FOR GIS AND LOCATION PLATFORM TEAMS

Evaluate Wolo alongside your existing GIS

Give locations in your GIS a shareable Wolo Code: a city or regional reference and three everyday words. Try a coordinate lookup in the Wolo web app, or contact us to discuss an SDK integration for your platform. Your GIS remains the system of record for geometry, attributes, and spatial analysis.

What Wolo contributes

A Wolo Code identifies a point using a Wolo city or named regional reference, followed by three words from a fixed, ordered 1,024-word list. Regional codes also carry an anchor index. Coverage is a finite city list, plus region codes on a 0.5-degree grid.

Your input	A point with latitude and longitude, plus its Wolo city or regional reference.
Wolo output	A Wolo reference and three dictionary words for the point.
Your GIS keeps	The original geometry, feature ID, attributes, coordinate reference system, and business rules.

The grid spacing is about 2 m, and a decoded point lands within about 1 m of the source. A Wolo Code does not improve the accuracy of the source geometry, GNSS, or survey measurements, and it does not replace your GIS coordinates.

Using Wolo in a GIS

01 Add a Wolo link to a GIS feature

Add a link in a feature popup or table. The coordinate lookup URL opens the point in the Wolo web app:

```
https://wolo.codes/?q=12.9731,77.5964
```

The same point as a Wolo Code URL is Bengaluru map marble pest: wolo.codes/bengaluru.map.marble.pest.

02 Integrate with an SDK

An SDK integration runs the codec in your application or data pipeline. With the ordered word list and Wolo reference data available locally, you can encode and decode points offline.

Encode a point using its geographic coordinates and Wolo reference. Use the same reference to decode the words back to coordinates. The example shows the workflow in pseudocode.

```
reference = wolo.reference("Bengaluru")
code = wolo.encode(latitude, longitude, reference)
point = wolo.decode(code, reference)
```

03 Keep the code beside your existing geometry

Keep your current point geometry and add fields for the display code and Wolo URL. Keep the source feature ID so a shared code can be traced back to its GIS record. For example:

```
{
  "type": "Feature",
  "properties": {
    "source_id": "POI-041",
    "wolo_code": "Bengaluru map marble pest",
    "wolo_url": "https://wolo.codes/bengaluru.map.marble.pest"
  },
  "geometry": {
    "type": "Point",
    "coordinates": [77.5964, 12.9731]
  }
}
```

Examples

City

Lalbagh Park, Bengaluru: Bengaluru leopard lotus guitar - wolo.codes/bengaluru.leopard.lotus.guitar (12.94984, 77.58661)

Region

Gurudongmar Lake, Sikkim: \ India 1112 candle kiwi mango / - wolo.codes/india-1112.candle.kiwi.mango (28.02449, 88.71165)

In a Wolo Code URL, dots separate the city or region+index from each of the three words. Spaces inside a multi-word city, or between a region name and its index, become hyphens, as in india-1112.candle.kiwi.mango.

Coordinates and data

- Coordinate system: transform projected or local coordinates to geographic WGS 84 latitude and longitude when you encode or decode, and keep the source geometry in your GIS.
- Reference context: the words need their city context or, for a regional code, the region and anchor index. Store and share that context with the words.
- Word list: use the exact ordered Wolo word list at wcodes.org/wordlist. Do not sort, normalize into a different order, or substitute words.
- Round-trip checks: encoding quantizes the point to Wolo's grid. Compare the decoded coordinate with the original, allowing for the 2 m grid and the accuracy of your source data.
- Coverage: a finite list of Wolo cities, plus region codes on a 0.5-degree grid for places outside those cities.
- Offline use: encode and decode need the word list plus the city and region list, not a database of every point.

Checklist

- Choose a small set of features, including points near city boundaries and the edges of your area.
- Note the source coordinate system, transform to latitude/longitude, and record the Wolo city or regional reference used.
- Encode and decode, then compare the returned positions with the source points.
- Open the coordinate lookup and Wolo links from the GIS client, including on field devices.
- Decide how codes will be stored, refreshed when source geometry changes, and handled when a city is unavailable, including by falling back to a region code.

Discuss your integration

Contact us with your requirements at support@wolo.codes. Tell us which GIS and runtime you use, what you want to build, and whether you need offline or batch processing.

Schedule a meeting