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## **Executive Summary**

Online shopping continues to grow at a rapid pace. As retailers and package delivery companies move increasing numbers of outbound packages, they must also address a rising volume of returns. In 2017, between \$113 billion and \$132 billion of ecommerce purchases were returned. Online purchases are three times more likely to be returned than those made in a physical store.

Yet, while the forward logistics boom associated with ecommerce has been quite visible, the process of returning goods, known as reverse logistics, has only recently gained widespread attention. Many shoppers believe that returned items simply travel back to retailers the same way they came, but that is not true. The real world of reverse logistics is complicated, involving difficult decisions about where and how to send items to recoup maximum value and minimize shipping and processing costs.

Though returns pose substantial challenges for retailers, they find it difficult to limit returns because customers increasingly see returns as a critical part of their online purchase experience. A reputation for fast, free, and friendly returns can earn customer loyalty while a poor return experience can drive them away. With five billion pounds of returns ending up in landfills, not to mention the waste from packaging, retailers are also struggling to make their reverse supply chains more sustainable.

To control the associated costs and improve customer experience, retailers are trying several strategies. Retailers with an existing physical presence have embraced omnichannel returns, allowing returns of online purchases at existing stores. New technologies, such as automated parcel lockers and smartphone apps, are creating a more seamless return experience. However, retailers still see returns as a major challenge to be overcome and as a cost center, which has created opportunities for innovation for all players in the reverse logistics field, including the U.S. Postal Service.

In 2016, the U.S. Postal Service Office of Inspector General (OIG) issued a white paper, titled The Evolving Logistics Landscape and the U.S. Postal Service, that noted the continuing surge of ecommerce was fueling a rise in the number

## Highlights

Return rates for ecommerce purchases are three times higher than for traditional physical retail. As ecommerce has grown, the reverse logistics market has exploded.

Reverse logistics is more complex than forward logistics. Retailers want shipping partners that create new efficiencies and cut costs.

The Postal Service has a smaller share of the returns market than the outbound market, suggesting room for growth.

Nearly half of the Postal Service's return volume involves accepting returns and handing them off to other delivery companies.

To grow its returns business, USPS could introduce new services, deploy new technologies, and enhance current procedures for handling returns.

of packages returned. This white paper follows up on that work by identifying emerging trends in reverse logistics as well as potential opportunities for the Postal Service. USPS already handles many returns – 148 million packages in FY 2016.<sup>1</sup> This includes packages carried through the entire postal network, as well as those where USPS only handles the first mile of the return before passing the packages on to other reverse logistics providers.

The Postal Service can continue to grow its returns business by better aligning service with the needs of both businesses and consumers. It has unique advantages that its competitors do not: letter carriers that go to nearly every address in America six days per week; a retail network of more than 30,000 post offices; 146,000 collection boxes for customer drop-offs; and dedicated law

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OIG analysis of USPS internal volume and revenue data.

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enforcement that provides additional security for returned items.<sup>2</sup> Additionally, the competencies developed through returns of online retail goods can also be applied to other types of returns, such as medical test kits, food deliveries, recalls, repairs, and product recycling or disposal.

This report also considers new products and services that the Postal Service could offer to better meet customers' needs. For example, some industry stakeholders have suggested the Postal Service could accept unboxed return items – something that other delivery companies and startups are already doing – to reduce both costs and waste for retailers. The Postal Service could also possibly partner with existing third-party logistics (3PL) providers to offer services beyond transportation, thereby putting it on par with other delivery companies.

Additionally, the introduction of new technology, including automated parcel dropboxes, home assistants, and parcel lockers, could provide customers with an improved returns experience.

Will the rising tide of returns lift all boats, or will the Postal Service be left behind? Other delivery services, old and new, are putting significant effort into serving the returns market now that it is increasing in complexity and potential. The Postal Service, an early pioneer in consumer returns, must continue to adapt if it wants to grow in this area. It has the potential to solve a critical problem for online retailers and better serve the growing number of Americans engaged in ecommerce.

<sup>2</sup> U.S. Postal Service, Fiscal Year 2017 Annual Compliance Report, (Washington, DC, 2017), p. 62, https://www.prc.gov/dockets/document/103292.

## **Observations**

#### Introduction

If you have ever returned a pair of pants that did not quite fit right or traded in your old smartphone for the newest model, you have participated in the world of reverse logistics. Reverse logistics is a component of the supply chain that has been often overlooked, even by large ecommerce retailers.<sup>3</sup>

Until recently, many businesses had the same reverse logistics strategy – treat it as a burden and avoid it as much as possible. They restricted consumers' ability to return unwanted items and, for those items they did take back, sold them in bulk to liquidators for pennies on the dollar. As retailers developed an online presence, they tried to build consumer confidence by offering generous return policies, which often include shouldering the cost of "free" return shipping. Returns have grown rapidly as a consequence, and retailers can no longer afford to liquidate every item they take back. Their need for alternative solutions has encouraged rapid innovation in reverse logistics, as companies look for more efficient ways to handle returned items and recoup the most value from them.

Dating back to an era before online shopping, when purchases were made through home shopping networks and mail order catalogues, the U.S. Postal Service played a key role in the reverse logistics industry by developing return shipping solutions to meet these customers' needs. However, the Postal Service's current share of the returns market is smaller than its share of the outbound parcel market. Since ecommerce return volumes are rising rapidly, this gap means that the Postal Service has opportunities for growth in this area. This paper will explore emerging trends in reverse logistics and returns management before examining the current role of the Postal Service in returns and its future opportunities for growth. To assist in its preparation, the U.S. Postal Service Office of Inspector General (OIG) consulted with Supply Chain Visions (SCV), a company with substantial experience in reverse logistics supply chain operations.

### Emerging Trends in Reverse Logistics What is Reverse Logistics?

Put simply, reverse logistics is the movement of goods from their place of use to their place of manufacture, sale, or disposal. Reverse logistics does not always involve sending goods back to their point of origin; it could instead mean sending them for resale in a secondary market; repair and return to inventory; or disposal. These options are collectively known as disposition.

A common use of the reverse supply chain is voluntary product returns, when customers send unwanted purchases back to a retailer. However, reverse logistics encompasses many other types of shipments throughout the supply chain, including reclamations, unsellable items, damages, defectives, obsoletes, overruns, seasonal returns, and buybacks.<sup>4</sup> Along with forward logistics, reverse logistics operations create a circular supply chain. The movement of goods through this circular supply chain is illustrated in a chart in Appendix A. Often, manufacturers participating in this circular economy are able to reclaim product components or resell used items, saving money and offsetting the cost of processing returns.

<sup>3</sup> Carla Huang, Director of Corporate Marketing at UPS, has said that "In our experiences, reverse logistics is one of the most often overlooked elements of the complete operations cycle." Curtis Greve and Jerry Davis, *Recovering Lost Profits by Improving Reverse Logistics*, White Paper commissioned by UPS, October 2015, https://www.ups.com/media/en/Reverse\_Logistics\_wp.pdf.

<sup>4</sup> The Reverse Logistics and Sustainability Council identifies different classes of products that require reverse logistics services, including used items (reclamation), items unsold by retail outlets (unsellable), damaged items (damages), defective items (defectives), items that have been replaced by newer models (obsoletes), items where manufacturers produced more than were able to be sold (overruns), unsold items related to particular seasons or holidays (seasonal items), and items repurchased by manufacturers from retailers (buybacks). Fact Sheet, Reverse Logistics and Sustainability Council, http://reverselogistics.com/RLSC/ files/1114/5922/5940/RLSC\_Fact\_Sheet\_3-29-16.pdf.

#### **Reverse Logistics Is Not Just Forward Logistics Backward**

Supply chains are typically built to move products from manufacturers to retailers to customers. They are efficient and well designed for that purpose. Given that fact, it might seem easy to reverse the direction of products to return them to their point of origin. But sending products back through the supply chain is like swimming up a river, with waterfalls to climb up and dozens of tributaries that make it unclear which way to go. Table 1 compares the main differences between forward and reverse logistics.

#### Table 1: Comparison of Forward and Reverse Logistics

Feature	Forward (Outbound)	Reverse	
Product Quality	Uniform	Variable	
Delivery Options	Single delivery destination	Multiple delivery options (Disposition)	
Routing	Single stream	Branching	
Volume Forecasting	Easy	Difficult	
Cost	Controllable by the merchants	Hard for merchants to control, depends on customer and item type/condition	
Inventory Management	Known upon sending	Unknown until items received	
Customer	Merchants	Merchants and consumers	

Source: OIG analysis.

During the forward logistics process, retailers are aware of how much inventory they have, its status, and its location. In reverse logistics, it is usually the customer initiating the process, so retailers have no knowledge of when or if a

product will be returned. Inventory management becomes a guessing game. Companies do not know how many employees they will need to process incoming goods on any given day. They also do not know the condition of each product until they open the box. Because of the inherent uncertainty of returns, retailers demand a high level of visibility from their shippers, including knowing when a return enters the mail stream, when it will arrive, and even some details about what is being returned.

"In reverse logistics, it is usually the customer initiating the process, so retailers have no knowledge of when or if a product will be returned."

Once a customer initiates a return, they usually box it up, label it, and give it to a shipper, who makes the first-mile delivery to a consolidation center. From there, it makes the middle-mile journey to a returns processing center, where trained staff assess its condition and decide what to do with it. There are many options for handling a returned product (Table 2), depending on factors like its resale price, condition, manufacturer resale policy, processing costs, and more. The last mile of the product's return journey is from the processing center to its ultimate destination. This multi-step journey adds uncertainty, extra touchpoints, and additional transportation costs. For more information on the components of the reverse logistics process, please see Appendix B.

#### Table 2: Descriptions of Reverse Logistics Disposition Options

Disposition Method	Description
Restock	Unopened, undamaged products are available to re-enter the forward supply chain
Sell for discount - original retailer	Retailers may try to sell opened but undamaged products in the clearance portion of a physical store location
Repair and restock	Some returned items may need minor repair to be returned to their original quality, before being repackaged and resold at a discount
Repair and sell on the secondary market	If the manufacturer or retailer has a policy of not allowing returned products to be sold by the original retailer, the repaired product may be sold on the secondary market
Sell on the secondary market/liquidate	The secondary market (which includes outlets such as eBay, T.J.Maxx, and Big Lots) in the U.S. and abroad is an option for functioning products
Recycle	Recycling of products may be an option if they can harvest valuable materials from them, or if they care about sustainability
Landfill	Returned products with no viable reuse option are destined for a landfill

Source: OIG analysis.

With all of these disposition options, reverse logistics requires the interaction of a complex network of actors. In 2017, there were over 4,000 businesses involved in the reverse logistics industry.<sup>5</sup> Despite the large number of companies, there are still opportunities for growth in this industry. Reverse logistics is considered to be in the "quality growth" phase of development and venture capital investments in startups are growing.<sup>6</sup> Additionally, the industry is experiencing partnerships

and mergers. In 2016, FedEx acquired Genco, a company that specializes in reverse logistics, while UPS has entered into a partnership with reverse logistics provider Optoro.<sup>7</sup>

#### As Ecommerce Grows, So Grows Reverse Logistics

Reverse logistics has taken on greater importance in recent years as a direct result of the rise of ecommerce. The value of products bought online in the U.S.

<sup>5</sup> Meghan Guattery, "IBISWorld Industry Report OD5926: Product Returns Management Services in the U.S.," December, 2017, p. 4, available from IBISWorld database, accessed March 28, 2018.

<sup>6</sup> The quality growth stage is described as technology and markets in peak development with weaker players being pushed out and stronger players better meeting evolving customer needs. Ibid, p. 11. A number of reverse logistics startups have seen multi-million dollar investments since 2014 including Optoro (\$30 million in 2016) and Happy Returns (\$12 million in 2017). "Optoro Closes \$30M Series D Funding," VC News Daily, December 21, 2016, http://www.vcnewsdaily.com/optoro/venture-capital-funding/rkmgswnbbf. "Funding Rounds: Happy Returns," Crunchbase, 2017, https://www.crunchbase.com/search/funding\_rounds/field/organizations/funding\_total/happy-returns.

<sup>7</sup> Jeff Berman, "FedEx Acquisition of GENCO is a Done Deal," *Logistics Management*, February 2, 2015, https://www.logisticsmgmt.com/article/fedex\_acquisition\_of\_genco\_is\_a\_done\_deal. "UPS and Optoro Form Strategic Alliance to Enhance Retail Reverse Logistics Services," United Parcel Service, December 21, 2016, https://pressroom.ups.com/pressroom/ContentDetailsViewer. page?ConceptType=PressReleases&id=1482265436045-955.

reached \$452 billion in 2017, an increase of about 16 percent over the previous year.<sup>8</sup> Globally, ecommerce grew by 25 percent in 2017.<sup>9</sup>

Products bought at brick-and-mortar stores are returned around 9 percent of the time.<sup>10</sup> The return rate for online purchases is nearly three times higher at 25-30 percent, and totals between \$113 billion and \$132 billion in the U.S. annually.<sup>11</sup> Particular product types can range from single-digit return rates to 40 percent or more.<sup>12</sup> As ecommerce grabs a greater share of the retail market, the overall retail return rate will continue to climb, especially the rate of goods returned via shipping, adding pressure to the entire reverse supply chain. The post-holiday period is especially flush, as about half of annual returns are made between December 26 and March 31.<sup>13</sup>

There are four major reasons why ecommerce purchases are returned so frequently.

- 1. *Inability of shoppers to try out items*. Without being able to touch, try on, or otherwise closely evaluate an item before purchase, it is more likely that a customer will be dissatisfied with it or experience buyer's remorse.
- 2. *Errors made by online merchants*. Sellers sometimes make mistakes in order fulfillment by sending the wrong product or the wrong size or color.
- 3. *Defective or damaged goods*. Items are occasionally damaged or broken during fulfillment or shipping.<sup>14</sup>

4. *No intention to buy*. Consumers may order items to use once or just try out, knowing that they can return the item for free afterward.<sup>15</sup>

Reverse logistics is more expensive than forward logistics, primarily because of labor and shipping costs.<sup>16</sup> Return packages must be collected, shipped to a returns center, opened by hand, inspected, classified, repaired if necessary, repackaged, distributed to the next sales venue, and restocked. Several pairs of hands touch each product, and some expertise is needed to properly handle the variety of products – each of which arrives in a different condition. When it comes to shipping, charges for some packages may be higher than expected because the consumer used a box that was unnecessarily large for the product being shipped; for example, the customer ordered four items together but returned one of them in the same box that was big enough to fit all four. There are other costs associated with product returns as well: transportation, warehousing, new parts for refurbishing, call center personnel, and even fraud.<sup>17</sup> Return fraud cost the retail industry an estimated \$18 billion in 2017.<sup>18</sup>

Given that the average return costs \$10 to receive and process, it may make sense to avoid the reverse logistics hassle for low-value items, or even high-value items that are difficult to handle or have low salvage value.<sup>19</sup> As a result, some retailers have implemented "returnless refunds," where customers are granted a refund but told to keep or throw away the original item.

- 12 Abha Bhattarai, "Americans Love Shopping Online, but They Want to Return Things in Person," *The Washington Post*, October 13, 2017, https://www.washingtonpost.com/business/economy/americans-love-shopping-online-but-they-want-to-return-things-in-person/2017/10/13/2562df74-acfc-11e7-9e58-e6288544af98\_story.html?utm\_term=.6af116ea0e99&wpisrc=nl\_sb\_smartbrief.
- 13 Jeffrey Haushalter, Partner at Chicago Consulting, in Parcel Forum Presentation, September 19, 2017.

<sup>8</sup> U.S. Census Bureau, "Quarterly Retail E-Commerce Sales: 4th Quarter 2017," (2018), https://census.gov/retail/mrts/www/data/pdf/ec\_current.pdf. Stefany Zaroban, "U.S. E-commerce Sales Grow 16.0% in 2017," *Digital Commerce 360*, February 16, 2018, https://www.digitalcommerce360.com/article/us-ecommerce-sales/.

<sup>9</sup> eMarketer, Worldwide Retail and Ecommerce Sales: eMarketer's Updated Forecast and New Mcommerce Estimates for 2016—2021, January 29, 2018, https://www.emarketer.com/Report/Worldwide-Retail-Ecommerce-Sales-eMarketers-Updated-Forecast-New-Mcommerce-Estimates-20162021/2002182.

<sup>10</sup> Stacey Rudolph, "E-commerce Product Return Statistics and Trends [Infographic]," *Business 2 Community* (blog), April 10, 2016, https://www.business2community.com/infographics/e-commerce-product-return-statistics-trends-infographic-01505394.

<sup>11</sup> Ecommerce sales in the U.S. totaled \$452 billion in 2017. Return rates for ecommerce purchases are estimated at 25-30 percent, or \$113-132 billion. U.S. Census Bureau, "Quarterly Retail E-Commerce Sales: 4th Quarter 2017," (2018), https://www.census.gov/retail/mrts/www/data/pdf/ec\_current.pdf.

<sup>14</sup> Patrick Kyle, "Why the Ecommerce Boom Has Increased Customer Return Rates," Optoro, August 15, 2017, http://www.optoro.com/2017/08/15/ecommerce-boom-increased-customer-return-rates/.

<sup>15</sup> Nick Winkler, "How to Reduce Your Return Rate & Predict Exactly What Customers Want," Shopify Plus (blog), December 6, 2017, https://www.shopify.com/enterprise/102947142-how-to-reduce-your-return-rate-predict-exactly-what-customers-want.

<sup>16</sup> Ramazan Kaynak, Ipek Koçoğlu, and Ali Ekber Akgün, "The Role of Reverse Logistics in the Concept of Logistics Centers," Procedia - Social and Behavioral Sciences, 109 (2014), p. 441.

<sup>17 &</sup>quot;The Financial Implications of a Generous Return Policy," The Wall Street Journal, January 25, 2017, http://partners.wsj.com/ups/the-financial-implications-of-a-generous-return-policy/?mod=djemlogistics.

<sup>18</sup> Appriss Retail, 2017 Consumer Returns in the Retail Industry, December, 2017, p. 1, https://appriss.com/retail/wp-content/uploads/sites/4/2017/12/2017 Consumer-Returns-in-the-Retail-Industry-Report.pdf.

<sup>19</sup> Rafael Zimberoff, "4 Things to Know About Ecommerce Returns to Minimize Lost Profits and Keep Customers Happy," Entrepreneur, January 2, 2018, https://www.entrepreneur.com/article/306727.

#### Return Rates Vary by Product Type

While the average return rate for ecommerce purchases is 25 to 30 percent, some product types are sent back at a far higher rate than others.<sup>20</sup> Online shopping for apparel and footwear is difficult because customers cannot necessarily discern differences in sizing and appearance. They may compensate by ordering similar items or multiple sizes with the intent of sending the unwanted items back, a behavior known as "bracketing."<sup>21</sup> The bedroom is becoming the new fitting room. Items with higher return rates tend to be fit-dependent, non-standard, breakable, perishable, high-touch, or high-priced and specialized.<sup>22</sup> Figure 1 shows how frequently different types of items were returned by online shoppers in the U.S. during 2016.

#### **Cross-Border Returns**

Ordering products from other countries has become more common, with crossborder ecommerce projected to be 20 percent of all ecommerce sales by 2022, but international reverse logistics is even more complex and costly than its domestic counterpart.<sup>23</sup> In addition to the long distances returns must travel, customs and border security issues make international returns difficult. In many cases, ecommerce businesses will not offer returns to international customers or refuse to sell to them altogether, hindering the growth of international ecommerce.

#### Amazon Sets the Pace

Amazon is the king of U.S. ecommerce. Its online sales equal that of the next nine-highest companies combined (Figure 2). Its dominant position has made it the pacesetter in writing the modern rules of retail, including those concerning returns. Amazon's generous policies, including free shipping on many products,

have pushed many other outlets to follow suit, which in turn has cemented those policies as the norm.  $^{\rm 24}$ 

#### Figure 1: Categorires of Items Returned by Online Shoppers, 2016

#### Apparel and Electronics are Among the Most Returned Ecommerce Purchases

According to a 2016 survey of ecommerce customers, three-quarters have returned clothing or accessories purchased online. Meanwhile, nearly one-in-three online shoppers have returned electronics or shoes.



<sup>20</sup> Abha Bhattarai, "Americans Love Shopping Online, but They Want to Return Things in Person," *The Washington Post*, October 13, 2017, https://www.washingtonpost.com/business/economy/americans-love-shopping-online-but-they-want-to-return-things-in-person/2017/10/13/2562df74-acfc-11e7-9e58-e6288544af98\_story.html?utm\_term=.6af116ea0e998&wpisrc=nl\_sb\_smartbrief.

<sup>21</sup> Raanan Cohen, "Leveraging Returns as Part of the Online Shopping Experience," Supply Chain Management, September 16, 2017, http://www.scmr.com/article/leveraging\_returns\_as\_part\_of\_the\_online\_shopping\_experience.

<sup>22</sup> Jeffrey Haushalter, Partner at Chicago Consulting, in Parcel Forum Presentation, September 19, 2017.

<sup>23</sup> Forrester Research, Inc., Online Cross-Border Retail Forecast: 2017 to 2022 (Global), 2017, https://www.forrester.com/report/Forrester+Data+Online+CrossBorder+Retail+Forecast+2017+To+2022+Global/-/E-RES137898.

<sup>24</sup> Third-party sellers on Amazon's marketplace platform are rated on a number of metrics, one of which is customer satisfaction with the returns process, and their search position on the site rises and falls accordingly. So although they have some freedom to not follow Amazon's lead, they could become less visible to customers if they don't. Mark Solomon, "Don't Want to Return that Stuff? Keep It, Amazon Says," *DC Velocity*, August 2, 2017, http://www.dcvelocity.com/articles/20170802-dont-want-to-return-that-stuff-keep-it-amazon-says/.

#### Figure 2: Leading U.S. E-retailers in 2016, Ranked by Net Ecommerce Sales



#### **Customer Expectations are Reshaping Reverse Supply Chains**

Where ecommerce returns were once seen as a privilege, customers increasingly consider fast, free, and easy returns to be a basic right of online shopping. Because they cannot see and touch an item before they buy it, a liberal return policy provides them confidence that the retailer stands behind its products. Under pressure from competitors, online retailers have generally made their return policies more generous by assuming more of the shipping costs or accepting returns with no questions asked.<sup>25</sup>

But the associated costs may be becoming too high to bear, especially for businesses that have not seen their sales rise as a result. Many companies have begun attaching conditions to their offer of free returns. Williams Sonoma, for example, will pay for returns if the wrong item is shipped or the order is damaged, but if a customer simply experiences buyer's remorse, they must foot the bill for return shipping.

Customers also expect fast refunds on their returns. While the average refund takes about 10 days to be processed, online retailers handle refunds in a variety of ways. Some online retailers do not issue a refund until the item has been visually inspected at a returns center, while others do it as soon as the package is accepted and scanned by the carrier.<sup>26</sup> In the first case, fast shipping is important because it allows the retailer to issue the refund quickly and keep the customer happy. In the second case, scanning reliability is more important.

"60 percent of active online shoppers say that free returns is the most important part of a good returns experience." Making returns free and easy for customers can result in a company receiving more returns. Some retailers, especially those that tie their customer experience to their open returns policy (i.e. Zappos) or whose business models rely on returns (i.e. Stitch Fix), tend to accept their higher supply chain costs as a way to avoid other costs

like customer service and retail space.<sup>27</sup> In some cases, retailers have seen increased sales and greater customer satisfaction as a result. Notably, it has been observed that consumers with the highest return rates on average are also the most consistent shoppers and the most loyal customers.<sup>28</sup>

<sup>25 &</sup>quot;The Financial Implications of a Generous Return Policy," *The Wall Street Journal*, January 25, 2017, http://partners.wsj.com/ups/the-financial-implications-of-a-generous-return-policy/?mod=djemlogistics. 26 ReBOUND Research, *The Great Returns Race: Benchmark 2017: The Second Edition*, 2017, p. 18.

<sup>27</sup> Zappos is an online shoe retailer while Stich Fix is a subscription clothing company that sends customers a selection of clothes every month to try on and decide whether to purchase or return.

<sup>28</sup> Michael-Jon Lazar, "Can Product Returns Actually Make You Money?," TrueShip (blog), May 21, 2015, http://www.trueship.com/blog/2015/05/21/can-product-returns-actually-make-you-money/#.V9GqPk0rKUm.

#### **Generational Differences**

Age is a major factor affecting consumer preferences for how purchases are returned. For instance, Millennials prefer in-store returns over mailed returns, relative to other age groups.<sup>29</sup> This could be because they prefer the instant gratification of completing the return and selecting a replacement item. Meanwhile, Generation X and Baby Boomers are more likely to prefer dropping off their returns at the post office than Millennials, who, when they do mail their returns, are more likely than others to arrange package pickup at home or drop them in a collection box.<sup>30</sup> This desire for convenience will likely influence how retailers interact with customers.

#### **Retailers Struggle to Make Reverse Supply Chains Sustainable**

The rise in returns creates a sustainability concern. About five billion pounds of returned items and packaging end up in the trash, making them a major component of landfills.<sup>31</sup> The longer a product takes to be resold, the greater the chance that it goes out of date or depreciates so much that it is no longer profitable to sell, making it more likely to end up in the trash. Shipping companies can help by moving items swiftly through the reverse supply chain, thereby increasing the likelihood of resale.

New regulations are placing the responsibility on retailers and manufacturers to dispose of their products safely and sustainably. The European Union and Japan have instituted product take-back laws requiring manufacturers of certain types of electronics to pay for those goods to be shipped to a place where they can be refurbished or disposed of properly.<sup>32</sup> While there is no national product take-back law in the U.S., 25 states have laws directing the take-back of some electronics. Some companies are starting to do this voluntarily.<sup>33</sup> For example, Figure 3 shows a mailing polybag for returning a used cell phone as part of a trade-up program.

Should product take-back legislation expand in the U.S., it could mean many more items flowing through the reverse supply chain.

#### Figure 3: Merchandise Return Polybag for Cell Phone Recycling



## There is No Widely Accepted Solution for Reverse Logistics Issues

As an industry that is still growing and developing, reverse logistics has not generated a widely-used set of standard solutions or best practices. Companies often employ a patchwork of solutions that address one or two parts of the process, or outsource it completely – nearly half of companies use a third-party logistics provider (3PL).<sup>34</sup> This has created a window of opportunity for entrepreneurs to develop new solutions that address the growing returns market and its

"Reselling returned goods can recoup some of the losses, but few are resold at full price."

<sup>29</sup> Millennials (52 percent) are more likely to return packages in physical stores than non-Millennials (41 percent). United Parcel Service, UPS Pulse of the Online Shopper: Volume 5 Retail Fundamentals, November 2017, p. 15, https://solutions.ups.com/rs/935-KKE-240/images/UPS-Pulse-of-the-Online-Shopper-2017-Volume-5 Retail Fundamentals.pdf.

<sup>30</sup> OIG analysis of data from the 2017 U.S. Postal Service OIG Postal Omnibus Survey, run from July 28, 2017 until August 21, 2017. This was an online, nationally representative sample of 3,391 Americans age 18 to 75.

<sup>31</sup> Daphne Howland, "Study: 5B Pounds of Retail Returns End Up in Landfills," RetailDive, December 27, 2017, https://www.retaildive.com/news/study-5b-pounds-of-retail-returns-end-up-in-landfills/513769/.

<sup>32</sup> Gökçe Esenduran, Eda Kemahlio`glu-Ziya, and Jayashankar M. Swaminathan, "Product Take-Back Legislation and Its Impact on Recycling and Remanufacturing Industries," in Sustainable Supply Chains: Models, Methods, and Public Policy Implications, (New York: Springer, 2012), p. 130, 136, http://www4.ncsu.edu/~ekemahl/takeback%20chapter.pdf.

<sup>33 &</sup>quot;Manufacturer Takeback Programs in the U.S.," Electronics TakeBack Coalition, accessed April 2, 2018, http://www.electronicstakeback.com/how-to-recycle-electronics/manufacturer-takeback-programs.

<sup>34</sup> Chris Cunnane, "Omni-Channel and Returns Management," Logistics Viewpoints (blog), August 16, 2017, https://logisticsviewpoints.com/2017/08/16/omni-channel-and-returns-management/.

associated headaches. However, some of these solutions threaten traditional delivery companies by reducing the number of returns or the number of returns that are shipped.

Prior to the last few years, most merchants took simple and painless approaches to managing their returns, even if those approaches were not the most cost-effective. Products that were returned to stores in like-new condition could be reshelved and resold, but few can be resold at full price.<sup>35</sup> All others would be sold by the truck-full to liquidators, who had only a murky idea of what was in the truck or the condition of the merchandise.

Liquidation is still very much an option for retailers, but technology is making it a more efficient and profitable practice. Online auction sites like B-Stock Solutions connect large retailers with hundreds of thousands of secondary buyers.<sup>36</sup> The same way eBay took yard sale haggling and turned it into a formalized, automated process with transparent prices, platforms like B-Stock raise sale prices for sellers and improve visibility and choice for buyers.

Technology is playing a crucial role in other segments of the reverse supply chain as well. One popular software provider is Optoro, which combines historical pricing and individual product data into an algorithm that tells companies where they should route each return item to the most profitable disposition path for a return: resale, liquidation, repair, recycling, or something else.<sup>37</sup> Optoro claims its smart routing dramatically improves the profitability of returned inventory.

#### **Omnichannel Returns**

Another growing trend is omnichannel returns, in which merchants are making returns more convenient by allowing consumers to return online items in physical "Though a majority of ecommerce shoppers prefer to return items directly to stores, most returns are actually shipped." locations. BORIS returns (buy online, return in store) not only save merchants the cost of first-mile return shipping, they also encourage additional purchases. According to a UPS survey, 66 percent of online shoppers made a new purchase when returning in store, compared to 44 percent when returning online.<sup>38</sup> In addition to being better for retailers, 58 percent of ecommerce shoppers preferred to make returns at brick-and-mortar stores rather

than mail them.<sup>39</sup> Yet despite this preference, the reality is that shoppers are much more likely to ship their ecommerce returns than bring them to a store.<sup>40</sup>

Delivery companies are also expanding physical access points in high-population areas. Walgreens recently agreed to provide FedEx package pickup and delivery service at 7,500 stores.<sup>41</sup> UPS Access Point offers services through a network of 4,000 locations, such as dry cleaners and convenience stores.<sup>42</sup> Then there is Happy Returns, a startup that collects and aggregates loose return items at kiosks in malls or stores.<sup>43</sup> Happy Returns provides online-only retailers with a physical channel for collecting returns. Retailers save on shipping, customers get their refunds right away and avoid the hassle of packing their item, and malls get additional foot traffic.

#### Technology for Package Pickup and Drop-off

Getting a return into the mail stream can be a challenge for customers. Several delivery companies, including the Postal Service, will pick up a return from the customer's house, but this process can be expensive for carriers and sometimes

<sup>35</sup> Jeffrey Haushalter, Partner at Chicago Consulting, in Parcel Forum Presentation, September 19, 2017.

<sup>36</sup> Eric Moriarty, Vice President, and Karen Huff, Director of Sales, at B-Stock Solutions, in discussion with the authors, March 6, 2017.

<sup>37</sup> Optoro recently entered into a partnership with UPS. Jordan Jakubovitz, Director of Product Management at Optoro, in discussion with the authors, January 10, 2018.

<sup>38</sup> United Parcel Service, UPS Pulse of the Online Shopper: A Customer Experience Study, June 2017, p. 7, https://pressroom.ups.com/mobile0c9a66/assets/pdf/pressroom/white%20paper/UPS\_2017\_POTOS\_ media%20executive%20summary\_FINAL.pdf.

<sup>39</sup> Ibid.

<sup>40</sup> Ibid.

<sup>41 &</sup>quot;Walgreens Now Offers FedEx Drop-off, Pickup Services," Daily Herald, November 7, 2017, http://www.dailyherald.com/business/20171107/walgreens-now-offers-fedex-drop-off-pickup-services.

<sup>42</sup> Mary Schlangenstein and Michael Sasso, "FedEx, UPS Want to Steer Santa's Packages to the Local Drugstore," *Bloomberg*, December 14, 2017, https://www.bloomberg.com/news/articles/2017-12-14/fedex-ups-want-to-steer-santa-s-packages-to-the-local-drugstore.

<sup>43</sup> David Sobie, Chief Executive Officer at Happy Returns, in discussion with the authors, January 24, 2018.

requires the customer to leave their package on the doorstep or change their schedule to be at home when the carrier arrives. Private companies and international posts alike have explored ways that technology can make package pickup more convenient.



#### Figure 4: Amazon Parcel Locker

Source: https://www.bullring.co.uk/visitor-info/facilities/amazon-lockers.

One option gaining popularity is automated parcel lockers. Amazon has placed lockers in apartment buildings, 7-Elevens, and Whole Foods stores (Figure 4).

Nordstrom and Macy's are putting lockers in their stores where customers can receive online orders, try them on in store, and stick them back in the locker if they are not satisfied.<sup>44</sup> And it is not just retailers experimenting with lockers; posts are trying them too. Finland's Posti operates 500 parcel terminals in grocery stores and malls; Swiss Post and Deutsche Post offer them too.<sup>45</sup>

Smartphone apps allow retailers, shippers, and customers to connect in real time to make package pickup easier and less prone to theft or failure. Several delivery startups in the U.S. and abroad use the GPS in a customer's smartphone to make pickups wherever the customer is.<sup>46</sup> Meanwhile, Ireland's An Post uses their ReturnPal app to schedule carrier pickups of unlabeled parcels from the customer's home, then does the labeling at the post office.<sup>47</sup>

Other companies have focused on providing better security for packages left at the home. Amazon, which recently purchased the video doorbell company Ring, is developing technology to grant Amazon delivery personnel access to customers' cars or homes, on a one-time basis, to drop off a package – though presumably it could be used for returns pickups as well.<sup>48</sup> The startup uCella makes a secure smart mailbox that attaches to the side of homes and is big enough to hold large packages. A customer making a return leaves the package inside, locks it, and sends a one-time unlock code to the postal carrier.<sup>49</sup>

While sending couriers out to make pickups on demand is very expensive, rolling robots could potentially do this for much less. Last year, UK parcel delivery company Hermes partnered with Starship, maker of small six-wheeled autonomous courier robots, to pilot a returns pickup service in London.<sup>50</sup>

<sup>44</sup> Brigid Sweeney, "It's a Store - and a De Facto Logistics Hub," Crain's Chicago Business, November 17, 2017, http://www.chicagobusiness.com/article/20171117/ISSUE01/171119885/brick-and-mortar-retailersaccommodate-online-shoppers.

<sup>45</sup> Saara Pietila, Head of Ecommerce Parcel Services at Posti, in discussion with the authors, November 28, 2017. Manuel Fuchs, Swiss Post, in discussion with the authors, January 26, 2018. Daniel Symonds, "DHL Expands Parcel Locker Network in Germany," *Postal and Parcel Technology International*, November 7, 2017, http://www.postalandparceltechnologyinternational.com/news.php?NewsID=88168.

<sup>46</sup> Fetchr, a delivery startup in the Middle East, makes scheduled pickups of unboxed returns at a location determined by the customer's smartphone GPS. The driver verifies the item, takes a photo for the retailer, and brings it back to Fetchr's warehouse to be packaged and shipped. Tariq Sanad, Chief Financial Officer at Fetchr, in discussion with the authors, January 29, 2018.

<sup>47</sup> Daniel Symonds, "An Post Launches Easy-to-Use App for Online Deliveries Return," *Postal and Parcel Technology International*, October 17, 2017, http://www.postalandparceltechnologyinternational.com/news. php?NewsID=87815.

<sup>48</sup> Eugene Kim and Christina Farr, "Amazon Exploring Ways to Deliver Items to Your Car Trunk and Inside Your Home," USA Today, October 10, 2017, https://www.usatoday.com/story/money/business/2017/10/10/ amazon-exploring-ways-deliver-items-your-car-trunk-and-inside-your-home/751361001/. Jeffery Dastin and Greg Roumeliotis, "Amazon Buys Startup Ring in \$1 Billion Deal to Run Your Home Security," *Reuters*, February 27, 2018, https://www.reuters.com/article/us-ring-m-a-amazon-com/amazon-buys-startup-ring-in-1-billion-deal-to-run-your-home-security-idUSKCN1GB2VG.

<sup>49</sup> Nick Lavars, "uCella Upsizes the Connected Mailbox for Online Shoppers," New Atlas, November 24, 2015, https://newatlas.com/ucella-smart-mailbox/40577/.

<sup>50 &</sup>quot;Hermes Continues to Use Robots as Couriers," CeBIT, April 25, 2017, https://www.cebit.de/en/news-trends/news/hermes-continues-to-use-robots-as-couriers-222.

#### New Techniques for Reducing Returns

Since an ounce of prevention is worth a pound of cure, retailers are continuously looking for solutions that stop purchases from being returned in the first place. A 2015 study by retail analyst IHL Group found that half of all returns are partially or wholly preventable.<sup>51</sup> To address this, apparel retailers may use software that tries to prevent fit or style mistakes. Boston-based True Fit, for example, has collected data from Lord & Taylor, Levi's, DSW, Ralph Lauren, and many others to create an artificial intelligence that makes size and style recommendations to online shoppers based on their previous purchases.<sup>52</sup>

Not all return reduction methods use technology. Jet.com, an online market owned by Walmart, allows customers to voluntarily waive their right to a return in exchange for a discount off the purchase price.<sup>53</sup> Return policies can also be tweaked in small ways, for instance by limiting customers' ability to return items with low resale value. Paradoxically, retailers may be able to reduce returns in a customer-friendly way by lengthening the amount of time they have to make their return. Buyers, knowing they are in no rush, may forget to make the return at all.<sup>54</sup>

#### The Postal Service's Role in Returns

#### **USPS Returns Strategy**

Returning goods and information from customers to businesses has long been a core part of the Postal Service's role. In 1928, the U.S. Post Office Department introduced Business Reply Mail, the first reverse mailpiece that allowed businesses to pay only for mail pieces actually returned.<sup>55</sup> Thirty years later, the program was expanded to all mailable materials, including packages. In response to requests from a variety of mail-order businesses, the Postal Service introduced

the Merchandise Return Service (MRS) in 1980, which provided customers a prepaid shipping label to return purchases.<sup>56</sup>

Throughout the first decade of the 2000s, the Postal Service pursued a strategy of expanding return options to meet customers' diverse needs. However, after consultation with business customers who found the many options confusing, the Postal Service has recently taken steps "The Postal Service first introduced package returns in 1958 with Business Reply Mail parcels."

to reduce and simplify its portfolio. It has also eliminated a number of fees for returns aimed at commercial shippers.<sup>57</sup> For a list of the Postal Service's current commercial return options, including comparisons of their target market, shipping price, and FY 2017 revenue, please see Appendix C.

Today, three postal products account for about two-thirds of the returns carried by the Postal Service.<sup>58</sup> MRS and USPS Returns carry packages end-to-end, from customer to merchant, and are focused on large- and medium-sized retailers that want to offer their customers prepaid shipping labels. Parcel Return Service (PRS), on the other hand, is a product marketed to other reverse logistics providers. With PRS, return packages only travel the first return mile (often the most expensive mile) to designated postal facilities, where they are consolidated and handed off to another company for the remainder of the journey. Many of the Postal Service's dedicated returns products are in the "competitive" category, meaning that they are allowed more pricing flexibility.

<sup>51 &</sup>quot;Survey: Most Retail Returns are Preventable," Chain Store Age, June 24, 2015, https://www.chainstoreage.com/article/survey-most-retail-returns-are-preventable/.

<sup>52</sup> Steve O'Hear, "True Fit, The Personalization Platform for Apparel and Footwear, Raises \$55M Series C," *TechCrunch*, January 15, 2018, https://techcrunch.com/2018/01/15/true-fit/. "Fit Is Strategic For Your Brand," True Fit, 2018, https://www.truefit.com/Partners/Brand-Data-Partners.

<sup>53</sup> Returns, Jet.com, accessed March 14, 2018, https://jet.com/help-center/returns.

<sup>54</sup> Tanya Dua, "How Retailers are Combatting E-commerce Returns this Holiday Season," Digiday, November 30, 2015, https://digiday.com/marketing/retailers-combatting-ecommerce-returns-holiday-season/.

<sup>55</sup> Winton Blount, "Business Reply Mail," Postal History Symposium, September 16-17, 2011, p. 6, https://postalmuseum.si.edu/Symposium2011/papers/Martorelli-BRM.pdf.

<sup>56</sup> Kiplinger's Personal Finance, July 1980, p. 10.

<sup>57</sup> Interview with Karen Key, Manager of Shipping Product Development at USPS, in discussion with the authors, November 8, 2017.

<sup>58</sup> OIG analysis of USPS Revenue, Piece, and Weight data. U.S. Postal Service, *Market Dominant Products: Final Revenue, Pieces, and Weight by Classes of Mail and Special Services for Fiscal Year 2016*, (2016), http://about.usps.com/who-we-are/financials/revenue-pieces-weight-reports/fy2016.pdf. U.S. Postal Service, *Network Returns Platform Redesign*, Decision Analysis Report: Business Case, (2017), p. 3.

When consumers have to pay for their own returns, they often use standard retail parcel shipping products, like Priority Mail. For this situation, the Postal Service offers a service called Return on Your Own (ROYO), where people paying for their own return shipping can easily print labels for participating retailers by typing the company name into Click-n-Ship on the Postal Service's website or at a self-serve kiosk (SSK) at the post office.<sup>59</sup>

#### Figure 5: Returns Volume Share, FY 2015

UPS Leads in the Market for Package Returns but the Postal Service is a Major Player

In FY 2015, UPS handled the most package return volume. Meanwhile, FedEx and the Postal Service each received over a quarter of the volume in the market.



In its 5-year strategic plan released in 2017, the Postal Service announced that it will "leverage electronic documentation, package barcodes, and digital visibility to simplify the process of accepting, verifying, and returning parcels to merchants."<sup>60</sup> In pursuit of this strategy, the Postal Service is automating its payment system for returns. Processing equipment will capture size and weight data and automatically bill merchants. This is expected to reduce labor costs and more accurately weigh each return, bringing the Postal Service's billing processes on par with competitors by the middle of 2019.<sup>61</sup>

Additionally, to meet the needs of customers that no longer own home printers, the Postal Service is expanding their ability to allow customers sending returns to print shipping labels at the post office retail counter.<sup>62</sup> This technology is scheduled to be deployed nationwide in August 2018.

#### Sizing the Market

The overall market for return shipping is estimated to have reached a total revenue of \$5.9 billion, on 736 million packages, in FY 2015.<sup>63</sup> Figure 5 shows that the Postal Service had a 27 percent share of the volume, though this might undercount packages that were sent as returns using any of the Postal Service's retail products.<sup>64</sup> The Postal Service is unsure of the exact number of return packages it carries that are not specifically labeled as returns, though it is attempting to develop estimates.<sup>65</sup>

Among the known returns handled by the Postal Service, the lightweight first-mileonly PRS returns made up 57 percent of volume in FY 2017. Full-network, end-toend returns – including MRS, USPS Returns, Business Reply Mail Parcels, and ROYO – cumulatively made up only 43 percent of returns volume (Figure 6).<sup>66</sup> As

- 61 U.S. Postal Service, Network Returns Platform Redesign, Decision Analysis Report: Business Case, (2017), p. 2.
- 62 Customers receive an email with a QR code from the retailer. When they arrive at the post office, a clerk scans the code on the customer's smartphone and generates a shipping label that can be applied to the box. This service will only be available at retail counters using Retail System Software (RSS), one of the two software systems currently used to manage retail transactions. Gary Reblin, VP Product Innovation at USPS, in discussion with the authors, April 6, 2018.
- 63 2015 was the most recent complete market data available at the time of publication. The Colography Group, U.S. Postal Service Business Returns Market Survey: Executive Summary, [Internal], July 15, 2016, slide 6.
- 64 According to a Colography Group survey of 532 businesses with return shipments, the Postal Service was estimated to have a 27 percent volume share of the returns market in FY 2015, by combining its 20.5 percent share of returns where the business selects the shipper and its 40.7 percent share where the consumer selects the shipper.
- 65 Jay Smith, Director of Shipping Services at USPS, in discussion with the authors, November 20, 2017.
- 66 Volume and revenue percentages in this figure do not include postage due returns and returns that are not sent using dedicated return products.

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<sup>59</sup> U.S. Postal Service, USPS Returns Customer Guide, May 2015, p. 30.

<sup>60</sup> U.S. Postal Service, Future Ready: U.S. Postal Service 5-year Strategic Plan, (2016), p. 19, http://about.usps.com/strategic-planning/five-year-strategic-plan-2017-2021.pdf.

higher-priced services, however, those end-to-end returns together brought in \$42 million more in revenue than PRS.

## Figure 6: USPS Returns Products Breakdown by Volume and Revenue, FY 2017

## USPS First-Mile Returns Account for the Most Volume, but Full Network Returns Bring in the Most Revenue.

Of the dedicated returns products, Parcel Return Service (PRS), where USPS handles only the first mile of the return, had the most volume in FY 2017. However, due to the higher price per piece, end-to-end (E2E) returns brought in the most revenue.



Overall, the Postal Service's return volume and revenue have been growing rapidly, though not nearly as fast as outbound package volume and revenue. Take for example two comparable products, Parcel Select for outbound and PRS for the return shipment. For both of these products, the Postal Service handles only the delivery between the local post office and the consumer. Since 2010, the volume of PRS packages has increased by a robust 142 percent.<sup>67</sup> But over

the same period, Parcel Select has grown by 900 percent, meaning that the Postal Service is extremely attractive for companies' outbound shipping business, but not as attractive for returns. When the entire shipping market is taken into account, this trend persists. The Postal Service estimates that it has a 38 percent volume share of the outbound parcel market, substantially more than its 27 percent volume share of returns.<sup>68</sup> This 11-point gap indicates that there is room to grow the volume of returns by selling to customers who already use USPS for outbound shipments.

As in the outbound market, the primary competitors for end-to-end return shipping are UPS and FedEx. But just as those two companies often hand off their packages to the Postal Service for last-mile forward delivery, they also generate substantial business for the Postal Service as reverse logistics partners in PRS.

Though the Postal Service focuses on the return shipping part of the reverse supply chain, it is also engaged in a program that goes beyond ecommerce returns, albeit on a limited basis. As a part of its BlueEarth Federal Recycling Program, the Postal Service provides federal employees with free shipping labels to send their used electronic devices and printer cartridges to certified disposal companies. To ship these items, it uses an existing service that is only available to companies through a Negotiated Service Agreement (NSA).

#### **USPS Has a Number of Unique Advantages for Returns**

To respond to potential opportunities in reverse logistics, the Postal Service could leverage its unique advantages (Figure 7). By delivering to nearly every address in America six days per week and offering free at-home pickup, the Postal Service is the least expensive provider of last-mile delivery and first-mile return pickup. When selecting among carriers for returns, business customers indicate that the primary reason they use the Postal Service for returns is that it "has the

<sup>67</sup> OIG analysis of USPS Revenue, Piece, and Weight data from FY 2012 to FY 2017, U.S. Postal Service, *Market Dominant Products: Final Revenue, Pieces, and Weight by Classes of Mail and Special Services*, Fiscal Years 2012 – 2017, http://about.usps.com/who-we-are/financials/welcome.htm.

<sup>68</sup> U.S. Postal Service, Network Returns Platform Redesign, Decision Analysis Report: Business Case, (2017), p. 2. Previous OIG research has shown that two thirds of lightweight commercial packages are delivered to their final destination by the Postal Service. U.S. Postal Service Office of Inspector General, If It Prints, It Ships: 3D Printing and the Postal Service, Report No. RARC-WP-14-011 (2014), https://www.uspsoig.gov/sites/ default/files/document-library-files/2015/rarc-wp-14-011\_if\_it\_prints\_it\_ships\_3d\_printing\_and\_the\_postal\_service\_0.pdf.

best price."<sup>69</sup> Along with price, businesses cited "accountable customer service" as an important factor when choosing a returns shipper.<sup>70</sup>

The Postal Service's extensive network of post offices and collection boxes provides thousands of drop-off points across the country.<sup>71</sup> Thanks to its presence in every town in America, nearly half of rural residents with a strong preference for a return shipper prefer to use the Postal Service.<sup>72</sup> Its experience handling return shipping and the extra security it provides through dedicated law enforcement can impart additional trust when sending returns.

#### Figure 7: Advantages of USPS in the Returns Marketplace



<sup>+</sup>Gallup, 2018, http://news.gallup.com/poll/224804/republicans-push-government-agency-ratings-not-fbi.aspx.

#### **Reverse Logistics Opportunities for the Postal Service**

To evaluate potential returns opportunities for the Postal Service, the OIG conducted in-depth interviews with 34 stakeholders throughout the reverse logistics industry and met with returns experts at prominent reverse logistics industry events. The opportunities discussed below were determined by the OIG to have the most potential and to be closely tied to the Postal Service's own core competencies. Please see Appendix D for a summary of the Postal Service's strengths, weaknesses, opportunities, and threats (SWOT) in this area. For a list of stakeholder interviews, please see Appendix E.

#### **Existing Opportunities**

#### Focus on Expanding First-Mile Return

The Postal Service's presence at every door in the U.S. makes it the natural choice to perform firstmile delivery of return packages. Indeed, the first-mile PRS service has provided substantial contribution to its bottom line and is a natural candidate for expansion. But first the Postal Service must address some of the issues that might hinder "The Postal Service may have limited ability to grow the number of retailers that use PRS without recruiting more reverse logistics partners."

its growth. For instance, at least 715,000 scheduled package pickups (about 5 percent of all pickup requests) failed for a variety of reasons in FY 2017.<sup>73</sup> Additionally, some reverse logistics companies mentioned that the Postal Service does not scan packages as reliably as its competitors, which affects their ability to anticipate what goods they will be receiving at their return centers. Small

<sup>69</sup> U.S. Postal Service, USPS Returns [Internal PowerPoint], (2015), slide 16.

<sup>70</sup> The Colography Group, U.S. Postal Service Business Returns Market Survey: Executive Summary, [Internal], July 15, 2016, slide 18.

<sup>71</sup> According to the Postal Service, people generally prefer to hand their packages off at a post office so they can receive a scan and build the confidence that they will receive their refund. U.S. Postal Service Office of Inspector General Reverse Logistics Forum, August 10, 2016, Arlington, VA.

<sup>72</sup> OIG analysis of data from the 2017 U.S. Postal Service Office of Inspector General Postal Omnibus Survey, run from July 28, 2017 until August 21, 2017. This was an online, nationally representative sample of 3,391 Americans age 18 to 75.

<sup>73</sup> This does not include any failed pickups which were not properly recorded as such by letter carriers. OIG analysis of Postal Service EDW "Pickup Success" data.

operational improvements to package pickup and scanning could attract more PRS customers.

It is important to point out that the vast majority of PRS volume comes from four reverse logistics providers – three of which, FedEx, Newgistics, and UPS, are listed on the Postal Service's website – some of whom are expanding their own first-mile infrastructure.<sup>74</sup> These four companies control the downstream relationship with the retailers, meaning the Postal Service may have limited ability to grow the number of retailers that use PRS without recruiting more reverse logistics partners.

#### Return-to-Store Delivery

Online retailers that also have brick-and-mortar stores are increasingly encouraging customers to make BORIS returns and using their stores as returns centers. However, many Americans do not live near one of their stores and would prefer to return by mail. Building on the ship-from-store system it has already created, the Postal Service could send return packages directly to retail stores. Under this system, customers would only have to return items to a local post office or schedule a carrier pickup. After being scanned at the post office, the items would be consolidated and delivered in bulk to stores within a close geographic area (Zone 1), usually by the next business day. This product would fill the trucks that are already going to these stores to pick up the ship-from-store items. Retailers would be able to put some items back on the shelf, while the rest could be shipped to their disposition locations in bulk – much more cost-effective than having each return item pass through the mail stream individually. The Postal Service is planning to pilot return-to-store delivery in fall 2018.<sup>75</sup>

#### Address the Needs of Different Return Delivery Submarkets

In addition to retail product returns, there are other market segments that rely heavily on return shipping that may be possible for the Postal Service to enter (Table 3). At least one of these submarkets is already being served by the Postal Service, the home try-on retail model. For example, Stitch Fix, one of the Postal Service's top returns customers, is a service that mails out a box of five stylist-selected clothing items; customers pay for any they want to keep and return the rest. These types of businesses are multiplying rapidly and generate repeated return shipments as an inherent feature of their business. As mentioned previously, they rely on accurate package visibility and convenient customer options for package entry points. To continue attracting them, USPS could focus on improving its scan rates and the success of scheduled residential package pickups.

Other less-developed but growing submarkets also generate consistent returns volume. For instance, companies like Rent the Runway send expensive, high-fashion clothes as rentals for customers to wear at special events like balls and weddings. Within 24 hours of the event the customer must mail back the outfits. In another submarket, a number of companies mail out medical diagnostic kits that customers send back with their own biological samples to receive genetic profiles, drug test results, or risk factors for certain diseases.

Another submarket the Postal Service could consider serving in greater depth is the recovery of used electronic devices. Its BlueEarth Federal Recycling Program could be expanded to state and local government agencies and employees, allowing those entities to mail their old electronics for free to a certified, environmentally-safe recycling company.<sup>76</sup> The recycling company pays for the postage. Swiss Post and France's La Poste have already implemented successful recycling programs for the general public.<sup>77</sup>

<sup>74</sup> Shipping Services, USPS.com, accessed April 19, 2018, https://about.usps.com/strategic-planning/cs10/CSPO\_12\_2010\_FINAL\_019.htm.

<sup>75</sup> Gary Reblin, VP Product Innovation at USPS, in discussion with the authors, April 6, 2018.

<sup>76</sup> This expansion would require approval from the Postal Regulatory Commission, assuming the BlueEarth program is considered "non-postal" and can therefore only be offered to federal agencies.

<sup>77</sup> Sustainable Services, Swiss Post, accessed April 5, 2018, https://www.post.ch/en/about-us/company/responsibility/sustainable-services. Recy'go, La Poste, accessed April 5, 2018. https://www.laposte.fr/entreprise/ produits-et-services/recy-go.

Example	Time Sensitivity	Need for Visibility	
Trunk Club, RocksBox, StitchFix	High to Very High	High	
Rent the Runway	Very High	High to Very High	
duct Life <sup>†</sup> Apple, Dell Computers		Low	
Tekovery Asurion	High to Very High	High	
Tercevery, Adament			
Recall Results, Stericycle	High to Very High	Moderate to High	
Alcoa, Clover	Low	Low	
23andMe, Cologuard	Very High	Very High	
	Trunk Club, RocksBox, StitchFix Rent the Runway Apple, Dell Computers Tekovery, Asurion Recall Results, Stericycle Alcoa, Clover	Trunk Club, RocksBox, StitchFixHigh to Very HighRent the RunwayVery HighApple, Dell ComputersLowTekovery, AsurionHigh to Very HighRecall Results, StericycleHigh to Very HighAlcoa, CloverLow	

<sup>+</sup>Subject to USPS Mailability Guidelines Source: OIG analysis.

#### Use Bundling to Bring Returns in Line with the Outbound Market

There is currently a gap between the Postal Service's share of the outbound shipping market and its share of the returns market. Yet, according to research by Shippo, 49 percent of online retailers reported working with only one shipping carrier.<sup>78</sup> This means the Postal Service could potentially increase its share of the ecommerce returns market by bundling its outbound and reverse shipping services for customers who already use it for outbound shipping.

#### Expand the Use of Automated Induction Points

With many of the Postal Service's competitors expanding pickup points, including retail, carrier, and parcel lockers, now is the time for the Postal Service to consider expanding its own automated package pickup infrastructure. In 2012, the

Postal Service introduced gopost ® parcel lockers, but they have not expanded beyond a small handful of test markets.<sup>79</sup> USPS has said that some of these units were heavily used while others were not used much. It could therefore redeploy underperforming units to better locations and expand the program in new areas. These lockers allow customers to drop off returns at their own convenience instead of waiting in line at a post office or leaving their package vulnerable on a doorstep. The Postal Service expressed reservations about deploying more lockers because of concerns with cost coverage during the pilot. Alternatively, the Postal Service could increase access by seeking agreements to deliver to third-party parcel lockers that are already deployed. Similar to lockers, the Postal Service is currently testing and could expand the number of Automatic Parcel Drop machines (Figure 8). This machine allows the customer to scan a parcel, place it in the machine, and receive a receipt.

<sup>78</sup> Shippo, State of E-commerce Survey: Shipping, December 12, 2017, p. 6, https://goshippo.com/blog/2017-state-shipping/.

<sup>79</sup> U.S. Postal Service Office of Inspector General, U.S. Postal Service Parcel Delivery Lockers: Management Advisory, Report No. DR-MA-13-002 (2013), p. 1, https://www.uspsoig.gov/sites/default/files/document-library-files/2015/dr-ma-13-002.pdf.

#### Figure 8: USPS Automated Parcel Drop Box



Source: https://link.usps.com/2017/06/19/drop-in/.

#### **New Opportunities**

#### Accept Loose Returns and Ship Them in Bulk

The consumer expectation for an easy returns process has led to a number of innovations, including preprinted labels and wider adoption of residential package pickup, but having to prepare a return for mailing can still be an inconvenience. This "arts and crafts project" often includes finding or purchasing the correct packaging, filling the box with sufficient cushioning, and properly taping and labeling the parcel.<sup>80</sup> Returns center workers must then spend time opening and sorting packages to verify the item's condition and route it to the proper disposition location.

During the OIG's interviews, several reverse logistics stakeholders, including current USPS returns customers, said that the Postal Service could potentially provide value to both sides of the return market by accepting certain types of returned items unboxed. Upon accepting the item, postal clerks or independent contractors could perform a very simple evaluation that could help route the item to the appropriate location in the reverse supply chain. With electronics, for instance, they could note whether the item has any visible external damage or is capable of turning on, which would help determine whether it should be sent to a refurbishment, fulfillment, or recycling center. The clerk could then sort the item into large polybags or boxes that contain items going to the same destination, then ship them together in bulk. See Figure 9 for an illustration of how this service could simplify the reverse logistics process.<sup>81</sup> Note that it is unclear whether such a service would be immediately allowable under the Postal Accountability and Enhancement Act (PAEA).<sup>82</sup>

<sup>80</sup> David Sobie, Chief Executive Officer at Happy Returns, in discussion with the authors, January 24, 2018.

<sup>81</sup> A simplified version of this service would involve customers packing their return items in unsealed boxes. Postal clerks would merely identify that the item is what the customer says it is, before sealing and labeling the box. Though this would do less to spare consumers from the "arts and crafts project," it might provide retailers enough piece of mind to issue an instant refund.

<sup>82</sup> The Postal Service is also concerned that it would assume legal liability for return items if employees misidentified a product or its condition.

#### Figure 9: Accepting Unboxed Returns Would Shorten the Reverse Logistics Process





Several competitors have already begun accepting unboxed returns, including established delivery services like UPS and FedEx, as well as start-ups like Happy Returns. Postal officials expressed concern that this service would not be economically feasible for the Postal Service.

This system could have additional external benefits. Because most returns are removed from their packaging in the middle of the supply chain and repackaged later, accepting unboxed items would provide sustainability benefits by limiting the amount of cardboard waste and other packing materials. By consolidating shipments and verifying the types and conditions of items, this service could also decrease the number of transportation legs, reducing overall costs and fuel usage.

#### Third Party Logistics Services

The OIG's interviews and market research reveal that many retailers are demanding additional reverse logistics services to go along with their return shipping, such as consolidation, warehousing, truck-filling, product assessment, and liquidation. Many of the Postal Service's competitors have responded with a slate of add-on services, similar to 3PLs. Previous OIG work has considered the possibility of offering 3PL services that leverage existing assets and are closely tied to the Postal Service's core competencies.<sup>83</sup> If allowable under PAEA, the Postal Service could also partner with capable 3PLs to provide the broader range of services that customers are seeking. Offering at least some reverse logistics services available from other delivery providers, see Appendix F.

#### Offer a True Ground Return Service

For certain types of products that cannot be quickly resold, return shipments are often less time-sensitive than outbound shipments. Therefore, many large retailers might prefer a slow return service that comes with a low price. This could be accomplished through a non-expedited ground service that sacrifices time for cost in the middle and last miles of the return. One example of how this could work is shipping ground returns via less-than-truckload (LTL) shipping. Return packages could be consolidated at a postal facility over the course of days and added to LTL trucks whenever they have space, or once the package volume had accumulated enough to fill a truck by itself. Consumers would not want to wait so long to receive their refund, however, so this service would be best for retailers willing to offer refunds before they receive and inspect the returned items.

At least one of the Postal Service's major shipping competitors is currently exploring a slow, low-cost return service. To make this work, the company will use a centralized database with instructions about how urgently each return item needs to be shipped. Employees would be given those instructions as early in the reverse supply chain as possible – ideally at the initial drop-off point – so they could ship the items according to the right timetable.

#### **Dynamic Routing System**

Currently, many retailers lack the ability to route their returns to multiple disposition locations, but the increasing complexity of the reverse supply chain means that more companies are demanding this capability. When a company preprints labels, it can only select one destination location, often weeks before the customer has decided to make the return. Developing a system that allows packages to be routed to a disposition location only after the return has been accepted by the Postal Service would enable business customers to maximize the value of each return. This system might require the Postal Service to print a new label at the post office or develop a barcode that can have its destination data changed once the label has been scanned as accepted.

#### Integrate Returns Capabilities into Internet-Connected Devices

Finally, the Postal Service could expand the use of in-home technology like several foreign posts have done. An electronic home assistant like Google Home or Amazon Echo could be used to schedule package pickups by voice command and receive updates on the status of a refund. Additionally, the Postal Service could create or license its own smart mailbox. It could also partner with existing technology companies, such as a smart mailbox provider or a robot delivery/ pickup service, on limited pilots.

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<sup>83</sup> U.S. Postal Service Office of Inspector General, The Global Logistics Revolution, Report No. RARC-WP-13-010 (2013), https://www.uspsoig.gov/sites/default/files/document-library-files/2015/rarc-wp-13-010\_0.pdf.

#### Conclusion

Despite the best efforts of retailers and manufacturers to minimize customer returns, the age of high returns appears here to stay, fueled by the rapid growth of ecommerce. While many businesses risk being swept away by this rising tide, it has also created opportunities for innovation and growth in the reverse logistics industry. The Postal Service is well situated to serve the product returns market and already offers many of the return shipping capabilities and services demanded by ecommerce retailers. However, there are opportunities to improve its technology and expand into related areas that are very close to its long-held, core competency of return shipping. The Postal Service recognizes that the growing returns market presents opportunities for new business and is updating its offerings accordingly. Its path forward could involve recognizing emerging trends, improving its current returns service, and responsibly exploring ways that technology and innovative business practices could transform it from simply a carrier of returns to an integral part of the reverse logistics industry.

## Appendices

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## Appendix A: Movement of Goods Through the Circular Supply Chain

Figure 10 illustrates the complex interaction of the forward and reverse logistics processes, also known as the circular supply chain. Such a network allows retailers the opportunity to recoup as much value as possible from a return item through access to resale, repair, or disposition options. Each stage below offers examples of commonly known organizations and where they fit in the forward and reverse logistics supply chains.



#### Figure 10: The Circular Supply Chain\*

\*The companies depicted in this graphic are intended to be illustrative examples and not an exhaustive list of operators in each category.

# Appendix B: Supply Chain Management Flows and the Reverse Logistics Process

Throughout the product return process, the retailer is monitoring the three main aspects of any supply chain: the physical product, information about the product and its movements, and the value or cost of returning the specific product. Figure 11 shows a simplified representation of the returns process, which identifies important elements of each step in terms of these three main features. One aspect not captured in this table is how the speed of the process may influence a product's valuation and, consequently, the retailer's inventory costs and ability to recover lost revenue. As shown in the figure, the movement of the product from the customer to the final location usually requires at least two transportation events. For time-sensitive products, the retailer will want to expedite the progression of the product through the entire process.

#### Figure 11: Flow of Product, Information, and Cost/Value in the Reverse Logistics Process

	Customer	Transportation	Returns Processing	Transportation	End Location
Product	Customer initiates return movement by returning the product	Product is picked up and shipped to vendor or 3PL's return processing center	Shipment arrives at the returns processing center for evaluation	After the product is assessed, it is moved again to its end location, which has been determined by the returns center	The end location can range from resale to disposal in a landfill
Information	<ul> <li>Questions that are answered:</li> <li>What is the product?</li> <li>How was it received?</li> <li>How does it need to be returned?</li> </ul>	Customer has received a return label and the product has entered the vendor's or 3PL's system as a return	Shipment is processed at the returns center and is examined to determine the cause of the return and to decide where to send it next	The 3PL moves the product again to a second location, based upon the decision of the returns center	<ul> <li>Questions that are answered:</li> <li>Can the product be re-sold?</li> <li>Is it moved to a facility for parts salvaging?</li> <li>Is it taken to a liquidation center?</li> </ul>
Cost/Value	Does the customer need to pay for the return movement?	Transportation paid for by the customer or the retailer	Returns center determines what is wrong with the product and whether any costs can be saved	The transportation movement is paid for by the retailer, and may fall under an agreement that the supplier has with the 3PL	Retailer attempts to retain value from the return by reselling, using component parts, or liquidation

Source: SCV analysis.

#### **Returns Management System**

There are four main components of the services offered by a reverse logistics provider: transportation services and equipment; warehouse space; information; and labor. A service provider may handle all four components, such as FedEx Supply Chain, or they may contract out parts of the process. The Postal Service largely functions in the transportation services component. Specifically, it often provides first-mile delivery services in the reverse logistics process, moving product returns from the customer to the returns processing center. The paragraphs below describe each component in additional detail.

#### Transportation Services and Equipment

Transportation services that can reach anywhere are a critical component of a successful reverse logistics process. Geographic coverage, capacity, and speed are the key requirements. Reverse logistics companies or their contracted carriers may execute the transportation roles. Many firms view transportation in terms of: the first mile (customer to a collection center); the middle mile (collection center to the returns processing center); and the last mile (returns processing center to the determined disposition facility).

#### Warehouse Space

Returns processing requires warehouse space to sort products as they come in and to prepare them for disposition. Additional space is required if the retailer or its 3PL tests the incoming products, repairs them, or repackages them. A returns processing center may serve a single retail customer or manage returns for a number of clients.<sup>84</sup>

#### Information

Information is a key element of the reverse logistics supply chain. Tracking the product throughout the process provides essential information to the retailer, such as: when to authorize a refund to the customer; which returned products may be available to offset production of new products; why products are being returned (potentially to inform manufacturing processes); and compensation rates from the disposition. For each item, the retailer or 3PL shares information with the customer, the transportation provider, and the disposition companies.

#### Labor

After the workers open the returned packages, they assess the condition of the product. Some returned products are still in their original packaging and can go back into the retailer's inventory for sale. All opened products need to be inspected, tested (if applicable), and then processed. Skilled workers that are familiar with the product and know what to look for may be necessary for determining the condition and potential disposition of the item. The assessment process may also include crediting customers with the return and tracking product defects.<sup>85</sup>

<sup>84</sup> David Egan, "Swimming Upstream: Navigating the World of Reverse Logistics," *CBRE Research*, February 29, 2016, http://f.tlcollect.com/fr2/516/83196/About\_Real\_Estate\_%E2%80%93\_Swimming\_Upstream\_ Navigating\_the\_World\_of\_Reverse\_Logistics\_March\_1\_\_2016.pdf.

<sup>85</sup> SCV analysis.

## **Appendix C: USPS Commercial Returns Products**

Figure 12: Comparison of USPS Commercial Return Products					
	DESCRIPTION	PRICING METHOD	PRICE	FY 2017 REVENUE	
MERCHANDISE RETURN SERVICE (MRS)	Return solution for medium- sized ecommerce merchants	Price determined at return entry	From: \$6.55 (Priority/Ground); \$2.66 (First-Class)	\$40m	
	Return solution for large ecommerce merchants with more than 10,000 returns per year	Merchant pays a flat rate based on the average weight of all returns	From: \$6.55 (Priority/Ground); \$2.66 (First-Class)	\$137m	
<image/>	Reverse logistics providers use USPS for first return mile	Each return is individually weighed at the post office	From \$2.75; majority of volume from Negotiated Service Agreement	\$183m	

Figure 12: Comparison of USPS Commercial Return Products

	DESCRIPTION	PRICING METHOD	PRICE	FY 2017 REVENUE
<b>BUSINESS REPLY MAIL</b> PARCELS (BRM)	Provides prepaid return labels for commercial customers with frequent, light returns requiring expedited service, (testing labs, optical retailers, etc.)	Price determined at return entry	From: \$6.55 (Priority/Ground); \$2.66 (First-Class)	\$37m
<image/>	Originally designed for continuity shippers, today used to return undeliverable and refused packages	Flat rate per parcel (min 10,000 per year)	\$3.00/parcel	\$0.6m
<image/>	Service for ecommerce merchants that allows individual customers pay for their own return	Applicable retail postage rate at post office or self- serve kiosk	From: \$6.70 (Priority/Ground); \$3.50 (First-Class)	\$10m

Source: U.S. Postal Service, *Returns Onboarding Guide*, (2015). FY 2017 revenue from OIG analysis of USPS volume and revenue data, 2017.

## Appendix D: USPS Returns SWOT Analysis

Figure 13 summarizes the strengths and weaknesses of the Postal Service in returns, as well as the opportunities and threats it faces in the reverse logistics industry. The key takeaways are that the Postal Service has more strengths than weaknesses in this area and that there are still many opportunities available to grow revenue from reverse logistics services. However, the Postal Service must be willing to target its products to evolving customer needs and expectations, continue to invest in new capabilities, and partner with firms that can augment its services.

#### Figure 13: Overview of Strength, Weaknesses, Opportunities, and Threats for USPS in the Reverse Logistics Industry

#### **STRENGTHS**

#### WEAKNESSES

- Serves a growing market. Ecommerce is expected to continue growing over the near- to medium-term
- Serves every address in the nation, six days a week
- Has significantly more retail locations and delivery trucks than competitors
- Is price-competitive, and often has a price-advantage, in first-mile return delivery
- Has strong existing relationships with partners and customers
- Is modernizing tracking technology and improving optimization of delivery vehicle routing

#### **OPPORTUNITIES**

- Develop innovation partnerships with 3PLs to expand USPS capabilities and interoperability
- Bundle forward and reverse delivery services
- Offer new value-added services
- Develop products tailored to omnichannel merchants
- Offer products targeted to each submarket of reverse logistics

- Sortation capabilities may not be fully meeting evolving customer needs
- Some perceive package pickup/delivery as unreliable
- Not perceived as a "premiere" service by some current customers or potential customers
- May not be cost-effective to develop many of the services performed by 3PLs in the reverse logistics industry

#### THREATS

- Retailer attempts to reduce the number of returns: limiting or eliminating free deliveries; buy online, return in store (BORIS); showrooming; third-party storefront returns
- Amazon's outsized influence on e-commerce shipping policies
- Overcommitment to customers about USPS capabilities
- Challenge to maintain infrastructure and staffing that are geographically aligned with current and future demand
- Macroeconomic conditions and fuel prices

Source: SCV analysis.

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## **Appendix E: Index of Interviews**

#### Table 4: OIG Interviews of Reverse Logistics Stakeholders Conducted for this Project

Company	Name and Title	Interview Date
Amazon	Heidi Kay, Senior Program Manager and USPS Contact, Amazon Transportation Services	1/18/18
An Post	Gerry Davis, International Service Manager	12/13/17
Best Buy	Derick Bussler, Senior Manager Reverse Logistics	2/8/18
B-Stock Solutions	Karen Huff, Director of Sales – Southeast Region; Eric Moriarty, Vice President of Sales	3/6/17
Colography Group	Darren Lamb, Director of Research	1/18/18
DHL	Christopher Lentjes, Director of International Product Management for the Americas; Bruce Marsh, Senior Manager Corporate Public Policy	1/26/18
FedEx	Jackie Makinen, Senior Manager of Postal Programs; Gavin Tierney, Managing Director of Business Development, Postal Programs and Transportation	2/21/18
FedEx	Jeffrey Elliott, Senior Director Technology Sales	2/7/18 (roundtable discussion)
Fetchr	Tariq Sanad, Chief Financial Officer	1/18/18
Happy Returns	David Sobie, Co-Founder and Chief Executive Officer	1/24/18
International Post Corporation (IPC)	Carlos Setien, e-Commerce Solutions Manager	1/18/18
JD.com	Beth Bao, Warehouse and Logistics Management Senior Manager	12/4/17
Newgistics	Richard Porras, Vice President Postal Strategy and Operations	1/18/18
Optoro	Jordan Jakubovitz, Director of Product Management	1/10/18
Overstock	Vince Atkin, Director of Transportation; Creighton Strong, Director of Reverse Logistics	1/24/18
Parcel Shippers Association (PSA)	Pierce Myers, Executive Vice President and Counsel	1/26/18
Posti	Saara Pietila, Head of eCommerce Parcel Services	11/28/17
Rocksbox	Debbie Shen, Director of Operations	1/8/18

Company	Name and Title	Interview Date
Royal Mail	Tony Boyle, New Product Development Manager	1/11/18
Shippo	Johnson Ma, Vice President of Growth; Helen Phung, Director of Public Relations	12/11/17
Softeon	Satish Kumar, Vice President Client Services and Technology	1/17/18
Swiss Post	Manuel Fuchs, Communication Manager	1/26/18
Swisslog	David Schwebel, Senior Director of Business Development, Swisslog Warehouse and Distribution Solutions	11/1/17
Tekovery	Andrew Orben, Director of Business Development	1/8/18
Tompkins Robotics	Mike Futch, President	11/2/17
United Parcel Service (UPS)	Keith Kellison, Vice President Corporate Public Affairs; Jessica Lowrance, Director Postal Policy and Sustainability	1/19/18
U.S. Postal Service	Vicki Bosch, Manager Product and Payment Technology; Pritha Mehra, Vice President Mail Entry and Payment Technology	1/29/18
U.S. Postal Service	Rachel Clausen, International Contract Sales Analyst	1/29/18
U.S. Postal Service	Tom Foti, Executive Director Product Management; Jay Smith, Director of Shipping Services - Product Management	1/30/18
U.S. Postal Service	Valerie Keyser, Sales, SCVs/Distribution Associate	1/5/18
(site visit)		
U.S. Postal Service (Innovations Group)	Karen Key, Manager Shipping Product Development	11/8/17
U.S. Postal Service	Richard Parlier, Sustainability Project Integration	12/18/17
U.S. Postal Service (Innovations Group; Entrance Conference)	Gary Reblin, Vice President of Product Innovation	10/13/17
U.S. Postal Service (former)	Richard Strasser, former Chief Financial Officer	2/9/18

\*Gary Reblin (USPS), Larisa Summers (Optoro), and Tony Sciarrotta (RLA) provided comments at the U.S. Postal Service Office of Inspector General's Reverse Logistics and Return Forum Panel Discussion, August 10, 2016, Arlington, VA. \*Jeffrey Haushalther, Partner at Chicago Consulting, presented at Parcel Forum '17, September 19, 2017.

## Appendix F: USPS Reverse Logistics Capabilities

Compared to other industry participants, the Postal Service does not offer a robust suite of reverse logistics services. Table 5 compares the reverse logistics services offered by USPS and others.

Reverse Logistics Services & Products	FedEx	UPS	Amazon	USPS
Delivery drivers	٠	•	٩	•
Package product service at retail location	٠	٠	0	0
Package product at customer's location	0	٠	0	0
Package sorting	٠	•	•	٩
Product assessment	٠	٠	٩	0
Product repair	٠	٠	0	0
Product liquidation	٠	٠	0	0

Table 5: Summary of Reverse Logistics Services & Products for USPS and Competitors

Scoring - Capability or Product Offering

• None • Limited • Emerging • Substantial • Significant

Source: SCV analysis.

## Appendix G: Management's Comments





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We conducted work for this white paper in accordance with the Council of the Inspectors General on Integrity and Efficiency's Quality Standards for Inspection and Evaluation (January 2012).