

THE OPPORTUNITY PROJECT

2022 PROBLEM STATEMENT

Transforming Local Addressing Systems in Puerto Rico

U.S. Census Bureau and U.S. Department of Housing and Urban Development (HUD)

THE CHALLENGE – Develop awareness campaigns, guidelines, tools, and solutions to local addressing and geolocation challenges in the Commonwealth of Puerto Rico, especially within vulnerable communities (i.e. those disproportionately affected during a natural disaster or emergency situation due to accessibility, demographic characteristics, historic vulnerabilities, and/or socio-economic inequities).

EXECUTIVE CHAMPION – Robert Santos, Director, U.S. Census Bureau

THE PROBLEM – Though often taken for granted, locatable civic addresses are critical during catastrophic events such as hurricanes and earthquakes, when residences and businesses cannot be located using traditional means of navigation that rely on structures, street signs, and landmarks. Residents of housing units that lack a locatable civic address may not receive services or assistance, such as emergency aid, as well as utilities, mail and package delivery. These services can even be out of reach to residents with existing addresses if they are not locatable and portrayed in consistent, uniform, and unambiguous ways to service providers.

Unfortunately, much of Puerto Rico faces a myriad of local addressing challenges including a lack of locatable civic addresses. First, many housing units do not have a unique address, and there may be several homes with the same address. Second, many housing units have mailing addresses that are not locatable to people on the ground and not locatable by digital mapping applications (e.g., P.O. Box and Highway Contract Route addresses). Third, citizens and institutions may not be aware of how to portray addresses so they are easily understood and can be processed by automated systems. Unnamed roads and streets compound these challenges.

Further, local governments in Puerto Rico may not have the resources to build an address data infrastructure to assign, collect, and maintain standardized and locatable civic addresses, especially within vulnerable areas. As a result, many communities lack locatable civic addresses with a house number and a street name associated with a geospatial coordinate that make them locatable by people and mapping technology. In other cases, where local governments have addressing programs, the address database is not openly available, limiting the benefit to the community.

THE OPPORTUNITY – Officials at all levels of government and community leaders in Puerto Rico need information and tools to identify the unique vulnerabilities of their constituents due to the lack of locatable, complete, standardized, and openly available addresses, and to help them respond in times of crisis. A complete inventory of addresses would support accurate counts through the decennial census, the American Community Survey, and the Puerto Rico Community Survey, which are critical for communities to receive their share of federal funds and be accurately represented in federal and local processes.

Innovative solutions and technologies have the potential to identify current address deficiencies and help create an accessible database of reliable, accurate, and standardized locatable civic addresses. These solutions may build upon recent progress – including through a 2018 TOP sprint – to meet the immediate needs of emergency responders, municipal governments, and communities in crisis.

Resources needed to overcome addressing problems include:

- Outreach and education about how to assign and uniformly portray addresses and why it is important and beneficial to society.
- Tools to help analyze and identify gaps in addressing and street names.
- Tools that can be used in the field and in the office to assign addresses, collect address coordinates, and validate, standardize, maintain, and share address and street name information.
- “Seed” data to serve as a starting point for data analysis and collection which can be shared openly (e.g., address lists, address point data, parcel data, and imagery).
- Linkages to open data sharing platforms such as the [Geospatial Platform and Census.gov](#).

VISION FOR SPRINT OUTCOMES – This TOP sprint will provide the necessary momentum for municipal governments to continue their efforts to fill in locatable address and street name gaps, standardize and openly share address information, and develop best practices to build an address data infrastructure that will advance equity and benefit communities.

TARGET END USERS – Tribal, federal, state, and municipal government leaders; mail delivery stakeholders; community members; advocates; and first responders in the Commonwealth of Puerto Rico.

RELATED DATA SETS

- ↳ [Address Count Listing Files and Map Viewer](#) – U.S. Census Bureau
- ↳ [Geographic Areas/Boundaries, Roads, Address Ranges, and Name Relationships, from TIGER/Line](#) – U.S. Census Bureau
- ↳ [2020 Census Demographic Data Viewer](#) – U.S. Census Bureau
- ↳ [Puerto Rico Community Survey](#) – U.S. Census Bureau
- ↳ [USA Structures](#) – Oak Ridge National Laboratory
- ↳ [Emergency Response Imagery](#) – National Oceanic and Atmospheric Administration (NOAA) National Geodetic Survey (NGS)
- ↳ [Puerto Rico Address Data Working Group reports](#)
- ↳ [TOP 2018 tools created in response to an earlier version of this challenge](#)
- ↳ [The National Address Database \(NAD\) Schema](#)
- ↳ Predominant Address Type by Census Block in Puerto Rico (forthcoming data expected May 2022) – U.S. Census Bureau

SPRINT LEADERS

- ↳ Deirdre Dalpiaz Bishop, Chief, Geography Division, U.S. Census Bureau
- ↳ David Cackowski, Federal Geographic Coordination Branch, Geography Division, U.S. Census Bureau
- ↳ John Huggins, Enterprise GIS Team Lead, Office of Policy Development and Research, HUD