

A New Dawn for Global Logistics

Addresses form a critical part of the basic information required for both physical and digital communication between governments, businesses and individuals. As a **fundamental global network**, addresses power our connection to everyday life, allowing us to have a voice and legal identity. Our participation in the formal economy, access to private and public services as well as e-commerce activities are **principally dependent on addresses**. Actually, addresses are the cardinal threads that connect different actors with their activities to form a network of networks.



In the last few years, we've witnessed **tremendous improvement** in mapping and navigation technology. This has enabled businesses, tourists and other logistic providers to identify locations. Despite this significant improvement, the most fundamental part of this experience-finding a precise location- **remains a major challenge**. Goods delivery is still a major logistical challenge groping the world today. Getting goods and people from one point to another can have a serious implication, both in terms of time and money.

Address formats in advanced economies

In most western countries, addresses contain alternating numbering scheme progressing along the streets with odd numbers written on one side and even numbers on the opposite side. However, there's a considerable variation in the basic pattern. In North American cities, particularly those on a grid plan, quadrants, cardinal directions, and block numbers are incorporated into the region's traditional address systems. On the other hand, a different identification scheme is used in the UK. The UK and Ireland use naming techniques instead of

numbers. Nonetheless, **both systems have fallen short of addressing logistical challenges.** Both regions lack a **competent digital addressing systems.**



In the U.S., notable logistical problems have been experienced. In 2016, for instance, Undeliverable-as-Addressed (UAA) saw a substantial surge, with over 6.8 billion packages marked as undelivered. To put this into perspective, 6.8 billion packages represent 4.56% of the outbound volume. Even more alarming is the cost of processing these mails. According to the United States Postal Service, the **cost of processing mails** in the same year stood at a whopping \$1.3 billion.

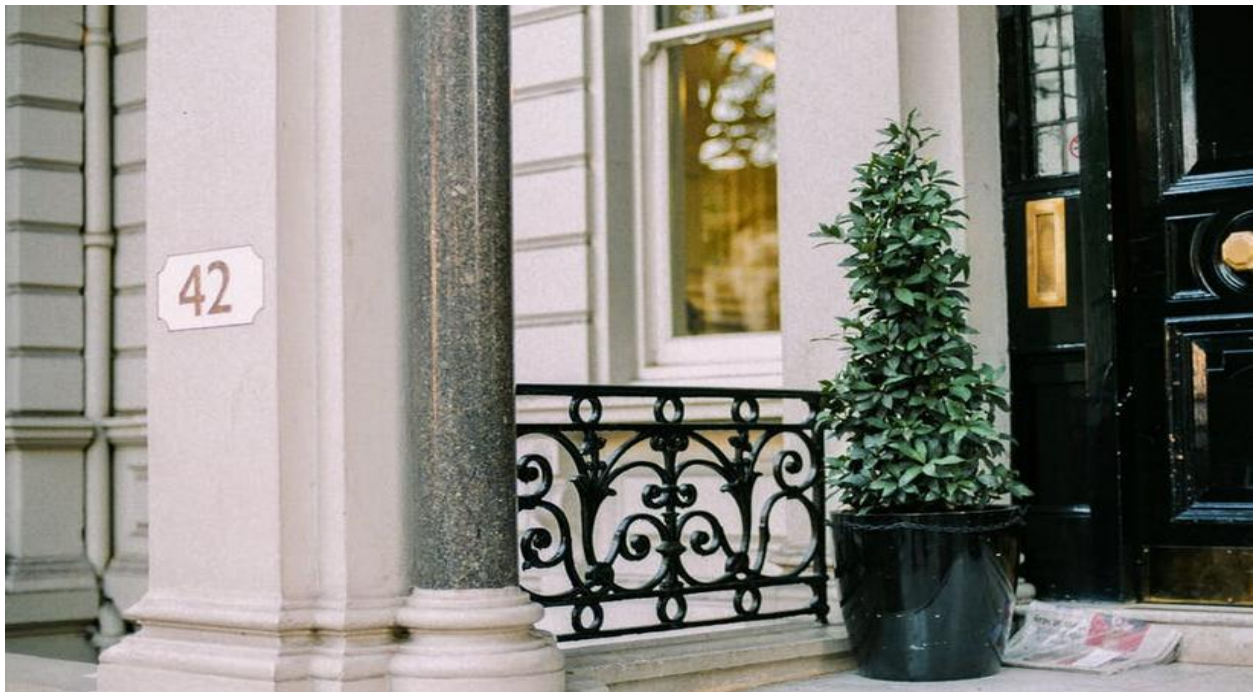
Undeniable Improvement in Rural Regions... Far From Perfect

In recent years, developing countries have witnessed an **unparalleled rural-to-urban migration** causing a rapid and irregular population distribution. As a result, it has become **increasingly difficult to locate or identify places**, resulting in 'non-existence' of people and premises.

Today, close to **two-thirds of the world** suffers from complicated, inadequate or inconsistent addressing systems. This means, therefore, that an over 4 billion people are completely in the dark, unable to receive aid, report crime or get deliveries to their doorsteps. In developed countries, poor addressing can be costly and annoying. In the developing parts of the world- where **traditional addressing systems are either poor or outright inexistent**- poor addressing can be a growth inhibitor or worse, a threat to the lives of citizens.

The Last Mile problems

Poor addressing has arguably taken a huge toll on online retailers. While the e-commerce scene in Africa, India, and Asia is growing by double digits, these regions remain the hardest to serve owing to **logistical issues associated with last-mile deliveries**. Delivering packages to customer's door-steps is a major challenge particularly in the urban centers. As a result, online retailers have had no choice but to combat these **costly logistical problems** by seeking digital addressing systems and other alternatives to aid in their delivery and keep their businesses afloat.



As e-commerce grows even further, **consumers are set to experience bigger delivery issues**. To address this logistical challenge, some retailers resorted to creating “fulfillment centers.” Still, this has **largely been ineffective** because only a few retailers can afford the capital-intensive fulfillment centers.

Logistics Nightmare: A case of South Africa, Brazil, and Japan

With the advent of the internet and smart phones, modern methods of expressing locations have been created, like geocoding and use of GPS. This, however, hasn't negated the fact that a large part of the world remains completely unaddressed.

Brazilian addresses are designed to have six main pieces of information- Name of the street, house or building number, neighborhood, city, state code and postal code. South Africa's forms

of addresses include a building address, a street address, a site address, an intersection address, a landmark address, a farm address, a Post Office address, and an **informal address**.

Both countries have a **plethora of rural villages**, whose addresses are **yet to be stored in databases or geocoded**. Verifying that such areas are valid is otherwise **impossible**. Remote villages in rural South Africa have seen occasions where victims of natural calamities are **not accessible** because such locations are not addressed.



South African farm owners are free to name their farms. In the event that the owner changes this name, validating the farm's address becomes quite a task. A similar situation has been witnessed in Brazilian suburbs where a property developer **chooses to use a different name for a location**, from the one assigned by the municipality. Eventually, these colloquial names replace the official names, **creating problems for service delivery**, such as emergency response.

For tourist, one of the most essential things is **finding your way around on foot**. Both Brazil and South Africa enjoy their fair share of tourists. Many tourists have wandered too far without guides and **gotten lost in a foreign land**, many times not speaking the local language. In both countries, the **ambiguity in addressing systems** causes situations whereby **two addresses refer to the same place**, or several **places share a name**.

Japan's addressing system also makes to the list of error-prone addresses; a single apartment block in Tokyo can have **multiples entry- and hence delivery points**. In such situations, an address can contain as much as eight lines of codes, which can be **profoundly misleading**.

While most major cities around the world experience crime, Brazil is principally vulnerable to this major social issue. As difficult as it is to find a correct address, getting medical or law enforcement to respond is equally difficult. **Accurate addressing systems are essential** in order to **streamline services and businesses**.

The Real Cost of Logistics

The **final leg between a consumer's doorstep and the retailer's distribution centers** (the last mile) is evidently the **most expensive and exhausting** part of the shipping journey, yet, there's **no effective solution** to this dilemma.



Online retailers have had to wade through the confusion of reaching shoppers who don't always have traditional addressing systems, or street names and numbers, but instead **rely on landmarks**. Sometimes, locations with naming systems or **inaccurate pointers** can present **even greater challenges**. For instance, writing **just a single letter incorrectly** in Iceland could **cost a courier** a 5 hours' drive of fuel and time. Iceland has no addressing system at all. Similarly, most countries in the developing world often rely on poor or inaccurate addresses based on descriptive landmarks. Often, shoppers place their orders with only their names and phone numbers being the closest 'addresses'. Lack of conventional systems of location identification has seen most **shoppers rely on landmarks** as addresses which usually present major challenges to delivery drivers who have to **revert to manual means** of finding customers.

Nowadays, travel has become more predictable and convenient. On the other hand, our obsession with the internet and social platforms means we spend a lot of time exploring the online space. That leads to an important question: has technology brought about digital addressing systems to **effectively address** traveler's navigation concerns? The answer is a resounding 'NO.'

Three major problems are certain;

- **Online shoppers** in emerging markets-especially those in highly populated areas or rural regions- **cannot be located easily**. As a result, e-Commerce has faced untold suffering
- The **need for personalized addresses** has never been so high. The world is becoming increasingly fast-paced meaning there's no time to waste on.
- **Traveling has gotten scarier**; there's need for a practical and lasting solution.

Naviaddress: The ultimate logistics solution

With over **50% of cities throughout the world poorly addressed**, there's no better time to **address the unaddressed**. As online retailers struggle to figure out how best to reach their shoppers without the **erroneous conventional street addresses**, a unique blockchain startup-Naviaddress-is creating a **digital addressing system** aimed at changing the way the world interacts with location addresses. The idea behind their revolutionary solution will see **lengthy physical addresses replaced by a string of digits** called a "Naviaddresse."



The startup seeks to create new digital addresses that can be **electronically stored and scanned** for a range of deliveries to replace the **lengthy and error-prone** addresses currently used on goods. According to its developers, the new system could be the **ultimate solution** to e-commerce biggest headache- delivery. Naviaddresses also carries a promise to **simplify internal**

verification processes. But, how could this happen? Well, Naviaddresses can be **assigned to all points and objects**, meaning they could be verified just once. When verification is complete, both instances are considered ‘verified’ and **doesn’t need subsequent validations.**

The new addressing system is set to **reduce the chances of address duplication, resolve confusing addresses and improve the internal efficiency** of logistic providers while also **enhancing customer experience.** Naviaddresses are high precision addresses that will see all objects and locations verified by a transaction trustless ID. For this reason, the new addressing system **will cut down on waste** while reducing **the uncertainties and risks in transactions between different parties.** The **use of words in the new system** (as opposed to numbers) will **ease the location of delivery points** world over. Addresses will be visible on maps and be traceable with utmost geo-coding accuracy.

Naviaddress will also bring the **much-needed reprieve** to tourists and other travelers. Last-mile navigation issues **affect travelers in all parts of the world**, but more so in places where mobile technology is less pervasive (fewer details on maps, poor or no cellular signal, etc.), within cities that have **an ancient street plan** or when visiting a **brand-new neighborhoods.** Smaller hospitality operators are often **not good at signposting** and making it obvious to new visitors how to find them. Travelers often get tired or jet-lagged after a long journey; all they want is to **go to their accommodation** and unpack. The good news is that **definitive step-by-step directions for the ‘last mile’ exist in every Naviaddress.** This feature is supported by local photos and tips to help travelers locate their accommodation.

Overall, the digital addressing system is **extremely beneficial.** Besides spurring navigation, Naviaddressed will **usher the world to global address standardization.** Addressing the logistical challenges is not only vital for **resolving delivery issues** but for **growing the customer base** as well. The new solution will **spur e-commerce in emerging markets** by **ensuring a dependable delivery** system for online purchases. In its quest to **address the unaddressed**, Naviaddress will bring every **rural location to light** and **optimize the services of logistic providers.**