LIGHTBOX

Location Intelligence

Broadband Mapping

About LightBox

Enabling the World's Most Successful Decisions Using Location Intelligence

Through the delivery of market-leading workflow, data and GIS capabilities, LightBox enables the success of over **100,000 CRE brokers and investors**, **1,100 banks and lenders**, **2,000 appraisal firms**, **5,000 environmental consulting and engineering firms** as well as **thousands of government agencies, telecommunication professionals, home builders, and land developers.**

Interoperable and scalable technology solutions

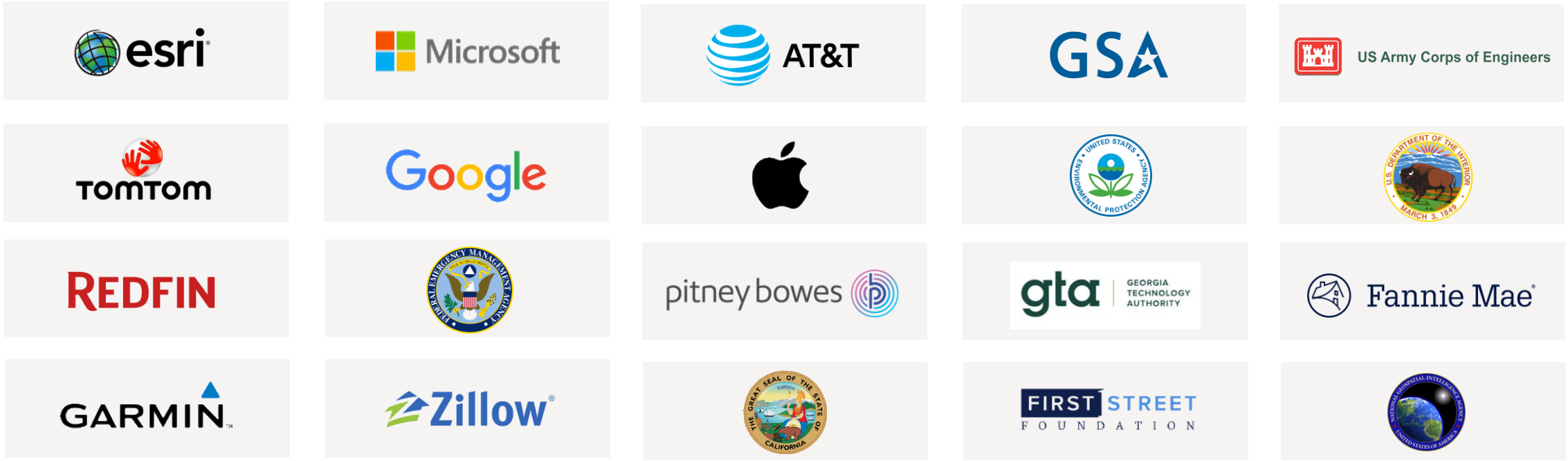
Unified data model powering end-users and workflow solutions

Robust spatial offering driving location intelligence

LightBox for Broadband

Proven and Commercially Available Solutions to Identify Underserved Broadband Households

LightBox enables location intelligence through integrated data. We create a building-centric view to understand broadband coverage. Integrated data from multiple sources to move beyond approximations the exact location of every building.



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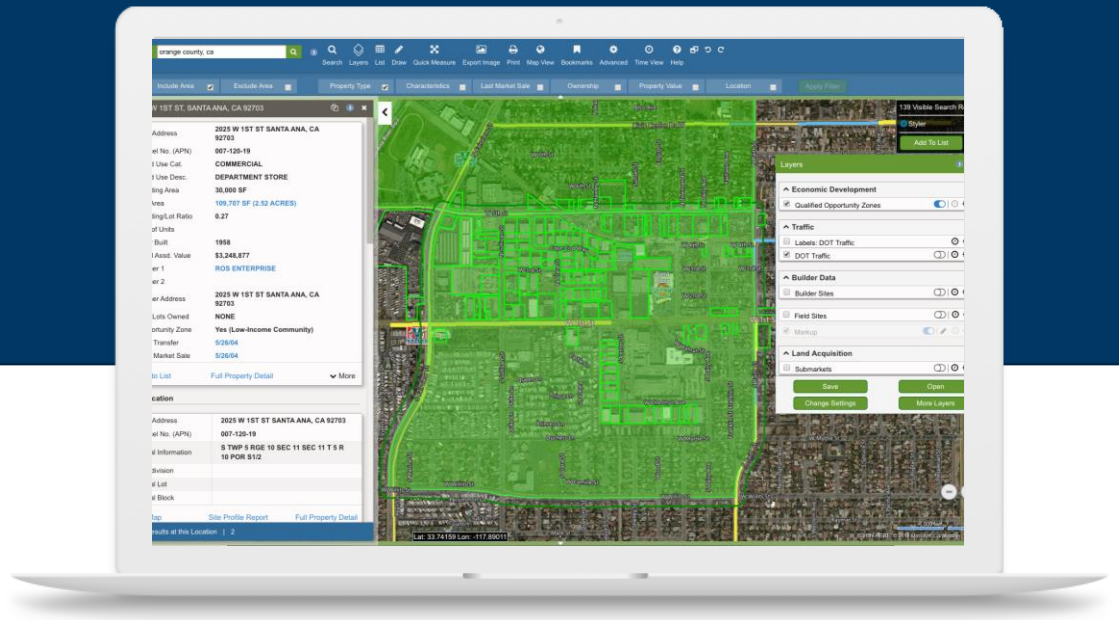
LightBox for Broadband

Create a Rich, Highly Accurate National Fabric of Broadband Coverage

The LightBox Address Fabric (LBAF) data solution:

- Sub-parcel Geolocation points
- Contains 240 million spatially located United States addresses.
- Covers all 50 states and the District of Columbia as well as the US territories.
- Solves for needs that require a high level of fidelity and location accuracy over a large area, including rural areas.
- Largest nationwide collection of parcel boundaries and building footprints as well as secondary addresses for both residences and businesses.

LightBox Address Fabric and Geospatial Platform



Available Now

North America's most complete parcel database matched to property data

Nationwide

Broad spatial data offering, including natural hazards, points of interest, opportunity zones, and more

Proven

Web service to stream content into applications in real-time + spatial processing and analytics at scale

Turnkey + Extensible

Robust data access, visualization, and management application

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Address Fabric

Coverage – Currency – Completeness - Accuracy

Parcels

300+
pre-linked attributes including property data and tax information

184M
Broadband serviceable locations

145M
parcel boundaries, 99%+ matched to property records

Parcel Boundary

Situs Address

APN/Prop Link

Parcel Centroid

Building Footprint

Building Address

UBID

Building Centroid

Buildings

120M
building footprints

98%
of buildings covered by U.S. population

240M
total addresses

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LightBox Rural Addressing Focus

LightBox Accurately Locates Buildings in Challenging Settings – Tribal, Rural, Lower Socio-Economic, Atypical Address Patterns

Example:

- Identify the boundaries of the parcel.
- Ascertain a building is on the property.
- Properly assign address.
- Identify the BSL to rooftop accuracy with the building location.
- Assign secondary unit information to the building where appropriate.
- Identify each linked address as business or residential.

LightBox: Location Solutions Driving Complex Analysis

Unifying the land with the building and property context is key to building Broadband Location Fabric

Building Layer
What is on top of the land and what is its use?

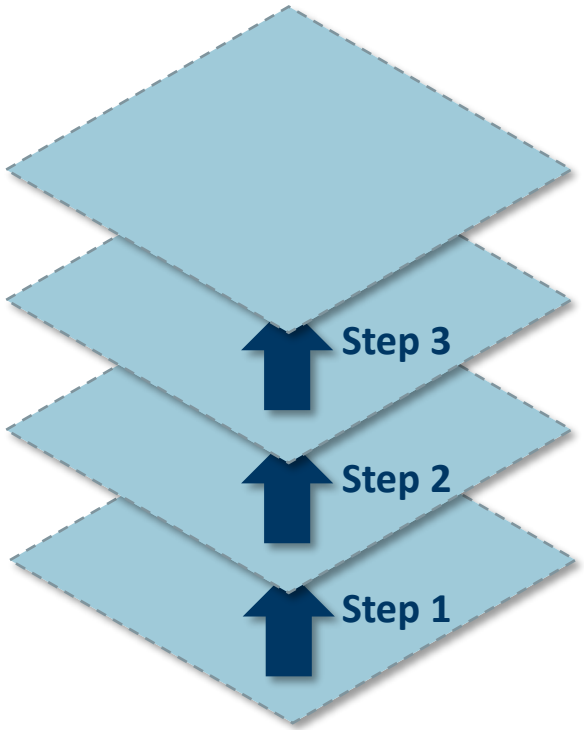
- Street addresses (postal, E911, potential addresses)
- Building footprint (height, ground elevation, sqft)
- Functional data (assessor, zoning, demographics, POI)
- Mobile data
- Transaction details

Land Layer
What's going on with the ground?

- Parcel boundaries
- Environmental data and topography
- Flood and hazard data

Geocode Layer
Where is the land and everything on top of it?

- Latitude/longitude coordinate as the location-based unique identifier for the associated land and building



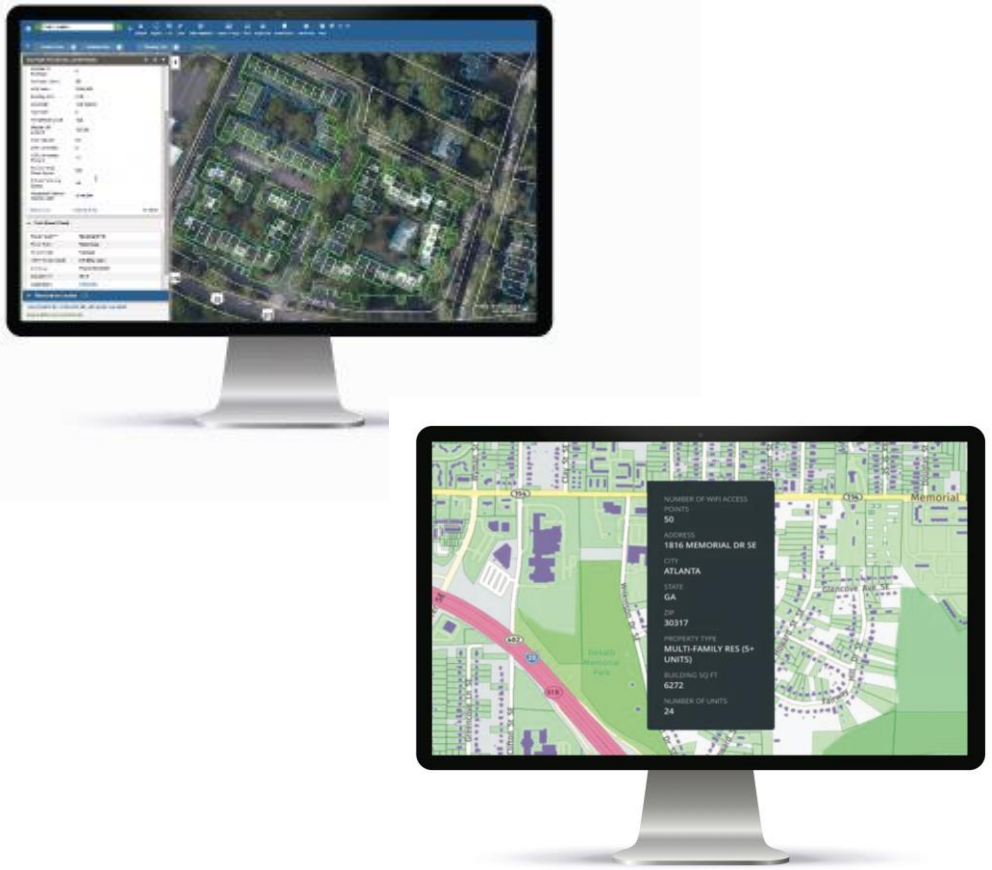
Step 1: Linking the parcels to a tangible "property" with an address layer and building footprints
Step 2: Use the geocodes to link the land and building layers
Step 3: Linking a building and location to broadband coverage; leverage address lookup technology

LightBox: Multifamily Residential Build-Out

- 1 Building
- ZIP+4s
  - 78643-1404
  - 78643-1405, APT 101-109
  - 78643-1406, APT 111-119
  - 78643-1409, APT 121-129
- All USPS Residential Address
- Year built (est. 1990)
- Owner LLV1, LP
- Usage (apartment complex)
- Microdemographics:
  - Median household income ($26k/yr)
  - Prevalent White, Hispanic
  - 18 Households

Alternative Data Sets

LightBox Develops and Joins Additional Data Components to Solve the Challenges Beyond Identification of Unserved Areas:

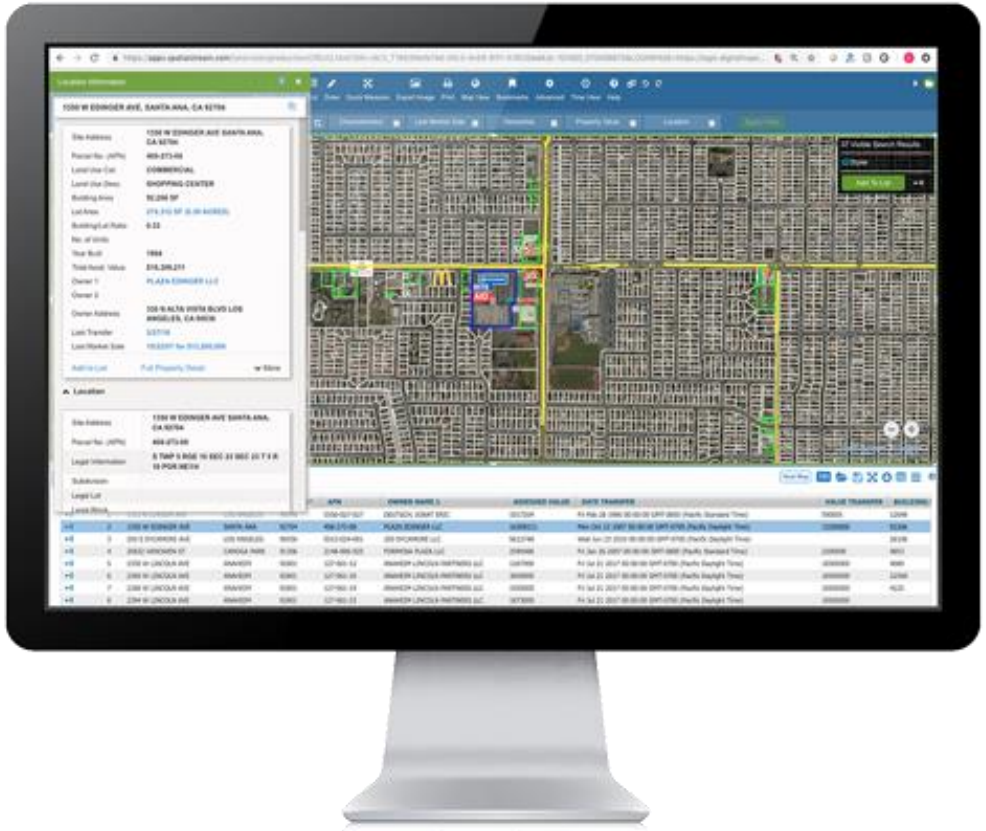


- LightBox joins and spatially overlays multiple data sets.
- Spatial queries allow for custom distance calculations critical for gauging connection costs.
- This includes micro demographics such as:
  - Income level, employment and race
  - Speed test, mobile trace and billing amounts
  - Wi-Fi connected devices
  - Broadband affordability estimates
  - Climate-adjusted flood data
  - Physical and financial property characteristics
  - Business and point of interest detail data
  - Construction data
  - Topographic data

LightBox Geospatial Analytics Platform - LandVision ®

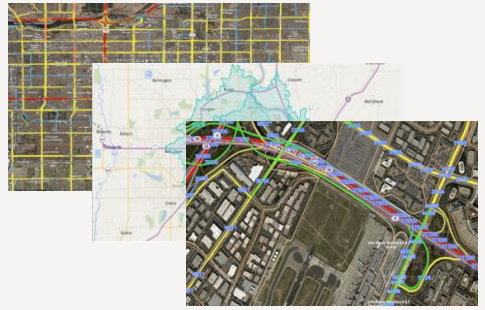
LandVision® offers data access, visualization, and management application – Unify your property related data assets in an intuitive, map-based interface.

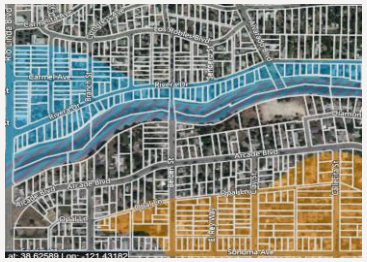
- **Data Access and Visualization –** robust spatial data included + load proprietary and 3rd party data
- **Data Interaction and Analysis –** query, style, edit, analyze your location data
- **Data Management –** creation, curation and sharing
- **Data Output –** map exhibits and targeted data extracts

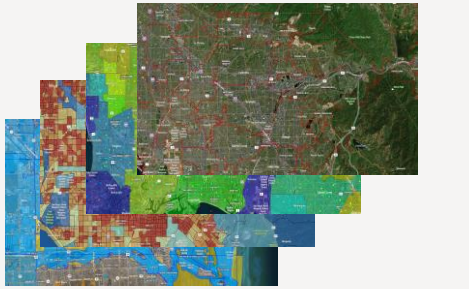


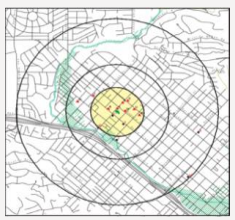
Map-Ready Content

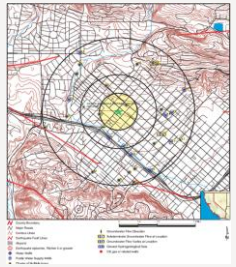
- Parcel Boundaries DMPID
- 300+ Property Attributes
- 20+ Years Property Sales History
- Postal Boundaries
- Hazards: Natural & Manmade
- Points of Interests
- Demographics
- Builder Sites
- Schools
- Tribal Maps
- Census Boundaries
- Topographic Info
- Traffic Count
- Opportunity Zones
- Contaminated Sites
- Comprehensive Environmental Data
- Landfill Sites
- Solid Waste Disposal Sites
- Superfund Sites
- Coal Ash Facilities
- Manufactured Gas Plants
- Clandestine Drug Laboratories
- Manufactures and Importers of Chemicals
- Geographic Soil Maps
- Topography Maps
- Building Footprints
- Rooftop Commercial Addresses
- True Ownership behind the LLC
- Sub Parcel Addressing
- 3D Buildings











Map View Examples

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LightBox Experience: State of Georgia Public – Private Partnership

Goal:

- Publish a statewide broadband availability map to provide broadband grant program addresses of unserved areas.

Key Consideration:

- GTA needed complete address universe for the state at the unit level.
  - 4,713,277 Property points delivered
  - 5,776,773 Addresses delivered
    - 22.6% more locations
  - ~5 million addresses used after duplicates and vacant parcels removed

LightBox Solution:

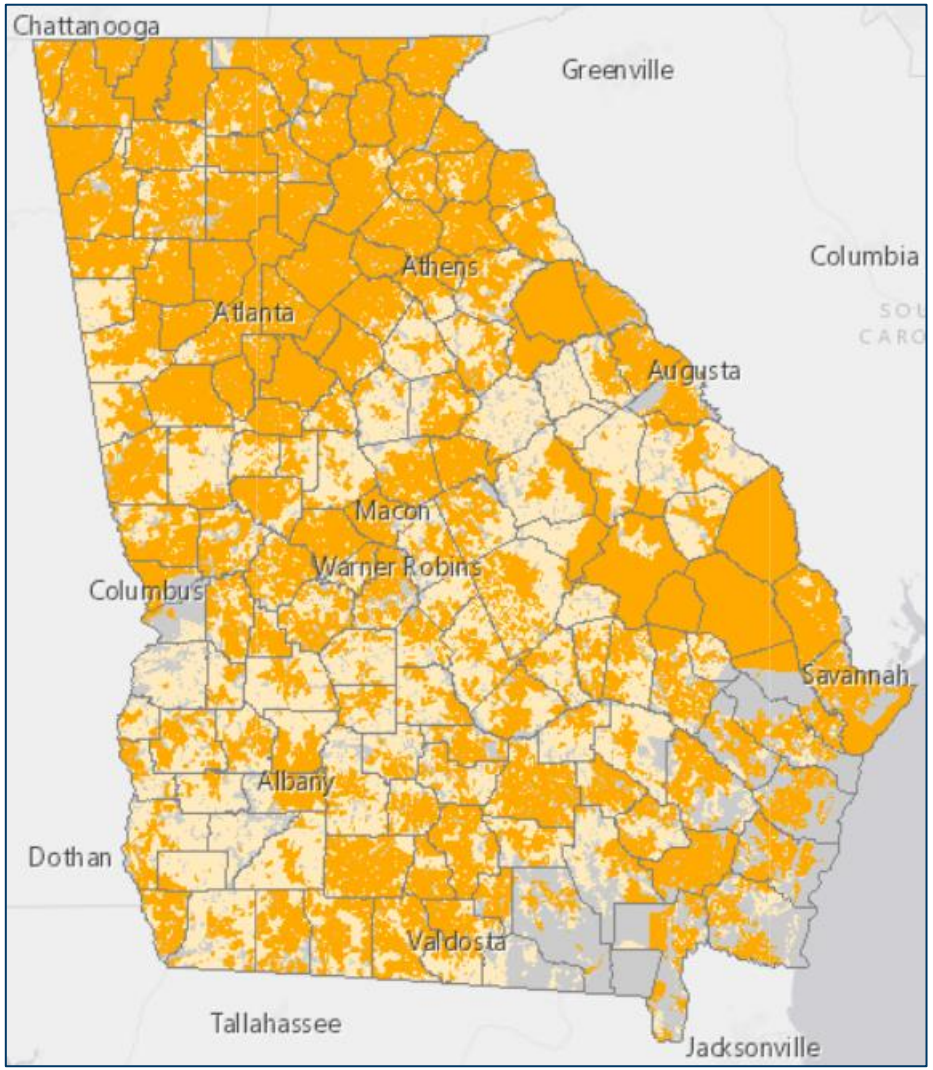
- LightBox "Address Fabric" (5.6 million locations)
  - Multiple Dwelling Units, Multiple Structures on a parcel, Business Parks, Strip Malls

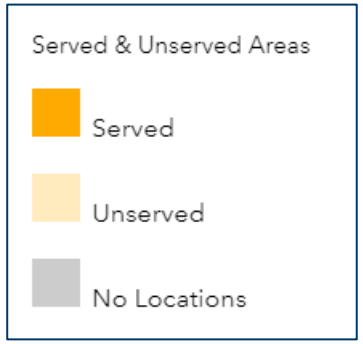
Testimonial:

- "The LightBox folks have been great to work with and we could not have built the master location database for the broadband maps without their data product service" –Chief Strategist Georgia Technology Authority

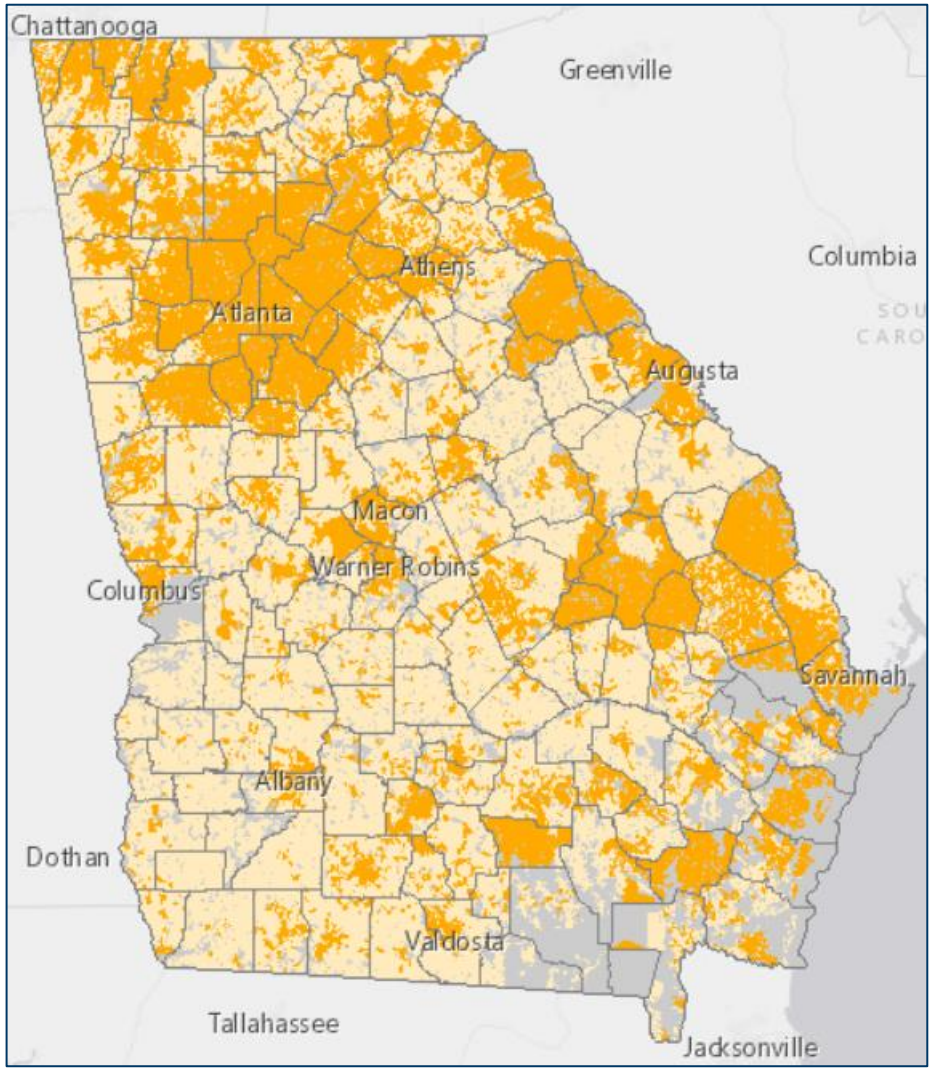
LightBox Experience: Georgia Broadband Mapping

Census Blocks: FCC 477 2020



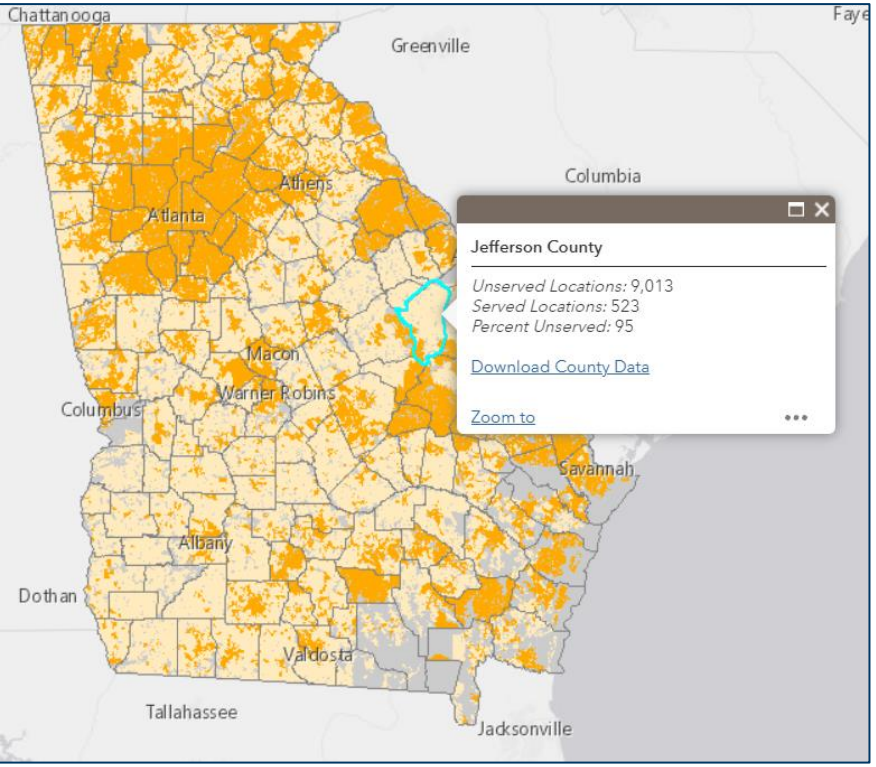


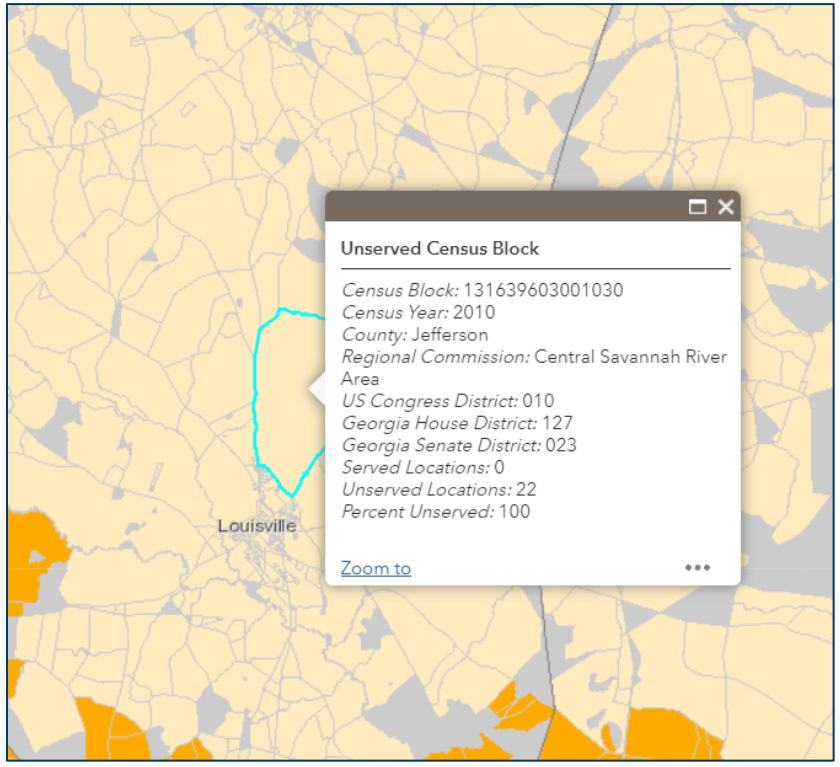
Census Blocks: Georgia 2021

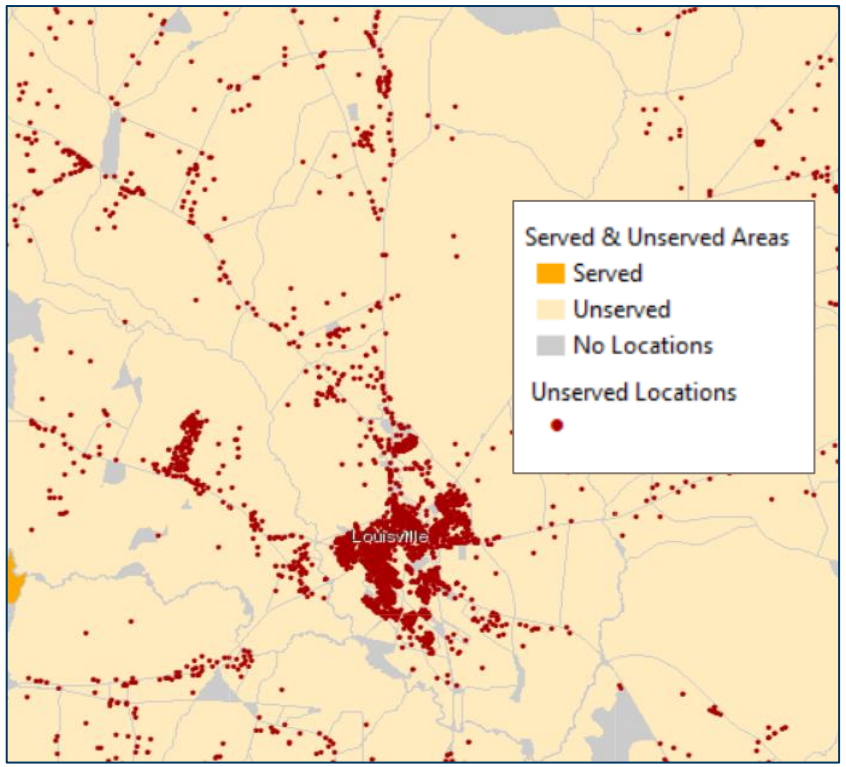


LightBox Experience: Georgia

Data and Mapping at the State - County - Census Block - to each structure and location

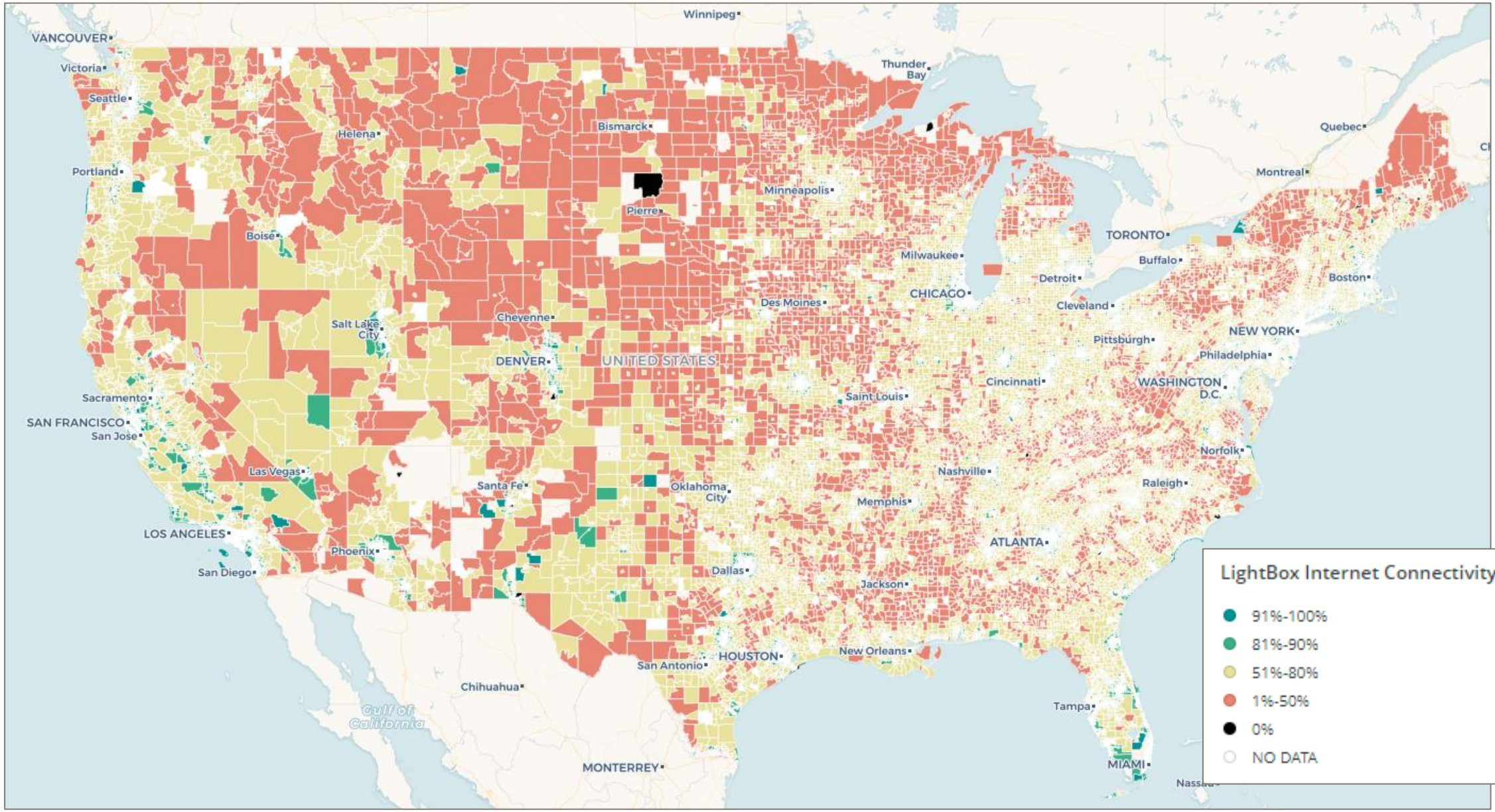






LightBox Data and Mapping Solutions

Integrating location data with WiFi signal data




LIGHTBOX
lightboxre.com
@LightBoxRE
LightBox

We have a nationwide structure, parcel and address fabric that we update and enhance every day to enable over 2,500 insights per second for the 15,000 customers we support. Our clients depend on LightBox data and GIS tools to run their businesses and to make informed decisions regarding matters that require accurate location intelligence.

Even if you have never heard of LightBox, chances are you interact with our data every day. If you have ever ordered Uber Eats, searched for a home on Zillow, navigated to your destination with Google maps, or ordered Verizon service, you have used LightBox data.

We have been collecting, curating, relating and standardizing thousands of authoritative datasets for the past two decades to do one thing; provide location accuracy and context. LightBox provides both data and answers – whether it be for the National Geospatial Agency focused on foundational data for homeland security and defense, the State of Georgia looking to remap broadband service, a technology firm focused on routing and logistics and consumer maps, a real estate firm focused on insights about a property, a lender focused on risk to your asset or portfolio, or a telecommunications firm focused on service area market share and infrastructure build-out.

We bring the data, the technology, and the data science to help you bridge the digital divide.

LightBox Data Platform

• Ingests data from over 10,000 different sources, including government records, partner data, orthoimagery and lidar;

• Processes data, over 2 petabytes in total, through its data processing pipeline with standardization, address matching, linking, and quality control stages, among others; and

• Delivers data via bulk data deliveries, its web-scale SpatialStreamR API and its LandVision™ mapping application to support over 2,500 location insights per second.

LightBox Support

Services touch more than 100,000 users of our data with over 350 customer interactions per day. In addition, LightBox employs more than 50 USA-based research analysts that perform a varied set of property research to help LightBox customers validate addresses and then determine property exposure to natural and environment risk factors.