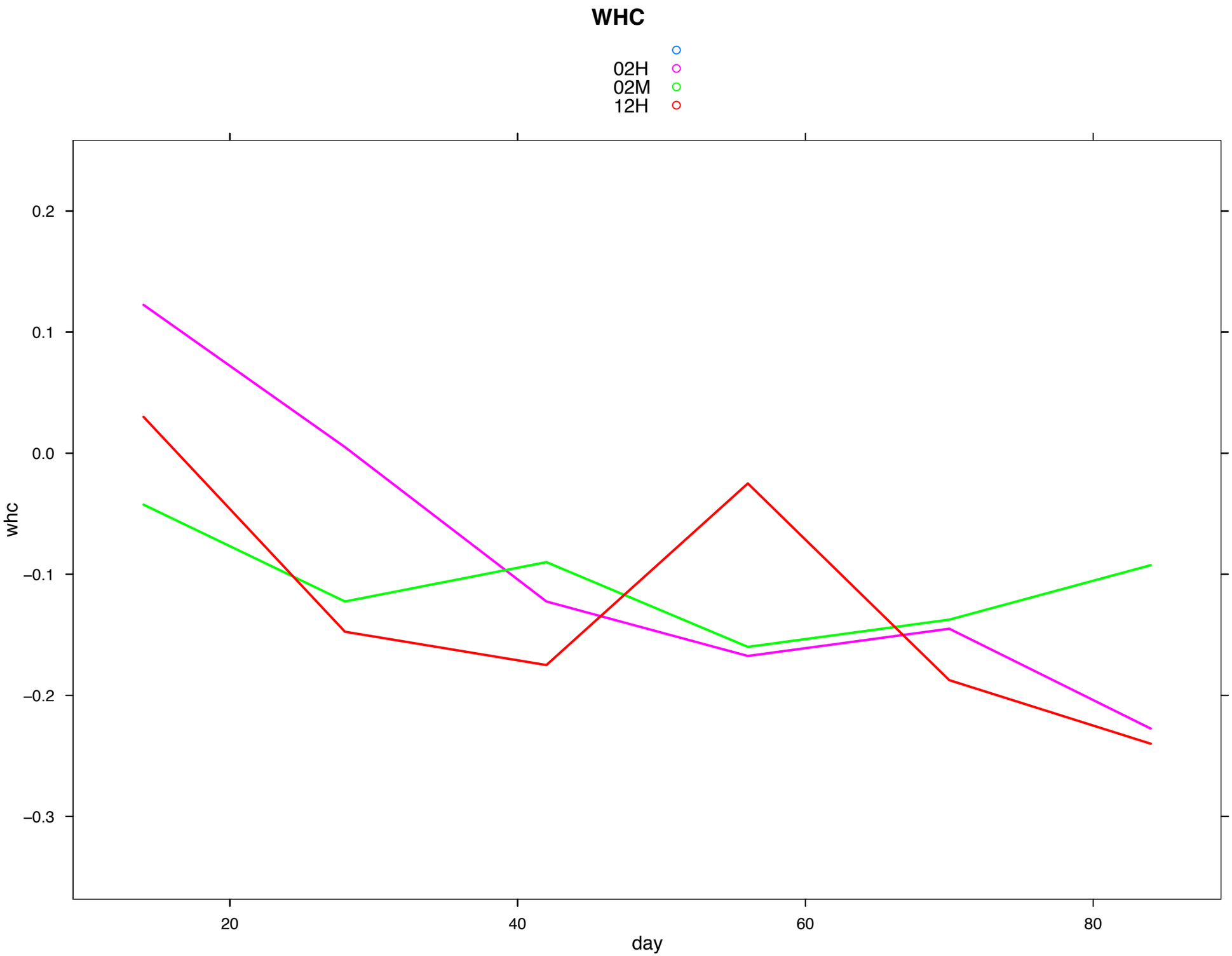
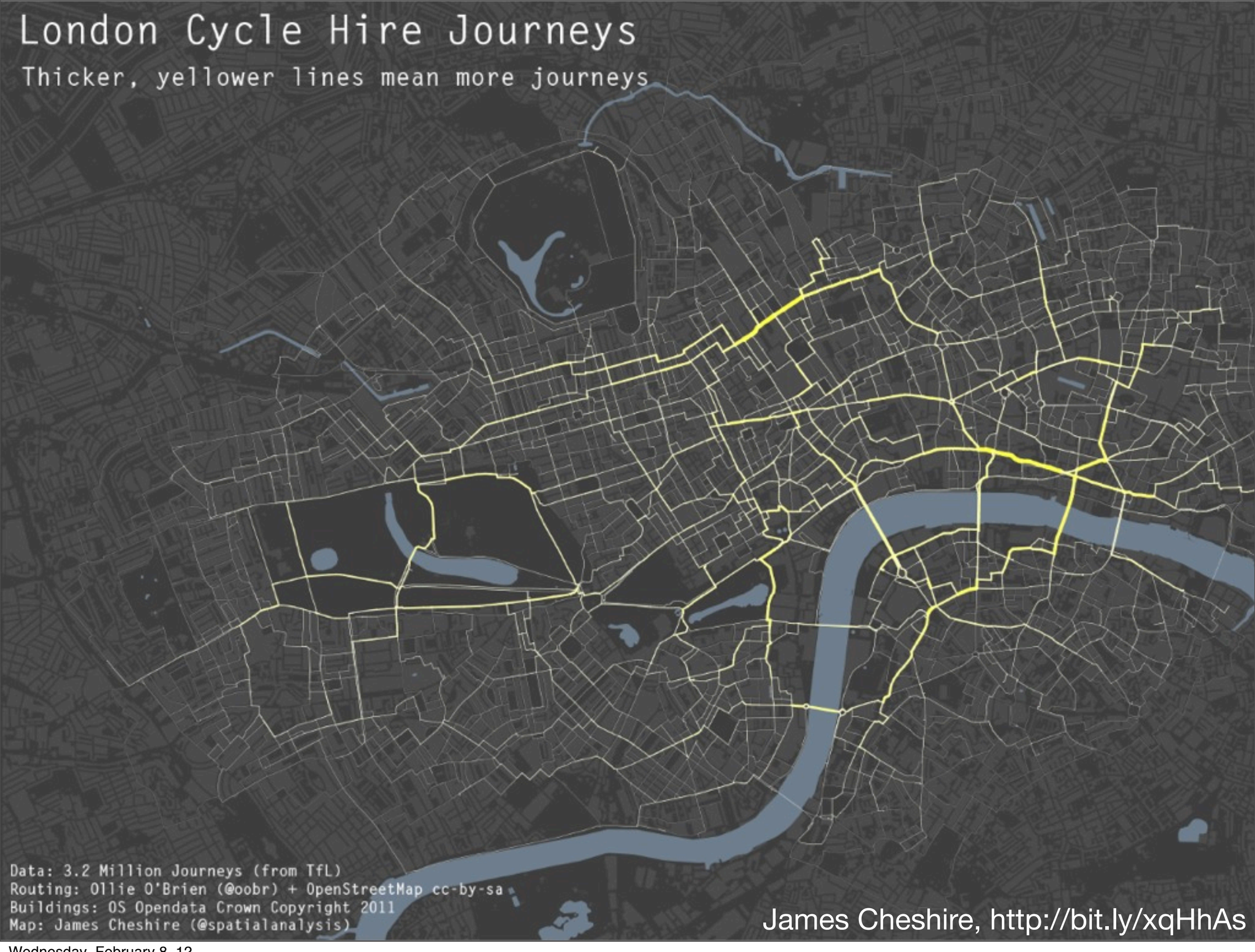
2004



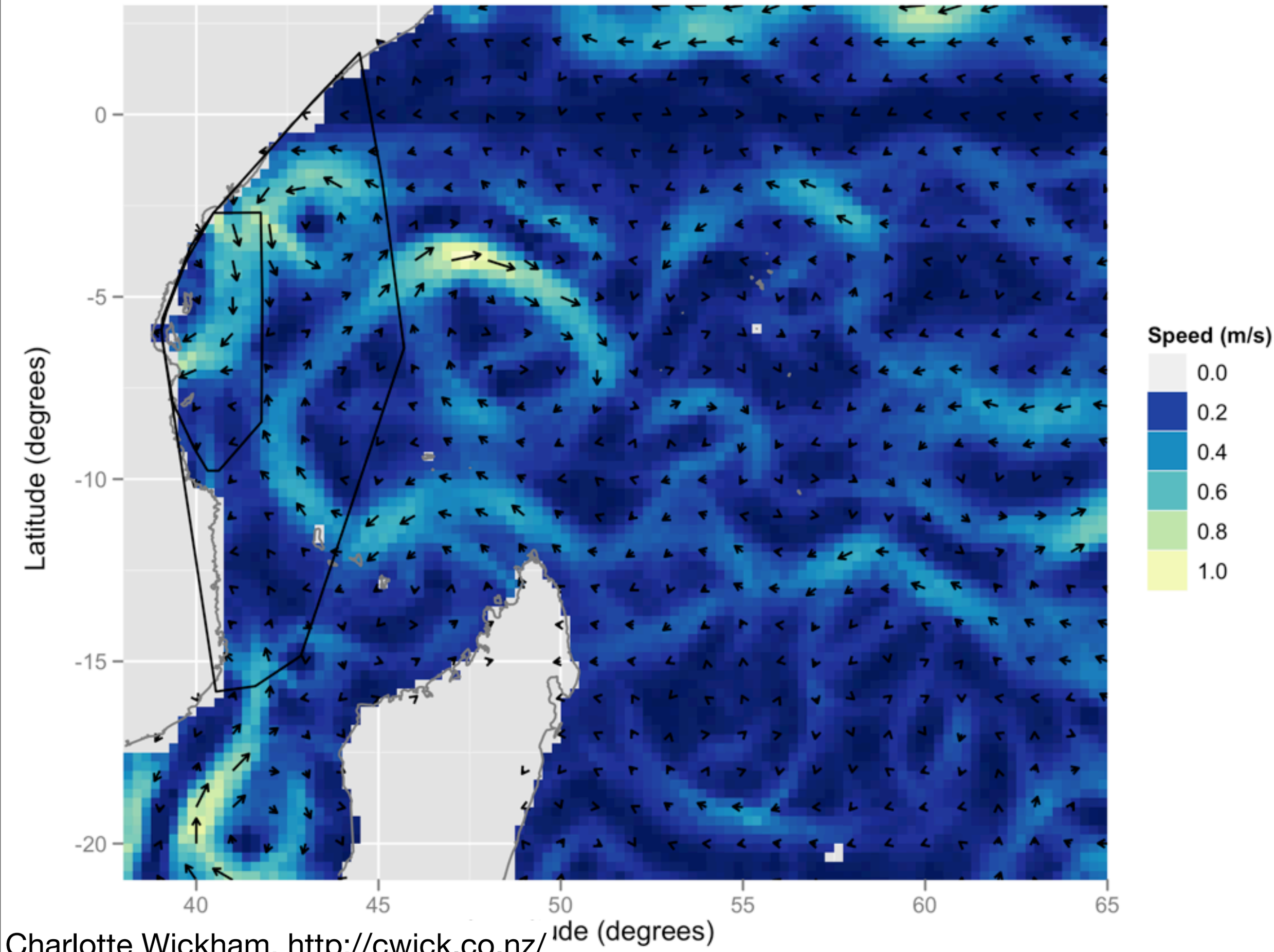
London Cycle Hire Journeys

Thicker, yellower lines mean more journeys

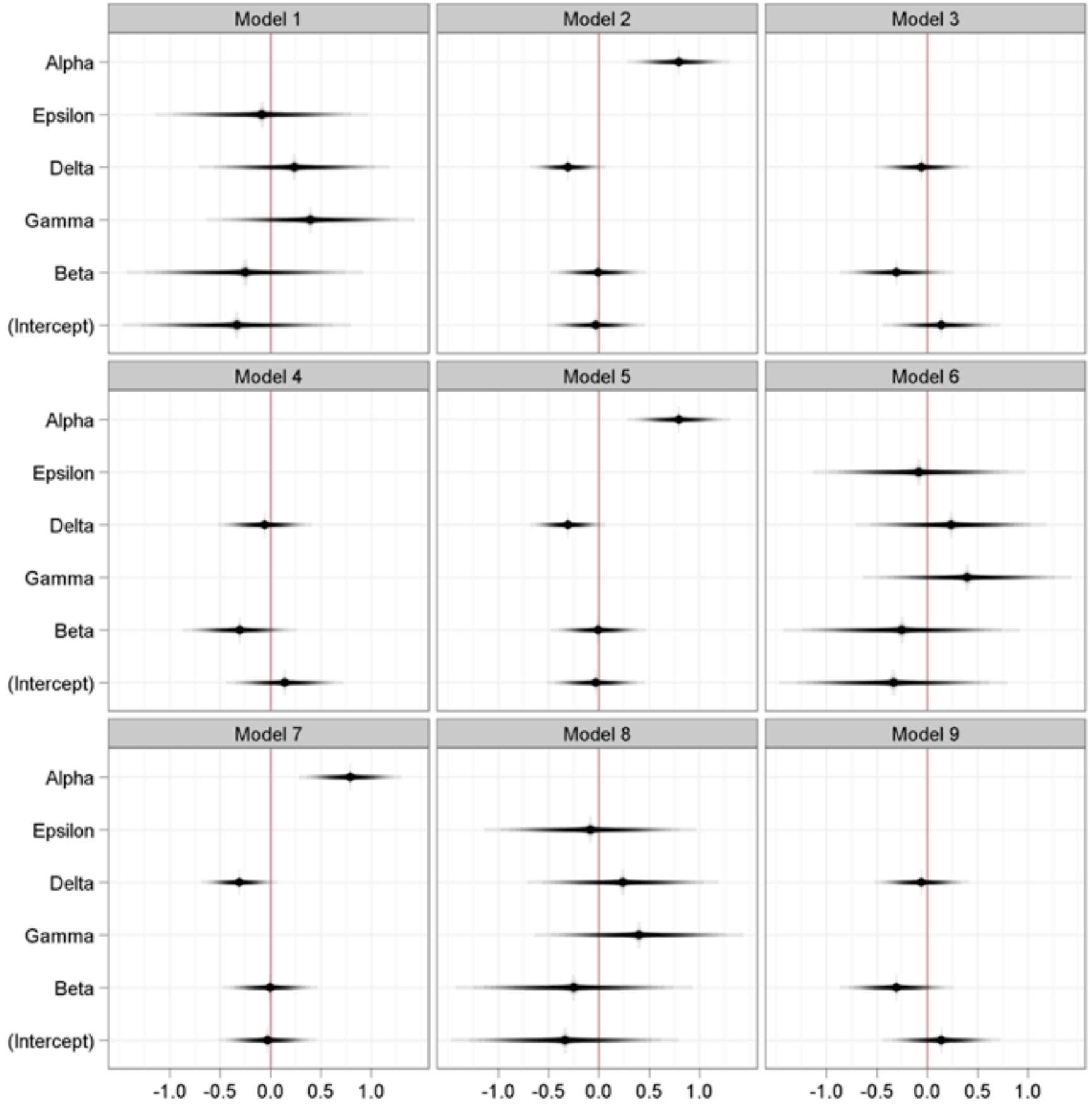


Data: 3.2 Million Journeys (from TfL)
Routing: Ollie O'Brien (@oobr) + OpenStreetMap cc-by-sa
Buildings: OS Opendata Crown Copyright 2011
Map: James Cheshire (@spatialanalysis)

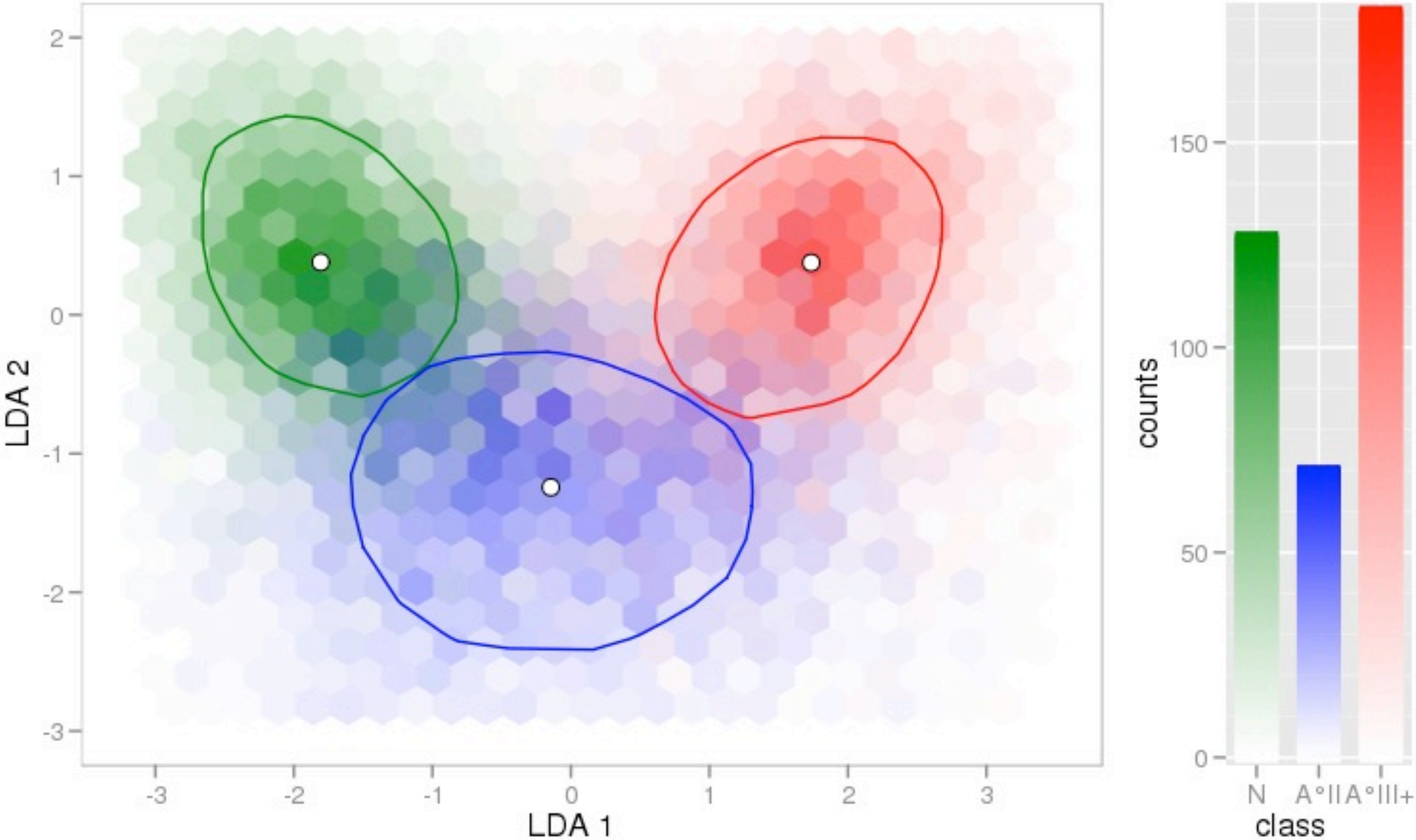
James Cheshire, http://bit.ly/xqHhAs



Charlotte Wickham, http://cwick.co.nz/



David B Sparks, http://bit.ly/hn54NW



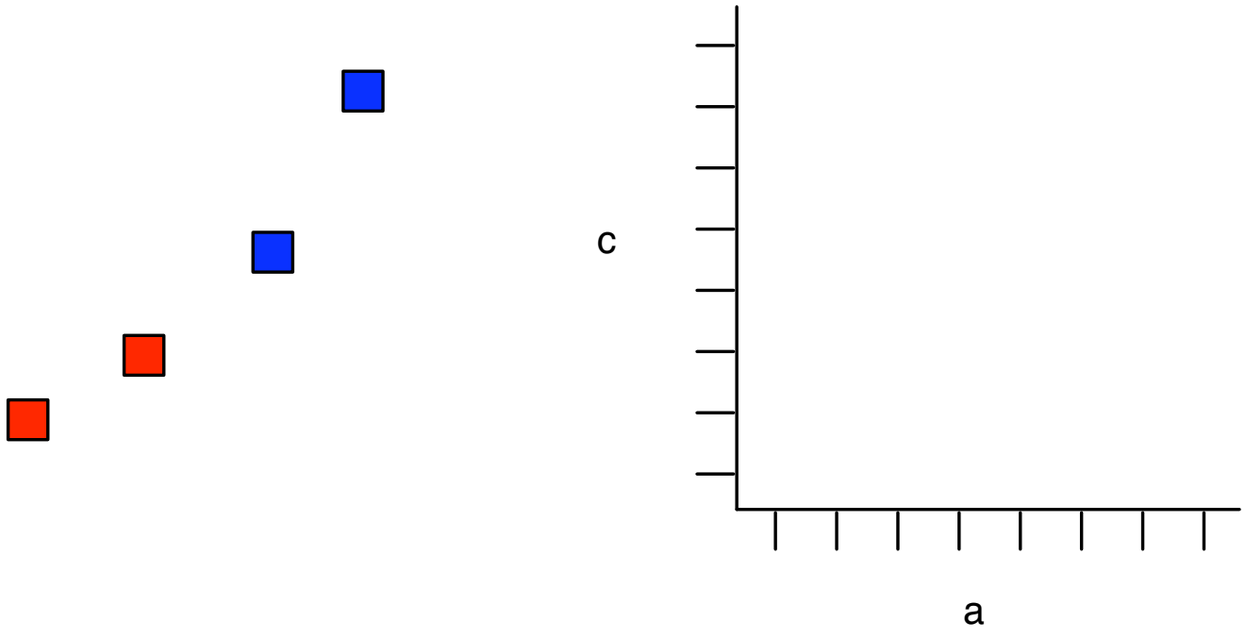
Claudia Beleites, http://bit.ly/yNqlpz

A **plot** is made up of multiple layers.

A **layer** consists of **data**, a set of **mappings** between variables and aesthetics, a **geom**etric object and a **stat**istical transformation

Scales control the details of the mapping.

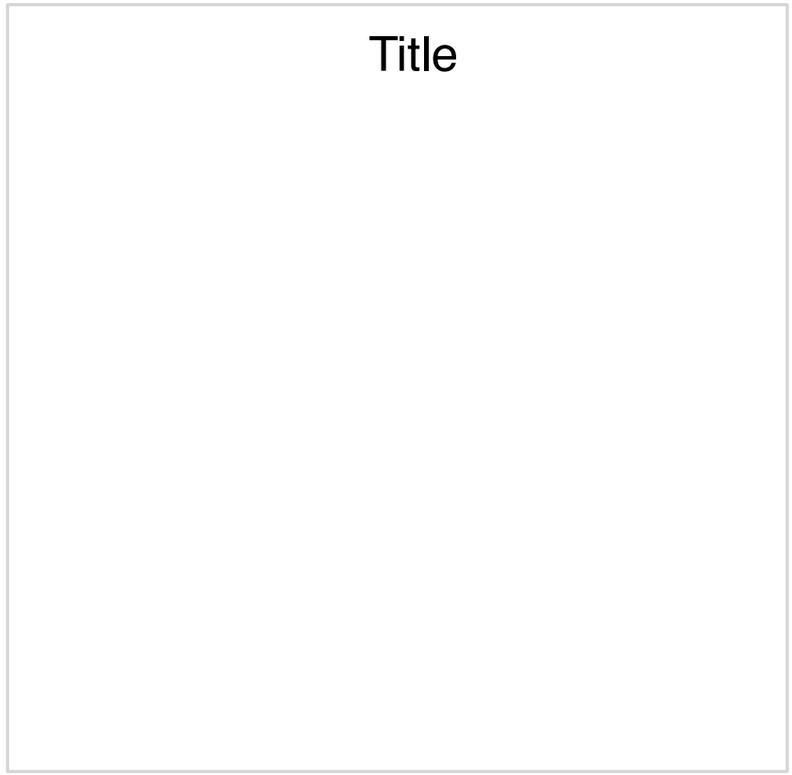
All components are independent and reusable.



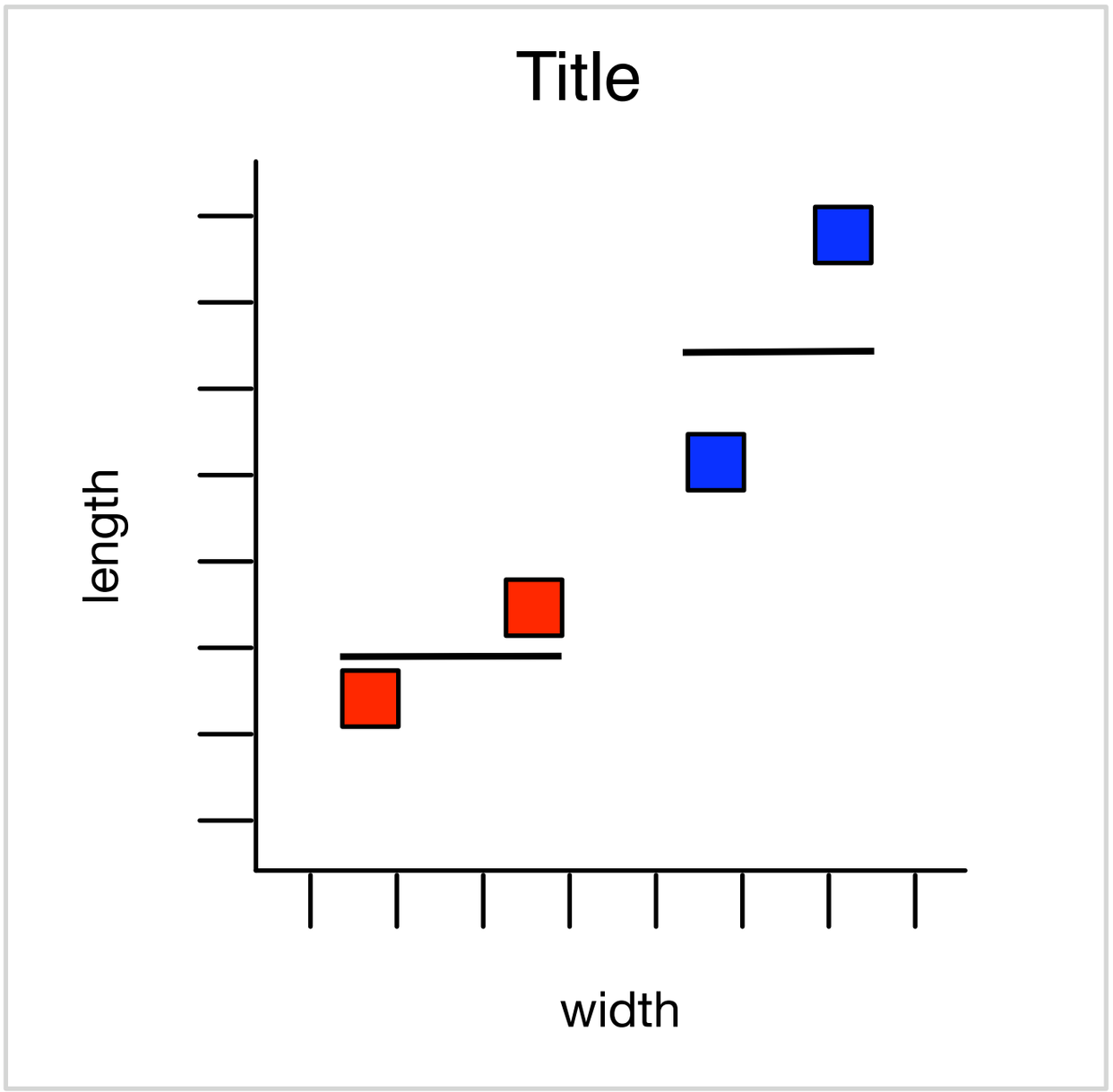
Geoms

Guides

(from scales and coordinate systems)



Plot



Multiple layers, statistical transformation

Plot definition

```
ggplot(data, mapping) +
layer(
    stat = "",
    geom = "",
    position = "",
    geom_parms = list(),
    stat_params = list(),
)
```