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How does unequal access to the city affect people with reduced mobility? The case of Strasbourg

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Mind the gap

How does unequal access to the city affect people with reduced mobility?

The case of Strasbourg

Laboratoire
image, ville, environnement | LIVE
de l'Université de Strasbourg
de l'ENGEES et du UMR

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Context

Accessibility to the city differs according to spatial, temporal and individual dimensions.

By focusing on some of the groups among those prone to suffer from inequality of access, the JUSTICE project aims to identify the constraints they encounter when travelling to the city and to measure the resulting inequalities.

A mixed methodology

EXPRESS Identify the constraints and perceptions of people with reduced mobility when travelling on public transport

Methods: go-alongs, interviews, focus groups

Transcription into parameters ↓ ↑ Cartographic materials

MEASURE Modelisation of routes by public transport (& walking) from 2,500 origins to 15 destinations with 13 restrictive conditions

MEASURE Measurement of accessibility (travel time, walking distance, number of transfers) via OpenTripPlanner

About data

OSM (OpenStreetMap)
Characteristics of public space (street network)

GTFS (CTS, SNCF, Region)
Characteristics of public transport network (theoretical service)

Anomalies (Eurometropolis)
Survey of public space anomalies (pavement width, fixed obstacles, etc.), stations, vehicles

Mapping constraints

Constraints
= combination of restrictive conditions
= potential additional efforts

Walking constraints Walking reluctance, reduced speed

Orientation constraints No tactile paving, network maps or voice announcements, avoiding complex stations

Crossing constraints Avoidance of anomalies on the street network, unsuitable vehicles and stations

Discretisation and visualisation

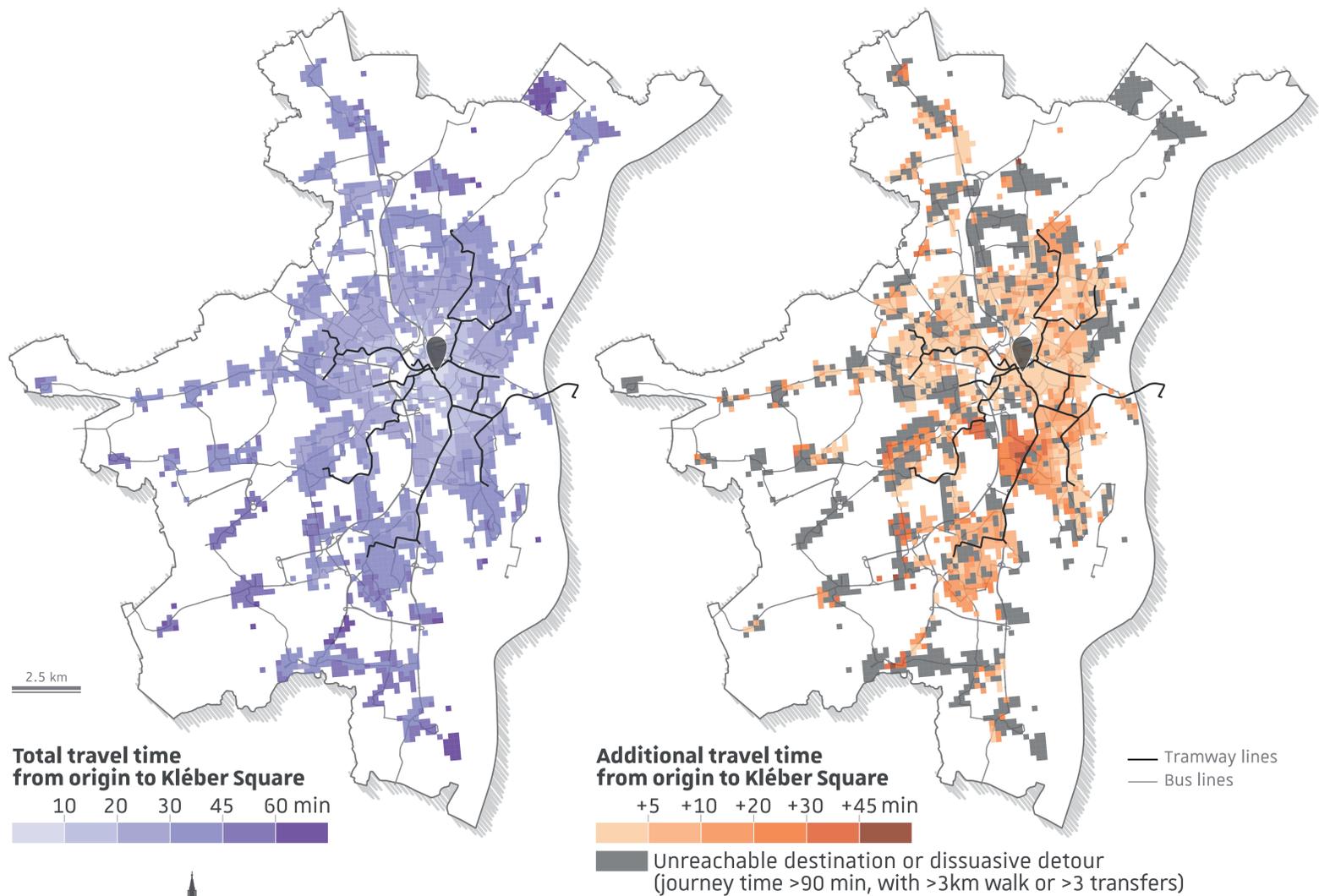
≥ 20 min detour = "significant" effort

Unreachable destination or dissuasive detour = "dissuasive" effort

Theoretical travel times for a non-disabled user

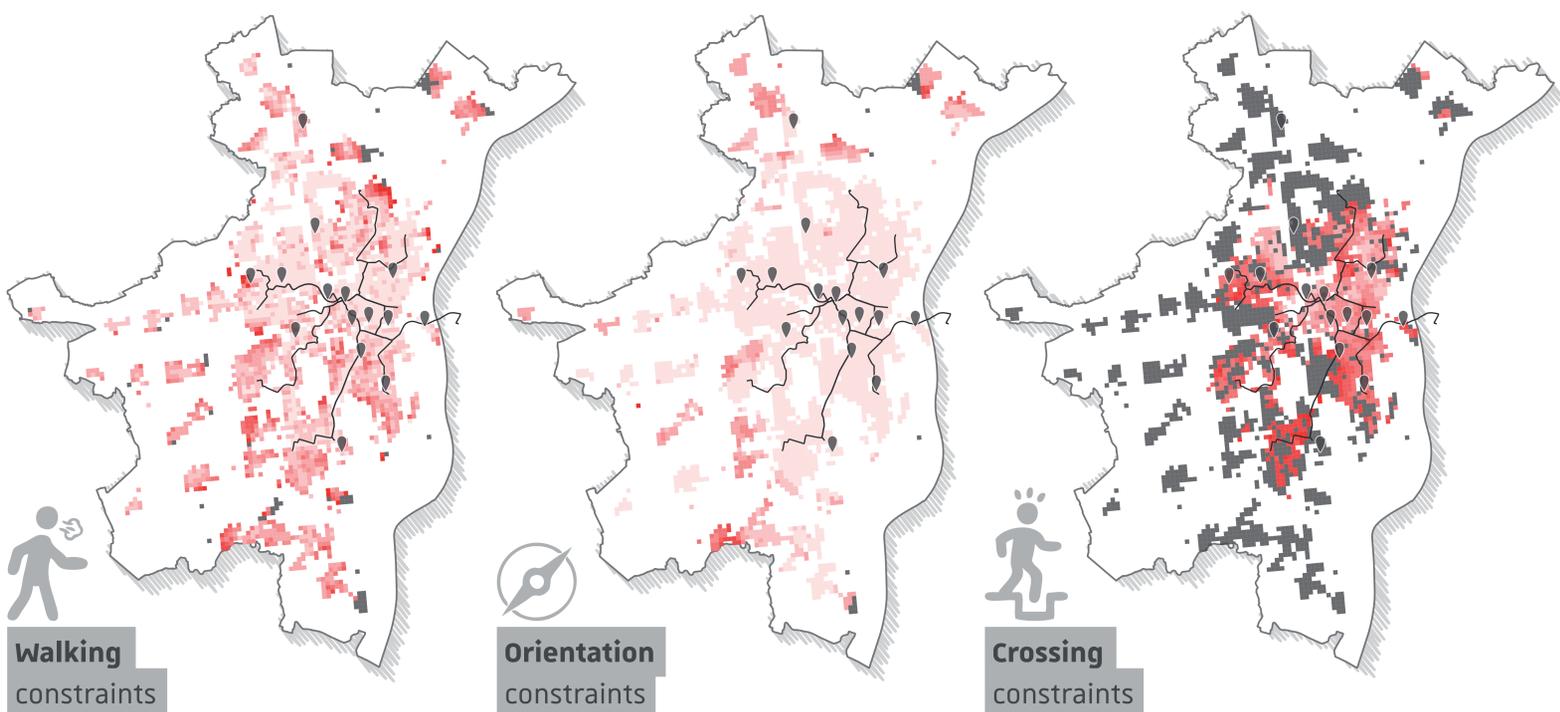
Reaching Kléber Square

Comparative times for routes complying strictly with wheelchair standards



Accessing the city

Typology of accessibility constraints encountered by users (combination of 15 destinations and 3 arrival times)



In most cases dissuasive efforts
Unreachable destination or dissuasive detour in more than 50% of cases

Extra efforts relatively rarely significant or dissuasive

Significant to dissuasive efforts

Extra efforts often to very often significant or dissuasive

Further information

JUSTICE the movie



JUSTICE the atlas

