

Isoscope: Mapping the Dynamics of Mobility

Flavio Gortana
flaviogortana@gmail.com

Sebastian Kaim
hallo@sebastiankaim.com

Martin von Lupin
kontakt@martinvonlupin.de

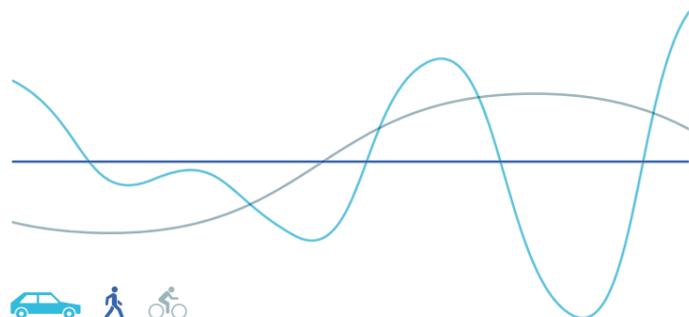
Till Nagel
nagel@fh-potsdam.de

FH Potsdam
University of Applied Sciences
14406 Potsdam, Germany

in partnership with
HERE, a Nokia Company

1. Motivation

Traffic jams and other temporary hold-ups affect our personal mobility depending on the chosen means of transport.



→ How do those restrictions impact our journeys through the city? In what way do cities differ here?

2. Temporal variance in mobility

“Isoscope” is all about: *how far do I get from a specific location, within a specific travel time, at various dates considering traffic conditions?*



→ Shows deviations in the reachable area over time due to changes in traffic conditions.

→ Allows for exploration and comparisons within and among locations.



3. Prototype: isoscope.fh-potsdam.de

Explore your own city now!

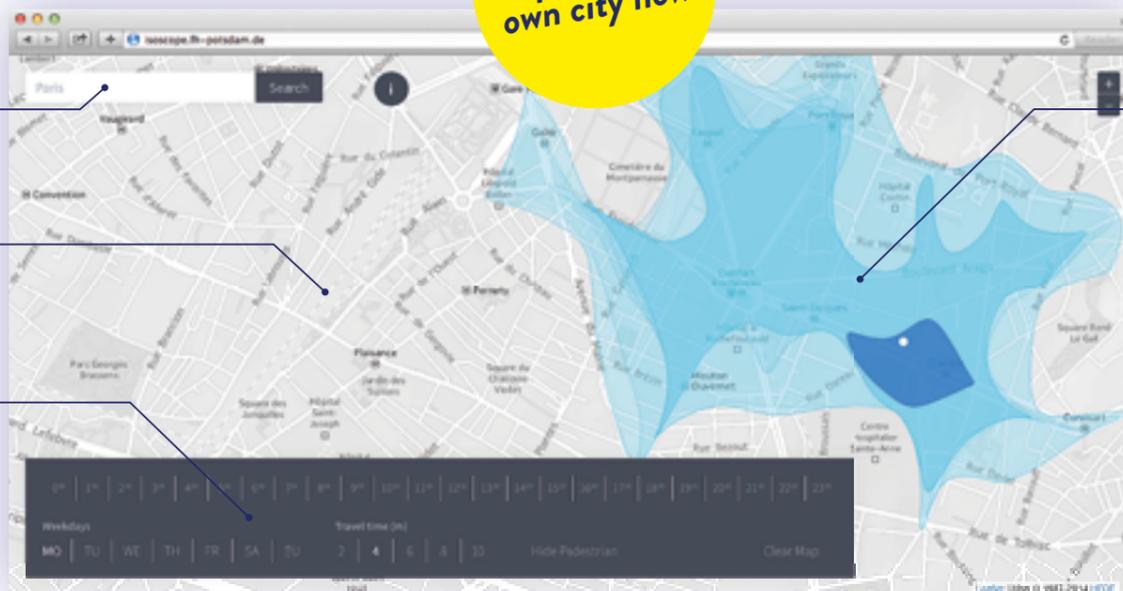
Global location search*

Main map*†

→ Grayscale to reduce visual complexity.

Date/Time & traveltime selector

→ Hovering over time highlights corresponding isoline.
→ Changing day or traveltime updates Isoscope shape.



24 layered isochrone shapes‡

→ Isolines linearly connect points (here: crossroads) having the same travel time from a specified location.
→ Travel ranges calculated by HERE Traffic API considering global traffic data.
→ Organic shape to imply vagueness of displayed info.
→ Translucence to assure legibility of map.

* uses the HERE Maps API for Javascript – † uses the Leaflet library; map tiles by HERE – ‡ uses the visualization framework d3

4. Walkthrough



1. Click on a specific location. Multiple isochrone shapes are displayed based on the settings on the control panel.

2. Hover over the timeline to highlight single shapes. Adjust parameters in the settings to compare scopes between days.

3. Select additional locations to compare isochrone shapes of multiple places side by side or start all over again.

5. Conclusion

“Isoscope” is a web-based tool to display time-varying mobility data with the help of layered isochrone maps.

→ A fun and aesthetically pleasing way to explore various metropolitan areas.
→ Scope variance provides insights into physical structure of cities.
→ Integration of missing modes of transportation (bike, public transport) would be valuable for a holistic representation of mobility.