

ORDNANCE SURVEY – EXPERIENCE WITH VGI

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Agenda

- History of our R&D
- Examples of current use of crowd sourcing
- Current reasearch

(A) DistilBERT

The suburb is roughly bordered by **Spencefield Lane** PLACE to the east and **Whitehall Road** PLACE to the south, which separates it from neighbouring **Evington** PLACE. A second estate consists of **Coleman Road** PLACE to **Ambassador Road** PLACE through **Green Lane Road** PLACE ; **Rowlatts Hill** PLACE borders **Crown Hills** PLACE to the west. To the north, **Rowlatts Hill** PLACE is **Humberstone Park** PLACE which is located within **Green Lane Road** PLACE and also leads on to **Uppingham Road** PLACE (the **A47** PLACE) , which is also **Rowlatts Hill** PLACE.

(B) SpaCy (large)

The suburb is roughly bordered by **Spencefield Lane** FAC to the east and **Whitehall Road** FAC to the south, which separates it from neighbouring **Evington** GPE . A second ORDINAL boundary within the estate consists of **Coleman Road** FAC to **Ambassador Road** FAC through to **Green Lane Road** FAC ; **Rowlatts Hill** FAC borders **Crown Hills** FAC to the west. To the north, at the bottom of **Rowlatts Hill** FAC is **Humberstone Park** FAC which is located within **Green Lane Road** FAC and also leads on to **Uppingham Road** FAC (the **A47** FAC) , which is also **Rowlatts Hill** FAC.

(C) Stanza

The suburb is roughly bordered by **Spencefield Lane** PERSON to the east and **Whitehall Road** FAC to the south, which separates it from neighbouring **Evington** GPE . A second ORDINAL boundary within the estate consists of **Coleman Road** FAC to **Ambassador Road** FAC through to **Green Lane Road** FAC ; **Rowlatts Hill** PERSON borders **Crown Hills** FAC to the west. To the north, at the bottom of **Rowlatts Hill** GPE is **Humberstone Park** GPE which is located within **Green Lane Road** FAC , **Ambassador Road** PERSON and also leads on to **Uppingham Road** (the **A47** ORG) , which is also **Rowlatts Hill** PERSON .

PREVIOUS RESEARCH EXAMPLES

Internal Zooniverse project – object matching

The screenshot shows the Zooniverse interface for a project named 'CLAIRE'S FIRST PROJECT'. The user is in the 'CLASSIFY' tab. The main area displays two side-by-side photographs of a street scene. In both images, a pink circle highlights a white lamp post on a signpost. The right-hand panel contains the following text:

Thanks!
Your classification:

Can you see any lamp posts that appear in both of these photographs?
 Yes [More](#)

Please use the ****Lamp post clicker**** to select the matching lamp post in both images, left and then right. If you can see more than one match, select the pair closest to the camera only. You will need to select the lamp post at the same height on both images. For example, you might click the base at pavement level, or on a distinctive feature higher up. Please have a look at the Help for further guidance. [More](#)

point Lamp post clicker (2)

[Talk](#) [Next](#)


Extracting the effects of participation biases on OSM data

2017/18



Dr Zoe Gardner

e: zoe.gardner@nottingham.ac.uk

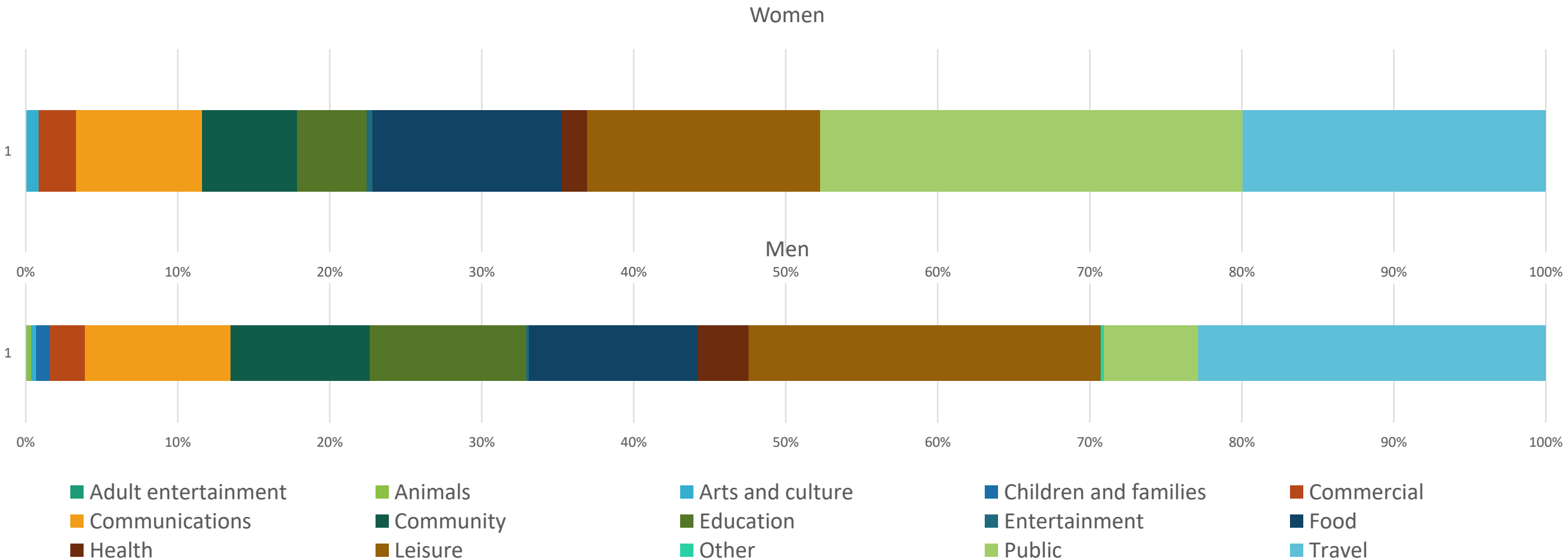
 @DrZoeGardner



University of
Nottingham
UK | CHINA | MALAYSIA

Results: gender

- The participation leads to men being the gatekeepers of geospatial information. This results in [gendered representations of user-generated geospatial content](#) (Stephens, 2013).
- However, **no statistical significance in differences** between men and women in tagging [gendered] amenities
- Vast differences in focus on 'Public' – public interest Pols and amenities



Summary: Results

1. Contrary to earlier theoretical claims, these results appear to show **no differences in amenity tagging preferences between men and women**
2. However: contributors of different ages and educational backgrounds do appear to have different interests in terms of the tagging categories they contribute to so **age and educational backgrounds matter**
3. As the UK dataset is representative of the global picture this is **likely to be replicated at the global level**

This PhD looked at the way locations are incorporated into everyday narratives, and the role they play in community as well as individual identity online. Drawing from Applied Linguistics and Human Geography, this project evaluated textual data gathered from social media and explored how subjective experiences of location could enrich descriptions of place in mapping.

(2019)

Place & Social Media Data

Iona Fitzpatrick

Supervisors: Gary Priestnall (Geography) & Svenja Adolphs (English)

University of Nottingham



“ **Mackems** having a full on melt down over @user having some brains is hilarious **#nufc**... ”

“ Don't forget
#tolookgoodnakedeatnaked **#newcastle**
#clean #health #fitfoods #paleo
#coldpressed... https:... ”

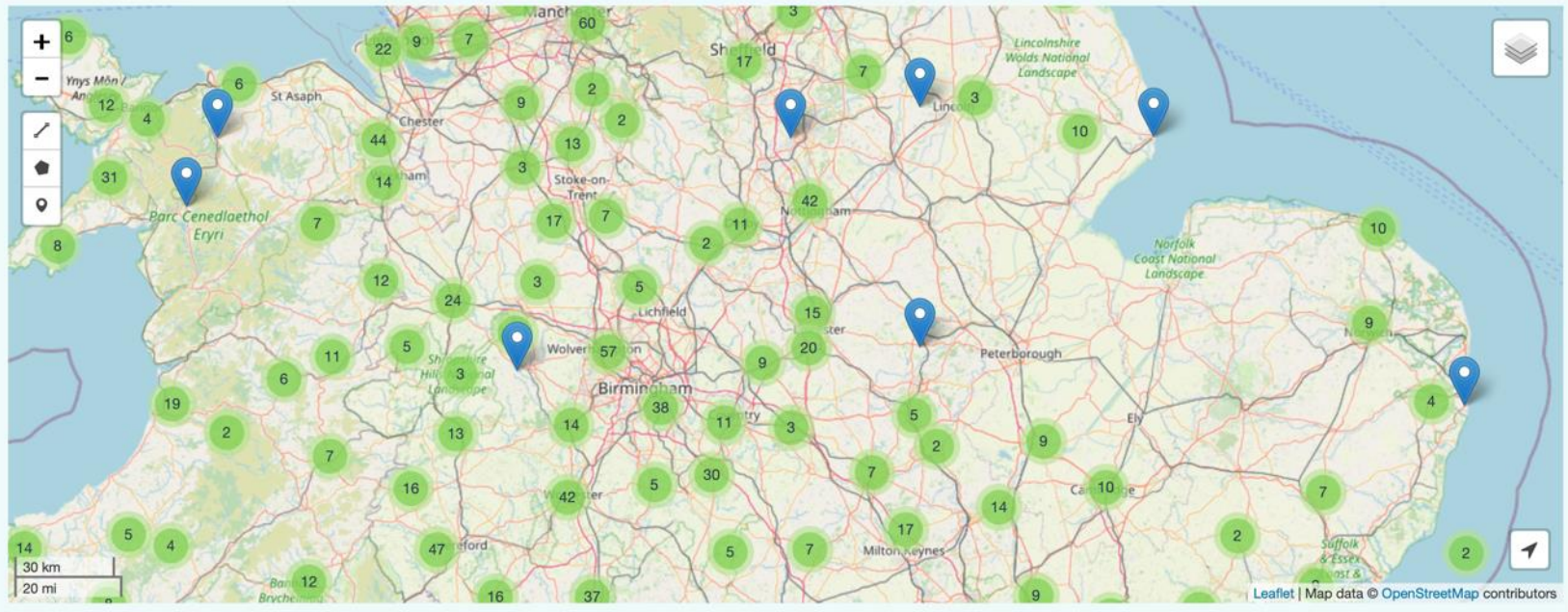
“ RT & Follow to enter our #competition to **#win** 3 t-shirts from @user! #Winners #TuesdayMotivation https:... ”

“ RT @user: Get active on Saturday in **#Nottingham** | Free #IAmTeamGB events @user @user @user @user https:... ”

“ Bring on tonight let's have it you redsssssss **#nffc** ”

“ RT @user: Honestly I don't need a piece of paper to tell me that I'm a disappointment I already know **#resultsday** ”

- Home
- Add a name
- Explore Map
- Statistics & Facts
- About



Your name

Navigate on the map by clicking on cluster symbols and moving your mouse over the displayed markers. Alternatively simply enter a name into the search form. Click on a name to load all available contributions and to get more information. Select single contributions to vote on their appropriateness describing the located place, add comments and load photos.

- ### Recently Added Place Names
- Emerson's Sand Quay
 - Toland's Flat
 - Lough Neagh Rescue Kinnego station
 - The White House
 - Top Pitch

Recent Comments

stephen 👍👎

Lights at night good visual for Marine Navigation.

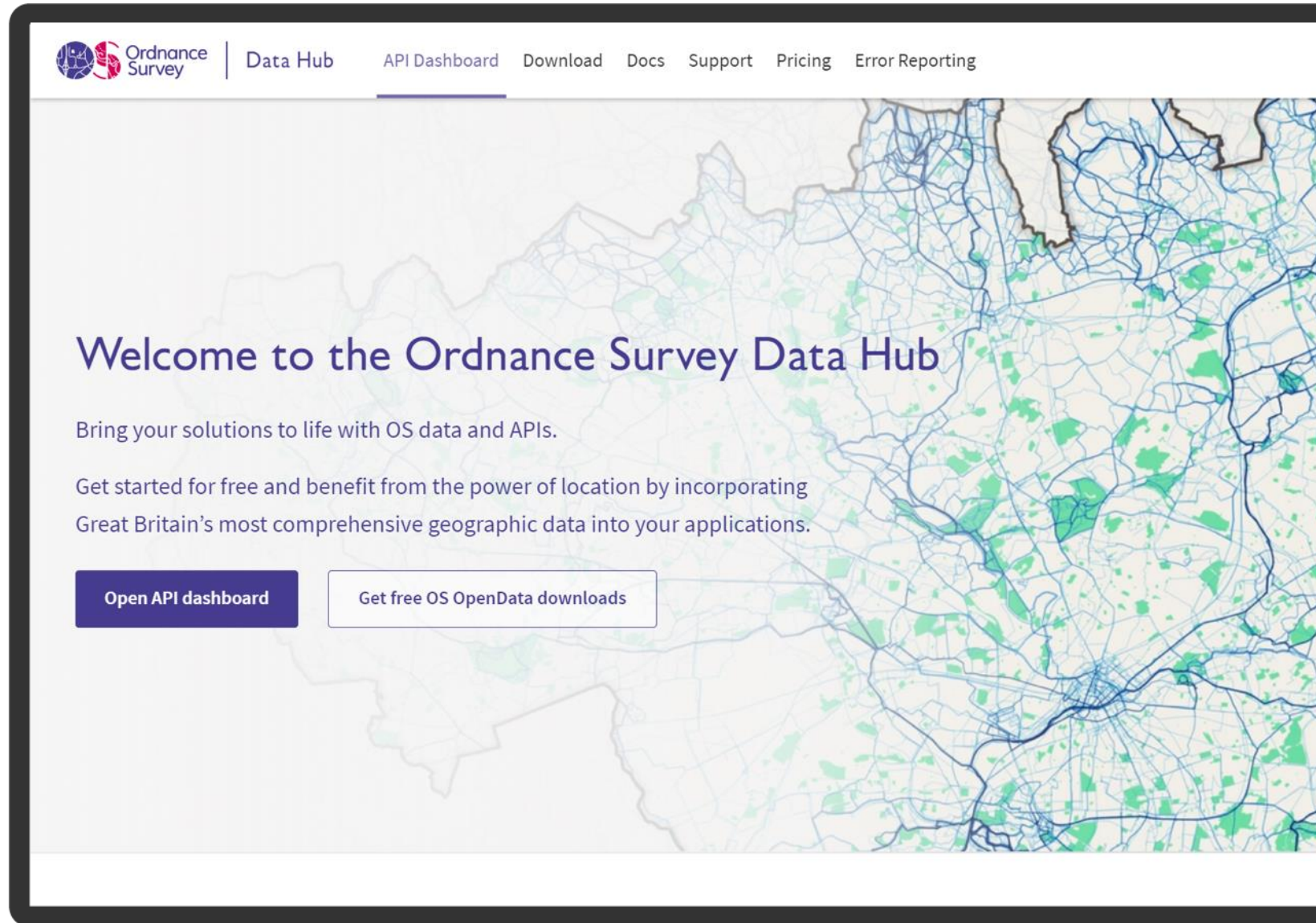
🕒 22nd Jul 2021 22:09

[Emerson's Sand Quay](#)

EXAMPLES OF CURRENT USE

OS Data Hub

Supporting the public and private sectors critical infrastructure and services by making it easier for anyone to **find, access and use** authoritative geospatial data



1/ OS Data Hub – Error reporting

Our errors and omissions service provides **public sector customers** with self-serve reporting errors and omissions capability.

This is integrated directly with OS production teams and 3rd party data suppliers via tooling and API.

Ordnance Survey | Data Hub | API Dashboard | Download | Docs | Support | Pricing | Error Reporting

Create an issue

What is wrong? ⬆
[Have you reviewed our guidance on common issues that we might not action?](#)

What is the issue?
 There's a problem with an address
 There's a problem with text on the map or some other type of feature (like a road, boundary or postcode location/geometry)

Which product(s) does this apply to? ⬇

Show us where on the map. ⬇

Describe the issue. ⬇

To submit your issue complete the information above. Cancel Submit issue

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OS Emergency Services Gazetteer

High Level Use Cases:

- Provides a national, consistent and maintained view of the locations.
- Enables quick and accurate gazetteer searches and visualisation in applications.
- Supports incident response, planning and coordinating emergency responses, situational awareness and incident reporting.

OS Emergency Services Gazetteer

Definition The OS Emergency Services Gazetteer product is a comprehensive and maintained gazetteer of locations including names, places, and objects.

- + Aligned to the AddressBase Premium Format.
- + Every feature in OS ESG will have a Unique Property Reference Number (UPRN).
- + Coverage is England, Scotland and Wales.
- + A set of granular classifications types.
- + Comprises of the Basic Land Property Unit (BLPU), Land Property Identifier (LPI) and Classification components ONLY.
- + Published monthly in GeoPackage and CSV formats.



Vernacular Names

Vernacular names are colloquial, alternative or local names given to places or objects.

30 ST MARY AXE,
LONDON,
CITY OF LONDON,
EC3A 8BF

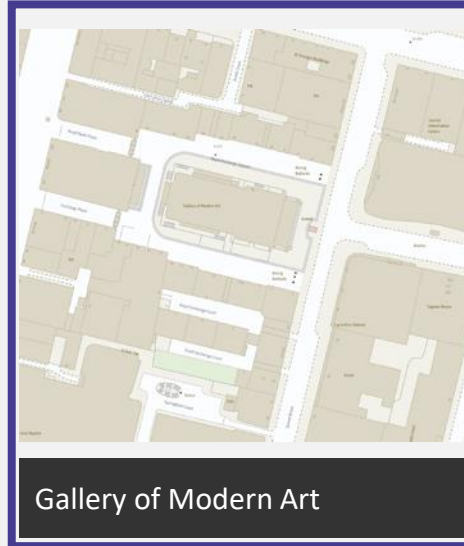
“The Gherkin”



Scenario

- As a command and control centre call handler, you've received a call for an ambulance to be sent to the Cone in Glasgow.

■ WHERE DO YOU DEPLOY TO?



Gallery of Modern Art



Glasgow Central Station



Kelvingrove Museum



No idea, need more information

2/ Vernacular Names Capture Tool

A data capture tool for **emergency services** to add local, alternate and colloquial names of real-world features into a central database.

It is an expert sourcing tool that allows OS to capture data where there is no authoritative source.

Once the data has been reviewed it will be curated into products and services that will be made available to PSGA members and our partners.



Vernacular Names



Data Hub

Vernacular Names

+ Add new submission

🕒 Submission history

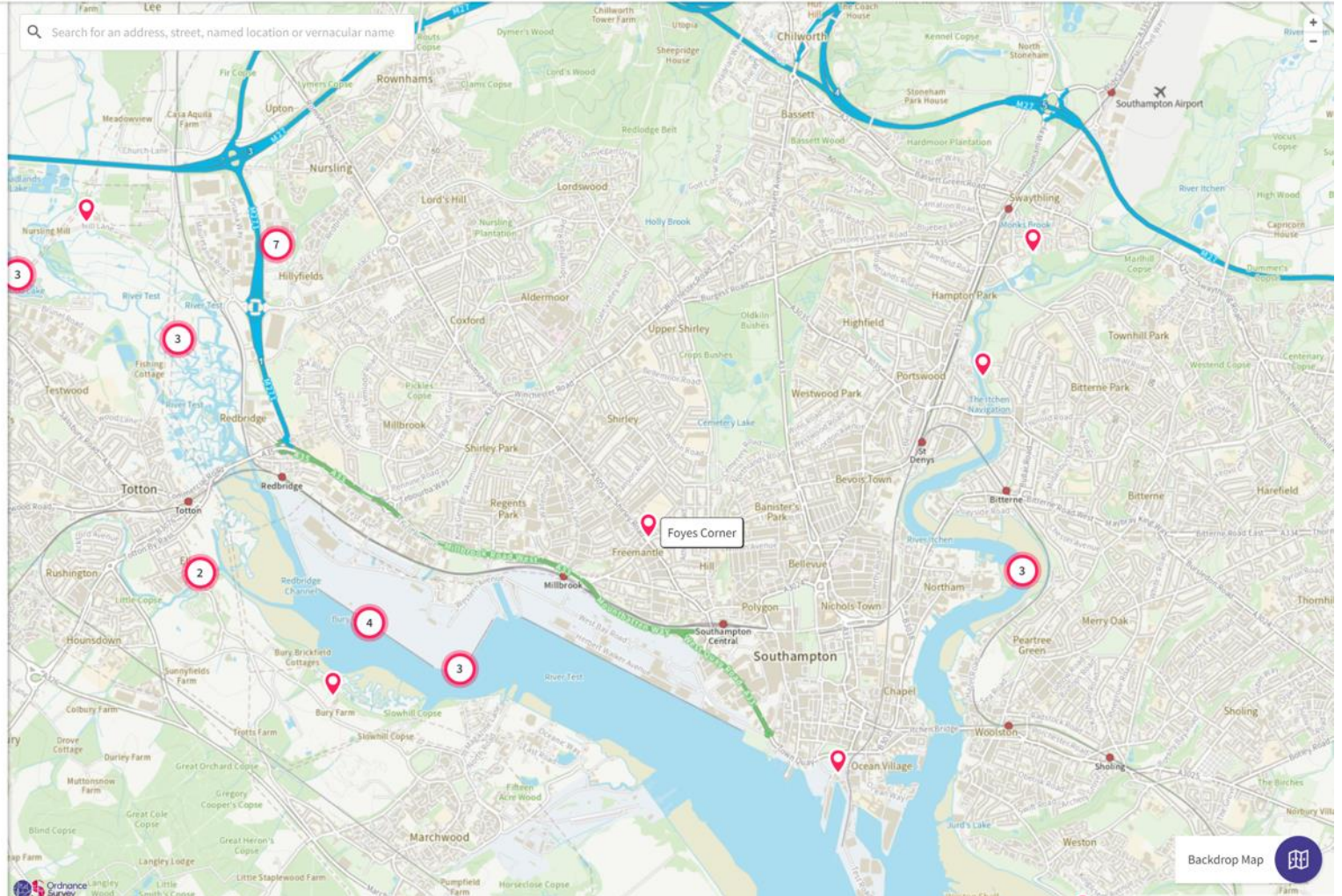
PSGA

Foyes Corner

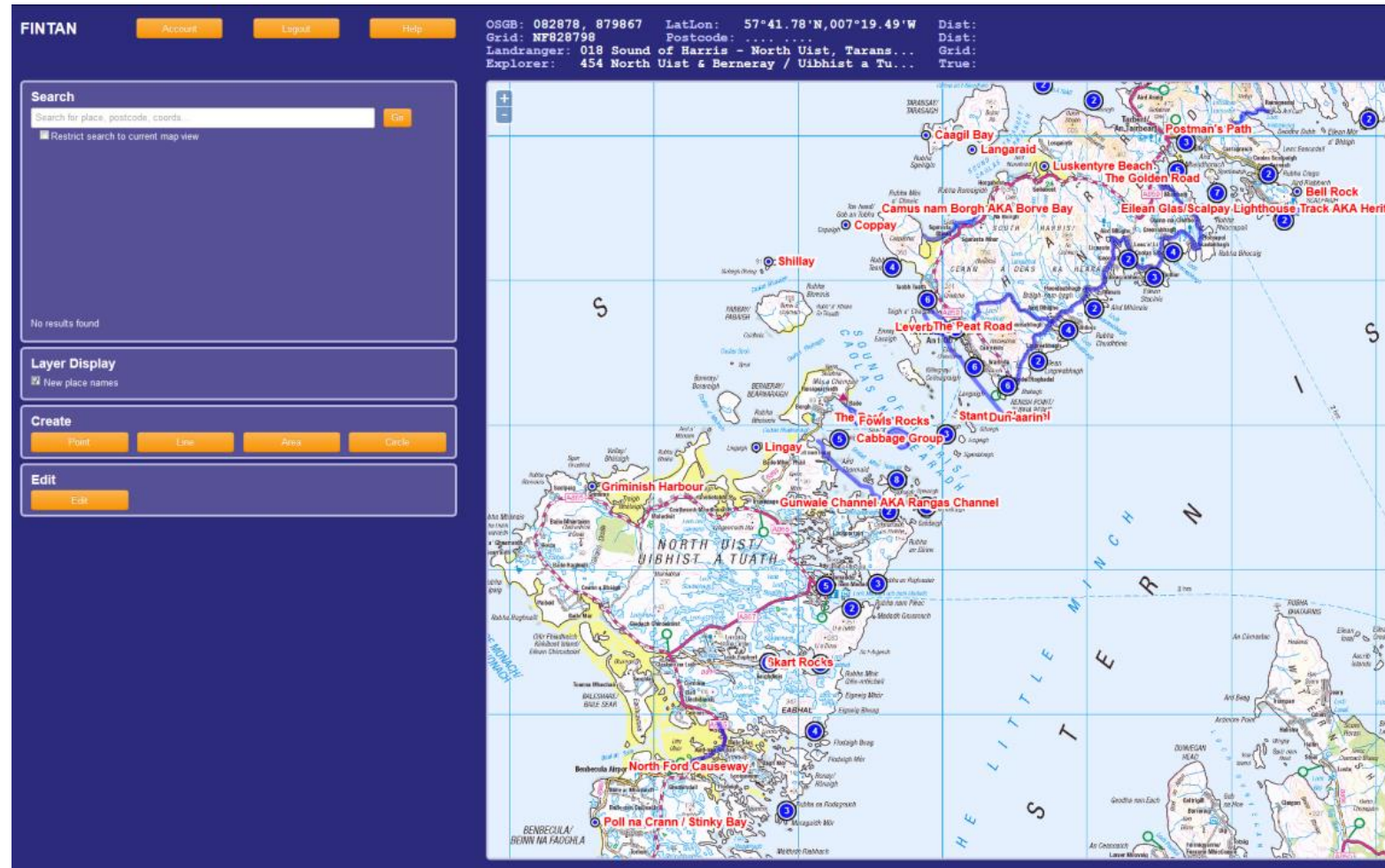
Eastings, Northings: 440646, 112924
GridRef: SU406129
Latitude, Longitude: 50.914358, -1.423192
DD MM.MM: 50° 54.86148 N 1° 25.391549 W
Represents: Road

Foyes Corner

Language: English
Date entered: 15/02/2024
Entered by: Ordnance Survey



Replaces FINTAN



- Web map service application for capturing coastguard knowledge of local names
- Database contained around 6100 names with associated point, line or polygon features
- Originally developed as a research project but operational for many years

3/ Named junctions and roundabouts

- To support emergency services and reduce their response times to incidents, OS developed an emergency services gazetteer which included official junction and roundabout names
- Lack of well-maintained, authoritative third-party data made data collection challenging
- Also, most junctions and roundabouts do not have an official name, so reviewing every one in the country was not viable



Capture tool

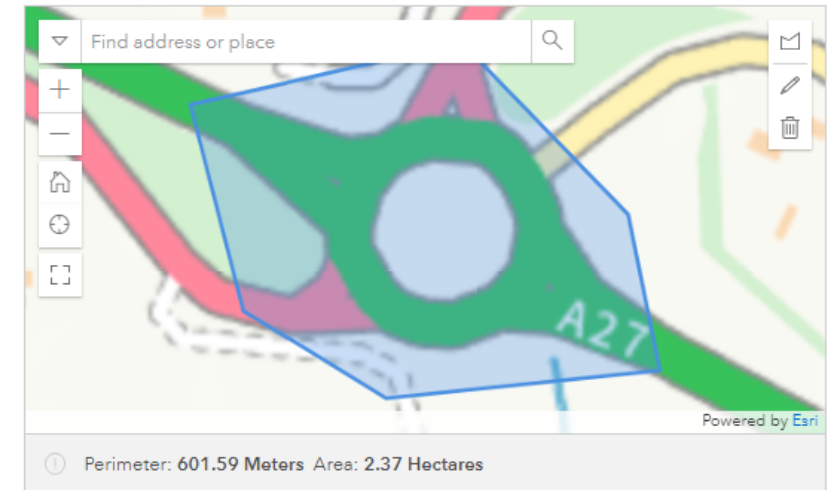
- **Internal** web map application developed to enable OS staff to view and add junction and roundabout names
- Application used ArcGIS Online web map and ESRI Survey 123 web form
- Users can draw a polygon around the junction on a map backdrop and add the junction name or number
- Optional fields – alternative language names, vernacular names and geotagged photos

Junction Location*

Named junctions already captured are shown on the map as pink circles and polygons.

To add a new junction name or number:

- Navigate to your desired location using the map scroll and zoom functions or search for a location in the 'Find address or place' search bar.
- If there is a pink polygon or circle at this location this indicates that we have already captured the name of this junction - please do not submit a name for this junction.
- If there is no pink polygon or circle, zoom in to the required scale to enable polygon drawing mode.
- Click on the 'draw polygon' button in the top right corner of the map.
- Draw a polygon around the junction or roundabout by clicking to create vertices.
- Double click to close the polygon and finish drawing.



Junction Name or Number*

Please enter the name or number of the junction or roundabout exactly as it appears on the sign.

CURRENT RESEARCH



Exploring Place from the Perspective of Informal Social Media Text

Cillian Berragan

University of Liverpool

Vernacular geography on social media

Resurgence in the study of place built from the availability of geotagged social media posts

- Usually used to designate vague **'cognitive regions'**
- **Text** associated with social media often ignored

Place names embedded in informal text present a large volume of place-based geographic information

- Much richer source of directly related **semantic information**
- Directly captures **vernacular geography**
- Extractable through **geoparsing** methodologies

Berragan, C., Singleton, A., Calafiore, A. & Morley, J. (2022) 'Transformer based named entity recognition for place name extraction from unstructured text', International Journal of Geographical Information Science, 37(4), pp.747-766. doi:10.1080/13658816.2022.2133125

Berragan, C., Singleton, A., Calafiore, A. & Morley, J. (2024) 'Mapping Cognitive Place Associations within the United Kingdom through Online Discussion on Reddit', Transactions of the Institute of British Geographers. doi:10.1111/tran.12669

Berragan, C., Singleton, A., Calafiore, A. & Morley, J. 'Mapping Great Britain's Semantic Footprints through a Large Language Model Analysis of Reddit Comments', Computers, Environment and Urban Systems. doi:10.1016/j.compenvurbsys.2024.102121

Associations between locations built from mental maps (Paper 2)

Mental maps; cognitive visualisation of a geographic environment

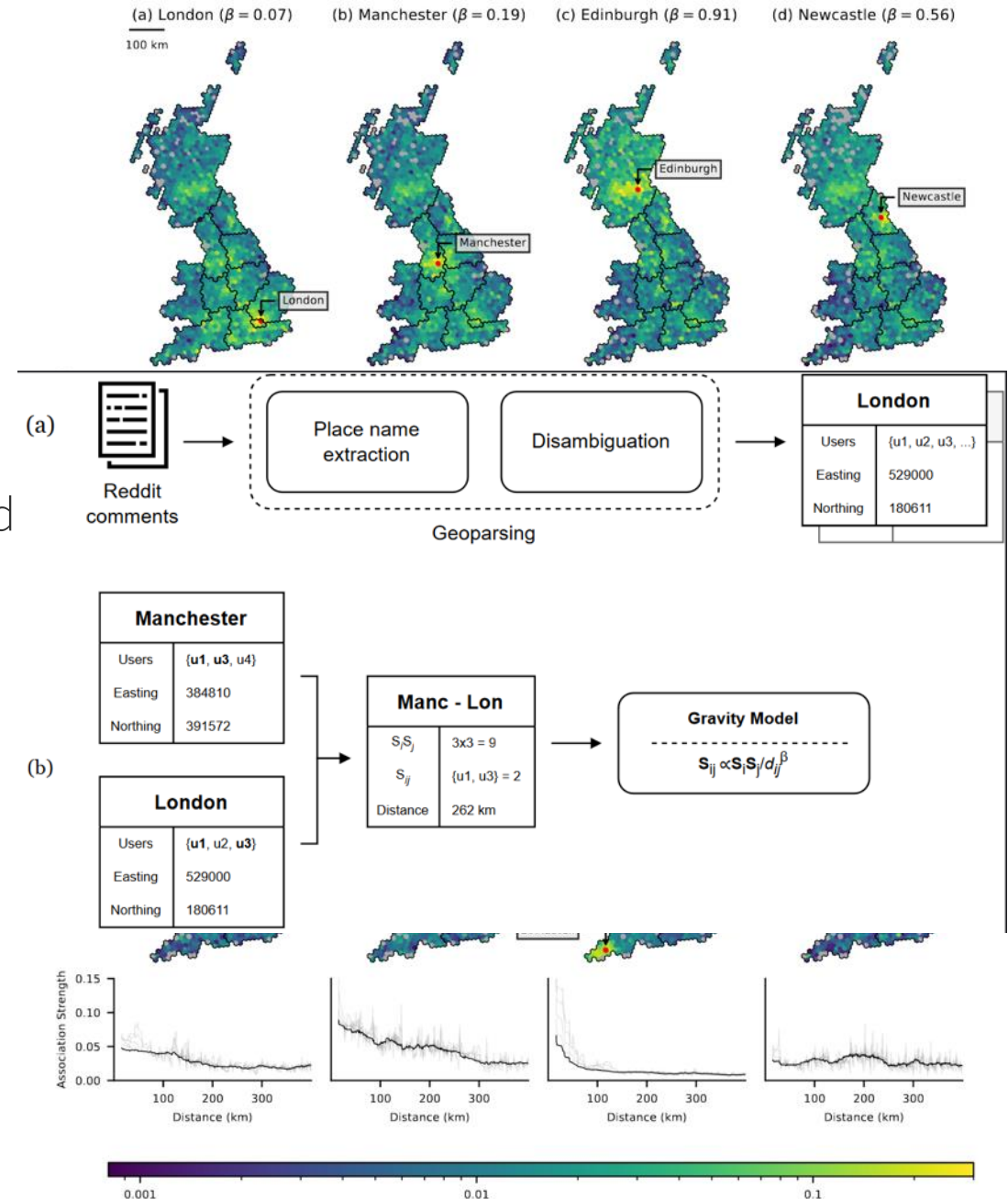
- Built from experiential geographic knowledge
- Place-based meaning features within maps are warped compared with reality

Geoparsed 8 million comments from UK **Reddit** forums

- Generated association strength through **co-occurring place names**

Overall distance decay of association strength positive

- Highly variable; lower in major cities like **London** or **Manchester**



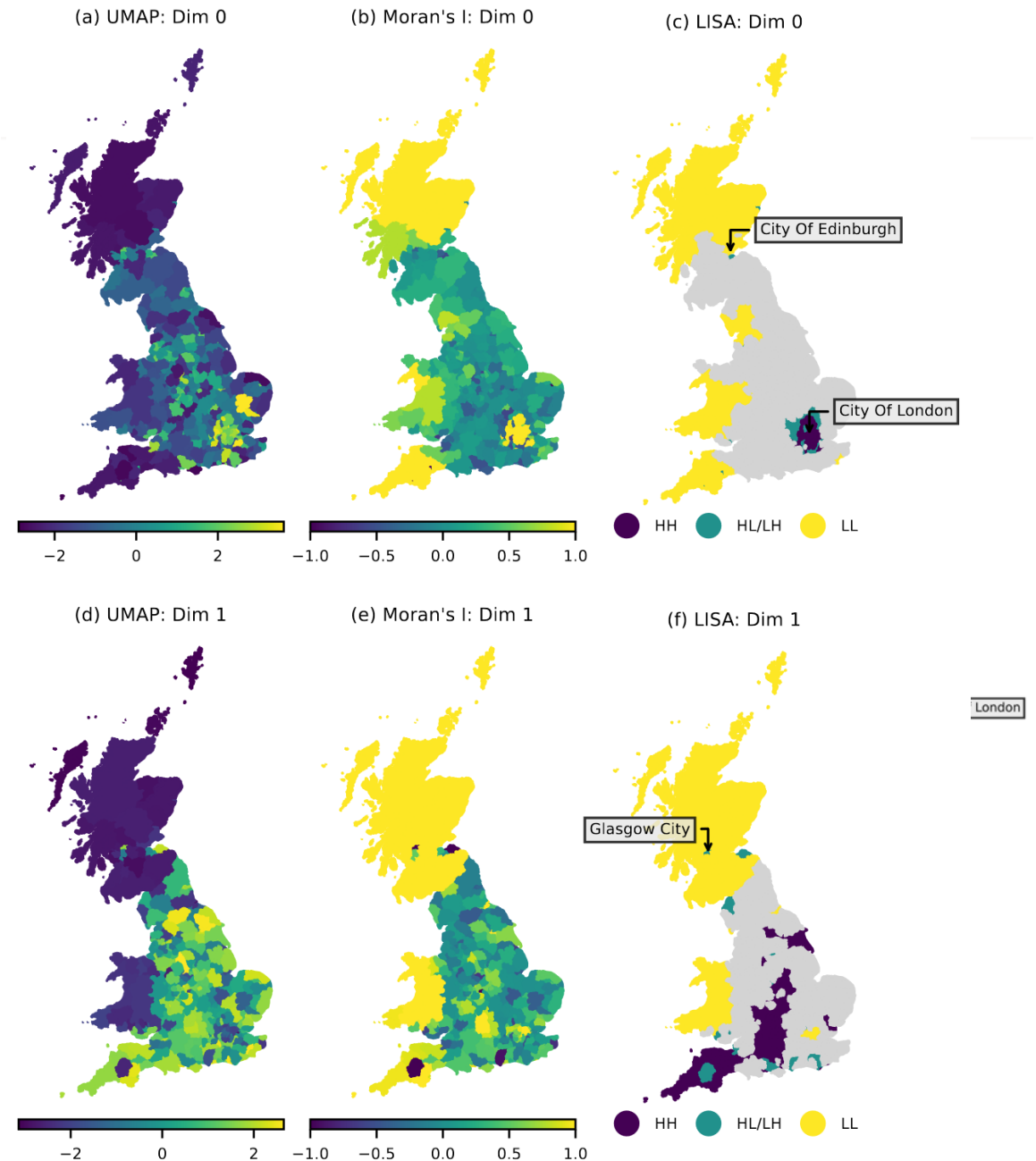
Mapping semantic regional variation (Paper 3)

Directly map variations in **vernacular geography**

- Generate semantic embeddings of comments relating to regions using an **LLM**
- Aggregate into small scale LSOA units;
 - Cluster analysis
 - Spatial autocorrelation

Embeddings broadly conform with **national boundaries**

- Wales, Scotland, London stand out
- Suggests strong place-based identities in these regions that is distinct from the rest of GB



CONCLUSIONS

- OS is using methods of direct crowd-sourcing for operational use
- Internal and external ‘crowds’
- External crowds do not yet include the general public
- We are still exploring indirect crowd sourcing
- Twitter/X has really lost its interest!

