Kinds of thematic maps

- symbol maps
- flow maps
- cartograms
- surface maps
- area maps

Isometric

4 · isometric and isopleth



Ground elevation, measured at points: one line every 25 m.

Both maps draw lines that join places of equal value.

On the left, the value (elevation) is measured at points. On the right, the value (density) is computed for each neighborhood, then placed at the center of the neighborhood.

Isopleth

4 · isometric and isopleth



Residents per km², measured over each neighborhood, then smoothed: lines at 4,000, 8,000 and 12,000.

Flows

5 · flows and networks



Commuting: the 20 largest flows between boroughs, thickness proportional to the number of workers.

Both maps draw arrows.

On the left, each arrow goes from one borough to another; its thickness gives the number of people who make this trip. On the right, an arrow is placed at each point of a grid: it gives the direction of the wind, and its length the speed. Two variables.

Winds

5 · flows and networks



Wind at 10 m on August 3, 2024, 8 pm: (1) direction, the arrow; (2) speed, its length, from 8 to 12 km/h.

Dot density map

1 · dot distribution



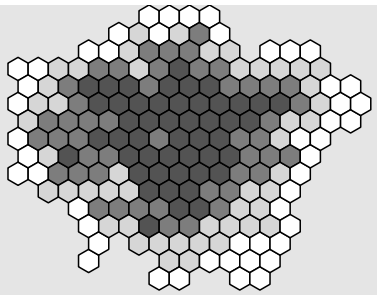
Residents: one dot per 10,000, placed at random in its neighborhood (MSOA).

Both maps show the same residents.

On the right, residents are added up in hexagons of the same size instead of being drawn as dots. The hexagons do not follow the borough boundaries.

Hexbin map

6 · cartograms



Residents per 3.5 km hexagon, in quartiles.

Proportional symbols

2 · graduated symbols



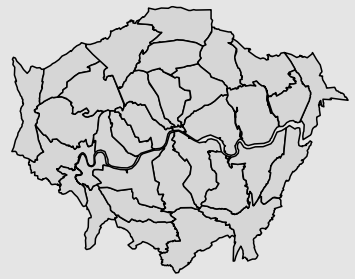
Residents per borough: the area of the disk is proportional.

In both maps, an area is proportional to the number of residents of the borough.

On the left, it is the area of a disk placed on the borough. On the right, it is the area of the borough itself, whose shape is distorted.

Cartogram

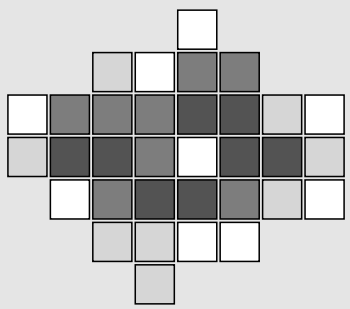
6 · cartograms



Each borough distorted: its area becomes proportional to its residents.

Tiles

6 · cartograms



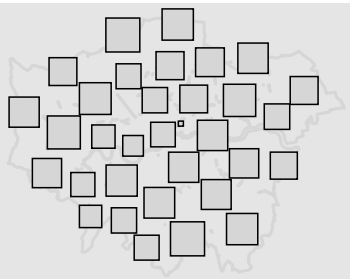
One cell per borough, near its real position; shade: residents per km², in quartiles.

Both maps show each borough as a square, placed near its real position.

On the left, all squares have the same size, and their color gives the density. On the right, the size of the square gives the number of residents, and there is no color any more.

Demers cartogram

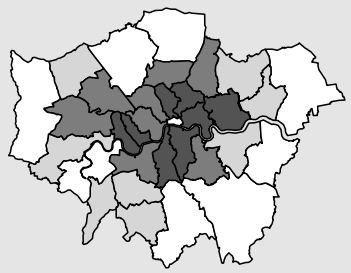
6 · cartograms



One square per borough, placed as close as possible to its position: its area is proportional to residents.

Choropleth

3 · choropleths



Residents per km² in each borough, in four classes (quartiles).

Both maps show the density of residents in each borough.

On the right, a second piece of information is added: where the urban fabric is. Residents are placed only there; parks, water and business areas stay empty. Two variables.

Dasymetric

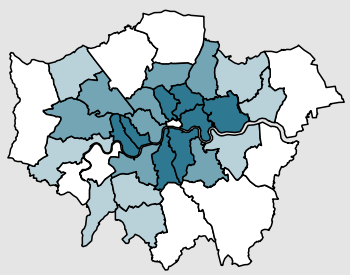
3 · choropleths



(1) main variable: residents of the borough; (2) ancillary spatial variable: urban fabric (Corine), the only place where they are placed. Shade: residents per inhabited km².

Choropleth in color

3 · choropleths



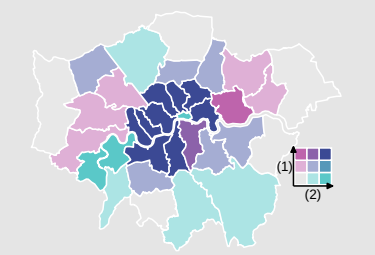
The same density, in quartiles, in shades of blue.

Both maps show the density of residents in color.

On the right, a second piece of information is added: the share of workers who mainly work from home. Each color combines the two; the square legend lets you read both. Two variables.

Bivariate choropleth

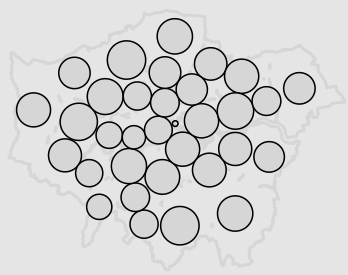
3 · choropleths



(1) residents per km²; (2) share of workers working mainly from home (2021). Each in thirds.

Dorling

6 · cartograms



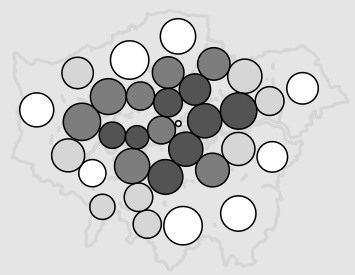
One circle per borough: its area is proportional to its residents.

In both maps, the size of the circle gives the number of residents of the borough.

On the right, a second piece of information is added: the circle's color gives the density. Two variables.

Bivariate Dorling

6 · cartograms



(1) circle area: residents; (2) shade: residents per km², in quartiles.