring-value/>. Instacart operates in much the same way as Uber but to deliver groceries ordered online. Instacart does not own physical stores. Instead, Instacart uses existing supermarkets as “warehouses,” and its smartphone app connects time-pressed consumers with independent contractor-agents who do the shopping and delivery. Roadie is a crowdsourced delivery app or website that links consumers seeking to ship packages with other consumers who are already driving to a particular destination. Farhad Manjoo, “Grocery Deliveries in Sharing Economy,” *The New York Times*, May 22, 2014, p. B1, OIG, *Letter Carriers: Modern Day Milkmen?*, Report No, RARC-IB-15-001, March 2, 2015, <https://www.uspsoig.gov/sites/default/files/document-library-files/2015/rarc-ib-15-001.pdf>; Greg Bensinger and Willa Plank, “A \$5.39 Bag of Chips? Doing the Math on an Instacart Order,” *The Wall Street Journal*, January 13, 2015; and Laura Stevens, “Technology Bubble? Ask Waffle House,” *The Wall Street Journal*, February 24, 2015.

11 Nicolas Kachaner, “Variabilization: Transforming Fixed Costs into Variable Costs,” *BCG Perspectives*, https://www.bcgperspectives.com/content/articles/innovation_growth_strategy_variabilization/.

12 Elisabeth Rosenthal, “Reinventing Post Offices in a Digital World,” *The New York Times*, October 31, 2011, p. A9.

13 Amazon, for example, piloted a partnership with taxi companies for same day delivery, and customers can order meals through Uber’s EATS service. Greg Bensinger, “Amazon Is Testing Using Taxis for Deliveries,” *The Wall Street Journal*, November 5, 2014, <http://www.wsj.com/articles/amazon-testing-taxis-for-deliveries-1415209630> and “UberEATS Debuts in Chicago and New York City,” *Post & Parcel*, <http://postandparcel.info/64734/news/ubereats-debuts-in-chicago-and-new-york-city/>.

Response Strategies

Responding to the key trends will require posts to develop a multipronged strategy centered on avoiding commoditization of delivery and embracing technology. In practice, this will mean (1) defending and strengthening the last mile; (2) expanding along the parcel delivery value chain through strategic partnerships and diversification into complementary business lines; and (3) leveraging technology and data.

Protect Delivery from Commoditization

Strengthen and Enhance the Last Mile

The importance of the last mile was underlined most clearly at the roundtable by Manabe when she said that much reform and organizational transformation has yet

to take place in modernizing the core; it is important that the Postal Service not become distracted from this mission. In a similar vein, the Universal Postal Union's Wendy Eitan stated that "without the core business and good delivery, the customers won't be coming to you."

- ***Become the Deliverer of Choice.*** Bringing the delivery experience as close to the customer as possible is critical as customers now have other options. Posts must be able to deliver what customers want: anything, anywhere, and anytime. Operators around the world are already providing multiple delivery options as contracted third-party parcel pick-up shops, same-day service, parcel lockers, varied delivery times, or

Box 1: Interview with Brody Buhler, Accenture

OIG: You have said the customer is becoming more powerful. How are customers changing the parcel delivery value chain?

BB: The solutions we are seeing right now are primarily focused on the basics: parcel redirection, instructions, and setting delivery times. The question we are working to answer is how that turns into value to the shipper. Are there companies that are able to turn that into more value? I believe the business case solution is founded on cost takeout — elimination of delivery attempts.

One solution is UPS My Choice, which I think is the most mature and interesting solution in the market now. Some of the features that make it a really popular solution are that it is person-based instead of address-based, has a seamless sign-up process, and has been designed with "mobile first" in mind. The last thing that really matters is their sign up mechanism. I think the subscription model, with à la carte pricing, is the way to go.

OIG: UPS My Choice sounds like a good new product, but UPS invested heavily in it. Given the Postal Service's more limited resources, what is your advice for them?

BB: I don't think UPS' investment has been all that significant. I think for \$10-15 million you could have a really robust technology solution. However, you'll need to invest in the process changes or costs get out of control. This is where UPS has done a very good job of optimizing their process, and we've seen posts do less. But for technology investment, it doesn't have to be a lot. So my advice to posts would be to get on it! In my opinion, this is the most important capability any delivery organization could be investing in in order to protect and grow market share.

The operational problems are always going to be more challenging, and have the potential to add a tremendous amount of cost. There's a lot of operational complexities that postal organizations need to sort out, which means that the technology piece is really the easier of those. It's how to do it at the lowest cost possible from an operational standpoint.

OIG: Most would likely agree that this kind of investment seems like a good idea, and yet somehow it can be difficult to get everyone on board and find funding to do these things. Any insight on hang-ups?

BB: I have had this conversation with CEOs of delivery and postal organizations, and I have had not one of them disagree. The challenge is, and this is organizational and universal I think, is that posts have a long operational heritage — the center of power is within operations. The business guys get it, but it is difficult or costly for the idea to be implemented. So operations implements what they can do and not necessarily what they should do. So what you see is a lot of these organizations have suboptimal, or even market irrelevant products, out there.

Box 2: Quintiq's David Kenneson on Moving One Postal Operator from Static to Dynamic Routing

"Our vision for postal — almost globally — is that the notion of fixed routes has to change. We have to go to dynamic pick-up and delivery. What they're doing today is they're taking in customers, putting them on the fixed routes... They didn't have the ability to optimize their entire distribution when new orders would come in.

"...We suggested we needed to look at adding value-added services and ad hoc pick-up and delivery. So what we got back from the team was basically: The drivers know the routes, they would have to learn new routes, the unions would never go for this. I think there were a few more false objections there. The focus was really on the problems and not on the vision. The project team wasn't empowered and the initiative eventually failed until we went back to senior management within this postal service.

"[With] support from the C-level suite...They actually implemented these changes. They [now] offer ad hoc deliveries ... customers' satisfaction on their own score carding system has gone up so you have got to wonder...That's where society's going with it. It's where e-commerce is going and it's where postal service delivery companies need to go."

Sunday delivery. Ultimately, many of these offerings could be combined in a "freemium" subscription model with (no-charge) basic services and (pay-for) premium services like UPS My Choice (Box 1).¹⁴ Freemium could help cultivate new customer bases and has often been used by technology start-ups looking to grow their businesses.¹⁵

Dynamic routing might also offer a solution to this anytime, anywhere delivery problem, allowing for route optimization and real-time re-routing.¹⁶ Quintiq software representative David Kenneson described in the roundtable how dynamic routing was implemented at one operator despite organizational hurdles (Box 2). Eventually, dynamic routing could enable the Postal Service to take customer orders and handle pick-up and delivery — thus strengthening the last mile, optimizing its services, and growing its market

through same-day delivery, intra-city, and returns shipping. Offering these highly personalized and customizable options to customers would be operationally complex, but could change the Postal Service from the shipper of last resort to the shipper of choice.

- ***Be More Consistent with the Customer's Values.*** The Postal Service enjoys a reputation as one of the most trusted organizations in the United States, public or private.¹⁷ This trust attribute can serve as a comparative advantage since a small but growing customer segment patronizes firms based on corporate social responsibility. Indeed, recent studies have found that "social purpose" is a purchase trigger for more than half of respondents when price and quality are equal.¹⁸ As more and more customers see trust and social values going hand-in-hand, posts also ought to explore this space, Bernard Haurie of La Poste argued.¹⁹

14 Customers do not pay to register for My Choice and have the option of receiving some services like delivery alerts and approximate delivery times; they pay either à la carte or through an annual subscription for premium services such as delivery rescheduling or redirecting.

15 Vineet Kumar, "Making 'Freemium' Work," *Harvard Business Review*, May 2014, <https://hbr.org/2014/05/making-freemium-work>.

16 This is similar to UPS' data-driven On-Road Integrated Optimization and Navigation (ORION) dynamic routing algorithm. ORION optimizes the firm's deliveries while cutting fuel expenses by minimizing unnecessary trips. Steven Rosenbush and Laura Stevens, "At UPS, the Algorithm is the Driver," *The Wall Street Journal*, February 16, 2015, <http://www.wsj.com/articles/at-ups-the-algorithm-is-the-driver-1424136536>, and UPS, "UPS Accelerates Use of Routing Optimization Software to Reduce 100 Million Miles Driven," news release, March 2, 2015, <http://www.pressroom.ups.com/Press+Releases/Archive/2015/Q1/UPS+Accelerates+Use+of+Routing+Optimization+Software+to+Reduce+100+Million+Miles+Driven>.

17 Steve Ander and Art Swift, "Americans Rate Postal Service Highest of 13 Major Agencies," Gallup, 2014, <http://www.gallup.com/poll/179519/americans-rate-postal-service-highest-major-agencies.aspx>, and Ponemon Institute, "2012 Most Trusted Companies for Privacy," January 28, 2013.

18 Trust helps hold corporations accountable and it's a factor that is growing in importance. eMarketer, "When Doing Good to Drive Sales, Authenticity Matters," January 8, 2013.

19 Many other firms are capitalizing on this growing phenomenon. Target, for example, has expanded its socially-conscious "Made to Matter" product line this year, touting it on its Web site and through other channels. Similarly, upscale grocer Whole Foods Market launched a "Values Matter" campaign to differentiate itself from other grocery stores. Target, "Made to Matter — Handpicked by Target," <https://corporate.target.com/article/2015/02/target-2015-made-to-matter-collection> and Stuart Elliot, "Whole Foods Asks Shoppers to Consider a Value Proposition," *The New York Times*, October 19, 2014, <http://nyti.ms/1qX7DIS>.

Posts, he said, must not only consider when and where items are delivered, but also *how*. La Poste did this in congested central Paris when it decided to minimize air pollution by employing alternative fuel vehicles.²⁰

- **Offer Better Tracking and Customer Communications.** In an era of instant customer communications, smart phones, mobile applications, and real-time alerts, it's critical that postal operators offer services that correspond to these expectations. Parcel tracking, allowing for greater transparency with near real-time capability, is now a customer expectation. Mobile alerts and other on-the-go communications thus could not only improve customer service, but could also help the Postal Service solve problematic delivery issues.

Selectively Diversifying before and beyond the Last Mile

Strengthening the last mile is a necessary part of the strategy, but is not sufficient to fully adapt to today's parcel value chain. Stuijt said postal operators must figure out how to "enhance the core business by *stretching* the value chain."²¹ To do so, they can create new business activities along the first and middle miles centered on e-commerce logistics. The additional services offered, whether through in-house innovation or partnerships, must make sense for the business model.²² They ought to, in other words, be complementary to, build off of, or enhance, the postal core competencies.²³ Examples of such services, mentioned at the roundtable and in interviews, include:

- **Streamlined Reverse Logistics.** Coupled with the need to efficiently deliver e-commerce packages is how posts should handle reverse logistics (the processing of returns when a customer seeks a refund or product exchange). Posts could develop innovative solutions that would make returns as seamless and pain-free for the

customer as possible.²⁴ The Postal Service, for instance, is exploring a two-way label for domestic shippers.

- **Fulfillment and Related Services.** Warehousing, order picking, packing, fulfillment, transportation, customs solutions, and other logistics services might offer posts the chance to bolster their service offerings to customers across the value chain.²⁵ These value-added offerings could be particularly beneficial to small- and medium-sized enterprises that cannot necessarily handle these complex undertakings on their own. Some foreign operators such as La Poste are already experimenting with fulfillment and freight-forwarding for small- and medium-sized businesses, sometimes in partnership with other companies with specialized expertise, Haurie noted in an OIG follow-up interview.²⁶
- **Develop Specialized Marketplaces.** Although large e-commerce platforms such as Amazon and Alibaba have first-mover advantage with general marketplaces, there is still an opportunity to develop niche, local marketplaces. Here posts have a comparative advantage through their day-to-day contact with residents.²⁷ The Postal Service could use its local reach by connecting small producers and farmers with the community through a delivery platform for farm cooperatives, for instance.²⁸
- **Introduce Presence Services.** In a natural extension of operations, presence services use postal carriers to support the provision of essential services. These services make sense because carriers are already in the neighborhood and they could likely offer some services in addition to mail delivery. This could take the form, for example, of supplying medication or groceries to a growing elderly or disabled population; they offer another avenue for posts to take advantage of their physical proximity to neighborhoods.²⁹

20 Some posts including Deutsche Post DHL and the Postal Service regularly report on their progress in reducing environmental or minimizing other social harms. In addition to improving buildings and using more recycled content, the Postal Service even highlighted gender equality in its most recent sustainability report, touting the post's "first woman Postmaster General." Deutsche Post DHL Group, "Corporate Responsibility Report 2014," March 11, 2015, <http://cr-report2014.dpdhl.com/>, U.S. Postal Service, *2014 Sustainability Report*, 2014, p. 3.

21 The OIG has discussed this in more detail in the previous work. See OIG, *The Global Logistics Revolution*.

22 Strategic diversification refers not only to new services, but also geographic markets — a lesson Deutsche Post learned the hard way. The German post embarked on an over-ambitious foray into the U.S. domestic market in the mid-2000s. However, after investing billions of dollars in parcel hubs, infrastructure, and workers, it was ultimately unable to crack the de facto UPS-FedEx express duopoly. Deutsche Post's new CEO cut the firm's losses in 2008 and pulled out. Mike Esterl, "DHL Retreats from US market," *The Wall Street Journal*, November 10, 2008, <http://www.wsj.com/articles/SB122632338746413543>.

23 Matthias Finger, "Limits to Diversification or 'How Far Shall Postal Operators Go?'" *the Postal Industry*, 2, No. 3 (2014), pp. 3-4.

24 OIG, *Domestic Merchandise Returns and Forwarding*, March 9, 2015, Report No. MS-WP-15-001, <https://www.uspsoig.gov/sites/default/files/document-library-files/2015/ms-wp-15-001.pdf>.

25 OIG, *The Global Logistics Revolution*.

26 Additionally, start-ups are moving to fill this space, indicating that there is a market need for these services. Shyp is illustrative: the start-up will not only pick up and pack your items, but it will also identify the lowest cost service to ship those goods anywhere in the world. "The Easiest Way to Ship Anything," Shyp, 2015, <http://www.shyp.com/>.

27 Another niche marketplace is Royal Mail's attempt to introduce a growing consumer population in China to distinctly British brands and products. Gill Plimmer, "Royal Mail 'Shop' Brings British Brands to China," *Financial Times*, May 4, 2015.

28 OIG, *Letter Carriers*.

29 The Postal Service could also fulfill a role as a governmental services portal for the community, allowing citizens to pay fees or fines, apply for passports or services, and receive public benefits.

According to a 2015 Accenture study, the market could be worth as much as \$10 billion worldwide.³⁰ Yamato, a Japanese parcel and express home delivery firm, and La Poste are some of the most innovative in this sphere.

- ***Integrated Payment Services.*** With the growth in e-commerce comes the need to integrate and coordinate payment for purchases and delivery. Stuijt noted how Eurogiro's global payments network connects financial institutions, posts, and payment service providers, with customers in payment transactions that can be used for e-commerce purchases. A Postal Service payments system could grow Americans' participation in e-commerce, especially among the large number of unbanked and underbanked citizens. These services could improve payment security in peer-to-peer commerce such with digital escrow and cash-on-delivery products, as well as with pre-paid cards for the unbanked.³¹

Develop a “Personal Logistics Network”

There are plenty of options for posts when it comes to ideas for strengthening the last mile and diversifying into new product areas. Doing this successfully means providing customers a “personal logistics network” or PLN. Introduced by Buhler, a PLN is where the customer is the focus of an array of value-added, tailored service offerings and fully in control of the delivery experience. Creating a PLN implies leveraging data to anticipate customer needs and provide a seamless delivery experience.

Data is the new “currency” in today’s information-driven society, and algorithm business models push the use of data to new extremes.

- ***Leverage Data.*** The role of data in today’s economy goes far beyond fad or fashion; it is central to new business models and highly-tailored, customizable services.³² Data is critical for businesses in understanding customer behavior, but is also highly valuable to customers. Indeed, the flow of data associated with a particular service may sometimes be more important than the service itself. Putting information in

the hands of customers provides them with real-time updates on the whereabouts of their package over the course of delivery — increasing transparency while allowing the customer to shape delivery according to their preferences. Additionally, data helps posts provide more customized and digitized services, provides instant metrics to pinpoint problem areas and improve services, and potentially allows postal operators to anticipate customer needs and expectations.

- ***Create a Seamless Customer Experience.*** New services built around the customer ultimately will not be successful if they aren’t joined together in a user-friendly and coherent fashion. This means that new technology, operational improvements, and partnerships must be seamlessly integrated and linked within a PLN if posts are to satisfy customer expectations. Customers will lose patience with firms that fail to provide the straight-forward, single interface to make transactions as smooth and user-friendly as possible (an example is UPS My Choice; see Box 1).
- ***Use Data to Anticipate Customer Needs and Improve Convenience and Choice.*** La Poste’s Haurie underlined the urgency for posts to adapt to changing circumstances in a pro-active fashion. Specifically, posts ought to develop new views of what the customer wants and not take their customers for granted. Data can help by identifying customer needs, preferences, and emerging trends so posts can proactively capture market share. Combined with a PLN, data can help the Postal Service survive in today’s competitive environment where nimble newcomers take advantage of gaps in the market’s most profitable segment — often through their clever use of data analytics.

Embrace Technology-Enabled Business Models

Thus far, the algorithm economy has favored the development of nimble, innovative, and software-focused start-ups that use them in asset-free business models for transportation and delivery (recall the example of Uber). If posts do not adapt, they could risk being pushed out of the most profitable markets by these new competitors. But this threat can be turned into an opportunity. Integrating algorithm technology in the business model could enable more effective response strategies. These technologies would allow the Postal Service to better anticipate and respond to logistical needs, fill the delivery pipeline, and engage in new forms of collaborative partnerships.

30 Accenture, “Postal Transformation: Postmen Open the Door to a New Era of Consumer Services,” 2015, <https://www.accenture.com/vn-en/insight-postal-transformation-postmen-open-door-new-era-consumer.aspx>.

31 OIG, *Providing Non-Bank Financial Services for the Underserved*, Report No. RARC-WP-14-007, January 27, 2014, <https://www.uspsoid.gov/sites/default/files/document-library-files/2014/rarc-wp-14-007.pdf> and OIG, *Peer-to-Peer Commerce and the Role of the Postal Service*, Report No. RARC-WP-13-005, January 14, 2013, <https://www.uspsoid.gov/sites/default/files/document-library/2013/rarc-wp-13-005.pdf>.

32 Accenture, “Data Is the New Black for Postal Transformation: Gain a Competitive Advantage through Post and Parcel Analytics,” 2014.

Meet Logistics Needs

Data has become the new “currency” in today’s information-driven society and algorithm business models push the use of data to new extremes.³³ Data from customers and machines is analyzed and fed into sophisticated algorithms not only to better connect customer demand to service supply in real time, but also to detect disruptions in the value chain and possibly become “predictive logistics.”³⁴ Increased intelligence would help increase efficiency, improve predictability, reduce shipping delays, cut costs in the supply chain, and foster cooperation and integration among value chain actors.

Software can now enable end-to-end visibility, planning, and optimization along the full supply chain.³⁵ Kenneson shared with the roundtable audience how his company’s product has been used by posts to protect market share and increase customer satisfaction by enabling posts to offer delivery windows that better match customer needs. It can also facilitate ad hoc pick-up and delivery of parcels across fully optimized dynamic routes.

New Partnerships Models

Partnerships are, of course, not a new idea. There are many examples of successful partnerships from foreign posts that were brought up during the roundtable including financial services that complement postal products. In France and elsewhere, La Poste has pursued partnerships strategically and vigorously, as detailed in an OIG follow-up interview with Haurie (Box 3). Today’s novelty is that coordination technologies and predictive algorithms allow the seamless integration of players and assets along the supply chain in ways that were not possible before.

The Postal Service should focus on filling its existing delivery pipeline to use its natural network advantage in delivery, as well as its rich and ubiquitous presence.³⁶ One way for posts to use in partnerships is to become an on-demand asset for third parties. It could take advantage of the development of nimble, algorithm-based delivery and other services by allowing its network of facilities, vehicles, and carriers to serve as nodes in the networks of other businesses.

This would help those businesses expand access to their services, create new services, or generate operational efficiencies. For example, the Postal Service could work with Roadie, an asset-free, algorithm-based start-up that uses individuals to deliver packages around the country. Waffle House restaurants serve as delivery

Box 3: Interview with Bernard Haurie, La Poste

OIG: What is La Poste’s strategy concerning working with partners and start-ups?

BH: We partner with companies to bundle services along the value chain based on our customers’ needs and demands. With partnerships, there is no intention to buy the company. With start-ups, we invest in the start-up and grow the business together. In many cases La Poste later acquires the company. We work with start-up sometimes just to test a concept or work in a niche market like connected retailers or same-day delivery.

OIG: Why partner rather than develop in-house?

BH: We like to work with entrepreneurs as things happen faster and easier. We can engage in risk and cost sharing as well as test market waters before we decide to do a service in-house. It also is a matter of focus: determining what is ‘our’ business and what is not. And some firms just do things better.

OIG: How do you find partners and start-ups?

BH: We set up a network in France and across Europe looking for innovation because it is good to be aware of all new businesses in this area. We aim to have a very organized and connected innovation monitoring process, and I think we don’t miss many things.

hubs so Roadie’s customers can meet in a safe location; it is easy to imagine the Postal Service playing that role, too, especially in less populated areas. After all, Waffle House is not located everywhere, but the Postal Service is.

A second option would be for posts to play the role of coordinator of resources through partnerships. They could leverage third-party assets, instead of investing in new infrastructure, to provide new or expanded services more efficiently. By sharing expertise, cost, and risk, partnerships can better utilize limited resources, attain cost reduction, promote efficiency, and enable the provision of new or better services.

33 “Industrial Internet of Things: Unleashing the Potential of Connected Products and Services,” in Industry Agenda (World Economic Forum, 2015), p. 14.

34 Institute for the Future, Matter Routing: Toward Predictive Logistics, 2013, http://www.iff.org/fileadmin/user_upload/downloads/th/ITFT_Age-of-Networked-Matter_map.pdf.

35 Quintiq, “Profiting from hidden optimization potential,” 2013, <http://cdn.quintiq.com/content/Brochure-hidden-optimization-potential-EN.pdf>.

36 OIG, *Package Services: Get Ready, Set, Grow!* Report No. RARC-WP-14-012, <https://www.uspsoid.gov/sites/default/files/document-library-files/2014/rarc-wp-14-012.pdf>.

Conclusion

The parcel value chain is in flux. No longer linear and static, it is being transformed by significant disrupters: booming e-commerce, changing customer needs, and new, nontraditional players looking for influence in a competitive marketplace. These developments are occurring in an increasingly globalized and technology-heavy environment where there is a greater emphasis on cross-border e-commerce, mobile access, big data analytics, and real-time logistics.

Two major trends illustrate why today's value chain is dynamic: increased customer power and the emergence of technology-enabled business models. Customers of the Postal Service (whether large shippers, parcel recipients, or retail customers) expect access to a sophisticated array of services centered on transparency, low delivery costs, immediacy, and a panoply of complementary, and seamlessly-delivered services. Nimble algorithm-based business models are emerging to better meet these needs by coordinating assets and responding to demands in real time. The Postal Service could risk losing its most profitable markets to these new competitors.

This potential threat in an era of heightened experimentation and change will require posts to evolve to grow their business and remain relevant — taking a multipronged approach to the challenges posed by the changed parcel value delivery chain. In short, posts will have to defend and strengthen the last mile, expand along the parcel delivery value chain through strategic partnerships, diversify into complementary business lines, and leverage technology and data. Ultimately, posts can coordinate personal logistics networks along the value chain in an ecosystem including the post, buyer, seller, and partner. Adopting this role would allow the Postal Service to place customers at the fore, creating the seamless experience that is needed today to become the deliverer of choice.

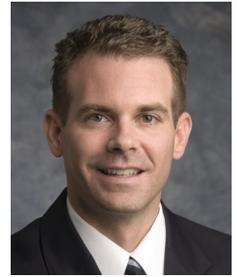
“You can’t do everything as a post; it’s all about focus and collaboration. Give the pieces of the action to those who know best. [Posts] can be . . . coordinator[s] to facilitate value.”

- Michel Stuijt, Eurogiro

APPENDIX: Panelist Biographies

Brody Buhler

At Accenture's post, parcel, and logistics division, Brody Buhler serves as global managing director. Directing a cadre of international consultants at more than two dozen posts around the world, Buhler also leads postal and parcel research. His work examines best practices, trends, and successful models in the delivery industry — most recently looking at e-commerce trends and the drivers behind successful digital transformation. He is also exploring how organizations should be responding to disruptions in the parcel delivery models. A frequent presenter at conferences and C-suite workshops on digital innovation and high performance drivers, Buhler is based in Accenture's Washington office.



Bernhard Bukovc

Bernhard Bukovc is the managing director of the Postal Innovation Platform (PIP), an initiative focused on the future of the postal industry. PIP operates under the umbrella of an academic research center (EPFL-MIR based in Lausanne, Switzerland), the Universal Postal Union (UPU), and Swiss Post. An entrepreneur, Bukovc also founded and manages Vinaficio, a firm that supports European wine growers. He previously worked as head of regulatory affairs at the Austrian Post and served as director of intercompany pricing and regulation at the International Post Corporation. He graduated with a JD from the University of Graz and a LLM from George Washington University.



Pascal Clivaz

Pascal Clivaz has more than 17 years of experience in the postal sector and at the UPU. Deputy director general of the UPU international office since 2013, Clivaz was elected to the position at the 25th Universal Postal Congress following his tenure as director of finance and strategic planning from 2005 to 2012 in the international bureau. Clivaz began his career at Swiss Post as a financial and strategies analyst before becoming director of international affairs and a member of the organization's management team. Trained in law, Clivaz also worked at the European Commission in Brussels and led the Swiss delegation to the UPU Council of Administration and Postal Operations Council.



Wendy Eitan

At the UPU, Wendy Eitan is product strategy, integration, and economics coordinator. In this role, Eitan is responsible for the development of UPU basic services (letter post, small packets, and parcel post) in accordance with the Congress Strategy. Eitan also supervises advanced postal economic studies covering topics of interest for UPU members, as well as the broader postal sector. Having joined UPU in late 2012, Eitan was previously Israel Post's director of international relations where she focused on the development and operations of international mail products.



Bernard Haurie

Since 2012, Bernard Haurie has been Le Group La Poste's head of strategy, forecasting, and innovation. He is also a member of La Banque Postale's supervisory board. In 2011, he was named chair of the IE-Club; since 2004 he served as chair of La Poste's subsidiary Certinomis, as well as head of e-services innovation and development. Since 1989, Haurie's tenure at La Poste has also included stints as international development director, mail and package sales marketing director, and regional director. Finally, he worked at the World Bank's former postal and financial services office, as well as on customer marketing at the Royal Bank of Canada. He attended the (now-closed) École nationale supérieure des postes et télécommunications and completed a MBA at HEC.



David Kenneson

David Kenneson is North America general manager for Quintiq, which he joined in 2011. Prior to joining Quintiq, Kenneson has worked for a wide range of businesses from start-ups and turnarounds to Fortune 500 companies such as SAP, HCL-AXON, and Cap Gemini. With more than 20 years in domestic and international business, operations, sales, and process management, Kenneson holds a MBA, in addition to a BS in production and operations management.



Nagisa Manabe

Until May 2015, Nagisa Manabe was chief marketing and sales officer and executive vice president at the U.S. Postal Service. In this role, Manabe oversaw all domestic and international products, marketing, development, and management. She was also responsible for pricing, channel access, global business, sales, secure digital solutions, and the stamp services organizations. Prior to joining the Postal Service in 2012, Manabe was vice president of new growth platforms at the Coca-Cola Company; she joined Coca-Cola after serving as vice president for marketing at Diageo Guinness USA. Over the years since beginning her career at Proctor & Gamble, she has held marketing and innovation positions at Diageo, as well as at Johnson & Johnson, Unilever Bestfoods North America, and Campbell's. She holds a BA from Yale University and a MBA from Harvard University.



Ramesh Ratan

Ramesh Ratan is CEO and member of the board of directors for Bell and Howell, as well as a member of BCC Software's board. Prior to his position at Bell and Howell, Ratan worked on developing a new, partnership-based business platform as president of Pitney Bowes' marketing services solutions division; previously, he presided over the firm's document messaging technology business. Earlier in his career, Ratan served as COO at the Direct Marketing Association, president at Americas of Vocaltec, in various senior executive positions at Lucent Technologies, and in other roles at Bell Laboratories and the AT&T Consumer Lab (which he helped found). Ratan completed a BS in mathematics at India's University of Poona, a MBA at the Jamnalal Bajaj Institute of Management, and a PhD at the University of Pittsburgh.



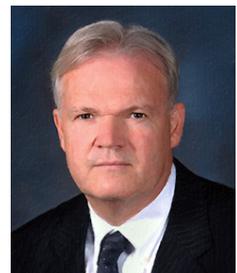
Michel Stuijt

Michel Stuijt's expertise spans more than 29 years in corporate banking and payment. He started his career at NMB Ban (now ING) in structured finance. Afterwards, he worked in corporate banking at Bank of Tokyo, followed by KBC Bank. Then, Stuijt joined CMG (later Logica; now CGI) as a senior business banking consultant. Over the course of 12 years at CMG, he served in various managerial and senior roles including head of the banking business consulting unit, as well as in commercial roles representing Logica as a global account director in financial markets. In 2008, Stuijt joined Equens as region manager and later became head of market management until he joined Eurogiro as CEO in April 2013. Stuijt studied international law at Leyden University and received a LLM from McGill University.



David Williams

David Williams became the second independent U.S. Postal Service Inspector General in August 2003. In his previous position, Williams served as the deputy assistant administrator for aviation operations at the Transportation Security Administration from 2002 to 2003. Williams has served as inspector general for five U.S. federal agencies, including the Social Security Administration from 1996 to 1998, the Department of the Treasury in 1998, and in the Tax Administration of the Department of the Treasury from 1999 to 2003. An Illinois native, Williams graduated with a BS from Southern Illinois University and a received an EdM from the University of Illinois.





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