Isochrone project

Evaluating transport networks

SHANE

GABRIEL

How can we visualize and evaluate how connected a location is ?

Overview

1 Isochrones

2 Google maps API

3 TravelTime API

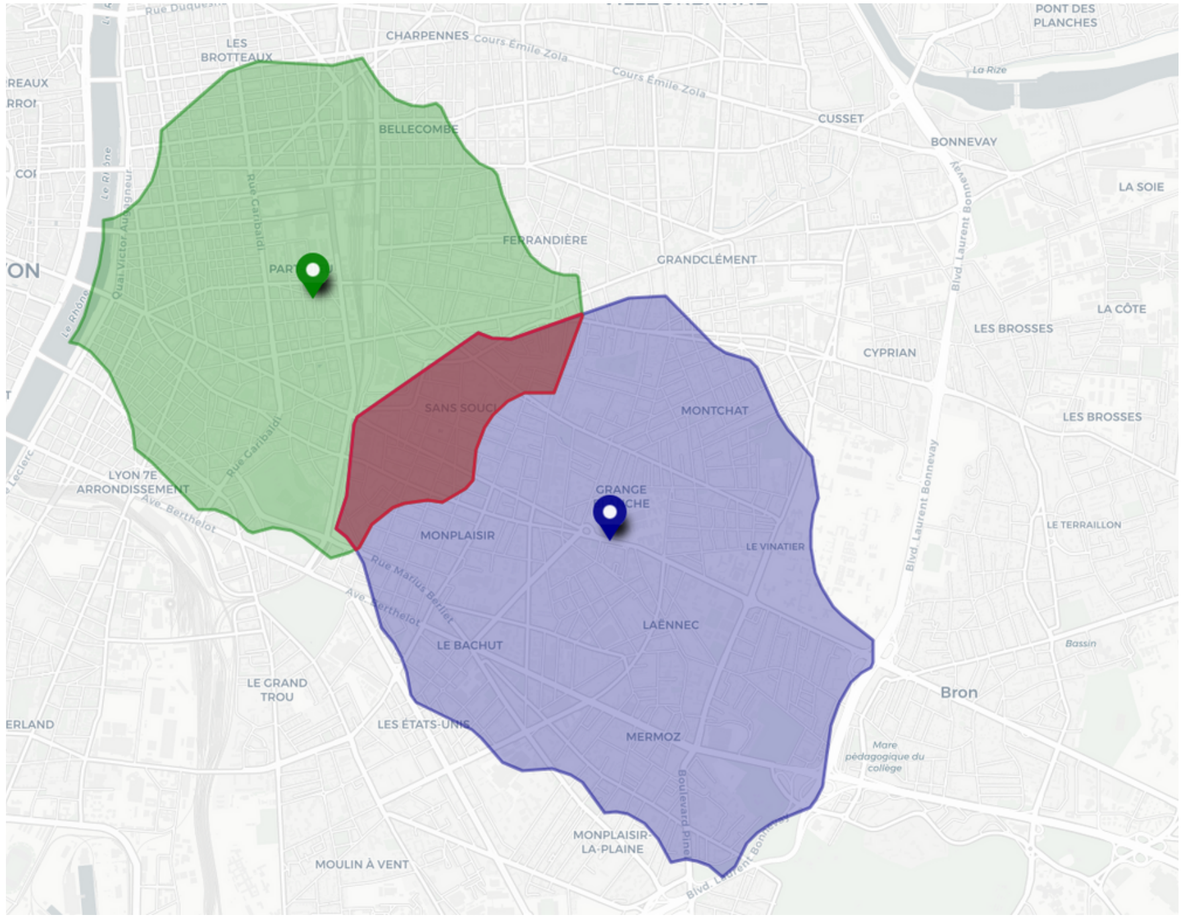
4 Visualization with shiny

5 Evaluating Isochrones

6 Applications

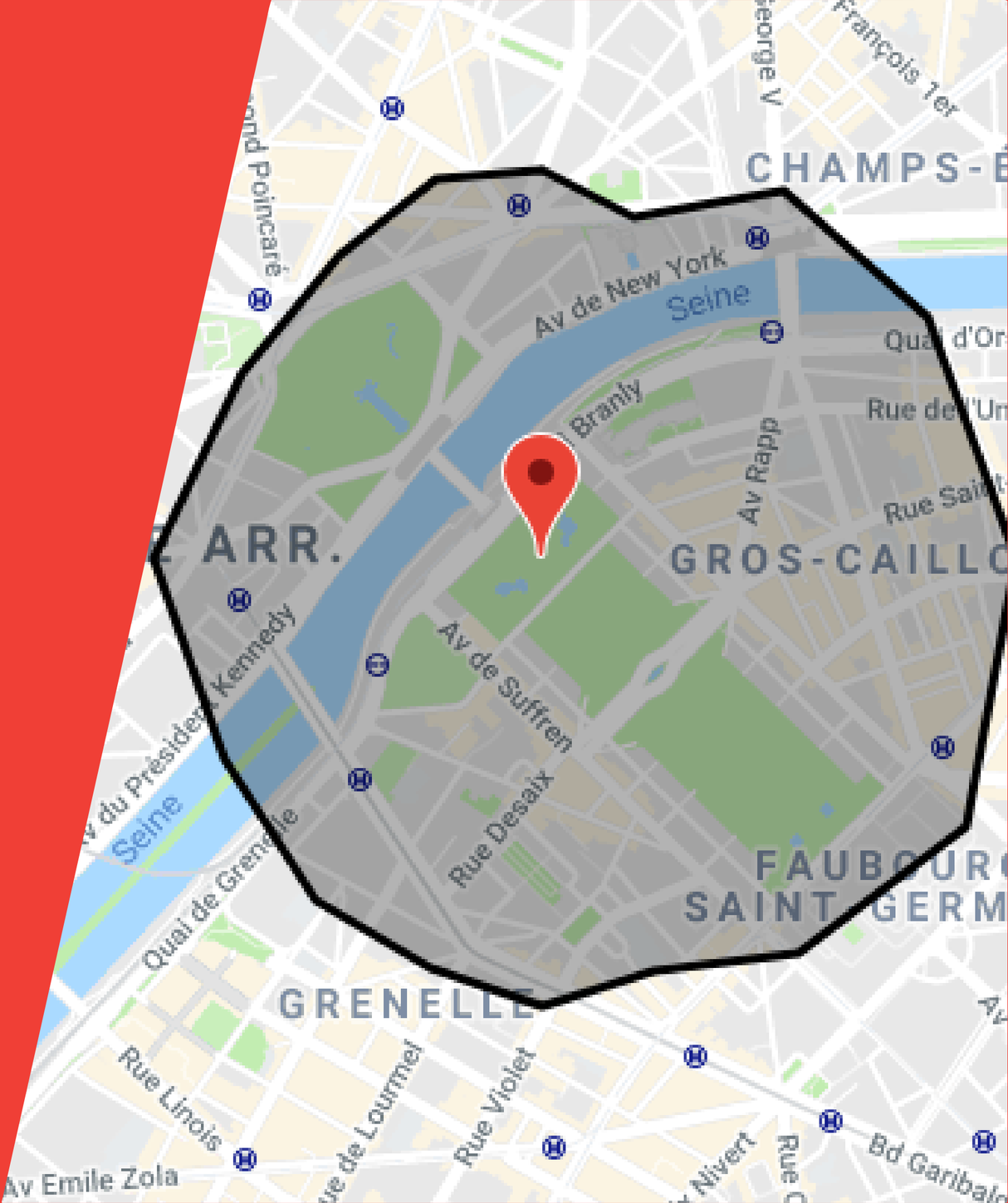
Isochrones

- Lines of equal travel time
- How connected a location is
- Transport & mobility modeling
- Improving transport network
- Optimisation involving location



Google Maps API

- API -> travel time between 2 points
- Options for transport mode
- Manual Isochrone Computation
- Limited parameters & resolution
- Cost



TravelTime API

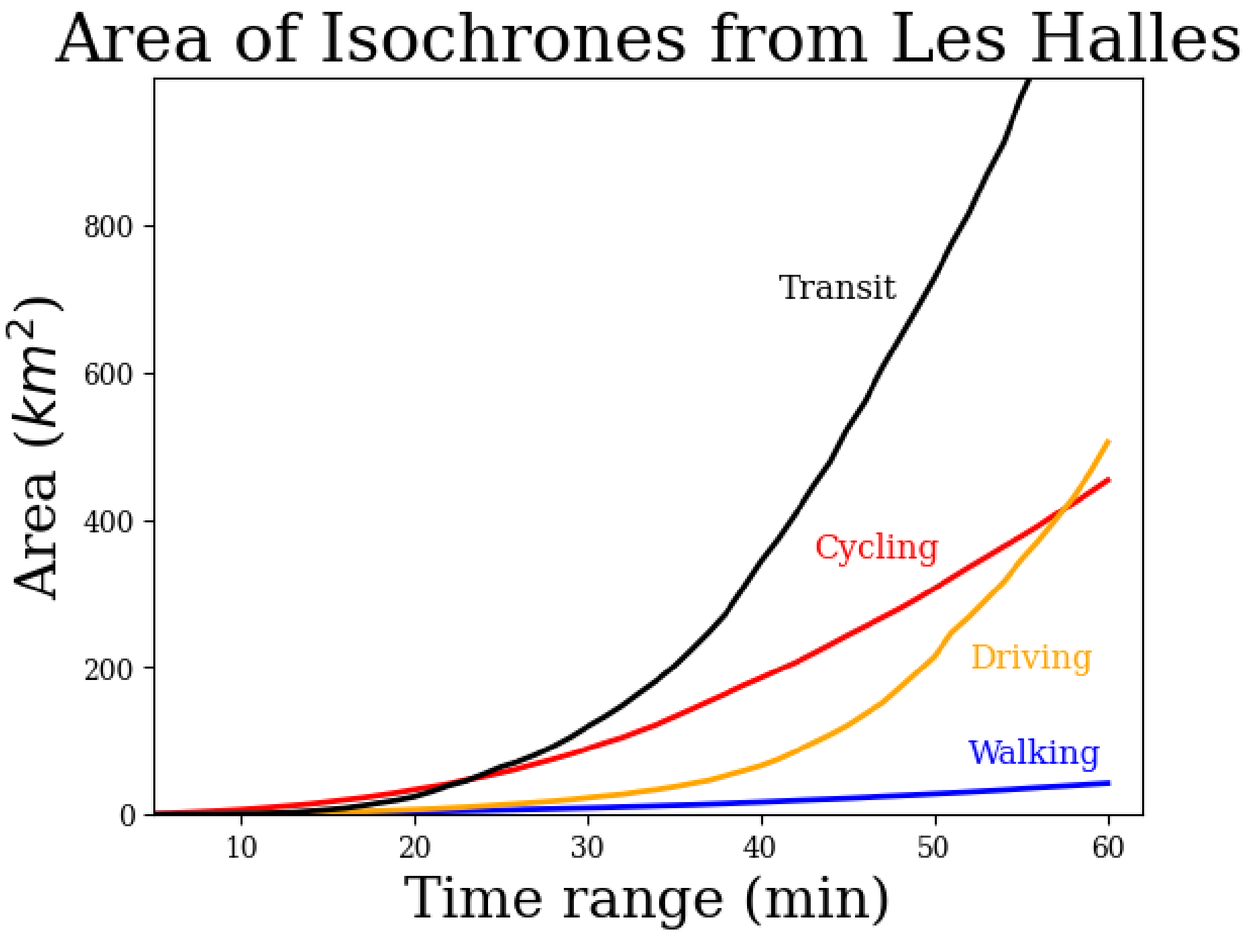
TravelTime

- Direct computation of isochrones
- More isochrone parameters
- Increased resolution
- Islands & Holes
- Free + R sdk (shiny)

Shiny demo

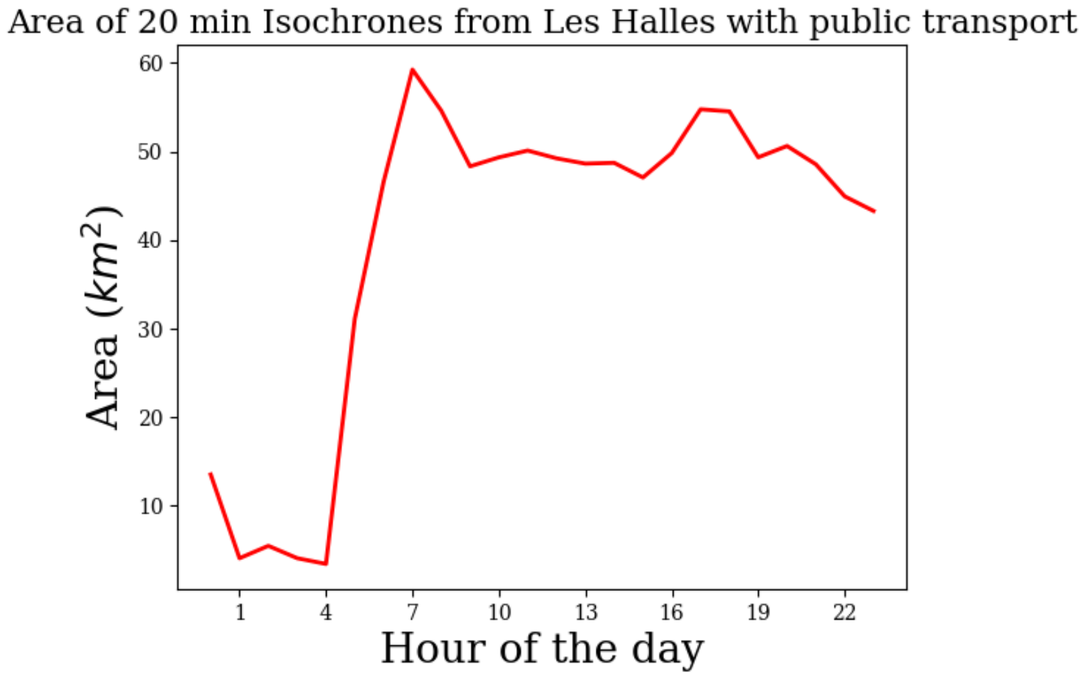
Isochrone Analysis

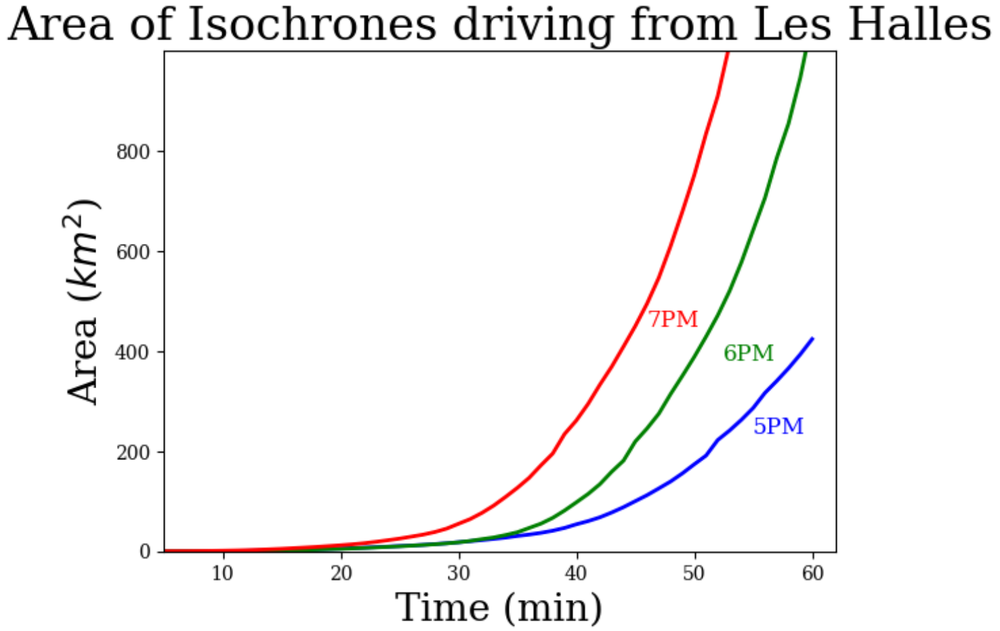
- Define metrics for interpretation
- Here : Total Area of isochrones
- Many different axis to observe : Departure time, transport mode, origin ....



Isochrone Analysis

- Notion of symmetry
- Maximum bearing distance
- Other metrics ?

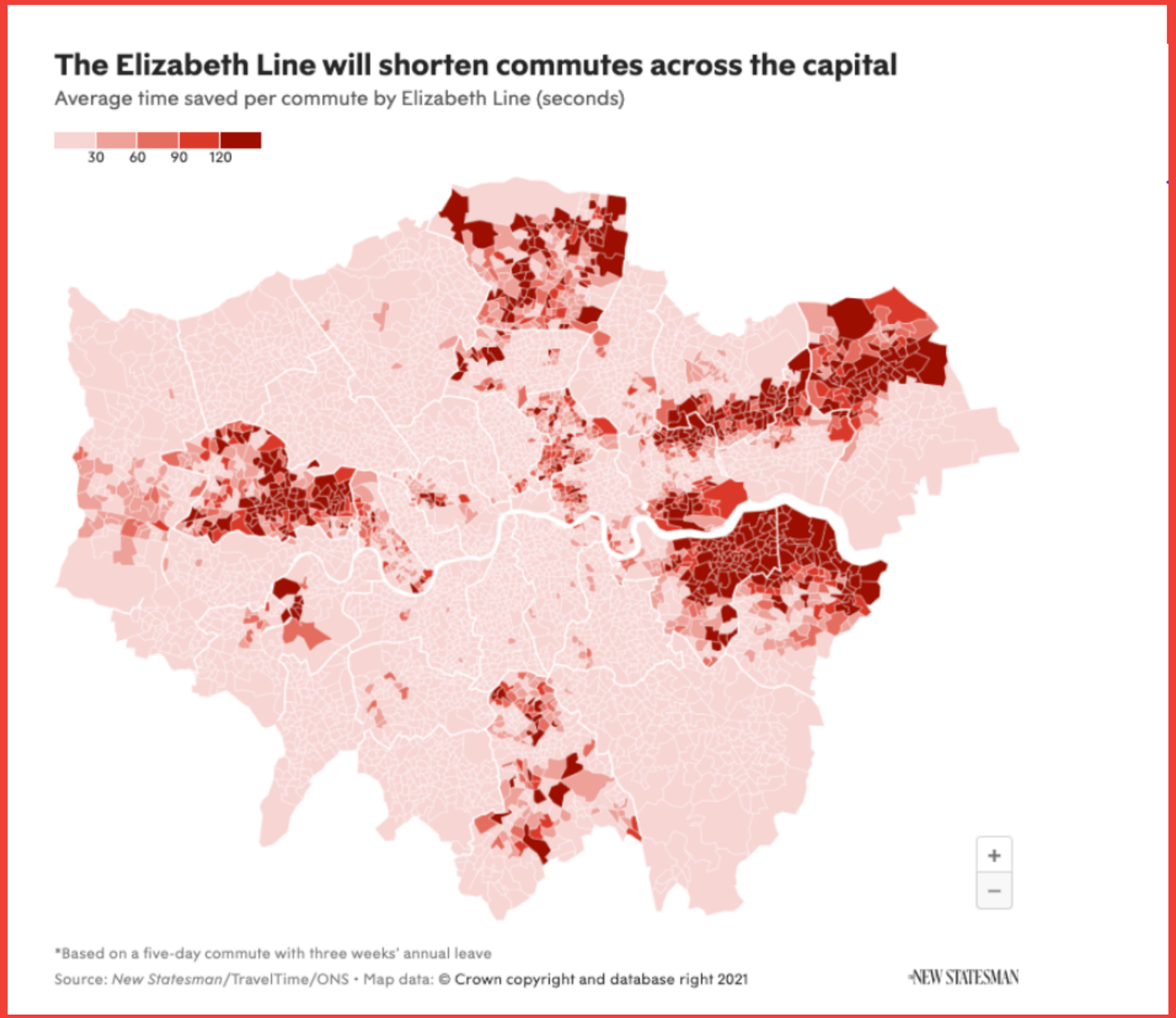




Application Examples

Mobility Impact

- Assessing changes in transport
- Measuring the impact of potential construction
- Planning future projects



Location-linked Decisions

- Opening stores
- Real estate applications
- Renting offices
- Looking for jobs

Lots of other examples!

Travel Time Customer gallery ...