

SDG Indicator 9.1.1

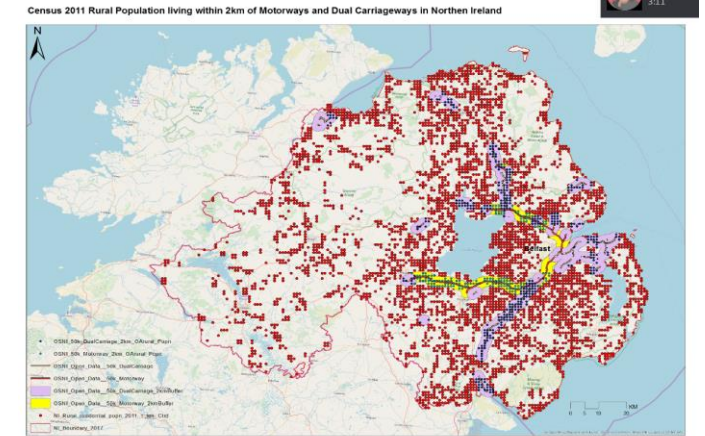
Proportion of rural population who live within 2 km of an all-season road



ONS team (Data Science Campus, UN Global Platform, ONS Geography, SDG team)

9.1.1. Tier III indicator - Rural Access Index

- Inputs: population, roads, road conditions
- Recognises value of global datasets
- National implementations e.g. UK and Colombia

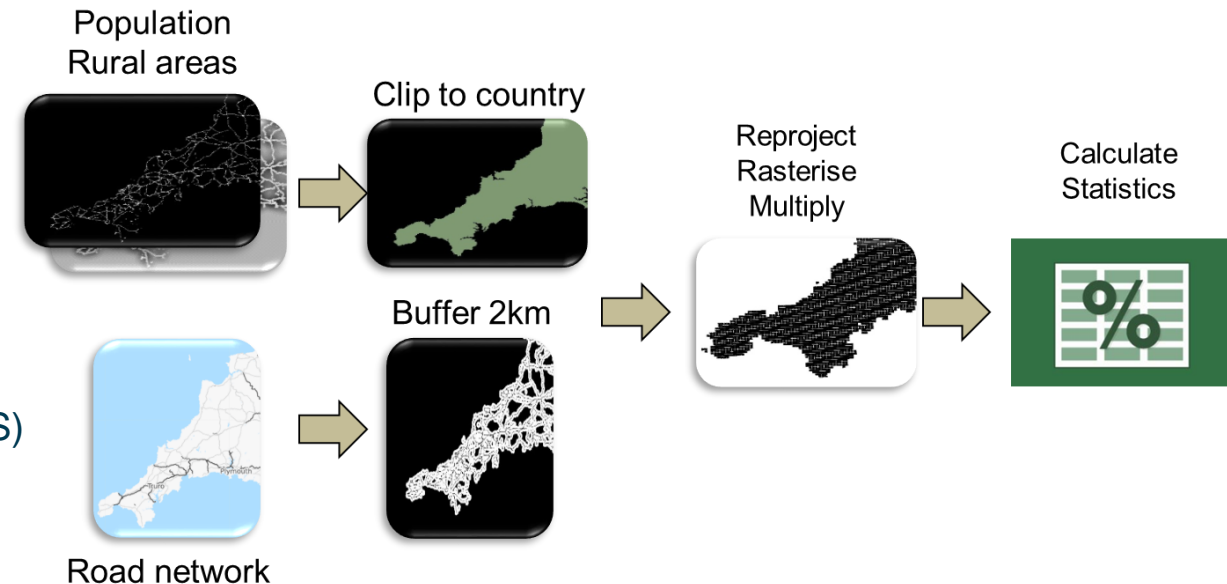


Purpose

- What are issues in scaling from national to global scales
- Consistency and availability of data
- Ease of production
- Comparability of statistical outputs

Methodology

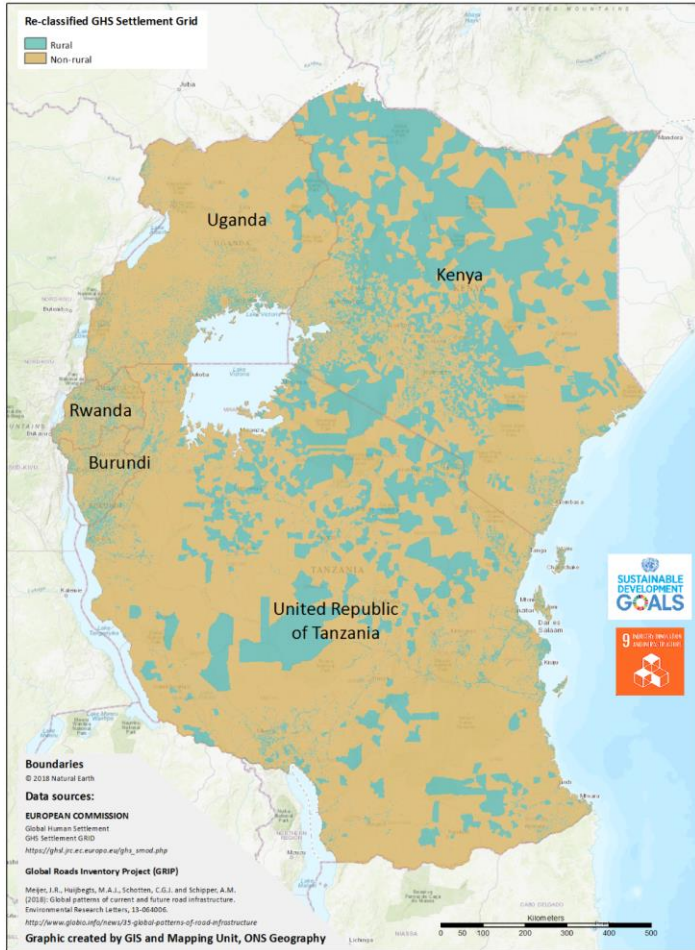
- Identify global datasets (e.g. OSM, GRIP, GPW, WorldPop GHS)
- Design and implement a process chain
- Visualise and assess results
- Refine methodology for deployment in Cloud via UNGP



Outputs



Towards the United Nations Sustainable Development Goals - Indicator SDG 9.1.1
Reclassified GHS Settlement Grid



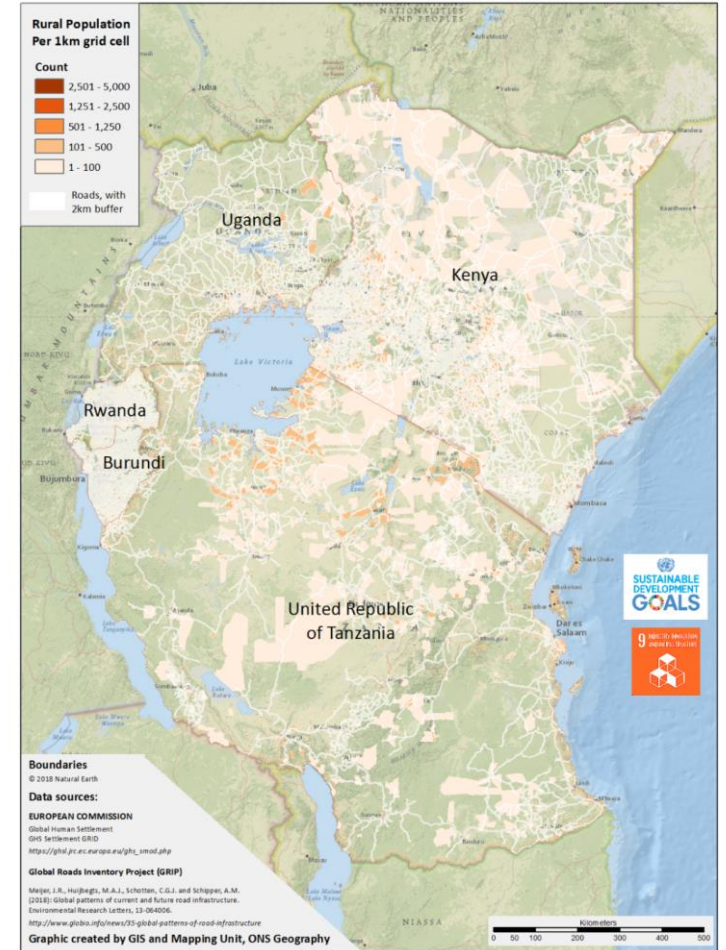
GHS reclassified to Urban and Rural

Towards the United Nations Sustainable Development Goals - Indicator SDG 9.1.1
Rural Population per Global Human Settlement (GHS) 1 km Grid Square

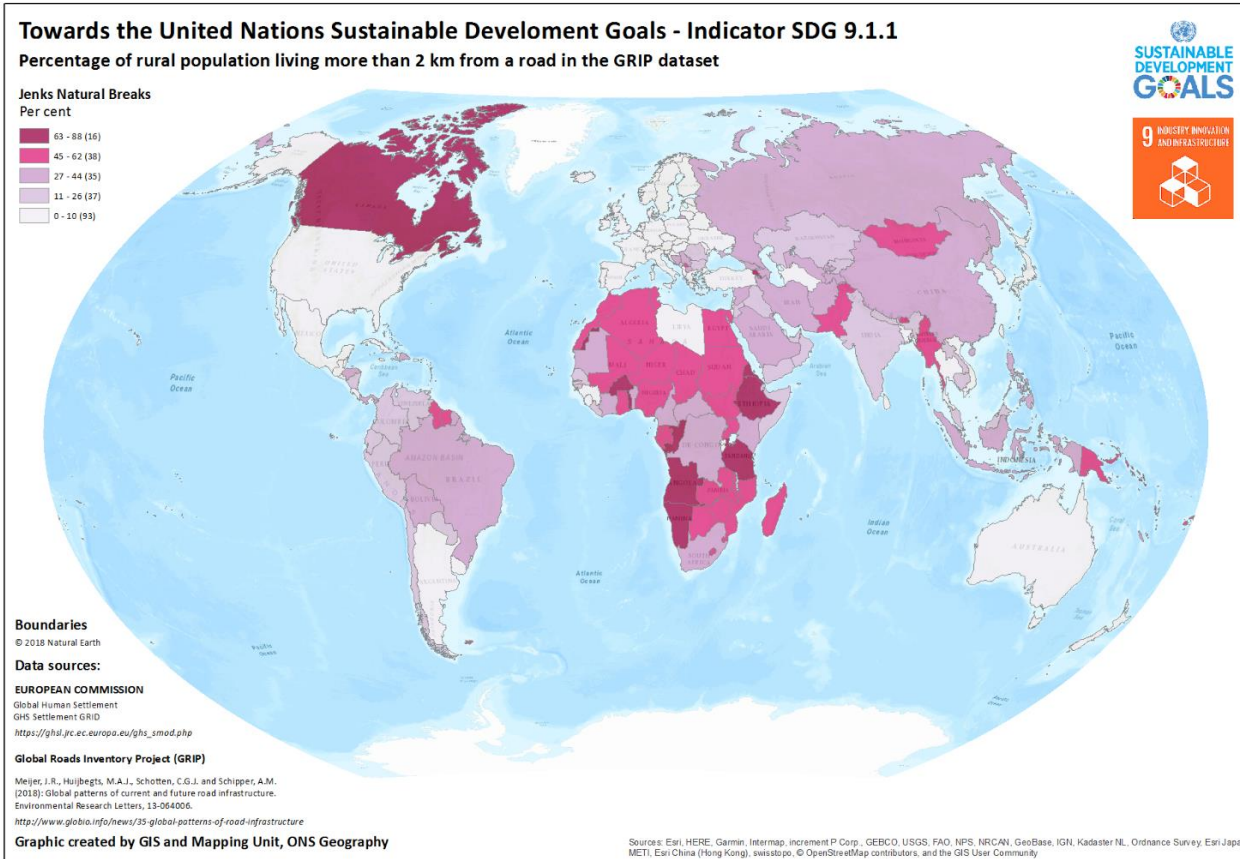


Rural population

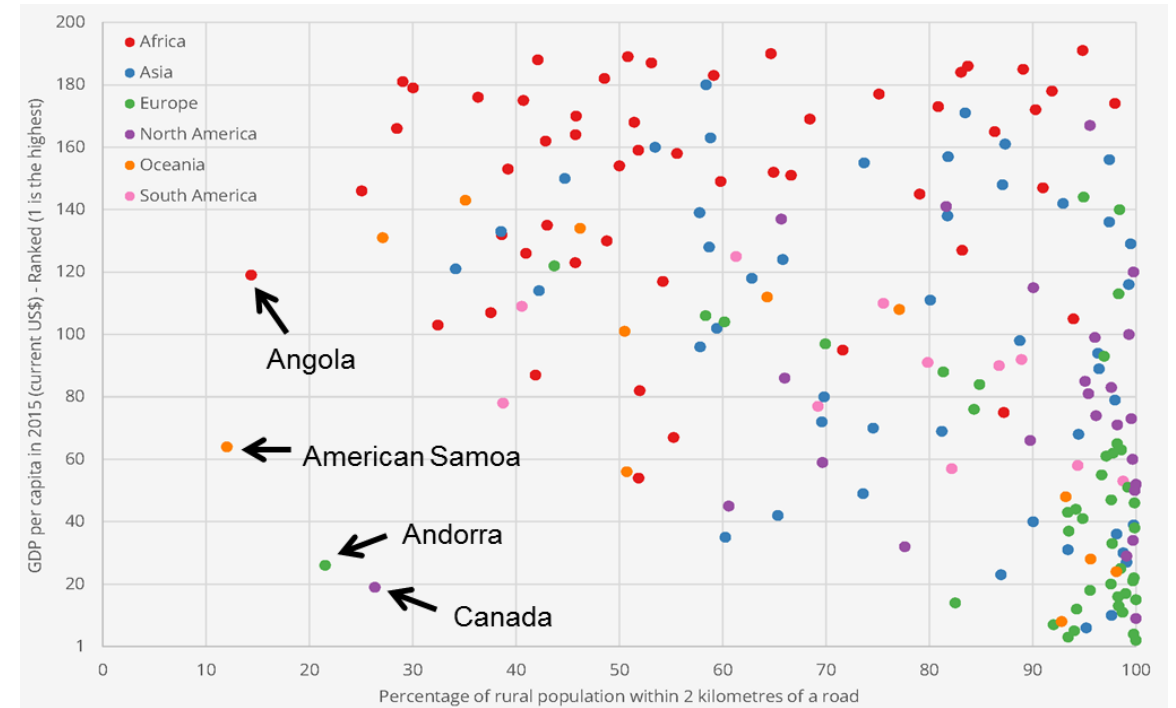
Towards the United Nations Sustainable Development Goals - Indicator SDG 9.1.1
Rural Population beyond the 2 km GRIP road buffer



Rural population >2km from a road



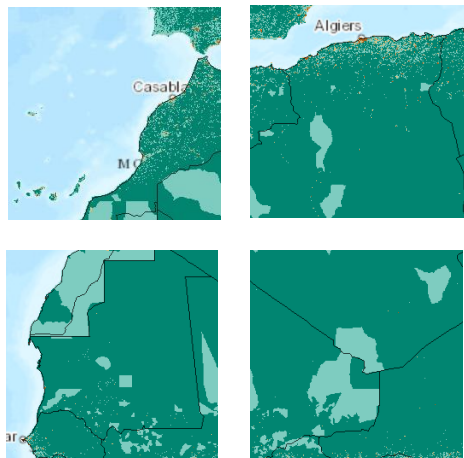
Countries ranked by indicator and rank of GDP per head.



Optimisation via UN Global Platform



Gridded data stored in AWS S3 Bucket
Tiled for parallel processing



Chaining service

Methods library

Extract_OSM (Python)

Compute_911

Buffer_and_burn (R)

OSM open data on AWS



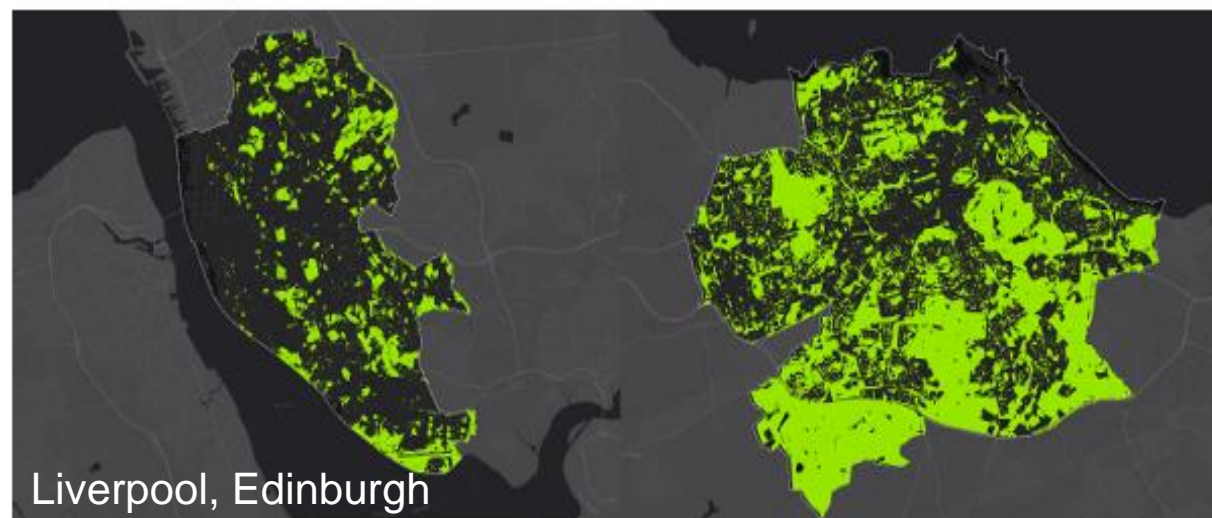
Amazon Athena

Stack_grids (R)

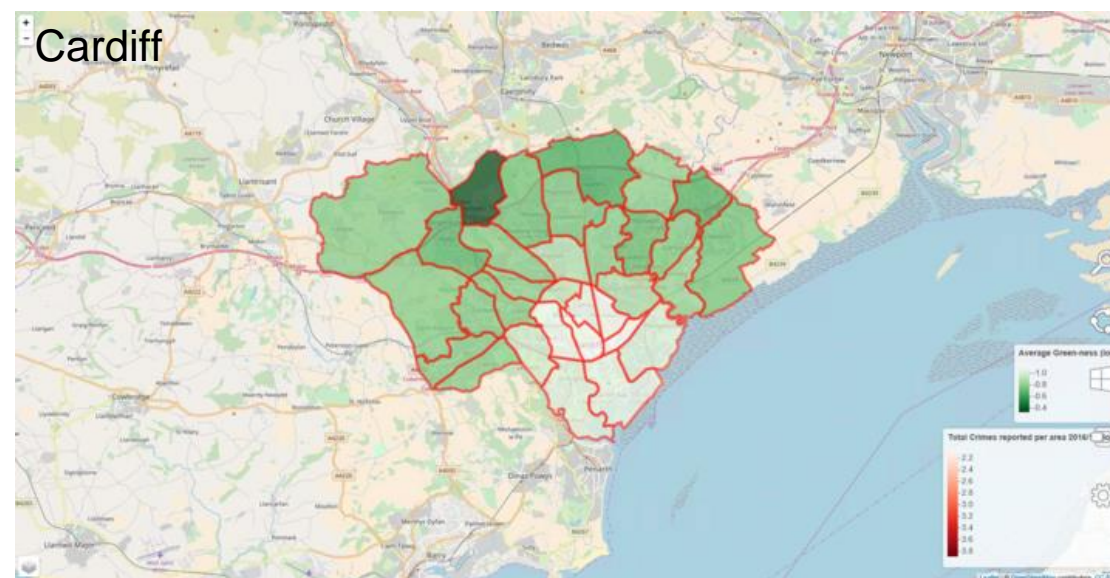
Non-traditional sources - Mapping the urban forest



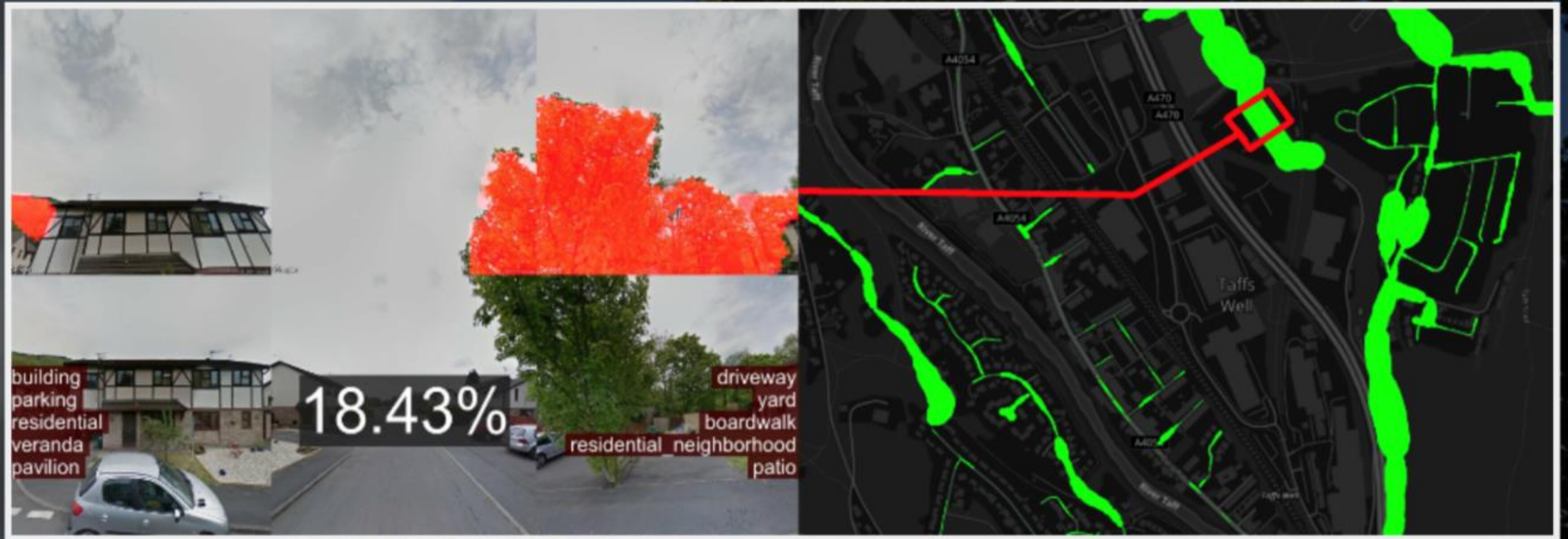
- Analysing images to improve data on local environment
- £1Bn value trees in urban areas (air pollution, health, wellbeing)
- But poor data at local level on tree & urban greenery



National Tree Map, Blue Sky



Non-traditional sources - Mapping the urban forest



Makes use of:

1. Google streetview imagery
2. OpenStreetMap road network data

Non-traditional sources - Mapping the urban forest



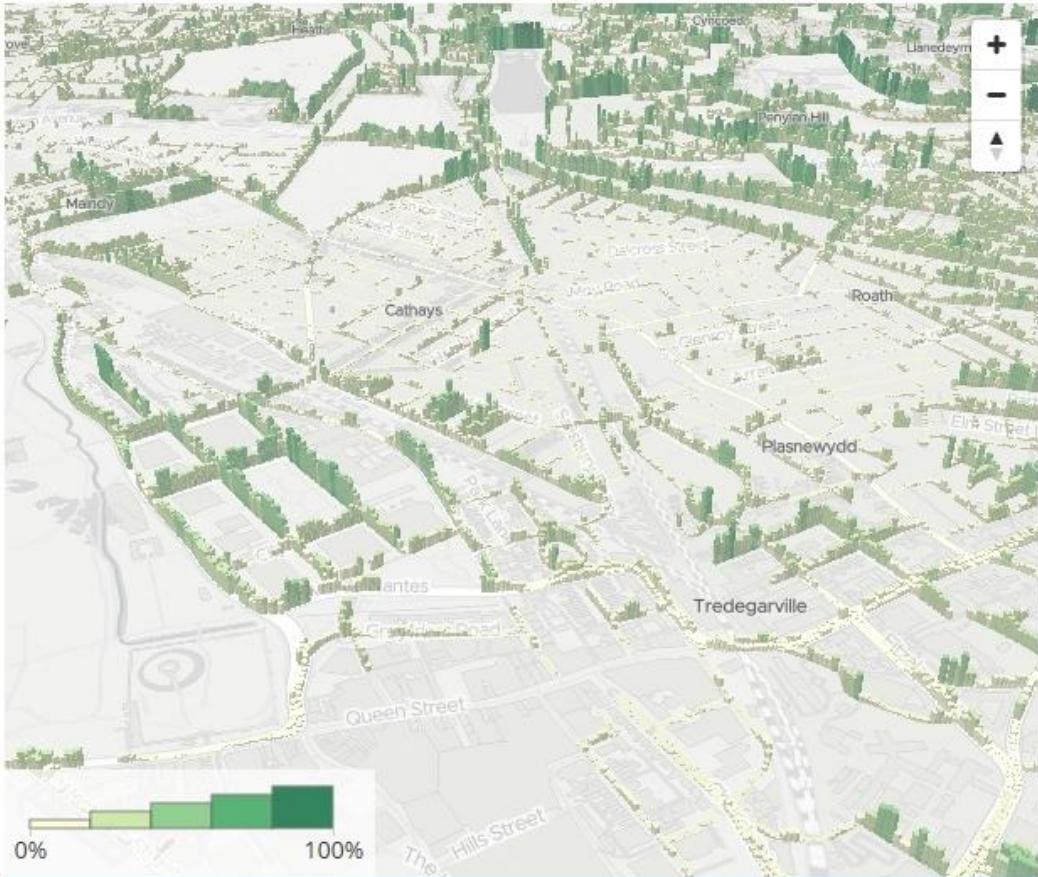
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