



OFFICE OF
**INSPECTOR
GENERAL**
UNITED STATES POSTAL SERVICE

Virtual Post Office Boxes

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April 17, 2013

MEMORANDUM FOR: NAGISA M. MANABE
CHIEF MARKETING AND SALES OFFICER AND
EXECUTIVE VICE PRESIDENT

A rectangular box containing a handwritten signature in cursive that reads "Darrell E. Benjamin, Jr." with a yellow question mark icon to the right.

FROM: Darrell E. Benjamin, Jr.
Deputy Assistant Inspector General
for Revenue and Performance

SUBJECT: Virtual Post Office Boxes
(Report Number MS-WP-13-002)

Attached are the results of our review regarding Virtual Post Office (PO) Boxes (Project Number 13RO004MS000). Virtual PO boxes would create opportunities for customers and businesses to manage the physical delivery of mail and parcels in the same way they manage digital communications. Virtual PO boxes with online management would also give users additional control over their mail — turning the mailbox into a powerful tool to manage goods and information. This paper identifies both potential features and challenges associated with virtual PO boxes.

If you have any questions or need additional information, please contact Janet M. Sorensen, director, Sales and Marketing, or me at 703-248-2100.

Attachments

cc: Randy S. Miskanic
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Virtual Post Office Boxes

Executive Summary

Communication is rapidly changing and people can carry on conversations, make decisions, direct activities, and transact business using many forms of communication media in addition to traditional mail correspondence (voice, email, tweet, instant message, wall post, text transmittal). Communication can also happen in almost any location (at home, work, airports, coffee shops). Digital addresses (phone, email, etc.) are also portable, but the physical address is still largely fixed to a specific location that is not always convenient or cost effective. For example, the current metal Post Office (PO) box at the Post Office is sometimes too small to accommodate packages and is, at other times, empty. In this environment, there is an opportunity for the U.S. Postal Service to meet changing customer preferences through providing additional functionality and a physical dimension to email communications and smart devices, while bringing more portability and flexibility to the physical address.

The Postal Service could introduce the virtual PO box as an alternative to the physical PO box. The virtual PO box would provide users with an address that could be redirected anywhere they choose. The change would move PO boxes to a back office operation at the nation's post offices with temporary lockers or bins provided to customers in the customer facing front office for delivery upon demand. Items received would be held in the back office or stored in the connecting network plant if the customer requests micro-warehousing or storage. Virtual PO boxes would accommodate the flow of mailpieces and parcels just in time and provide users the ability to accept or redirect mailpieces using the Postal Service's website and smart devices. Alternate addresses could include: residences, a business, a nearby Post Office, a temporary address, or even a nearby parcel locker. For example, someone traveling frequently for business may request that their mail be redirected from their PO box to the office they are traveling to. Another person on vacation may request that their packages be delivered to a nearby gopost[®] parcel locker. A virtual PO box could also provide a solution to the issue of some Post Offices having an insufficient number of physical PO boxes to rent to customers. In addition, the virtual PO box would be a dedicated, permanent address that would remain constant, which could help reduce complications associated with change of address issues customers may experience after moving.

The virtual PO box could offer many features and options which customers could combine to suit their needs. The features and options could:

- Send alerts, via email or text message, when a customer has mail or parcels waiting.
- Give a physical dimension to email and smart devices by linking customers' email addresses to their PO box address and residential address for parcel fulfillment and other activities.

- Validate the identity of users for merchants and in peer-to-peer sales, while concealing home addresses and personal information.
- Allow international customers to shop online and provide merchants with a U.S. address for parcel delivery and returns. Parcels could also be repackaged and shipped with other parcels traveling to the same international destination, making costs less prohibitive.
- Provide small businesses the ability to possess a vanity address and use the virtual PO box as a micro-warehouse. The virtual PO box could receive inventory and send items as directed by the small business to customers.
- Allow international retailers to manage parcel returns by directing that the returns be repackaged and sent to new customers or other U.S. locations or recycled.
- Allow the option to maintain the current physical PO box as long as there is a continued demand for this popular service.

In addition, future enhancements to the virtual PO box could be developed as the need is warranted and the service has become well established. These future applications could include the ability to:

- Enhance the alert function by offering additional capabilities such as sending recipients emails with images of their mailpieces.
- Use scanning technologies to convert physical documents to digital or digital documents to physical (known as hybrid and reverse hybrid mail, respectively).
- Provide personal message integration and data storage. For example, an individual could archive or store tax returns, legal documents, and real estate transaction records.

To provide the functionality associated with the virtual PO box, the Postal Service could partner with companies currently providing similar services to leverage their expertise along with the Postal Service's well-established brand and long-standing trust of the American people. The joint partnership could also provide investment capital for the initiative. Because most of the features are extensions of the existing PO box product and could be considered ancillary to a current postal product, the basic service may require no change in existing law. The Postal Service is also well positioned to provide a virtual PO box service because it has sole access to PO boxes and mailboxes and maintains the address management and change of address systems for the U.S. In addition, the virtual PO box would allow the Postal Service to effectively redeploy excess space resulting from network optimization and move the address management system from a cost center to a profit center. Specifically, the Postal Service could

provide space for micro-warehousing. Much of this surplus space is contiguous with active postal operations and, therefore, can't be sold or given away because of mail security issues. Further, while post offices may have limited storage space, they are already networked to large plants and mail facilities that have substantial storage space and ongoing network transportation connectivity.

The virtual PO box would benefit the Postal Service as it responds to the complex challenge of monetizing digital services, since the traditional PO box already has a fee structure. The virtual PO box, in addition to adding functionality to email accounts and smart devices, would also be a portal for broad new uses for the Postal Service's current network and products.

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Introduction

Digital and mobile revolutions are reorienting late 20th Century modes of communication toward current methods of communication that move with a person and are not tied to one place. Land line telephones and faxes are tied to physical locations that are not always convenient, whereas email, Twitter, and Facebook accounts travel with people. Even the idea of separate telephone numbers for home and office is becoming increasingly outdated. Control of communications is also shifting from the sender to the recipient, giving customers more choices in where, when, and how they receive communications. Communication is rapidly changing and people can carry on conversations, make decisions, direct activities, and transact business using many types of communication media.

People can decide where and how to accept their digital messages, are able to communicate worldwide, and have become accustomed to changing the method of communication on their own terms. They can keep some telephone numbers and email addresses throughout their lives and throw others away when they are no longer needed. This flexibility and portability does not yet exist in the physical world, but people are searching for it. For example:

- A new startup company is looking to tie physical addresses to Facebook and Twitter to allow people to send packages to other social network participants without having their physical address.
- International shoppers, who can browse U.S. stores so easily online, want to be able to purchase goods just as effortlessly. They are renting U.S. addresses so they can make online purchases in the U.S., have them shipped to their “rented address,” and ultimately have items shipped to their international location.
- Companies and postal administrations are converting physical mail into digital mail that people can decide whether or not to read wherever they are located.
- Entrepreneurs are creating online stores that exist without physical locations or inventory.

In this rapidly changing environment, there is an opportunity for the Postal Service to serve these needs by bringing more portability and flexibility to the physical address. The Postal Service already offers PO box service for customers who want to receive

mail in a different location than their home address. Making the PO box virtual would create new opportunities for customers and businesses to manage the physical delivery of mail and parcels the way they already manage digital communications.

The Virtual Post Office Box

At its most basic level, the virtual PO box would provide users with an address that could be redirected anywhere they choose. After appropriate identity checks, users could sign up for a virtual PO box address (for example, VPOB #1234) and log into their usps.com account online or use smart devices to link this address with any physical address they choose: a residence, a business address, a nearby Post Office, or even a physical PO box. Users could select to have packages automatically sent to a nearby gopost parcel locker. The Postal Service's sorting equipment would automatically read the virtual PO box address and route mail and packages to the physical address the user has chosen to link to their virtual PO box. This would allow the virtual PO box to accommodate the flow of mailpieces and parcels just in time. Customers could also be notified immediately via email or by text message when new mailpieces arrive.

The virtual PO box would bring the same portability to the physical address that already exists for email addresses and telephone numbers. When virtual PO box holders travel or spend time away on business, they could change the destination of their virtual PO box to their temporary address or a nearby Post Office. A virtual PO box would be a dedicated, permanent address that would remain constant, which could reduce complications associated with change of address issues customers may experience after moving.¹ Change of address requests expire after a certain period of time but if a customer has a virtual PO box, he or she would continue to receive mail regardless of when and to where the customer moves.

In addition to portability, the virtual PO box would offer privacy. Shoppers would have an alternative to providing their personal physical address in online commerce transactions. A virtual PO box could also address the issue of some post offices having an insufficient number of physical PO boxes to rent to customers.

Beyond the basic level of service, virtual PO box customers could also choose more advanced service options that would enable them to manage each mailpiece and parcel they receive online via virtual PO box management. Mail and parcels would be stored in temporary lockers or bins and held at a back office location at a Post Office or a processing plant connected to the Postal Service's retail and processing network. While post offices may have limited storage space, they are already networked to large plants and mail facilities that provide substantial storage space and ongoing network transportation connectivity. An online management tool would allow PO box holders to see an image of each item in their virtual PO box and determine where to have it delivered. They could log into their usps.com account to access the management tool and reroute each piece individually or select from a range of other features.

¹ For example, Americans move an average of about 12 times in their lifetimes and we have previously reported concerns with the change of address system.

Customers could also manage or direct their physical mail via email. Features would include: storage, scanning, consolidation and reshipment, and micro-warehousing. For example, users may decide to forward the new shoes they ordered to their home address, while storing an early birthday present until the time comes to forward it to the recipient. A small business could use the virtual PO box to warehouse products (micro-warehousing) until customers order them.

A virtual PO box could also provide hybrid and reverse hybrid mail services, either now or in the future. Customers could request that the Postal Service open and scan important mailpieces (hybrid mail) or convert letters received in a digital format to physical (reverse hybrid mail). A hybrid mail system would allow an addressee to receive letters sent in a digital format by the addressee in a physical form. Hybrid mail options produce a physical dimension to email. These services are emerging and several companies provide some of these services. The virtual PO box with online management would give users complete control over their mail — turning the mailbox into a powerful tool to manage goods and information.

Role of the Postal Service

The Postal Service is well positioned to provide a virtual PO box service because it has:

- The existing physical PO box product line that could be expanded and has the infrastructure in place to expand value-added services.
- Sole access to PO box and street addresses and exclusively maintains national address databases.
- A law enforcement arm to provide oversight of the services.

The Postal Service would be the 'back office' operator, leveraging existing retail and processing network infrastructure at the nation's post office's to tailor products and services to best suit customers' needs. Various pricing models could exist for senders, such as a small rental fee for the basic virtual PO box with premiums for the use of additional features. While no specific estimate of potential revenue from the virtual PO box service has been developed, we recently reported potential revenue from providing a service discussed in this report — comprehensive micro-logistics — at \$3.4 billion annually.²

² U.S. Postal Service Office of Inspector General (OIG) report, *Revenue Generation Strategic Report* (Report Number MS-MA-10-002, dated).

Virtual Post Office Box Features and Options

The virtual PO box could offer many features and options — some intrinsic to the service and others optional — which customers could combine to suit their needs, including:

- A link from addresses to the virtual PO box.
- Identity verification and address protection.
- The ability to program various options and features online.
- Vanity addressing.
- International shipment and returns.
- Micro-warehousing and logistics support.
- Personal message integration and data storage.
- The option to retain a physical PO box.

Linking Addresses to a Virtual Post Office Box

The Postal Service may be able to enhance its current address information systems to link the various virtual PO box attributes. Specifically, the National Address Management System and the National Change of Address databases could be used to link virtual PO box addresses to physical addresses (default, alternative, etc.) and to link to digital communication addresses (such as email and text messaging) for notification.³ The Postal Service is already familiar with and has implemented some of these technical features for other initiatives. For example, for the growing gopost initiative, a customer selects the gopost address for package delivery when purchasing a product. The gopost address is comprised of the customer's name, account number, and address of the gopost unit. The Postal Service's National Address Management System recognizes gopost addresses and formats as acceptable for addressing packages. Virtual PO box addresses could be similarly recognized and accepted.

Customers, both individuals and businesses, requesting virtual PO box service would be required to have their identity authenticated. The Postal Service is currently piloting the Federal Cloud Credentialing Exchange (FCCX). FCCX is intended to serve as a cloud-based service providing all federal agencies with the ability to accept non-federal government-issued credentials to verify identities. The Postal Service could also use FCCX to authenticate virtual PO box customers. Once authenticated, the customer would be provided a unique account, complete with identifier and password. The virtual PO box web page would be postal-owned and accessible via usps.com, leveraging the trust and reliability of the Postal Service brand. Customers could access the portal through their laptops, tablets, smart phones, or any new communication devices. If customers sign up to see the contents of their virtual PO box online, they could receive

³ The National Address Management System database contains all the addresses of the delivery point network in the country and is continuously updated as new addresses are added or changed. It does not contain the names of residents nor does it match residents' names with physical addresses due to privacy requirements. The National Change of Address database contains addresses and associated residents' names with the capability to collect email addresses through the change of address process.

a text message or email notification to alert them to the status of their mailpieces. They could then direct or re-direct the Postal Service as to what could be done with individual mailpieces through the 'smart' or active address management choices.

Identification Verification and Address Protection

To provide a virtual PO box to a customer, the Postal Service would need physical verification of the individual's identity and mailing address (identification verification). As we mentioned in a prior report,⁴ the Postal Service's existing infrastructure — its 'brick and mortar' locations and door-to-door delivery service — is a major advantage for identity services. As a trusted neutral body with a nationwide network of locations and postal carriers reaching every door, the Postal Service could provide in-person verification or verification-by-mail services where it would identify, authenticate, and certify potential customers who sign up for virtual PO boxes.

The Postal Service has experience in both providing physical authentication services for federal agencies (such as the Department of State's Office of Passport Services) and in providing such services for its own products, ranging from change of address requests to registration for the new gopost parcel lockers. By offering these services in person at a retail location or with verification by their letter carrier, customers could work with an organization they trust to keep their information updated and secure and, additionally, help protect themselves against fraud and identity theft, among other things.

For international customers, the Postal Service could partner with foreign postal operators who could offer in-person verification services to confirm and authenticate customers' identities and addresses prior to the Postal Service assigning a PO box address.

The Postal Service also has unique strengths in the fight against fraud, offering protection under federal law through two law enforcement organizations: the OIG and the Postal Inspection Service. These law enforcement organizations currently investigate crimes that include using a false identity and fraud. The reach and experience of these two organizations are a valuable tool for protecting customers' privacy and security — a tool that could readily be adapted to meet the privacy needs of virtual PO box customers.

In addition to providing in-person identification verification, the Postal Service could also protect personal address information by encrypting a customer's virtual PO box and associated personal address information. This would include an option for the customer to decline to provide a physical address or personal identification to merchants or in peer-to-peer transactions. This 'electronic fence' would serve as a barrier against potential external hacking efforts and provide a 'block' against threats to privacy, preventing further discovery of an individual's private information, like one's home address. The Postal Service could also use cloud-based authentication through the previously mentioned FCCX program as an additional way to authenticate the identity of

⁴ *Digital Identity: Opportunities for the Postal Service* (Report Number RARC-WP-12-011, dated May 29, 2012).

individuals requesting a virtual PO box in the future. Through its secure network and national addressing system, the Postal Service can ensure protection of customers' personal identification and information during digital communications.

Active Address Management and Smart Options

The virtual PO box would help meet customer demands for more options by providing active address management and smart options; that is, allowing customers to choose among several alternatives for delivery of their mail. For example, customers could log on to the online management system for their virtual PO box to see its mail contents and have the option to choose the delivery address for specific mailpieces or parcels based on their specific needs.

Email users could direct and store physical mailpieces and digital messages. In addition, users could request text message notification and direct or redirect delivery of parcels to their residence, an alternative address, a physical PO box, or a parcel locker. A future enhanced alert function could offer additional capabilities, such as sending a copy of the image to the recipient. Senders would be able to better manage mail and have a secure, authenticated link between the physical and digital addresses of their customers. Moreover, through increased automation and tracking, customers would have greater visibility into the status of their mail. Recipients could receive mail and packages more quickly and could flexibly manage their delivery preferences in a 'one-stop' manner. Using a smart device or going online, customers could choose which mailpieces or parcels would be delivered and choose the delivery address, as well.

Premium services may also be available to allow certain mail to be scanned and stored digitally with the Postal Service. Recent increased labor flexibility affords the Postal Service an opportunity to position its workforce to better meet customers' needs, for example by moving part-time employees to a scanning center.

In addition to revenue generation, the Postal Service could save operating costs. Current delivery methods where carriers deposit mail in boxes at home doors, curbside, or in neighborhood consolidated boxes are costly, averaging \$201 per year per city delivery point, and \$169 per year per rural delivery point. Virtual PO boxes could position the Postal Service to reduce these associated costs, in part, by expanding the use of centralized physical and digital delivery options, which are less expensive alternatives. Certain private sector providers currently provide some of these services.

The virtual PO box could also offer customers a number of other delivery options, both basic and premium.

Examples of options for letters and flats:

- Send handwritten letters to my home address (basic).
- Hold my catalogues and deliver to my home address on Friday for review over the weekend (basic).
- Send hard copy professional journals to my home address (basic).
- I am traveling for business for 3 weeks and need some of my mail (that I identify) re-directed to my regional office (premium).
- Provide me images of each mailpiece and I will decide what to do with them (premium).

Examples of options for parcels:

- Notify me immediately by text message of any packages (basic).
- I am expecting a package that contains critical medicine; deliver to my default gopost/physical PO box within 4 hours (premium).
- I am a small business owner and expecting a large shipment. Hold at the Postal Service facility until further notified (premium for large-scale storage). If voluminous mail or parcels cannot be delivered and must be held at a postal facility, the facility could charge the customer a premium for storage space after a certain period of time.

Vanity Addressing

The Postal Service could offer small business customers vanity addressing via the virtual PO box service, using a PO or other postal facility's physical address. While there are a limited number of physical PO boxes, the number of virtual PO boxes the Postal Service could offer is limitless.

The Postal Service could generate revenues by charging a monthly or annual virtual PO box vanity address rental fee. This would allow customers to present their virtual PO box 'address' as a street address that is different from their actual physical address. For example, they could have their vanity address such as '694 Main Street, New York, NY' (a postal retail facility), when the customer's actual physical address is in New Jersey. Since many postal buildings are in prestigious neighborhoods (for example, there is one at 1250 Broadway, New York, NY and another at 8383 Wilshire Boulevard #106, Beverly Hills, CA), the Postal Service could charge a higher fee for vanity addresses situated in such areas.

The demand for vanity addresses has grown with the expansion of Internet commerce and the resulting proliferation of home-based small businesses. Vanity addresses have the benefit of combining the privacy protection offered by a PO box number with the credibility associated with a street address. Home business owners and occasional Internet sellers may not want to use their home address on their website or business cards but, at the same time, want a physical address to give their business a more professional image. In addition, renting a vanity address could allow users to receive mail and packages from carriers such as United Parcel Service and FedEx that do not deliver to PO boxes.

With thousands of locations across the country, the Postal Service could offer customers a broad list of PO box addresses and other postal facilities to choose from. Users could rent one or more of these addresses when signing up for the virtual PO box and easily change or remove them from their account. The presence of the customer's unique virtual PO box number (or other unique identifier, such as smart tags or numeric codes) in the vanity address would allow the Postal Service to associate a user's vanity address with their actual physical address.

Figure 1 illustrates how the vanity address of user John Smith whose virtual PO box number is 12345 would look.

Figure 1: Link between User's Vanity Address and Virtual Post Office Box



Source: OIG.

Mailpieces and parcels sent to the customer's vanity address would be collected and forwarded by the Postal Service to the default address or other customer-designated delivery destination (parcel locker, overseas address, physical PO box, etc.).

International Shipment and Returns

Although international e-commerce is a fast-growing market, barriers such as high shipping costs, cross-border payments, customs issues, and online trust present challenges for global online businesses. The Postal Service could reduce these barriers by offering small businesses and customers within and outside of the U.S. international package shipment and return services. These solutions would allow international shoppers to purchase items conveniently from U.S. websites that do not ship overseas, charge high shipping rates, or do not accept international billing addresses, while creating new business opportunities for U.S. merchants. Additionally, the Postal Service could offer package return options for U.S. customers who need to return internationally shipped packages.

For international customers, the Postal Service would provide a U.S. street address for shipping and billing purposes, together with a virtual PO box account. The items purchased online would be shipped by the U.S. retailer to the buyer's physical U.S. address. The physical U.S. address would correspond to one of the five existing Postal Service international service centers (ISCs) and a virtual PO box address.⁵ Here, the items would be forwarded to the customer's international address. Through the virtual PO box, users would be able to see a scanned image of the parcel, change the delivery address, or put the shipment on hold for later delivery. When requested, the purchased items could be repackaged and multiple orders consolidated into the same package to further reduce shipping costs. The customer would complete all customs documentation.

The Postal Service could complement this service by offering a number of optional services, including short-term parcel storage, insurance services, special packaging and shipping options, or prepaid cards with a U.S. billing address and other payment options (such as money transfers). Similar services are currently offered by some commercial providers. The Postal Service could consider reaching out to these companies and potentially partnering with them. By leveraging the Postal Service's network and infrastructure, these providers could benefit from an expanded logistics capacity and customer base.

In conjunction with international shipment for U.S. customers, the Postal Service could also offer return shipping for international customers for a fee. International returns would allow international businesses several options to return internationally shipped packages, should shipments be lost or destroyed in transit or returned by customers. For example, if a package shipped to the U.S. from a foreign country is damaged in transit, the Postal Service would offer to ship replacement merchandise. In addition, if a U.S. customer receiving an internationally shipped package wants to return it (the merchandise is the wrong color or the wrong size, for example), the customer could drop off the package at domestic (U.S.) outlet and the Postal Service would then ship it back to the international company or product manufacturer. A number of postal operators, such as Deutsche Post DHL and Swiss Post, offer a similar service.

⁵ The Postal Service ISCs are in Chicago, Los Angeles, Miami, New York, and San Francisco.

Micro-Warehousing and Logistics Support

Micro-warehousing and logistics support services are part of a large and growing market. These services are end-to-end logistics solutions and offer supply chain capabilities for business customers, including returns and inventory management (such as storage of goods), distribution services, order processing, and packaging of goods. International posts and U.S.-based private sector companies operating in this market tend to offer a wide range of services. In a prior OIG report,⁶ we noted that there were gaps in e-commerce fulfillment and end-to-end solutions, particularly for small businesses, and, while many companies offer services for warehousing, pickup, and pack and ship operations, smaller businesses are more challenged in integrating these various services.

Due to the recent decline in mail volume and ongoing consolidations, the Postal Service has excess space within existing facilities which could be used for these services. As a result of network optimization, facilities could be redeployed for micro-warehousing. Much of this surplus space is contiguous with active postal operations and, therefore, can't be sold or given away because of mail security issues. The Postal Service could expand its services to this area to help it generate more revenue by providing space for micro-warehousing and offer this as an enhanced feature of the virtual PO box. This would allow the Postal Service to effectively deploy/redeploy excess space resulting from network optimization and move the address management system from a cost center to a profit center. There are currently a number of companies in the U.S. which offer these services for a fee, integrating with major parcel shipment companies such as FedEx and UPS. To participate in this already burgeoning service area, the Postal Service could offer storage, shipping, and return services for other businesses; use of excess space in its various postal facilities nationwide; and use of its network of Post Offices and processing facilities to offer business customers a complete end-to-end logistics solution.

The Postal Service would offer space rental and shipping and return services, primarily for small businesses that have inventory storage and shipping needs and need this logistics solution. Small businesses would pay a fee to the Postal Service to receive and store their inventory at various postal facilities and would then, via the virtual PO box account, direct the Postal Service to ship requested inventory from the storage facility as ordered by the customer. The Postal Service could also manage returns for these businesses via the virtual PO box. The Postal Service platform is well-positioned to connect the dots between senders and receivers, both physically and electronically. Additionally, the Postal Service could offer a suite of services to larger companies with goods that do not sell quickly and thus require warehousing, or to international businesses offering goods online in the U.S. All of these businesses would benefit from the storage options and capabilities of the Postal Service and its vast network.

⁶ *The Postal Service Role in the Digital Age, Part 2: Expanding the Postal Platform* (Report Number RARC-WP-11-003, dated April 19, 2011).

Message Integration and Personal Data Storage

As First-Class Mail[®] volume continues to decline, the Postal Service needs to position itself as a 21st Century communications provider, not just a physical mail delivery service. Stakeholders have commented during focus group sessions we hosted in 2012 that the future of the Postal Service rests with electronic solutions.⁷ Specifically, some mailer participants observed that there was no reliable way for customers to store financial data digitally without investing the time to set up their own household management centers, or use commercial systems they are unfamiliar with. Similarly, this concern applies to archiving or storing tax return filings, legal documents, real estate transaction records, photographs, and medical records.

Personal data storage is another feature that can be integrated into the virtual PO box suite of services to address this gap in the marketplace. For example, an individual's medical files could be stored and sent to an alternative medical team in the event of an accident or emergency away from home. Benefits for the Postal Service would include improving customer service and generating additional revenue sources. While some private sector entities provide data storage services, the Postal Service enjoys brand recognition and is engendered with trust (and enforcement authority) to handle and protect the mail. Moreover, it enjoys a centuries-long history that can help assure customers that their confidential data will be secured for the long term.

Like several other features of the virtual PO box, this would be an optional service. It could primarily be targeted to individuals, households, small to medium-sized businesses, and non-governmental organizations. At a basic level, it could provide data storage that customers could purchase based on the size of data and the length of time data are stored. Since virtual PO boxes integrate physical and digital addresses, users could customize services to be added on later. For example, after receiving an alert about an important mailpiece via text message, a customer could direct the Postal Service via a smart phone app to scan physical mailpieces and store them digitally.

In addition to managing mail digitally, customers could use a virtual PO box for centralized data storage and uploading documents for storage into their account. Examples of such documents include birth and marriage certificates, copies of passports and drivers' licenses, insurance files and tax records, among others.

⁷ *Summary of Focus Group Discussion on the Future of First-Class Mail* (Report Number MS-MA-12-001, dated April 20, 2012).

Option to Retain Physical Post Office Box

For customers who want to maintain their physical PO boxes, they could integrate those boxes as an 'address option' with their new virtual PO box account (using the physical PO box as a delivery alternative, much like selecting a home address, a parcel locker or a vacation address). Therefore, as long as there is continued demand for this popular service, physical PO boxes would remain as valuable and viable an option for customers in the future as they are today.

Implementation Challenges

The development and roll-out of the virtual PO box service touches almost every functional area of the Postal Service. Implementation of such a service can be broken down into operational, information technology (IT), security, liability, privacy, and legal/regulatory issues.

Operational

Among the most important operational considerations is how items could be forwarded to the designated virtual PO box address. Updates to the Postal Automated Redirection System would be required to automatically intercept and forward items that are redirected at the customer's discretion to their designated delivery address.

Postal Service management should conduct market research to determine test markets for the roll-out of the virtual PO box pilot. Among the criteria for determining where to offer a pilot, the Postal Service could consider post offices that have no or low vacancy rates for PO box rentals, well known vanity address locations (Beverly Hills, CA, Middleburg, VA, etc.), as well as leveraging current and planned gopost locker locations.

Internationally, the Postal Service should consider offering the service to customers in markets with significant cross-border volume with the U.S. For example, Brazil and Chile have experienced large increases in recent years as a growing middle class and favorable currency exchange rates have made American goods increasingly affordable.

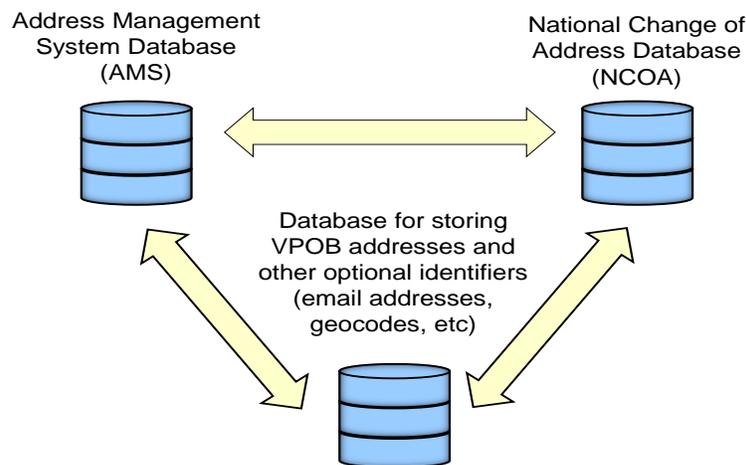
Another consideration is employee training. While customers could complete much of the registration process online, clerks would need to be familiar with the product and registration process. In-person authentication for the virtual PO box service would be similar to the procedures already used for PO boxes, registered items, passports, and gopost. Mail handlers and carriers would also require instruction on recognizing virtual PO box addresses and ensuring that virtual PO box pieces are directed or re-directed to the designated address meeting the required service standards.

Another major factor in rolling out the service concerns the availability of space at Postal Service facilities. Postal Service management currently tracks excess or underused

space through its facilities database and would need to determine which locations could offer the service. Some smaller POs and stations have limited or no space available. A determination would also need to be made whether contract postal units could participate. For any micro-warehousing operations, the Postal Service would likely need to use larger facilities, such as network distribution centers. The international package reshipment service could use one of the five international service centers depending on the destination country (for example Miami to Latin America, San Francisco to China, etc.). The Postal Service would need to develop a procedure for cross-border returns. Parcels containing items from multiple merchants would need an address protocol (in other words, a single return U.S. address). The Postal Service would also need to determine an appropriate fee structure for returns. Some comparable U.S.-based services currently provide a free international return service to their U.S. facility and forward on, for free if the item has a prepaid merchandise return envelope or for a flat fee (for example \$8 for the first pound, plus \$2 for each additional pound).

Information Technology

The virtual PO box presents a few potentially significant IT changes. The first and most important is modifying the address management system to allow for the use of virtual PO boxes. The system already reads the recently added gopost locker addresses (for example, Customer Name, 1602 GoPost #ZA12345, Arlington, VA 22204), so creating a new field to accommodate virtual PO box addresses is possible. A new database, as illustrated in Figure 2, could be created to link the virtual PO box to physical addresses in the Address Management System and National Change Of Address databases with other optional identifiers such as an email address or geocode.

Figure 2: Linking Postal Service Databases to a Virtual P.O. Box Database

Source: OIG.

A second IT issue would be creating a user interface for online registration on usps.com. To reduce retail transaction costs, the Postal Service could consider using its FCCX secure network to authenticate domestic users. For international users, customers could register online, but may require in-person authentication by a foreign postal partner depending on legal requirements.

Security/Liability

The virtual PO box service would require some additional measures to ensure adequate physical security of items. For example, micro-warehousing or international package reshipments would leave merchandise visible and susceptible to theft. For higher value items, registered cages or lockers could be used for storage. For the international service, measures would also need to be considered to reduce opportunities for fraud. A virtual PO box address could be used to commit illicit activities such as shipping prohibited items, such as illegal or prescription drugs, child pornography, weapons, etc. Although a virtual PO box would be linked to an individual/business and a permanent physical address, such shipments must be closely monitored to minimize opportunities for fraudulent activities. The OIG and Postal Inspection Service would be well positioned to provide this oversight.

On the domestic side, there would be no major change to how insurance and liability procedures are currently handled for claims of theft or damage using the virtual PO box service. However, liability and indemnification policies for the international package reshipment service would need to be clarified given the Postal Service's role as a third party consolidator and 'proxy sender' on behalf of the international customer. In cases where the Postal Service acts as the sender, there may be increased attempts by addressees to make false claims for theft or damage.

Privacy

The Postal Service could continue leveraging its trusted name and reputation for protecting the privacy of its customers. Currently, the Postal Service shares updated 'address only' information in the Address Management System with mailers who subscribe to the update service. Similarly, this service could be expanded to include the use of virtual PO box addresses when requested by the customer. As the Privacy Act prohibits the Postal Service from sharing an individual's name from the National Change of Address database with mailers, the Postal Service would continue to share address-only updates related to PO boxes with businesses. Thus virtual PO boxes would be afforded the same privacy protections as other Postal Service products.

Furthermore, the Address Management System and National Change of Address databases could be leveraged to support a third new database (see [Figure 2](#)) containing virtual PO box addresses and other optional information, such as email addresses and geocodes. As with any online-based service, privacy concerns may arise. However, these could be easily overcome given the opt-in nature of the service, by providing a clear, concise privacy statement that prevents the Postal Service from sharing information with parties other than those customers choose.

Legal/Regulatory

Most of the virtual PO box features are extensions of current services — the vanity address is closely related to PO box rentals — or could be considered postal services and would require no change in the law. However, the Postal Regulatory Commission would have to approve the virtual PO box service including all of its proposed optional features such as micro-warehousing, international package reshipment, and personal data storage. As PO boxes are now classified as competitive services and there are providers of similar products, such a service would likely be considered a competitive product.

Conclusion

The digital and mobile revolutions are transforming how people communicate and, in the case of the mailing industry, control is shifting from the sender to the recipient. Advanced digital offerings are giving customers more choices in what, when, how, and where they receive communications.

The Postal Service is uniquely positioned to meet its customers' needs and to participate in the new communications and commerce landscape in a number of ways. Namely, the Postal Service maintains national address databases and can use its expansive retail, processing, and delivery networks and infrastructure to provide storage and shipping capabilities. Further, the Postal Service can leverage its brand trust and loyalty to provide secure means of digital communication and use its enforcement and oversight capabilities to ensure the security and confidentiality of its services. With an existing and well-established traditional PO box product line, the Postal Service can

expand the product with basic and advanced features. Virtual PO boxes could help the Postal Service meet the present and future needs of its customers in an increasing physically and digitally integrated landscape.

A virtual PO box service can help meet the evolving needs of mail users by combining the familiarity of existing postal products and services (physical PO boxes and delivery options) with enhanced options, including micro-warehousing, digital storage, and international shipment and returns, among others. The Postal Service could monetize these services using an existing, well-established and trusted product line and reduce operating costs, such as those related to unsuccessful deliveries. Implementation of a virtual PO box could present challenges in the areas of operations, IT, security, liability, privacy, and legal/regulatory concerns.

To provide the functionality associated with the virtual PO box, the Postal Service could partner with companies currently providing some of these services. A collaborative partnership could also help provide investment capital for the initiative. The Postal Service has the legacy of serving the nation as a communications platform and it can continue to serve all of its customers with access to these digital and physical delivery features.