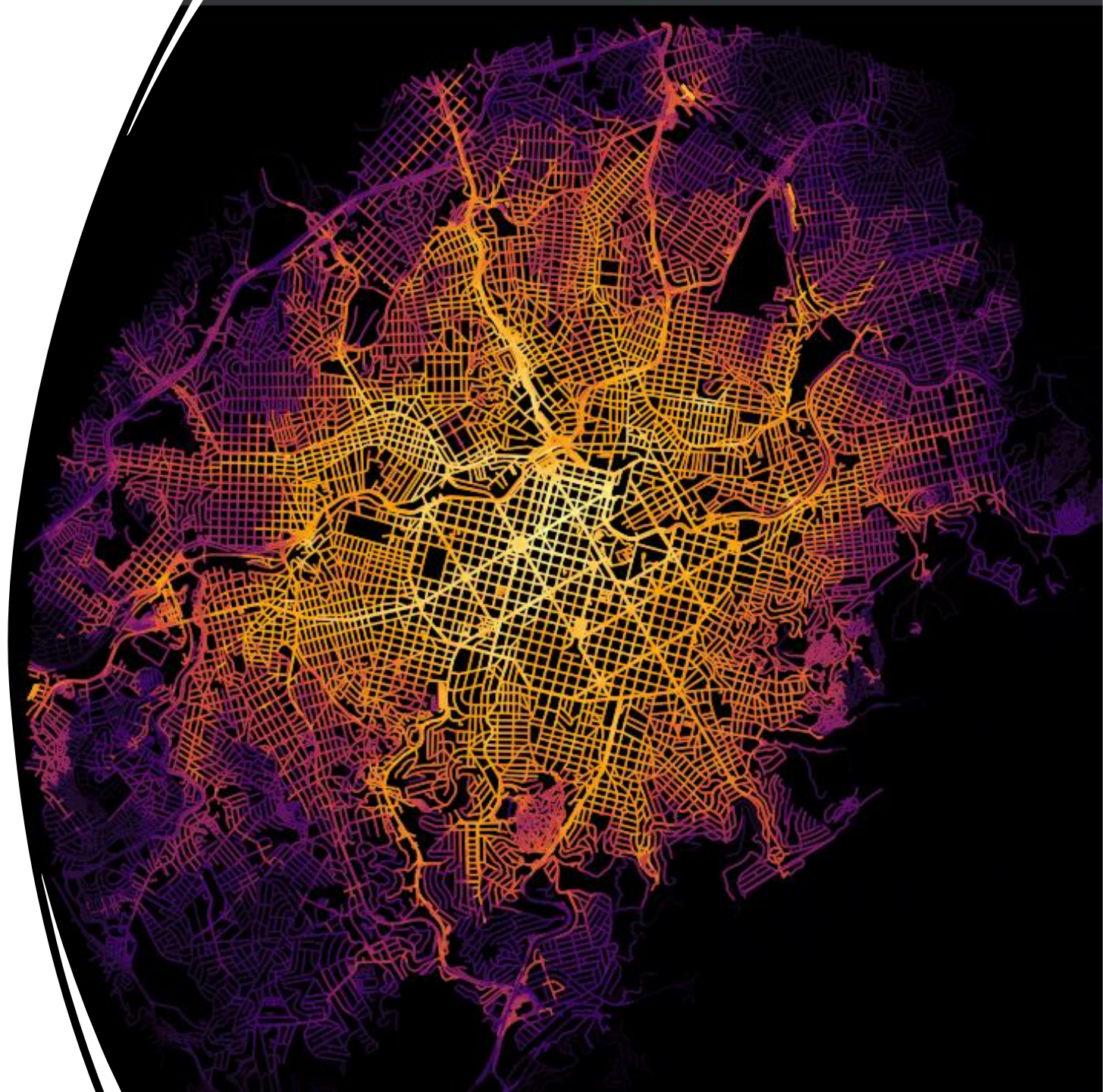


Data
requirements

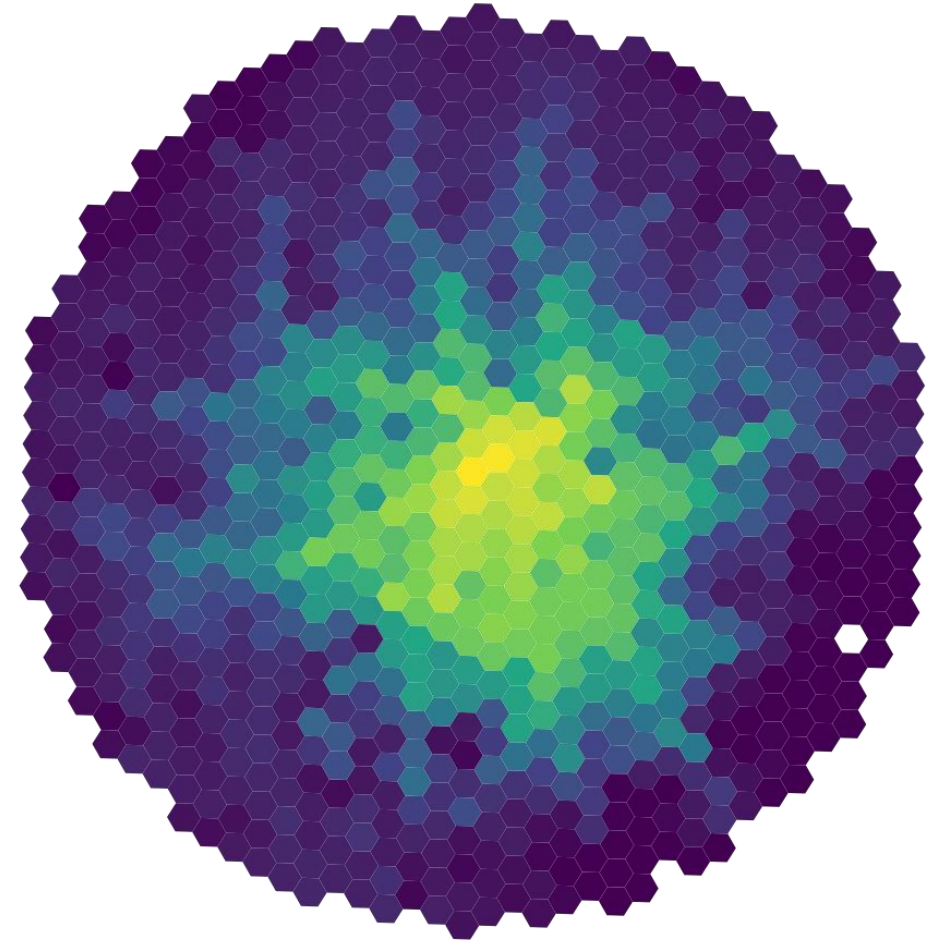


Data requirements:

1. Road network
2. Public transport network - *optional*
3. Topography - *optional*
4. Population
5. Land use

Good news !

There are open & globally available sources for most of these



OpenStreetMap

R packages

- {osmextract}
- {osmdata}

Websites

- Geofabrik
- HOT Export
- BBBike Extract Service

* saved in **.pbf** format



Public transport data

R packages

- {tidytransit}

Websites

- Transitland
- TransitFeeds
- Mobility Database
- Government open data websites
e.g. gtfs.ovapi.nl

* saved in **GTFS.zip** format



Topography

R packages

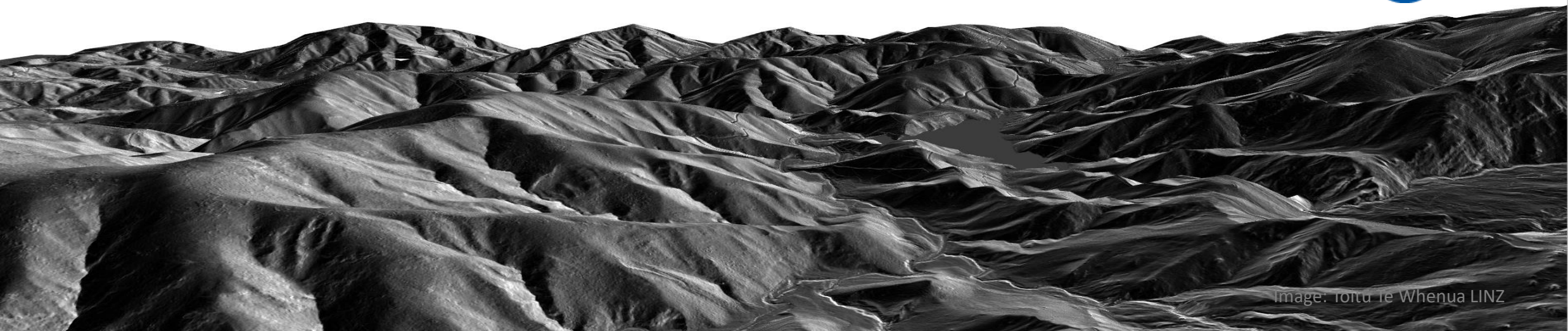
- {elevatr}
- {osmdata}

Websites

- Nasa's SRTMGL1
- NASADEM

* Raster data saved in **.tif** format

30m: Shuttle Radar Topography Mission



Population estimates

National population censuses
Gridded population estimates

- 1Km: GPW4 / Sedac
- 100m - 1Km: WorldPop
- 100m and 1Km: GHSL / European commission
- 30m: Meta Data for Good

* Some spatial aggregation

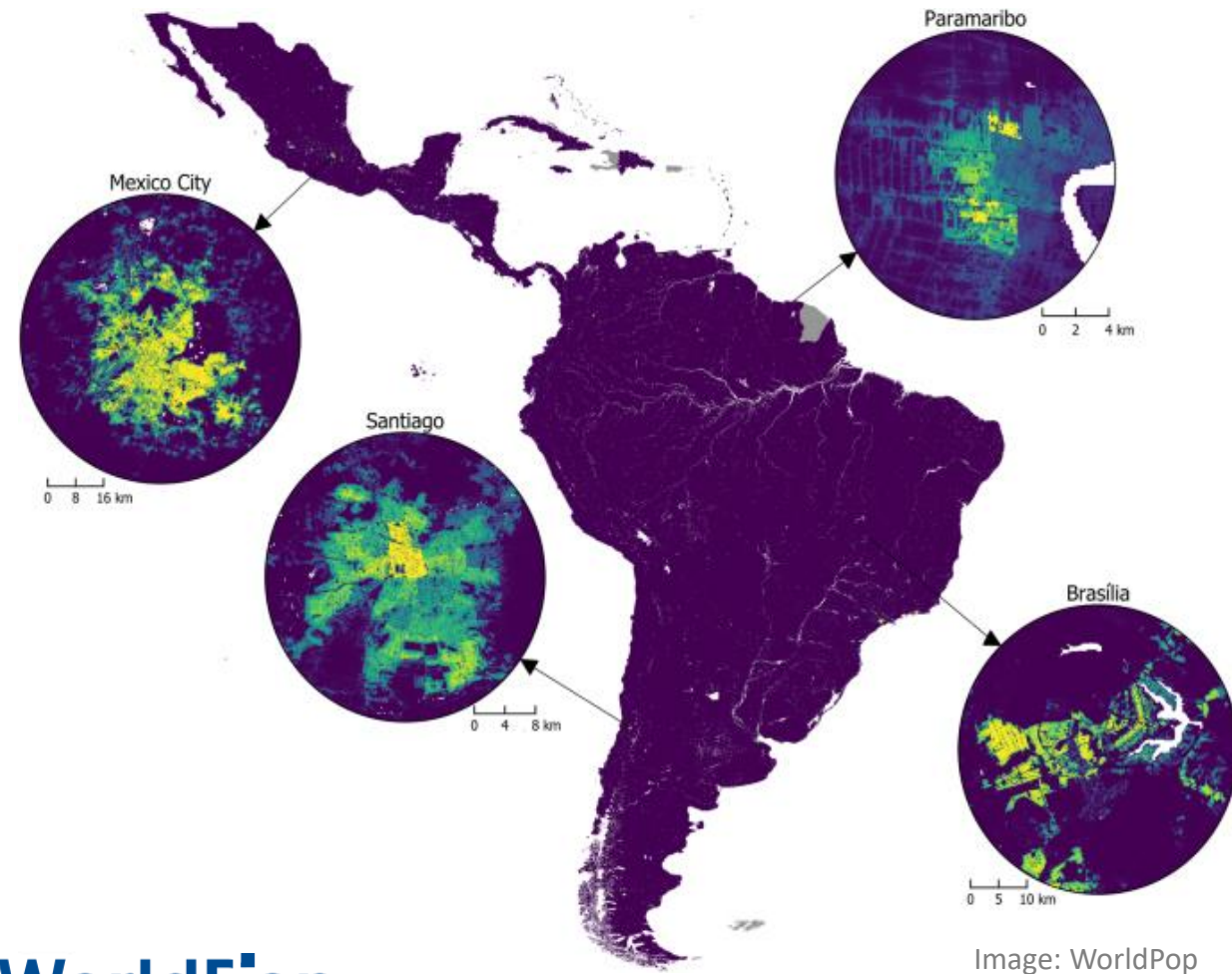


Image: WorldPop

Land use data

Scattered source:

- Household (travel) surveys
- Administrative records
- OpenStreetMap (caution)

R packages

- USA {tidycensus} and {lehdr}
- Brazil {censobr} and {aopdata}



Image: TUM

- * Some spatial aggregation

A crash course on Urban accessibility with R

Rafael H. M. Pereira

 @UrbanDemog