

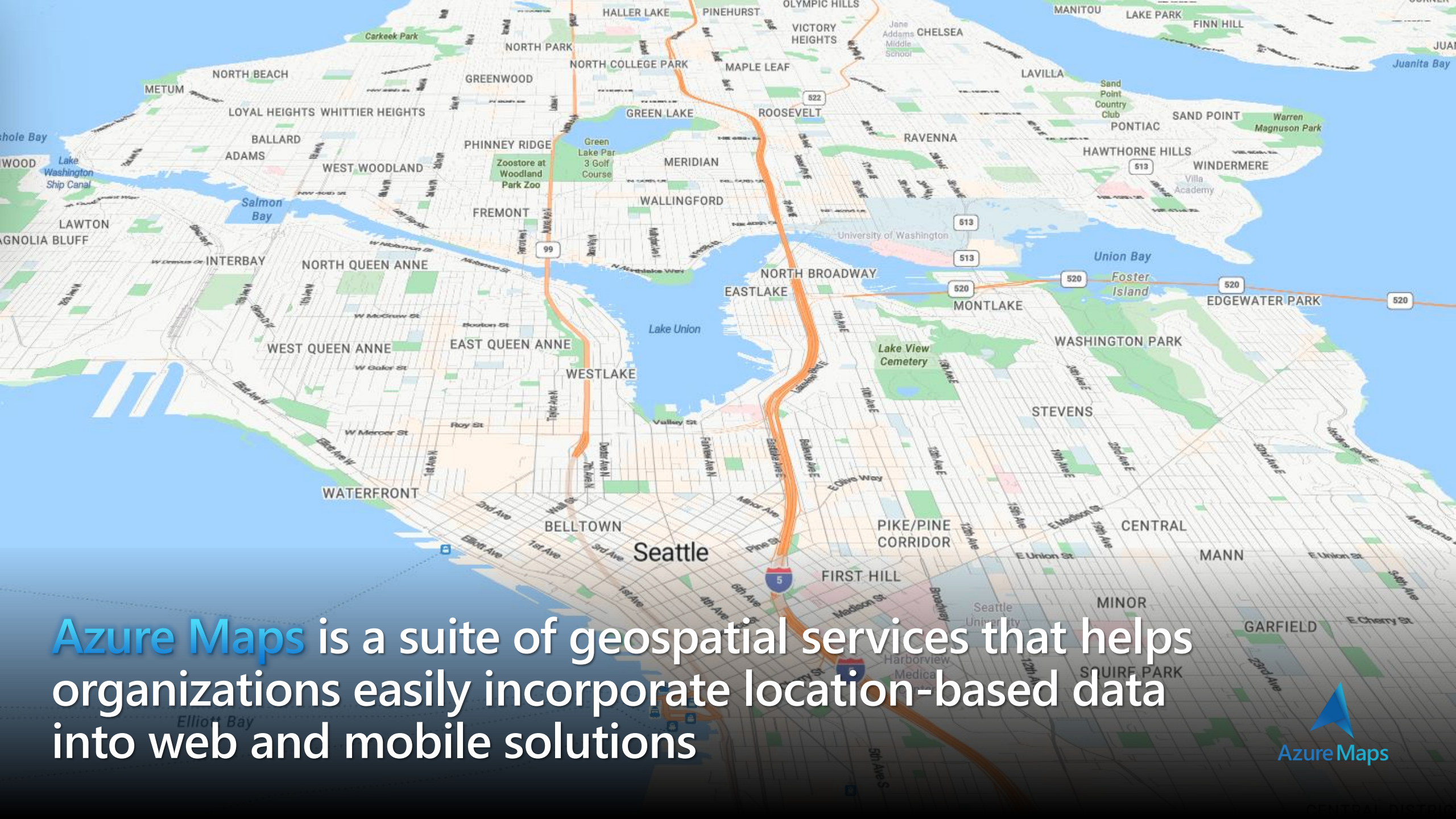
Bring intelligent location-enabled experiences to life with Azure Maps

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Microsoft Enterprise Maps





Azure Maps is a suite of geospatial services that helps organizations easily incorporate location-based data into web and mobile solutions

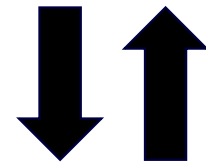


What is Azure Maps

- A geospatial **developer** platform
- Built in partnership with industry leaders
- Innovating for enterprise use cases
- Azure native
- Available for Web, Mobile and the Microsoft **Power Platform**
- Limit data residency to the **European** (EU) or **United States** (US) geographic areas (geos)
- Microsoft's Mapping Journey is empowering more than 20+ years of consumers and enterprises solutions



Azure Maps



OpenStreetMap



A platform of location-based services for the enterprise



Maps

Display objects, points of interest, and business listings on static map images or interactive vector map tiles



Search

Create applications that provide details about a given location, nearby points of interest and address geocoding



Imagery

Get high-resolution satellite and aerial imagery that's available worldwide and continually updated



Routing

Calculate optimized routes for multiple modes of transportation such as car and truck vehicles, support for route matrix and isochrones for time and EV range



Spatial Operations

Enhance your location intelligence with a library of common geospatial mathematical calculations



Time Zones

Obtain time zone and current time information from any location



Traffic

Real-time traffic flow and incident detail for display or for route calculations



Geolocation

Convert IP address to location



Data Management

Upload and store geospatial data for use with spatial operations



Creator

Create and publish your private indoor maps maintaining control of design, distribution, scale and access.



Weather services

Historical, current and forecasted weather data, air quality, tropical storms, radar and infrared satellite maps



Power BI integration

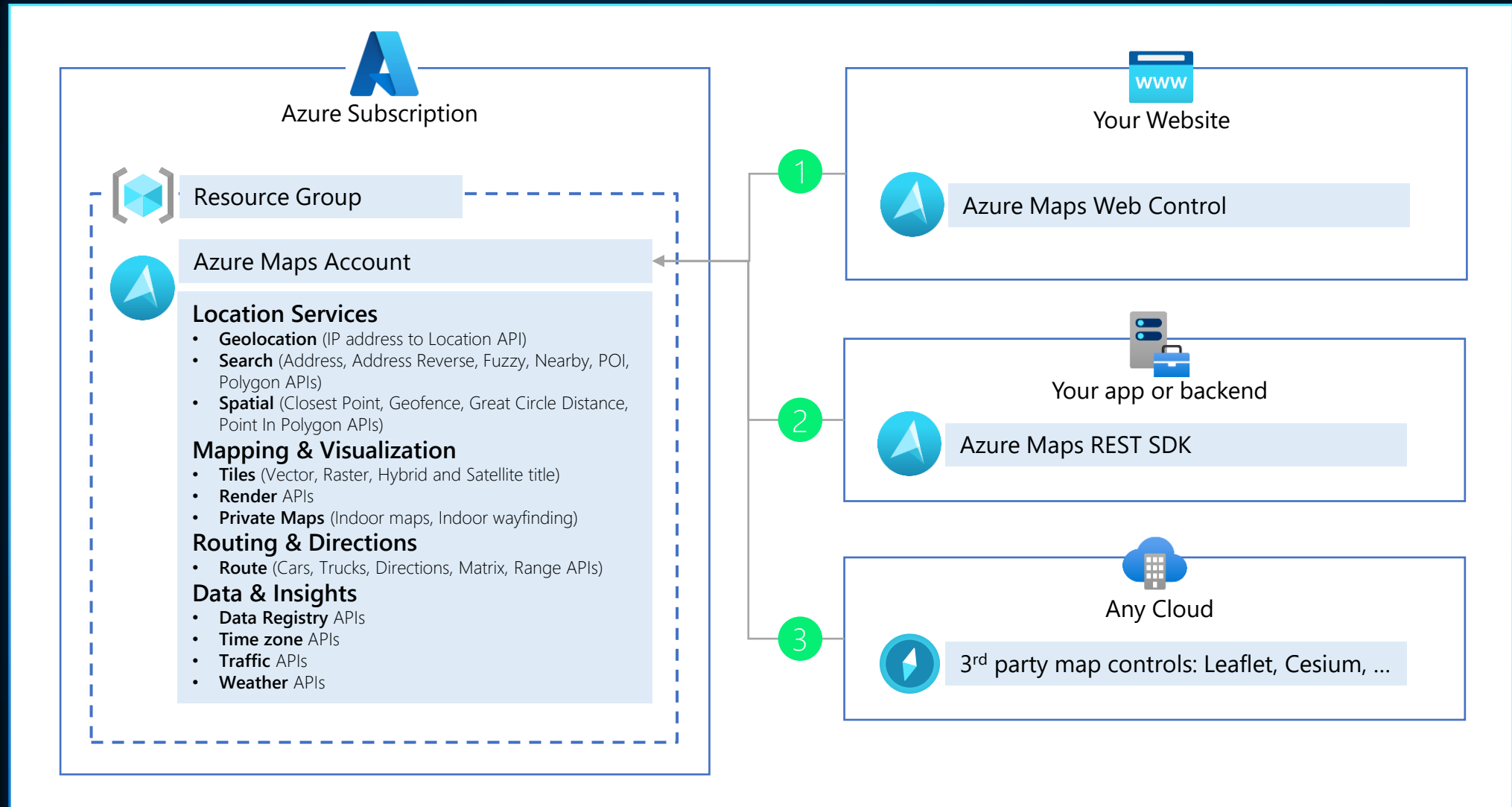
Integration with Power BI w/ rich data service and more powerful capabilities



US Gov Cloud support

Azure Maps services availability through Azure US Government Cloud

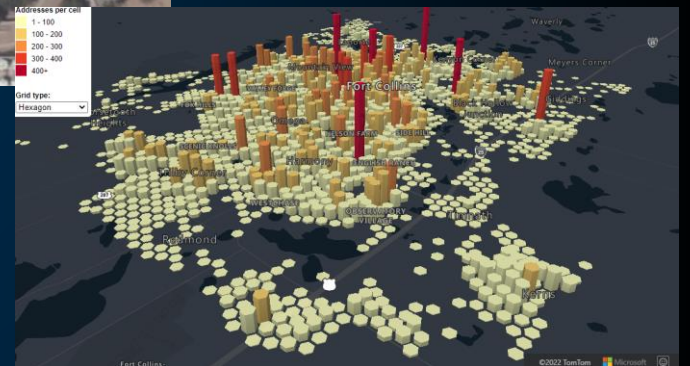
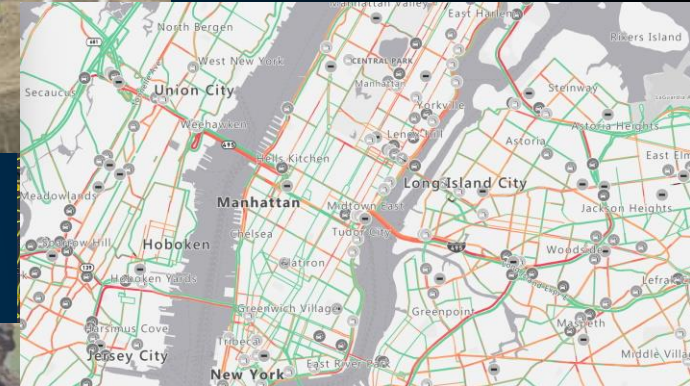
Using Azure Maps





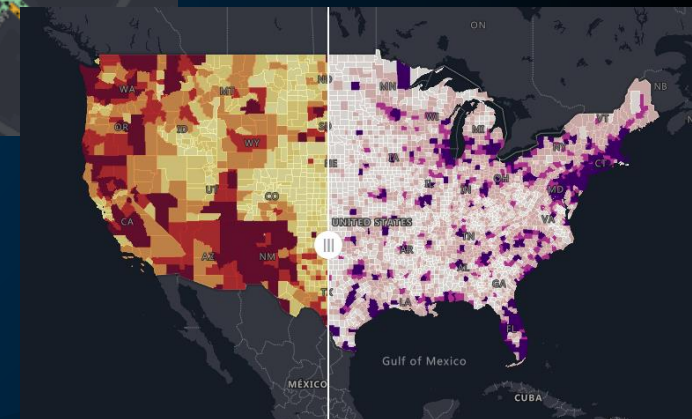
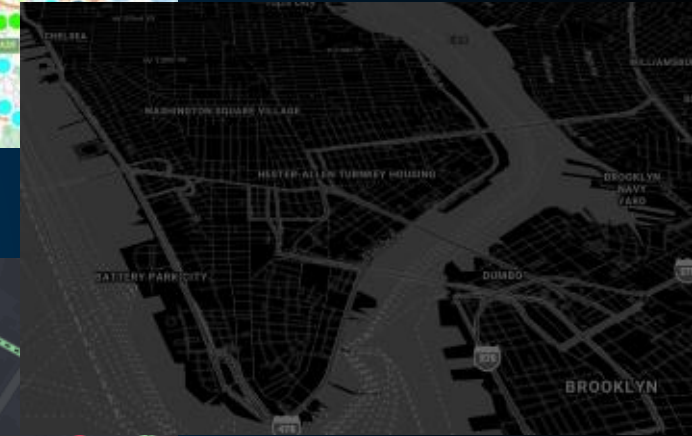
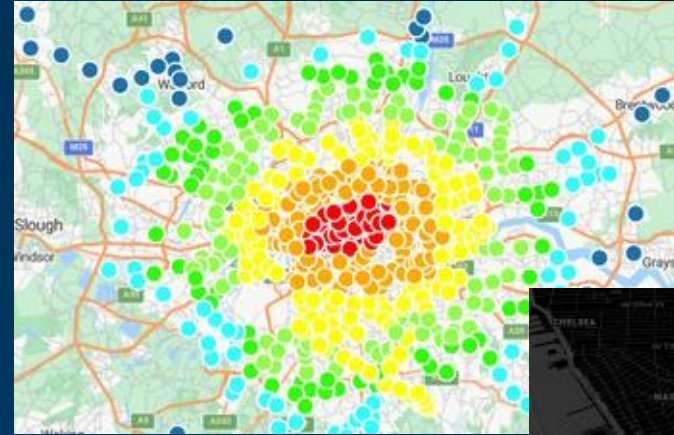
Render Maps & Imagery

- Vector and Raster tiles
- Base maps & Satellite imagery
- Weather Radar & Infrared animated tiles
- Real-time traffic Flow & Incidents
- Several predefined styles also for accessibility

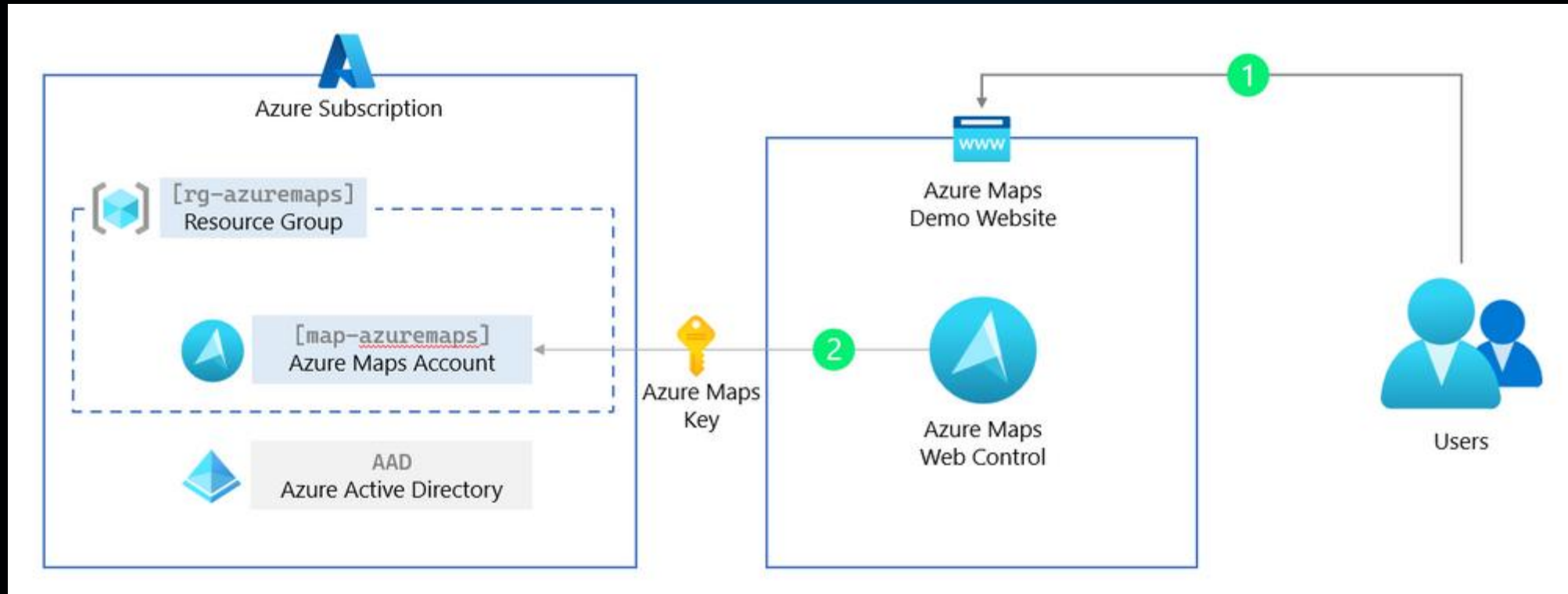


SDKs

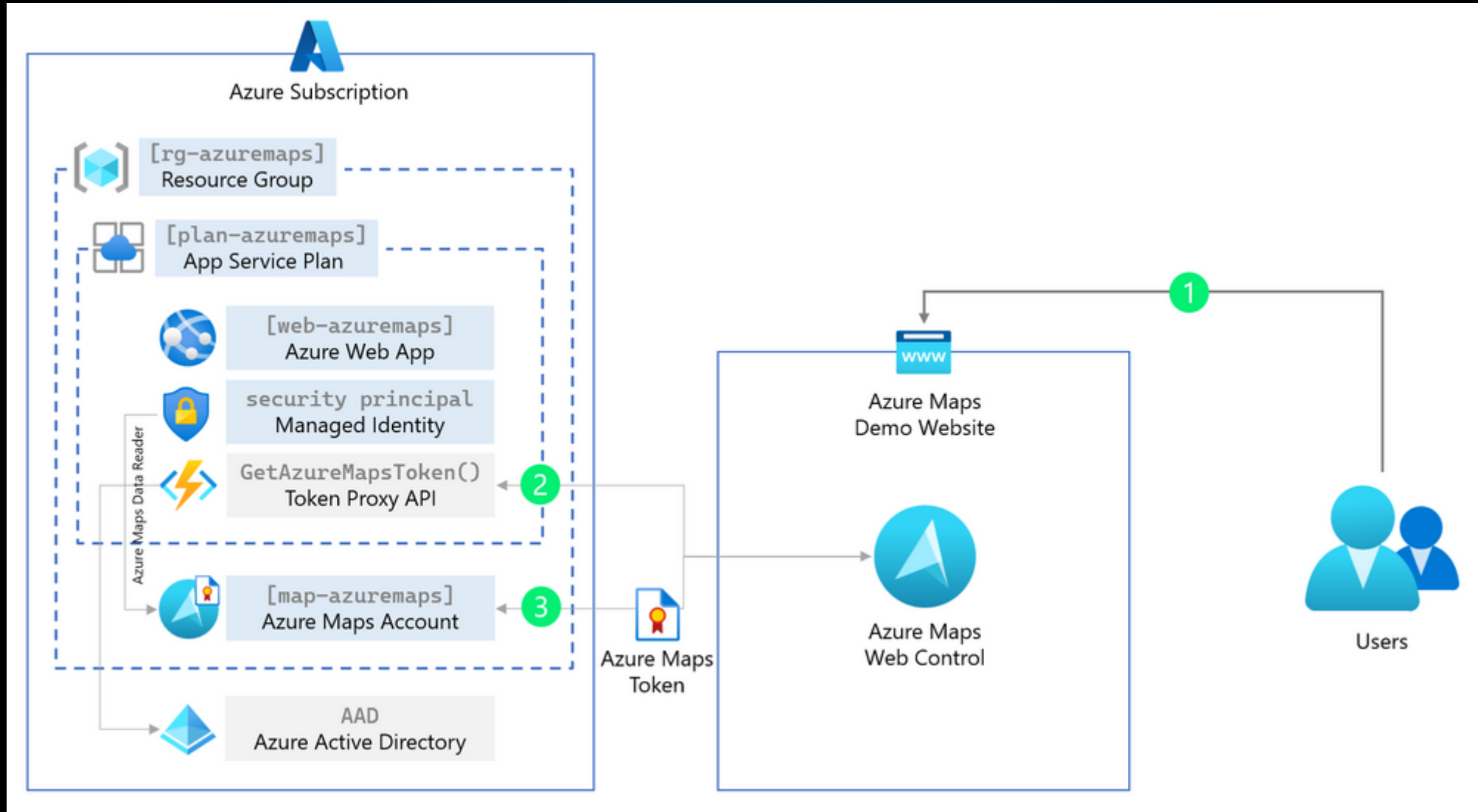
- Map Controls for Web and Mobile
- REST SDKs for C#, Java, Python and TypeScript
- Support for WebGL (Babylon, Deck GL and Three)
- Hundreds of samples (samples.azuremaps.com)
- Extensible through Open Web SDK modules



Subscription Key?

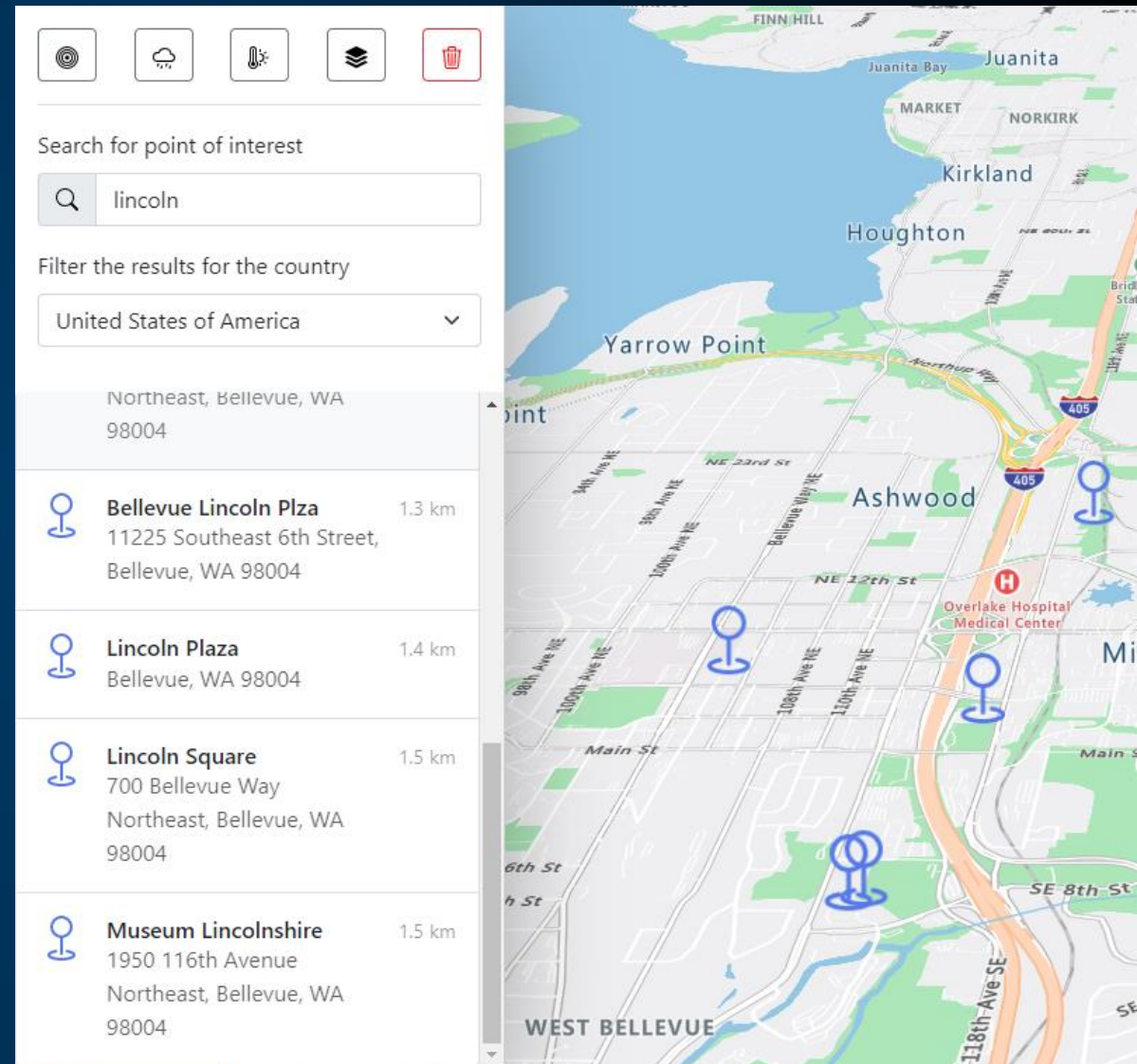


Azure Maps Token provider using Managed Identities



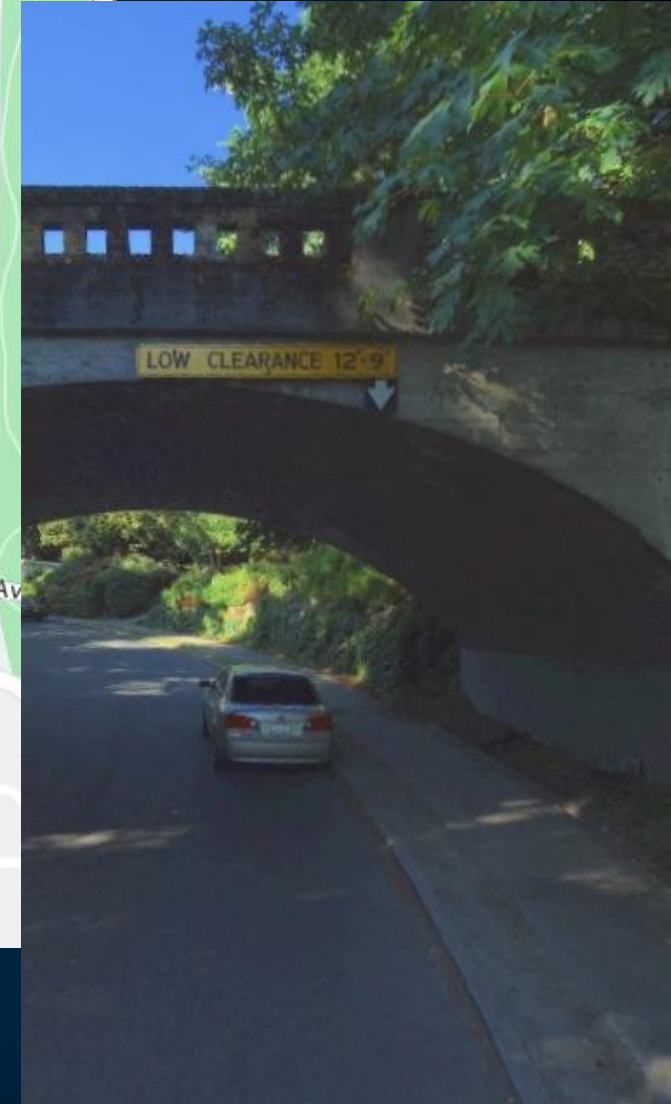
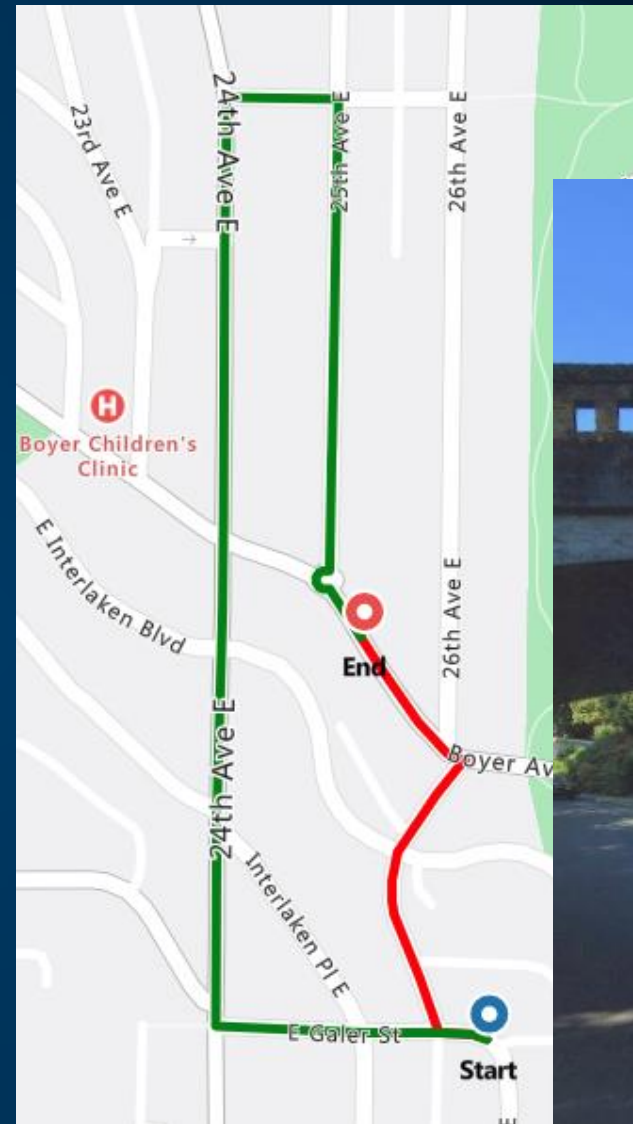
Search

- Autocomplete
- Address and Place Geocoding
- Structured or Unstructured
- Restrict Results by Bounding Box or Country
- Reverse Geocode to Address or Cross Street
- Batch Geocoding (up to 10K requests with 1 call)
- POI Search (incl. along route and in geometry)



Routing

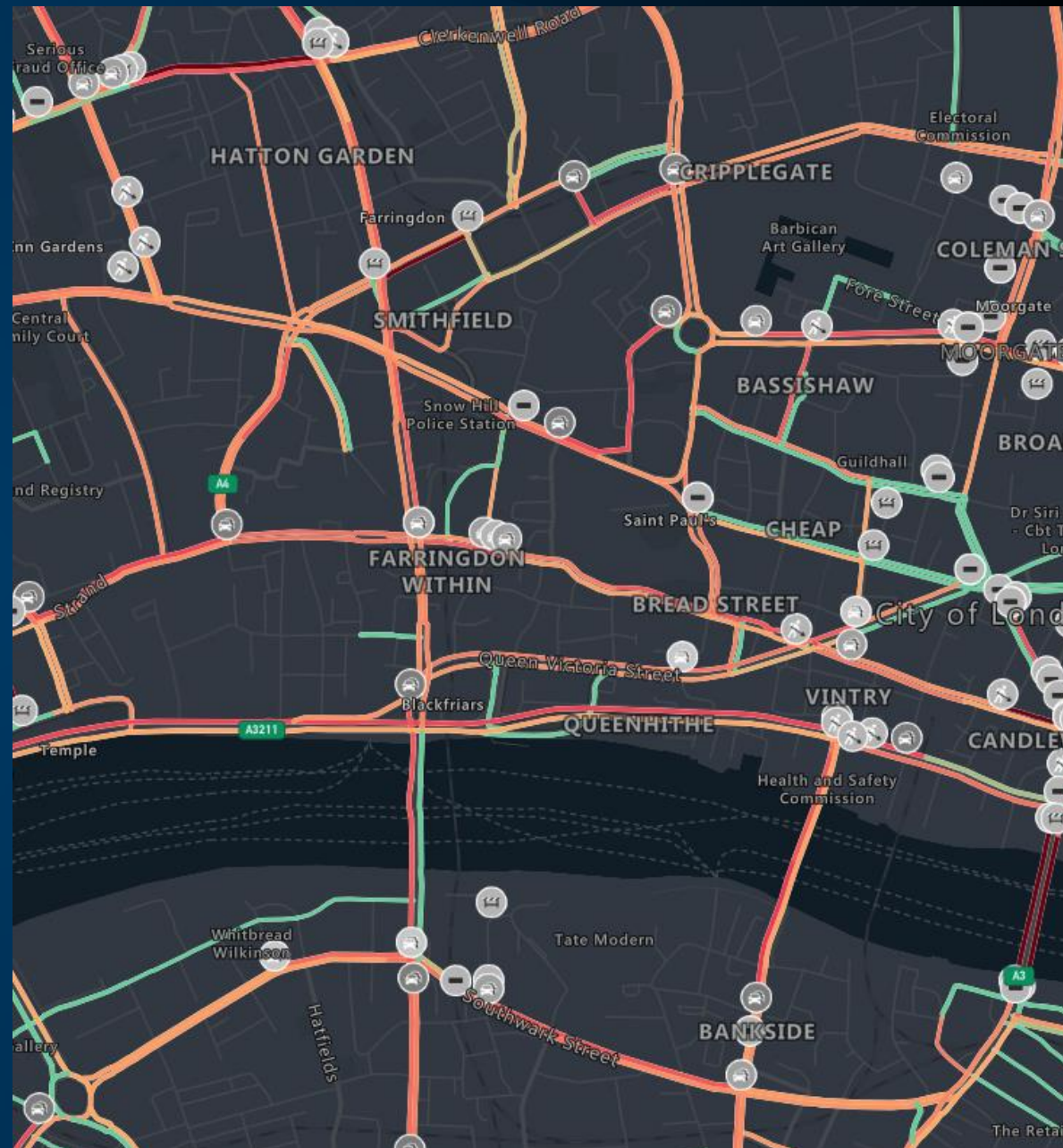
- Fastest, Shortest and Traffic-Based Routing
- Truck Routing (Height, Width, Weight, Hazmat)
- Combustion and Electric Engine Efficiency Routing
- Route Optimization
- Batch Routing
- Distance Matrix Routing
- Route Range (Isochrones) in time, kWh, fuel and distance





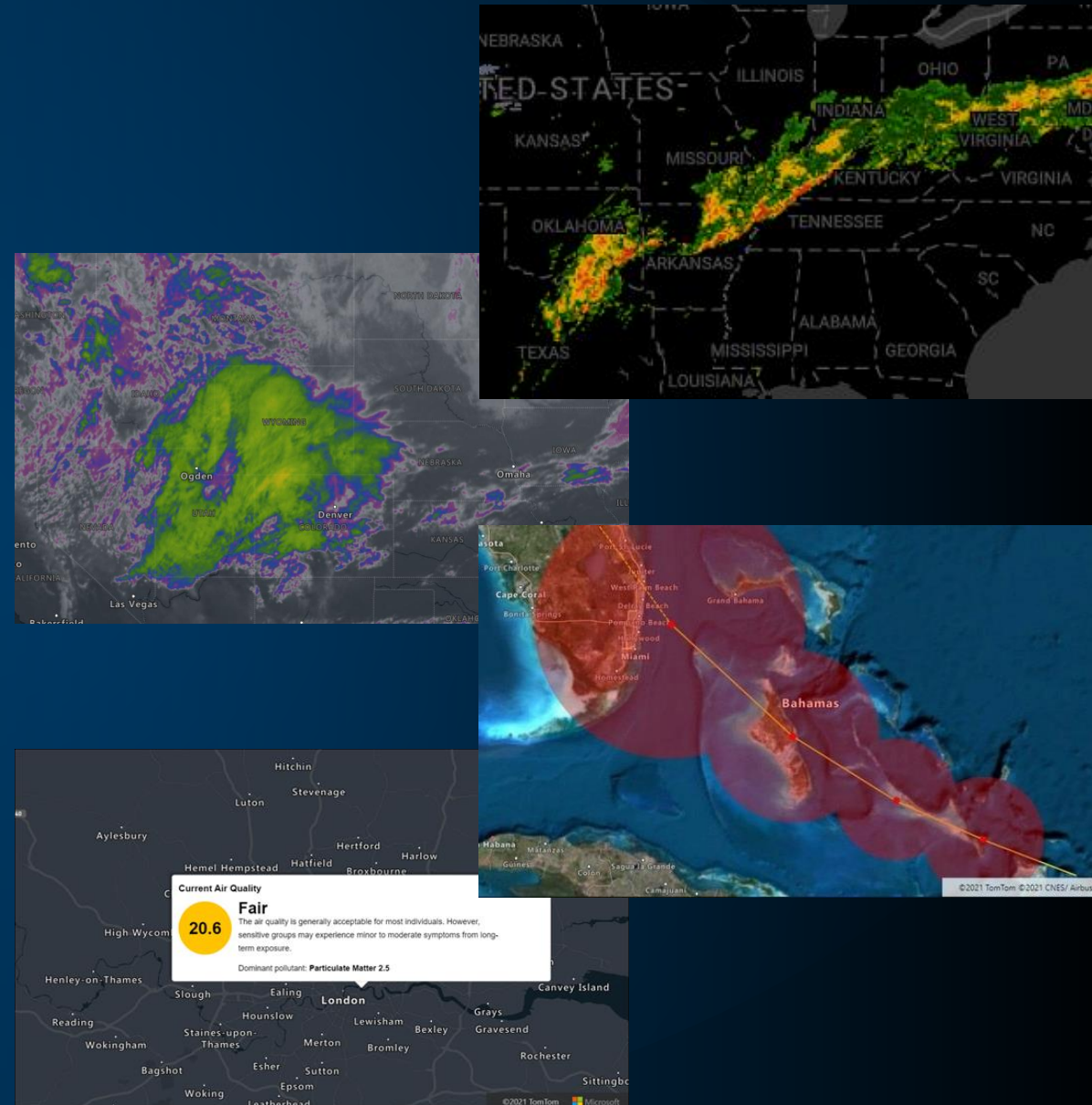
Traffic

- Flow
Raster and Vector Tiles
Updated Every Minute
- Incidents
Vector Tiles and REST API
Updated Every 2 Minutes



Weather

- Historic, Current and Forecasted Weather
- Weather Tiles (Radar and Infrared)
- Weather along a route
- Severe Weather Alerts
- Tropical Storms
- Current and Forecasted Air Quality



Time Zones

- Query by Coordinate or ID
- Uses Microsoft Compliance Polygons
- Powered by IANA and Windows Time Zones
- Provides Wall Clock Time, Daylight Savings and UTC Offsets



The image shows a world map with various time zones labeled with offsets from UTC. Two callout boxes highlight specific time zone data:

```
    "AliasOf": "Europe/Rome",
    "HasZone1970Location": true
  },
  "Id": "Europe/San_Marino",
  "IsAlias": true,
  "AliasOf": "Europe/Rome",
  "HasZone1970Location": true
},
  "Id": "America/Tijuana",
  "ReferenceTime": {
    "Tag": "PDT",
    "StandardOffset": "-08:00:00",
    "DaylightSavings": "01:00:00",
    "WallTime": "2010-06-30T17:00:00",
    "PosixTzValidYear": 2010,
    "PosixTz": "PST+8PDT,M3.2.0,M1"
  }
}
```

Geolocation

- Return country based on a specific IP address
- Identify customer geographic distribution
- Respect geopolitical boundaries and regulations
- Customize and/or block certain content and services based upon country

```
1  {
2    "countryRegion": {
3      "isoCode": "US"
4    },
5    "ipAddress": "172.58.46.229"
6  }
```

Spatial Operations

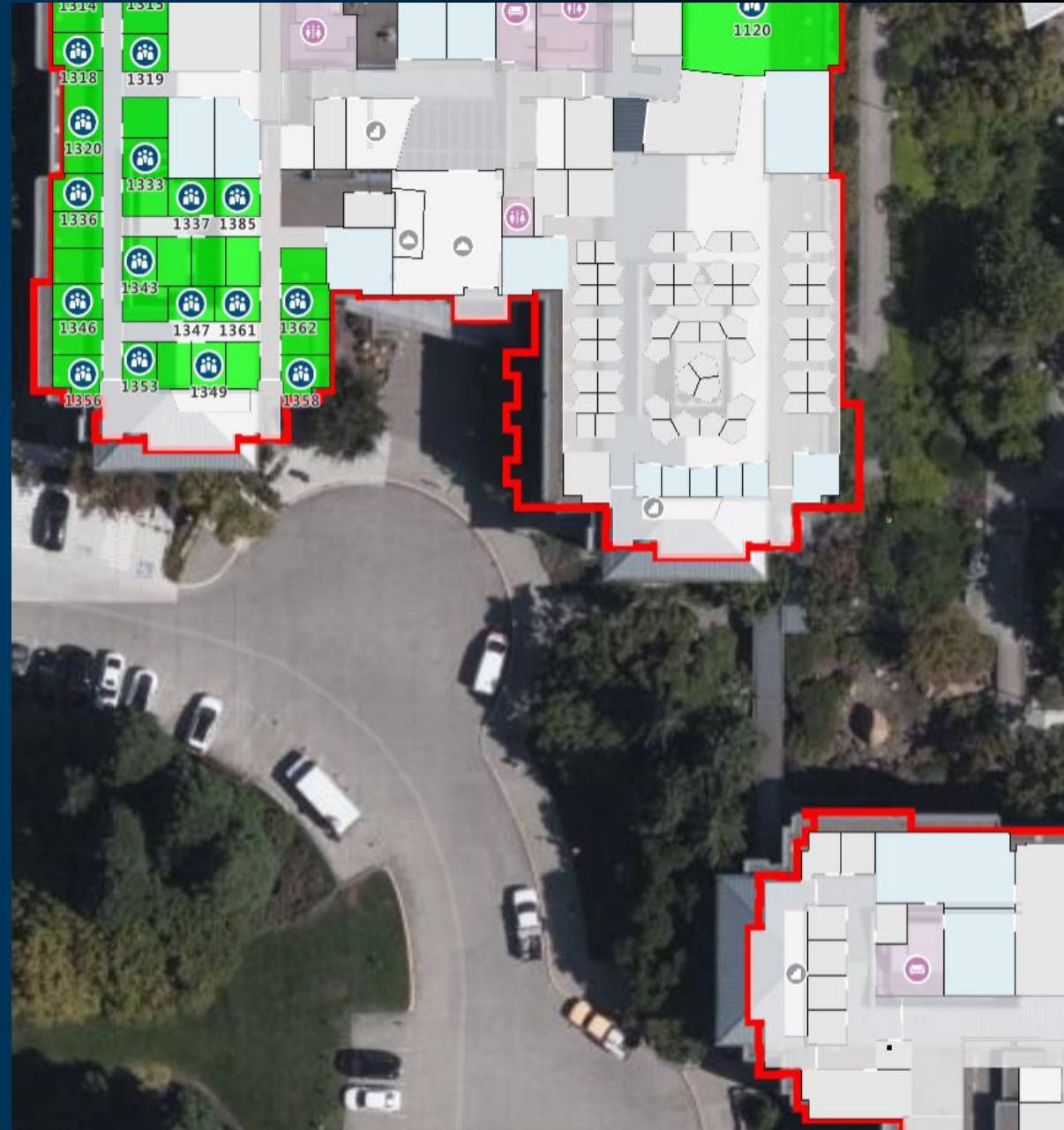
- Geofence
 - Entering or leaving a fence
 - Azure Event Grid integration
 - Time validation
- Spatial Calculations
 - Closest points
 - Buffer
 - Point in polygon
 - Great circle distance





Azure Maps Creator

- Private Indoor Maps
- Automated CAD Processing
- Render Vector Tiles
- Manage State for Operational Monitoring
- Routing on Private Indoor Maps (wayfinding)
- Query Features through WFS
- Plugin for QGIS



Thank you

Resources

Learn more
azuremaps.com

Read this
docs.azuremaps.com
samples.azuremaps.com
blog.azuremaps.com

