Send mail and packages to people, not places

Business Plan

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Executive Summary

Smartmail is a software technology platform developed by Nicholas Melhado in 2019 to address the fundamental problems that arise from our antiquated system of mail delivery. Smartmail allows a user to manage their mailing addresses on an online profile and provides the user with a Smartmail ID that can be used to send mail, either to oneself or to other individuals, with far greater accuracy then the current system of physical address entry.

Every year the United States Postal Service (USPS) fails to deliver nearly six billion pieces of mail due to a category of error known as 'undeliverable-as-addressed' (UAA). The problem of UAA costs the USPS alone roughly $1.3 billion annually,[1] and inconveniences millions of Americans. Failure to deliver due to a faulty or unusable address is, indeed, endemic to all major mail carriers and a burdensome issue that has not been adequately mitigated by current technology or software. The problem of UAA is estimated to cost the mailing industry as a whole $20 billion per year.[2] In addition to mail carriers, the problem of UAA also impacts online retailers. According to data provided by EasyPost, 4.7% of e-commerce forms are submitted with some manner of user error that results in an undeliverable shipment[3]. Extrapolating from that figure, a mid-range e-commerce retailer that ships a million packages a year will experience 47,000 errors made on shipping forms that result in UAA (Smartmail can address 71%[4] or more of all UAA issues). It is estimated to cost between $35 and $75 to correct shipping errors[5]. Using the low end figure of $35, that still amounts to $1.168 million per every million packages. A large e-retailer, like Amazon who is estimated to have shipped approximately 2.5 billion packages in the U.S. in 2017[6], could save as much as $2.07 billion every year.

The growth of e-commerce, both in an absolute sense and as a proportion of total retail sales in the United States and the corresponding growth of box-parcel shipments makes the issue of UAA a persistent and growing, problem. While the USPS and other carriers process an ever decreasing volume of letters (2.5% decrease annually[7]), certain and often critical forms of mail like financial documents, jury summons, and tickets and penalties will continue to be required to be transmitted physically.

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[1] USPS: https://postalpro.usps.com/UAARollup
[2] USPS: https://www.uspsoig.gov/sites/default/files/document-library-files/2015/ms-ma-15-006.pdf
[3] easypost: https://www.easypost.com/blog/2015-07-15-the-cost-of-bad-addresses
[4] USPS: https://postalpro.usps.com/July2019_NixieVolume
[5] easypost: https://www.easypost.com/blog/2015-07-15-the-cost-of-bad-addresses
[6] https://www.savethepostoffice.com/an-amazon-puzzle-how-many-parcels-does-it-ship-how-much-does-it-cost-and-who-delivers-what-share/
[7] https://facts.usps.com/table-facts/

The main causes of UAA are change of address (14% of the U.S. population will move to a new address within a given calendar year)[8] and improper completion of an address. Smartmail is a system of physical address identification that eliminates the aforementioned causes of UAA. This system pairs a person or company's name with a unique eight-digit alphanumeric identifier that is linked to a secure private profile (Diagram 1.1). That profile is maintained by the individual or company to contain the person or company's chosen mailing address. The name and unique ID, when entered, queries the correct and most up-to-date address associated with that ID. Smartmail reduces the risk of UAA by reducing the number of steps required to input a mailing address to (i) a name and (ii) eight digit code and also by pre-verifying that the physical address is accurate.

This system not only minimizes the occurrence of UAA, it also has added utility for individuals, large-volume mailers and online retailers. The eight-digit unique ID code is a far simpler method of address input (with a higher "success rate") than the current method of filling out an address form on an e-retailer's website which has an average number of 6-7 input fields (Diagram 4.1). As a result, online retailers would have a quicker and easier-to-use address-input interface at their point of sale (POS). Smartmail also reduces the number of times an individual or company is required to update a change to their physical address to a singular action and therefore reduces their exposure to lost mail due to UAA.

Smartmail has the added benefit of creating a more environmentally sustainable shipping industry: each year undeliverable mail adds an estimated 300 million pounds of paper waste to landfills worldwide[9] and nationally the process of transporting mail via airplane and delivery truck multiple times results in an increased carbon footprint (2,629 metric tons of CO_2 emissions [10]).

Smartmail's system of address identification promises to fundamentally transform and improve the mailing and shipping industry, save carriers and retailers billions of dollars annually, improve and simplify the experience for mail carriers and recipients alike, and reduce emissions and waste to improve the mailing industry's impact on the environment.

[8] USA Today: https://www.usatoday.com/story/money/economy/2018/07/05/cities-americans-growing-population-migration/35801343/
[9] https://www.serviceobjects.com/blog/solving-undeliverable-address-cases/
[10] https://about.usps.com/what-we-are-doing/green/pdf/USPS-EnvImpacts-of-Mail-LCI-Report-06-08.pdf

Business Description

Smartmail was founded in 2019 by Nicholas Melhado to address a fundamental flaw in how mail and packages are delivered. After repeatedly dealing with the struggles of changing mailing addresses and encountering the problem of lost or undelivered mail frequently, Nicholas realized there had to be a better way to deal with the inefficiency. He found that companies and friends often send mail to a previous address; that friends and family would make mistakes when addressing mail to his new address; and that he had to go through the same onerous process of updating his address for every contact he had (be it personal or commercial). Each move resulted in hours spent on the phone to track down missing mail and packages (not to mention the mail that was undelivered and went unnoticed). Not only was it inconvenient but it created the damaging scenario where tax documents were unaccounted for and important financial information was sent to previous addresses where it could be intercepted and exploited.

These experiences led to the realization that there is a huge opportunity to improve the mail and shipping industry and to advance it into the modern era. The existing mail system targets a physical location instead of the intended individual or organization. Considering the average American moves 11 times in their lifetime (which equates to 40 million Americans who move every year[11]), this leaves a lot of room for errors and inefficiency.

If you were to devise a mailing system from scratch today it would look like Smartmail's system of address identification. Assigning a Smartmail ID provides one personal address that a person can use throughout their lifetime (akin to an email address). When USPS, UPS, FedEx or any other mail carrier receives mail or a package with this ID, they can query our system and receive the most up to date address information for that customer. This removes the possibility of someone sending mail to an out of date address, as well as significantly reducing the likelihood of someone making a mistake when addressing mail or a package.

Smartmail has three primary groups of end-users; mail carriers, retailers, and individuals. Mail delivery services will use Smarmail to increase efficiency and reduce costs of UAA. Retailers will adopt our system for simplified address input for consumers and a more accurate customer information database requiring no manual updates. A reduction of shipping errors will also increase customer satisfaction. Individual accounts will be offered for free to facilitate rapid and wide-spread adoption.

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11 https://www.usatoday.com/story/money/economy/2018/07/05/cities-americans-growing-population-migration/35801343/

Benefits of Smartmail		
Mailers & Shippers	E-Commerce & Utility Companies	Individuals & Companies
● Removes the possibility of sending mail to an out-of-date address ● Almost completely negates the possibility of an incorrect address ● Removes the necessity of validating an address every time something is sent ● Significantly reduces customer service calls due to undelivered or misdelivered mail ● Provides time windows for package deliveries, reducing the number of return trips and saving money ● Standardizes address input format	● Reduces the number of misdelivered packages due to incorrect and/or out-of-date address entry ● Simplifies address entry (instead of building number, street name, unit number, city, and zip code, one only needs to enter an 8 character string) (Diagram 4.1) ● Eliminates the need for a customer to update their address, which is more convenient to the end consumer ● Eliminates the need for address verification ● Saves time and money	● Instead of updating all contacts about a new address, a customer only needs to update their Smartmail account ● Never lose a bill, tax document, or any other critical document due to UAA ● Never worry about a friend, family member, customer, company, or any other contact from sending mail or packages to an out-of-date address ● Share your address more easily (just 8 characters)

Smartmail aims to fundamentally reform the mail and shipping industry that will ultimately allow all parties to run their businesses and affairs faster and with fewer errors while reducing their detrimental impact on our environment.

Go To Market Strategy

The first step in Smartmail's go-to-market strategy is to secure Series A funding. This first round of funding will allow Smartmail to assemble a team of software engineers, business developers as well as a marketing department. These will cover server and deployment costs, equipment costs, enterprise licenses, and legal costs that may arise in the course of launching the business.

This first round of funding will allow Smartmail to build v1 of its platform and will give the company approximately 18 months of runway (enough to secure its first mail carrier and retail partners and achieve revenue generation). Series A funding needs to be both a sufficient float to tide the company over until the point of revenue generation and a fair valuation of the company's future potential earnings.

While Smartmail will not begin to generate revenue at the commencement of its operations, it still addresses a real and substantial market deficiency in a manner that promises enormous savings for its future clients. Smartmail should thus plan on seeking a Series A funding round of between $2-$3 million and must determine if that is sufficient to fund the company through 18 months of initial operation. Below is Smartmail's projected overhead and startup cost for the first 12 months of operation:

1. Labour costs
    a. Software engineers:
        i. Two senior engineers ($150K annual salary): $300K
        ii. Two junior engineers ($100K annual salary): $200K
        iii. Security and reliability engineer ($100K annual salary): $100K
        iv. One senior operations officer ($130K annual salary): $130K
        v. Project manager ($130K annual salary): $130K
    b. Marketing
        i. One coordinator ($100K annual salary): $100K
        ii. One designer ($75K annual salary): $75K
    c. Business development team
        i. Principal officer ($150K annual salary): $150K
        ii. Junior officer ($80K annual salary): $80K

    Total labour costs: $1.265 million

    ***Healthcare and other benefits for labor force of 12: $144K**

    Total labour costs w/ health insurance costs factored in: $1.409 million
2. Capital expenditures
    a. Server and deployment costs (frontend/backend): $750K (cost is scalable as company grows)
    b. Equipment costs: $100K

c. Enterprise licenses: $100K

Total capital costs: $950K

3. Legal/accounting/contingency costs
    a. Legal: $150K
    b. Accounting: $75K
    c. Misc. (unforeseen): $100K

Total legal/accounting/contingency costs: $325K

Total costs (12 months): $2.684 million

The company's 12 month burn rate is approximately $2.684 million, a number that includes $100K in unforeseen costs. Given the company's projected overhead, it will seek Series A funding of at least $3 million, a number that provides sufficient buffer against unforeseen costs and a longer time horizon until revenue generation.

Since Smartmail won't be able to generate revenue before its investment round, it will instead lean on its 'minimum viable product' (MVP) to attract investors. Smartmail's MVP will consist of a fully functioning front-end and back-end interface that enables the consumer (mail carrier, e-retailer, and individual) to perform key functions. The MVP must be at a point at which it is ready to be deployed in any of the three circumstances.

The mail carrier must be able to retrieve a correct physical address from a unique Smartmail ID. The Smartmail ID corresponds to an individual user's physical address (maintained by the individual consumer, be it a person or company). The Smartmail ID may translate to a permanent physical address or a temporary address. A user's physical address will only be retrievable by mail carriers who have partnered with Smartmail and have the necessary permissions to access the Smartmail API. By no other means can an individual's or company's address be retrieved.

The MVP must also include a means by which it may be readily adoptable by an e-retailer at the point-of-sale. In practice the MVP reduces the number of entry fields a customer must fill out at the point of sale from six (Name, Street Address, Apt. number, City, State, Zip) to two (Name and Smartmail ID), thus reducing the amount of time and lowering the potential for error encountered in the current system of address entry. For the e-retailer, a Smartmail ID does not generate a customer's address, that is a function performed solely by the mail carrier, but it does produce a customer's shipping zip code. This allows the e-retailer to correctly factor shipping and handling costs as well as obtain critical customer data that they need for marketing initiatives.

For the individual user the MVP serves as an online profile. An individual or company is free to join and obtain a Smartmail ID. The user then maintains their mailing address on Smartmail's website and can control for certain variables like secondary, temporary and billing addresses.

The user can also develop a contact list of other users' Smartmail ID's. When an individual moves or travels they can update their address once on Smartmail, thereby eliminating the need to update their address on numerous retail websites.

Once these three categories of use are successfully developed the first step towards revenue generation is complete. The next step is obtaining Series A funding. Series A funding allows for operational leeway enabling the company to develop its end product, additionally it confers essential legitimacy to the company.

A key step in Smartmail's pursuit of a mail carrier is the execution of a limited test case to examine the utility and user adoption rate of Smartmail's business model. In concert with successfully lobbying a mail carrier to adopt Smartmail, mid-scale e-retailers will be enlisted to integrate Smartmail into their checkout process. This will enable us to examine user adoption, ease of use, and percentage of successful deliveries compared to traditional address entry while minimizing the risk of adoption to the mail carrier. The data from this exercise will enable shipping carriers and retailers to examine the potential value of using Smartmail.

The key objective, which must take place within the prescribed runway period, is the ultimate adoption of Smartmail by a mail carrier. Having achieved this, marketing efforts can be made to enlist e-retailers to begin using Smartmail IDs in their checkout process, making subsequent adoption by individual users more likely. As the number of individual and e-retailer users grow, so too will the natural inclination of other mail carriers to adopt Smartmail. After the test case concludes, Smartmail will then be a revenue generator, making it an ideal time to pursue Series B investment and expand its operation.

There are a number of Key Performance Indicators or KPI's which should be examined at this juncture. For mail carriers, the KPI would be the rate of UAA encountered in our trial period and to extrapolate from observed instances of UAA what our financial benefit is to the mail carriers. For retailers, the KPI that we would monitor is the conversion rate on billing and shipping pages, i.e., what percentage of customers are signing up for a Smartmail ID and with what frequency they are using their Smartmail ID to checkout. For the individual consumer, the KPI will be the frequency with which they use their Smartmail ID account to log-in and theoretically change their address or manage temporary addresses.

Many steps will be carried out in parallel. For a more comprehensive timeline, view Smartmail's *Go To Market Timeline*.

Revenue Streams

Pricing

Smartmail is taking an existing system and making it easier, more efficient, and more technologically advanced. In this way, it is very similar to the way that Opentable revolutionized restaurant reservations. Opentable charges $1 per patron (on top of a high one time setup fee). This amounts to 2.5% of the average per person meal cost in the U.S. ($1 / $40*). Using this as a model, Smartmail plans to charge 2% of the average shipping cost.

Mail and Shipping and Food Delivery Revenue

	Estimated Volume in the US (2017)	Smartmail Charge Per Shipment	Total Annual Revenue
Packages	13 billion[12] *(with 20% growth every year)*	$0.183 (2% * $9.15[13])	$23.79 million / 1% of packages sent
USPS Mail	149.5 billion[14] (letters)	*$0.01 (2% * $0.50)	$14.95 million / 1% of mail sent
Other Mail	7 billion[15] (periodicals, coupons, etc)		$0.7 million / 1% of mail sent

Total: **$39.44 million** / 1% of mail and packages sent and food deliveries ordered

Break Even Analysis

Smartmail expects annual overhead to be approximately $3 million **[tentative number, need more analysis]** in year one. In order to break even, we will need to capture only 0.076% of the market.

$3 million / $39.44 million (per % of the market) = 0.076%

[12] Pitney Bowes: https://www.pitneybowes.com/us/shipping-index.html#
[13] Pitney Bowes: https://www.pitneybowes.com/us/shipping-index.html#
[14] USPS: https://facts.usps.com/table-facts/
[15] Fast Company: https://www.fastcompany.com/40560641/can-online-retail-solve-its-packaging-problem

Smartmail expects to capture significantly more than 0.076% of the market and believes that it will surpass that figure within just two years of its public release. This makes us very confident that Smartmail will achieve rapid profitability and high profitability once it has established itself in the market.

More Details About Revenue Source

The primary avenue of revenue for Smartmail runs through mail carriers. Smartmail plans to charge mail carriers an initial $0.01* fee per mail item and $0.183 per package shipped using Smartmail's address identification services. By charging per item sent through a Smartmail identifier, it makes the financial risk of adoption negligible for mail carriers. They will only be charged if Smartmail is successful in generating adoption. In the case of 100% adoption, the cost to USPS would be offset by nearly a third due to its recouped losses resulting from UAA*. With a public adoption rate estimate of 5% after three years of business operations, this aspect of the business would generate over $197.2 million in revenue per year.

*$1.26 billion[16] (2019 direct cost of UAA for the USPS) / 142.6 billion units[17] (2019 USPS mail volume
= $0.009 cost of UAA per every item of mail sent

Smartmail IDs will be generated at random, however a paid option to choose your own (similar to a vanity license plate) will be made available. We will allow users to pay for an available ID of their choosing (with prices tiered based on projected desirability). This will provide a small additional source of revenue.

An inherent aspect of our address identification system is that it will accumulate large amounts of consumer data. This information will be very valuable to all businesses and mail carriers and selling that data will provide Smartmail with another source of revenue.

[16] USPS: https://postalpro.usps.com/UAARollup
[17] USPS: https://facts.usps.com/table-facts/

How it Works

Users sign up and provide their current mailing address. They are then given a Smartmail ID. The user gives that Smartmail ID out to anyone who sends them mail or packages. This may include: family, friends, banks, service providers, businesses, accountants, magazines, etc. When someone sends mail or packages to the user, they will now use the user's Smartmail ID instead of their physical address.

The process starts with a simple and easy signup process (Diagram 1.1) to attain a Smartmail ID. With a Smartmail ID, you can have mail sent to you with an electronic shipping label, hand addressed mail, and through e-commerce websites.

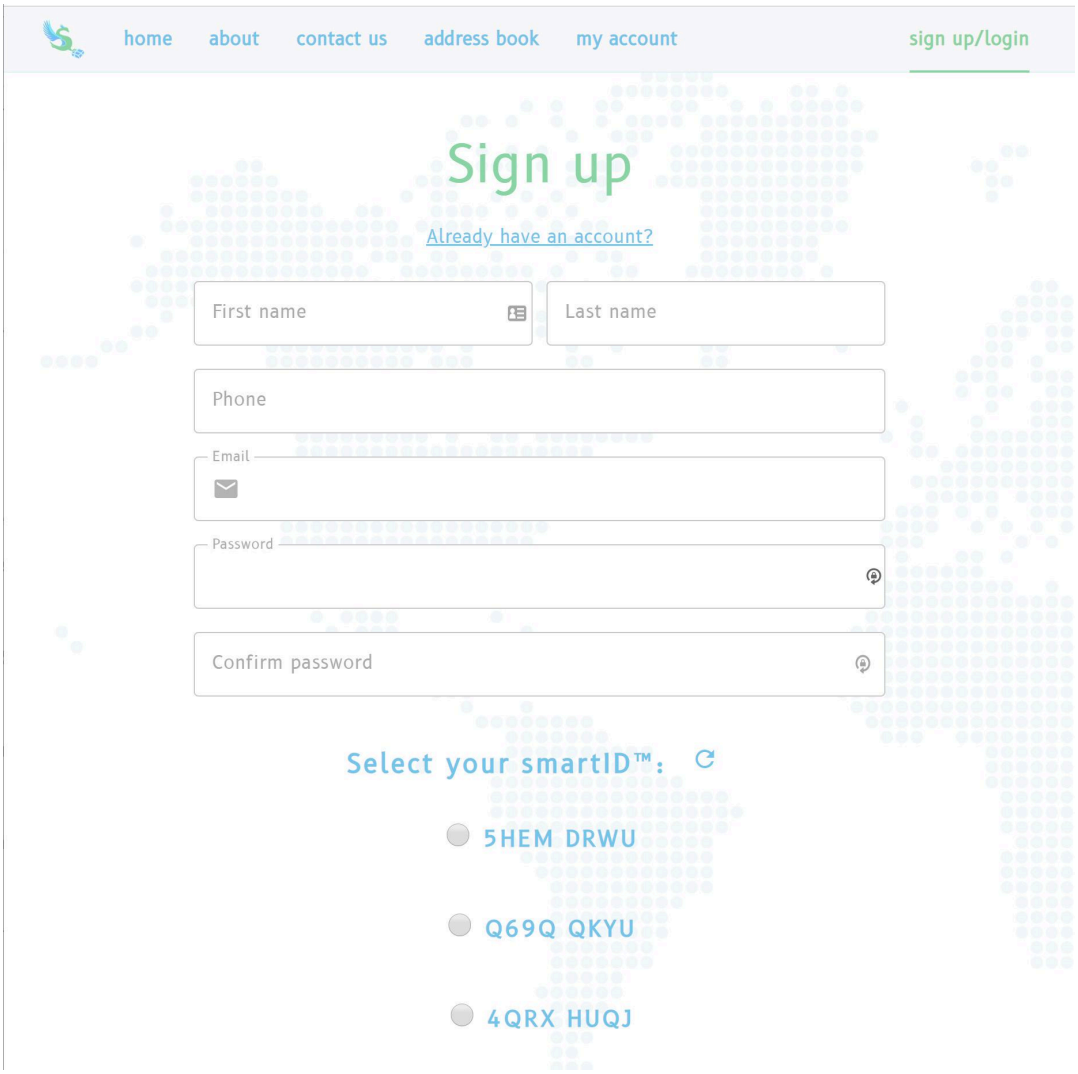

Diagram 1.1 - Smartmail sign up

The image below shows a before and after of UPS's address entering form. The before image shows the current UPS form and the below image shows what the form will likely look like after Smartmail. A Smartmail ID cuts the `from form` down from 12 fields to 2. When factoring in that the efficiency is duplicated over on the to form, 24 fields is reduced to just 4. This offers large time savings and minimizes the chances of user error when filling out the form. The process is continued in **Diagram 2.2**.

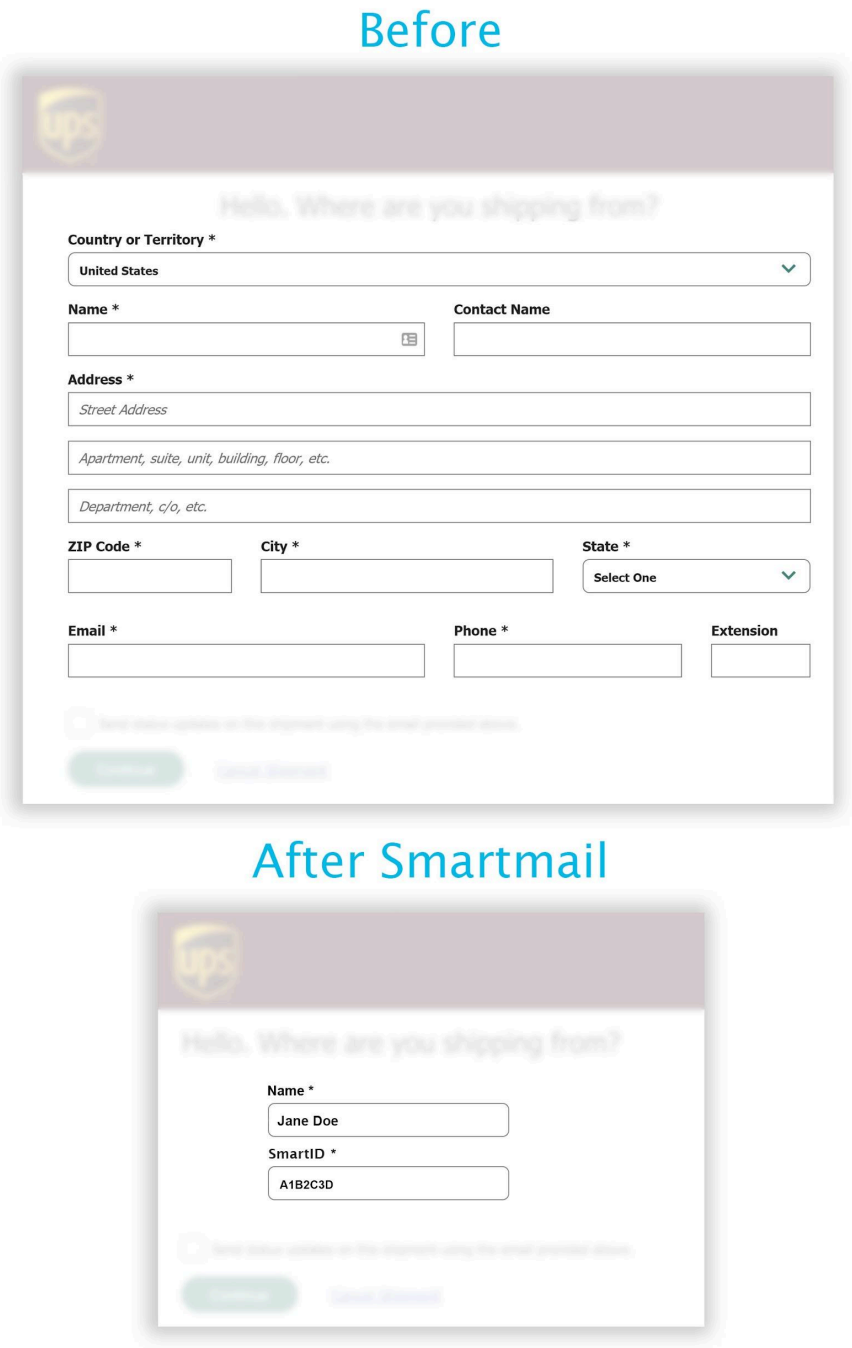

Diagram 2.1 - Before and after electronic shipping form

After a user submits Smartmail ID(s), the mail carrier sends an API request to Smartmail's servers (Diagram 2.2). Smartmail validates the request and immediately returns the correct and most up to date address for the ID. The mail carrier then prints the most current address on the label and the process continues on as it did before the invention of Smartmail IDs.

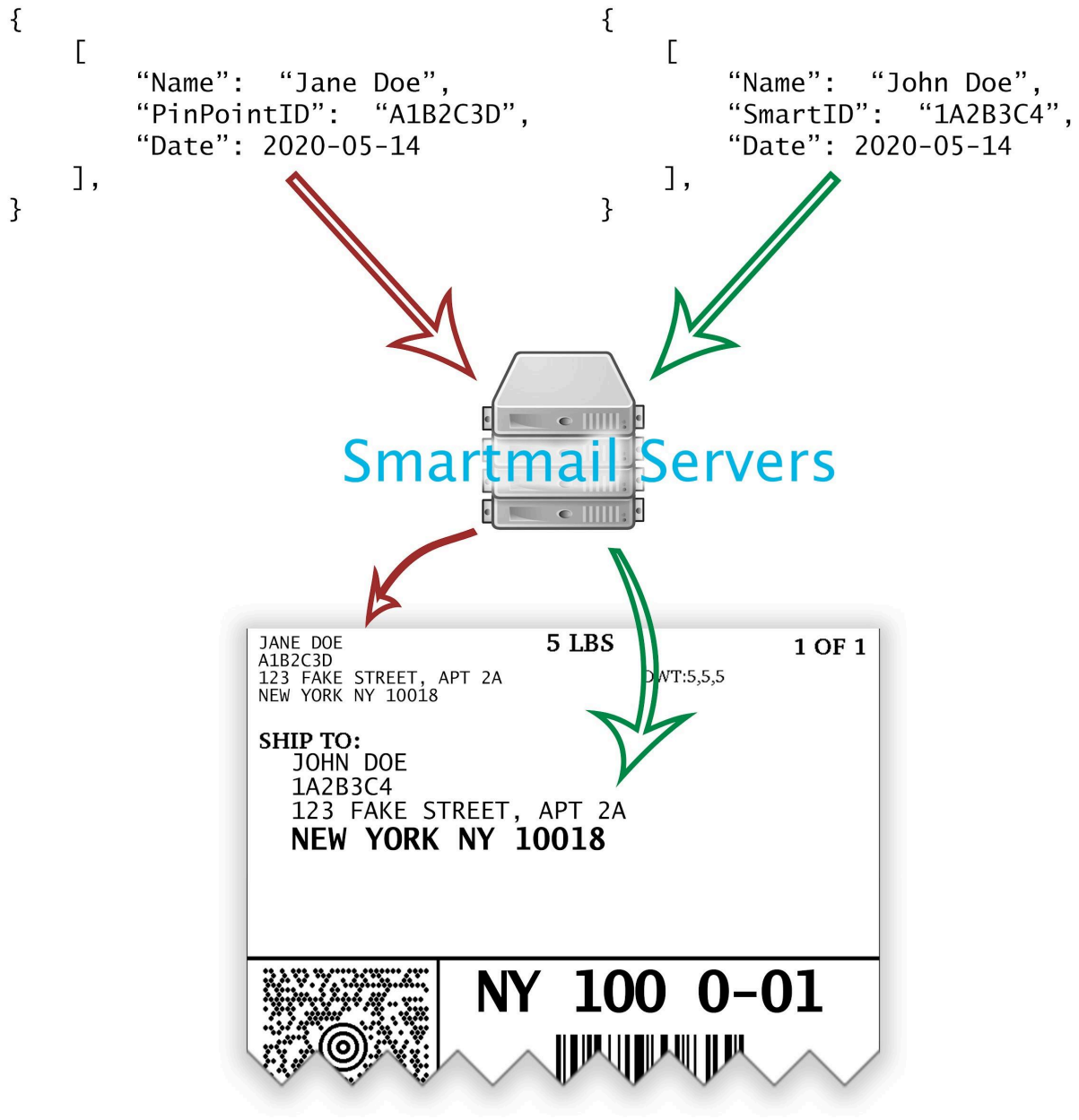

Diagram 2.2 - mail carrier sends an API request to Smartmail

How Smartmail Integrates Into Existing Mail Carrier Systems

In the case of hand addressed mail and packages, an end user will send mail which will be delivered to the mail carrier's sorting facility. There, the handwritten address will be scanned and converted into digital strings. Up to this point, the mail carrier's process is unchanged. The scanner will identify if the address is a traditional address or a Smartmail ID. If it's a Smartmail ID, the mail carrier will send an API request to the Smartmail servers which will validate the request and instantly return the current address of the ID holder (Diagram 3.1). From there, the address will be reprinted on the letter or package using existing technology.

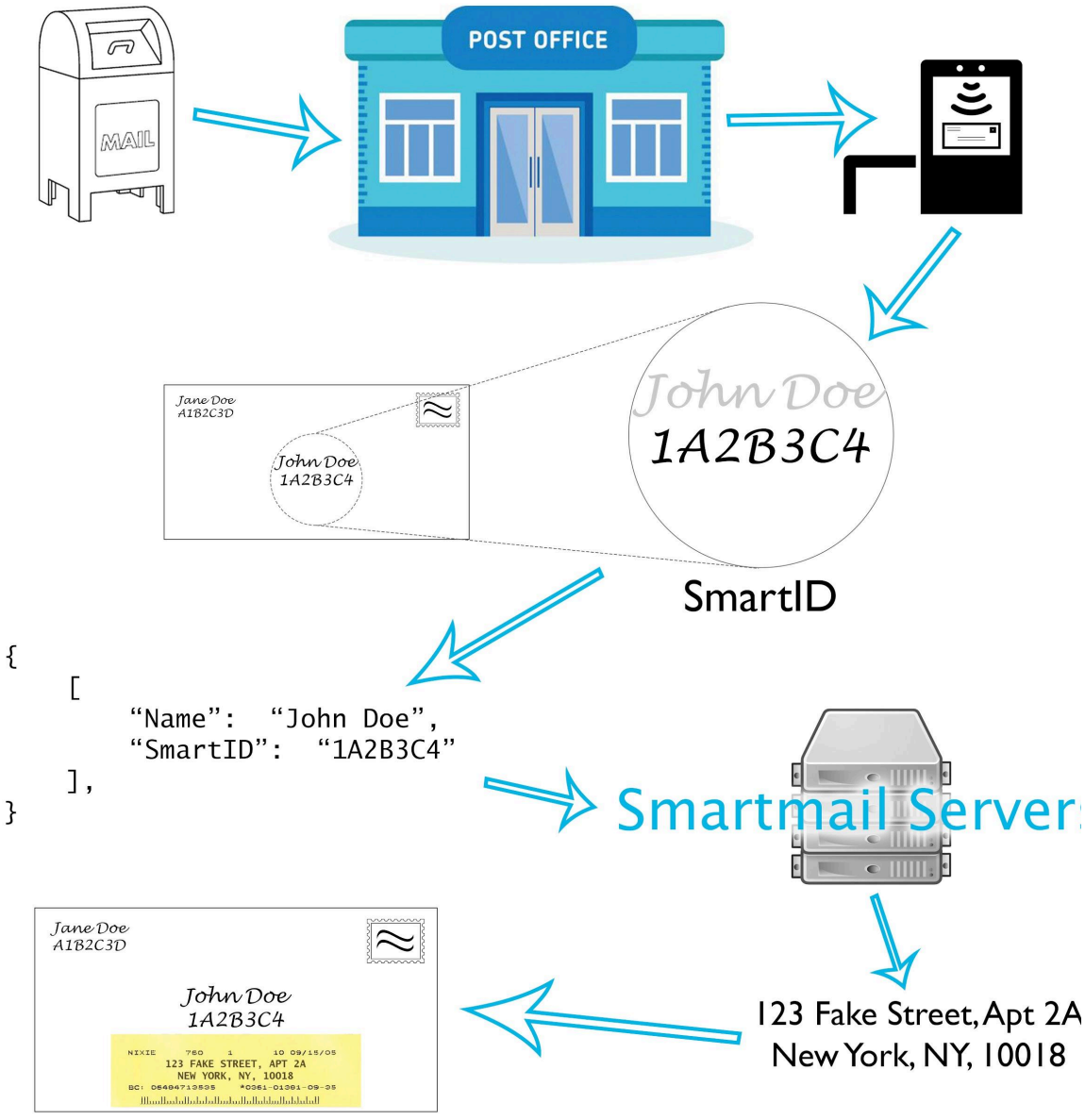

Diagram 3.1 - Hand addressed mail and packages

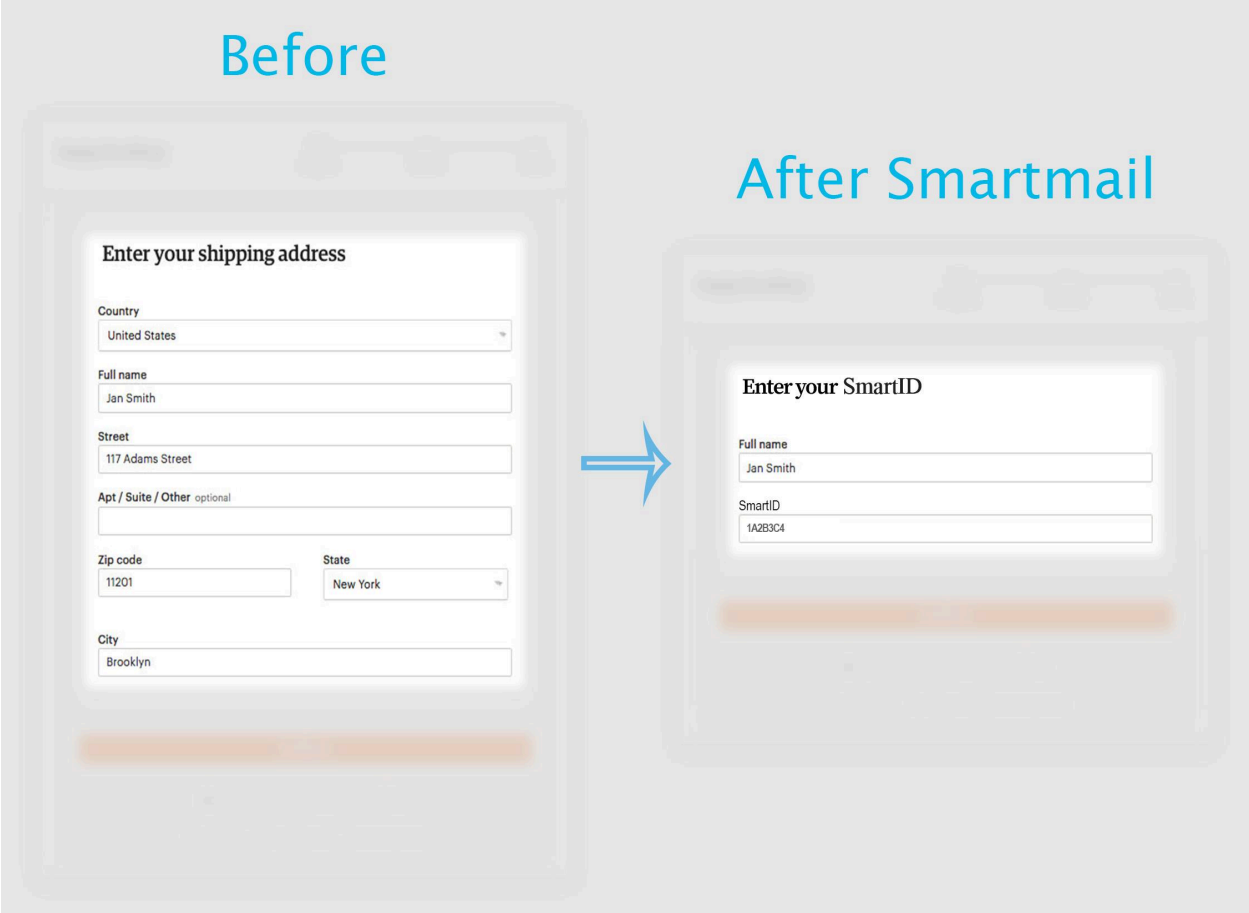

Diagram 4.1 - E-commerce shipping process

The left image shows what current ecommerce shipping forms look like while the right image shows what the forms will look like after Smartmail. The shipping process will be greatly simplified. Instead of seven fields, a user enters two (name and Smartmail ID). This simplifies the process and also removes the need for users to update their address when they move. When the order is complete, the e-commerce submits a request for a shipping label using the Smartmail ID. This follows the same process as **Diagrams 2.1 - 2.2**.

Additional Features

Consumers

- Intelligent Package Routing: Machine learning capability that helps to verify that a user's saved mailing address is correct and up-to-date. Software will use data from customer's physical geo-location to make suggestions about updating their account

- Last mile re-routing will afford the user the ability to reroute a package that is out for delivery to a new address (i.e. an office or secondary address). This feature will require the input and signoff from the mail carriers. It will only be offered if the new address is nearby

Retailers

- Opt-out marketing materials
- Last mile re-routing (see above)

Enterprise

- Branded signup page and account management
- Opt-out of paper billing and marketing

Risk Assessment

There are internal and external risks associated with Smartmail's operation. The primary internal risks revolve around the successful development of Smartamail's MVP and operational platforms. External dangers are posed by the prospect of outside competition as well as security risks posed by hackers and other malicious parties. Other risk variables stem from user adoption and the challenge of overcoming the natural opposition consumers and mail carriers have to adopting new methods of behavior/action.

Development of Smartmail's MVP and operating platform represents a controlled, internal risk. An honest assessment of what functionality is ultimately feasible, and which time and available capital will afford, will have to be made and potential features will have to be included or elided accordingly. Features that may be too complex, too time consuming or too costly for our team of four software engineers to complete will have to be shelved for subsequent versions of the platform.

The eventual rollout of the Smartmail platform poses its own challenges. Smartmail will rigorously stress test its software platform to ensure that it functions properly under an array of different circumstances and usage volumes. Prior to a national rollout, when a mail carrier agrees to use Smartmail's shipping platform, Smartmail will construct a geographically limited test field with which to mitigate any potential road bumps or issues with early shipments.

While some degree of caution is called for in the roll out of Smartmail's software platform, it must be balanced against the threat posed by potential external competition. Smartmail's system of mail delivery, while novel, is not proprietary and thus not shielded from competitors. The only thing that militates against the prospect of competition, either from a mail carrier that may decide to internally develop a similar system of mail delivery or another startup from employing the same method, is speed to market. By being quick to market and partnering with a mail carrier and e-commerce sites, Smartmail can effectively fence off the market from competition. The more users Smartmail has, the less likely a potential competitor is to enter the market.

Another important risk to focus on is that posed by the challenge of altering consumer behavior. By introducing a novel product to the market, Smartmail assumes the responsibility of marketing it to a consumer population that is used to a form of address entry that is essentially unchanged since the introduction of the ZIP code in the 1960's. Changing ingrained consumer habits will require effective marketing efforts targeting specific consumers who are likely to derive the greatest utility from the Smartmail ID (i.e. a demographic that is overwhelmingly young and highly mobile).

Summary

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