Mapping

Core mapping
With Mapping, you can visualise your performance data across geographic areas. Identify trends according to location, know exactly where the most tests are run, and provide telling graphics when compiling reports.

Core and advanced analytics controls
When creating maps, you can use all the same controls you have access to in the rest of analytics: Core and Advanced.

Satellite view
You can view your data over two different views: map view and satellite view. Satellite view is great for seeing how the terrain affect your test results. For example, in the following screenshot you can see that the best results are near the more populated areas.

Mapping visualisations

Raw map
Plot all the individual test results on a map. They’re automatically colour-coded based on their performance compared to the other results, but you can customise the thresholds.

Mobile Download Speed

By default, the results are colour coded so that the bottom 25% are red, the next 25% are amber, and the top 50% are green.

Timeline
See how internet performance varies over time, without sending separate data requests.

Aggregate map
Visualise and aggregate your data generated anywhere in the world, at a country or regional level i.e. province or state. Easily spot variations in performance according to colour.
The shapes are generated from data provided by Natural Earth.

**Heat map**
See how many tests were run for a specific metric(s) on a map. The “hotter” the colour (i.e. red), the greater number of tests were run in that area.

**Geocoding**
All of SamKnows mapping, whether it be raw data points or aggregate bucketing, relies on associating test results with longitudes and latitudes. In some instances, such as mobile, we receive the data in this format. However, in others, we need to turn an address (or partial address such as a postal or zip code) into coordinates.

When using Mapping, you can either provide coordinates as metadata, or we can calculate the coordinates for you based on the address data. If you're not using Mapping, you can still use geocoding to associate coordinates with your test results for analysis.

**Ordnance Survey data source**
In the UK, we match the postcode with the Ordnance Survey data, which is the most accurate source of address data in the United Kingdom. We use their code-point open API documented here.

**OpenStreetMap data source**
We run a search for an address in Nominatim, the search tool by OpenStreetMap. We then use the address details and coordinates of the address that is returned, so long as it seems to be a valid match.

**Google geocoding API**
If no other data source can return a valid match, we attempt to Geocode with Google Maps API in order to do so.