Sustainable Places 2022
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Socio-spatial dynamics and changes in urban mobility practices in a pandemic context: a mixed method case study in Mulhouse, France

Philippe Hamman
Prof. of Sociology. Institute for Urbanism and Regional Development. Faculty of Social Sciences. SAGE-UMR 7363 – CNRS & Strasbourg University

Sophie Henck
Research engineer Mut'Action. SAGE-UMR 7363 – CNRS & Strasbourg University

Andreea Grigorovschi
Architect and Urban planner and designer. Ass. Prof. Strasbourg National School of Architecture, IMM Chair/AMUP-UR 7309

Marie Fruiquière
Architect and Urban planner and designer. Research engineer Mut'Action. IMM Chair/AMUP-UR 7309 – ENSAS

<u>Outline:</u> the presentation is organized in 5 parts:

I. Context of the research project "Mobility and Tactical Urbanism in Action"

II. The city of Mulhouse as fieldwork

III. Sociological analysis dimension: Can we consider the pandemic as a driver of changes in urban mobility behavior?

IV. Spatial analysis dimension: The place of post-lockdown infrastructure in the subjective geography of Mulhouse as a *cycling city*

V. Conclusion

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I. Context of the research project "Mobility and Tactical Urbanism in Action" (2020-2022)

- The Mut'Action project is one of the 15 selected programs of **the 2020 call for projects "Resilience Grand Est",** launched by the French **Ministry of Higher Education and Research, the ANR** (National Research Agency) and the **Grand Est Region**, around the territorial **consequences of the Covid-19 crisis**.
- **Funding period :** oct. 2020 – nov. 2022
  Labelled in June 2020 as a partnership innovation project by the French **Pôle Véhicule du Futur.**

Academic partners, a multi-disciplinary team:

- **URCA – Reims Champagne-Ardenne University**
  EA 2076 HABITER, Aménagement et géographie politique
  EA 3312 CRDT, Centre de Recherche Droit et Territoire
- **UNISTRA – Strasbourg University / Faculty of Social Sciences**
  UMR 7363 SAGE (Sociétés, Acteurs, Gouvernement en Europe) & CNRS
- **ENSAS – Strasbourg National School of Architecture**
  UR7309 AMUP (Architecture, Morphologie / Morphogénèse Urbaine et Projet) & IMM Chair

The objectives of the MUT'Action programme

Developing tools for…

A better understanding of the practices and spaces of tactical mobility:

Indexing

Of tactical urban planning interventions in the cities of Reims, Nancy and Mulhouse

Evaluation

Impacts of these actions (spatial quality, response to users, health crisis, climate issues)

A decision-making aid in facing the health crisis challenges and ecological transition:

Action Database

For decision-makers to identify "good practices"

Dynamic mapping

To spatialise the cross-referenced data of the index and the impact evaluation protocol

Project topic, research question and hypothesis

A dual ecological and health crisis context...

What are the *in situ* characteristics of the temporary urban planning practices observed?

3 keys of entry: *spatial transformations, processes and governance, temporalities and changes in mobility practices*

Hypothesis: Can tactical / pandemic urbanism be seen as a transition tool towards sustainable urban mobility?

Is tactical urbanism a strategy to initiate and develop a transition towards sustainable cities in a health emergency context?

Can renewing bottom-up forms of governance help build territorial resilience?

May short-term and punctual actions initiated in response to the health crisis imply long-term changes in mobility?

Our empirical research methodology is based on:

Literature review

- Scientific publications (academic productions on tactical urbanism and influence of the Covid-19 health crisis on mobility spaces)
- Guides / Recommendations leaflets (planning suggestions in response to the crisis)
- Press review (local press)

Interviews & surveys

- Interviews with institutional and associative actors (decision-makers and city professionals)
  20 interviews in Mulhouse
- **'Flash' user questionnaire *in situ***
  389 questionnaires in Mulhouse at 2 test sites

Fieldwork

Status of urban planning and design actions implemented in response to the health crisis and their transformations over time.

- Observation matrix
- Spatial survey
- Photographic report

Fieldtrip in Mulhouse :
05/08/2020, 19/09/2020, 22/01/2021, 07/05/2021, 20/08/2021, 14/04/2022, 25/04/2022, 02/05/2022, 05/05/2022, 28/05/2022, 28/06/2022

II. The city of Mulhouse as fieldwork

Mulhouse, a city particularly affected by the pandemic in 2020

Overview of the deconfinement actions in the urban landscape of Mulhouse

PR1 (= Président Roosevelt 1) / Bus-bike shared lane

PR2 / Temporary bike lane

PR3 / Temporary bicycle boulevard

PR4 / Temporary bike path

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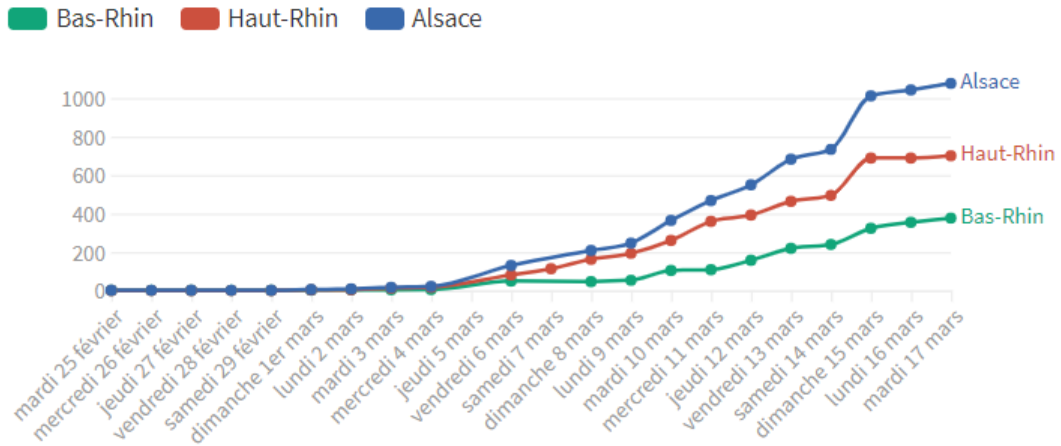
Evolution of the number of confirmed coronavirus cases in Alsace

Between February 27th and March 17th, 2020



Source: Agence régionale de santé et préfecture du Haut-Rhin

About 247.000 inhabitants

From 16th to 29th March:

- **2020 = 298 deaths**
- 2019 = 9 deaths

+ 117.1% deceased between 2019 and 2020

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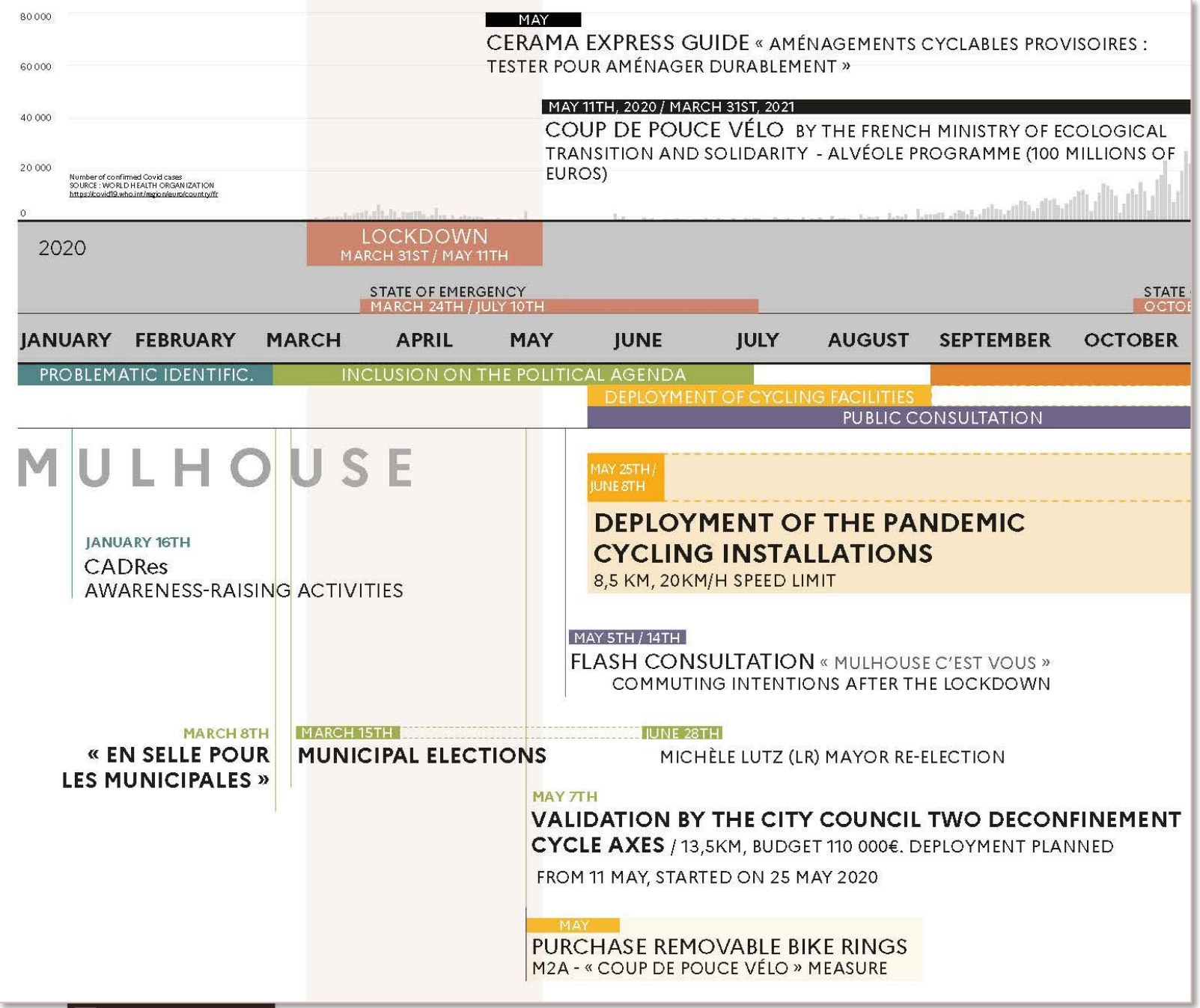

The repertoire of a *City cycling* was at the heart of the municipal election campaign 2020

56% of the agglomeration's inhabitants live in its **suburbs:** there are significant and growing **commuting** everyday movements

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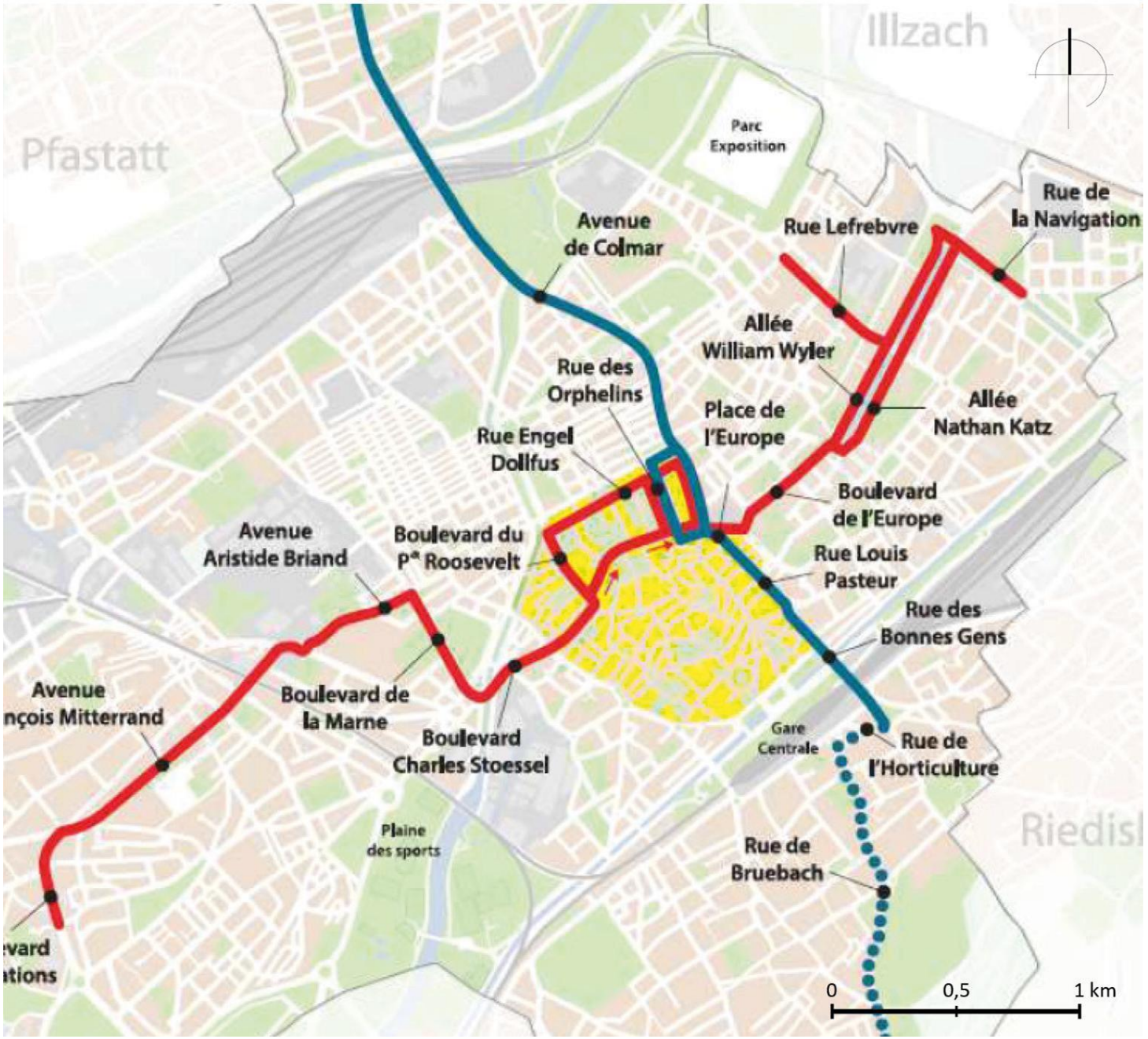

The pandemic project in Mulhouse

The birth of the deconfinement cycle routes

13.5 km of deconfinement cycle routes (the figure of the cross) at a cost of **€120,000.**

Deconfinement cycle itineraries

- North-South axis
- East-West axis
- 20km/h car speed limit

Sources :
Ville de Mulhouse, *Organisation stratégique après expérimentation* (Présentation), 14/09/2020
Voir aussi : Ville de Mulhouse, *Parcourez le centre-ville autrement* (Dossier de presse pour l'événement du 20.09.2020), 14/09/2020

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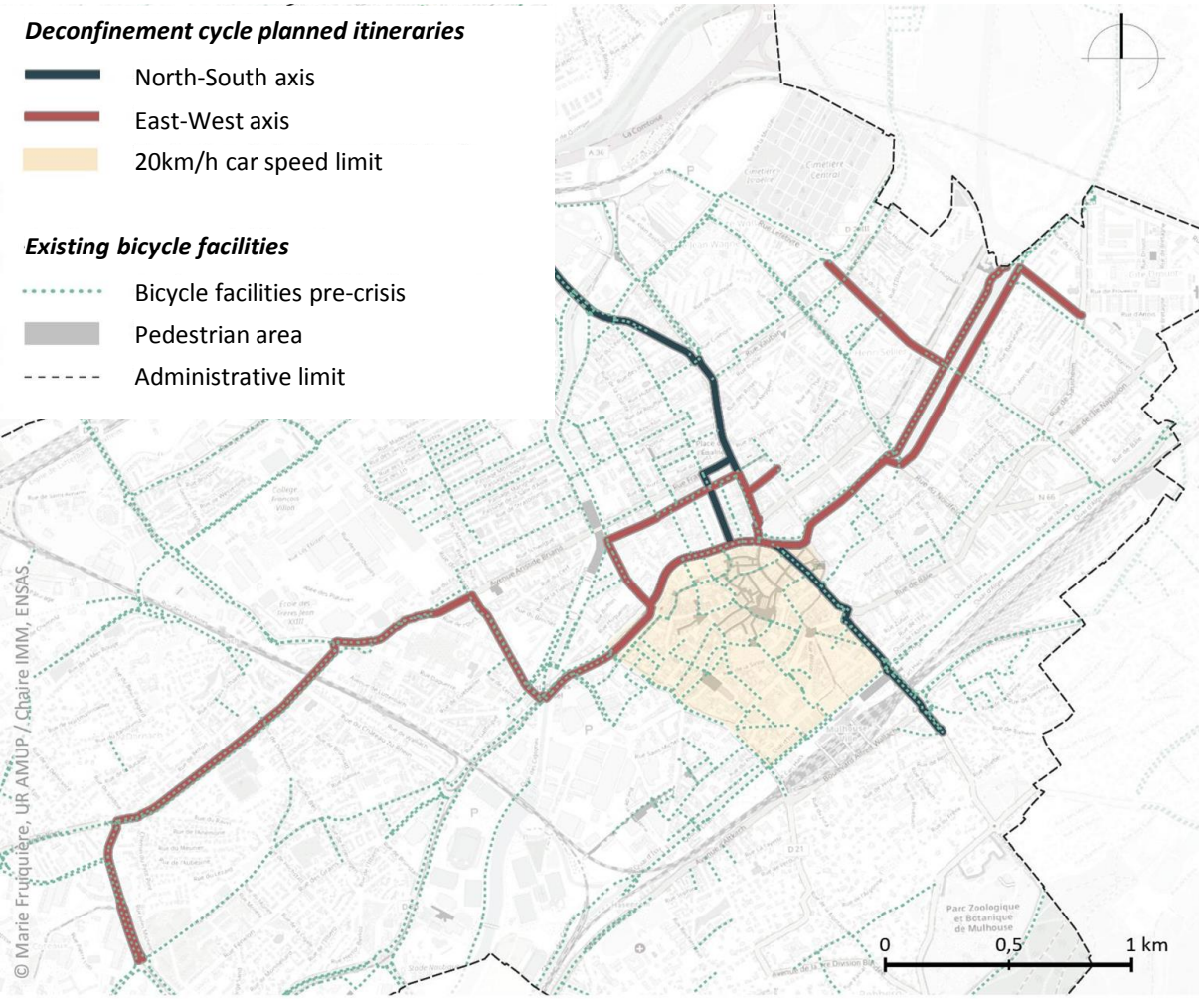
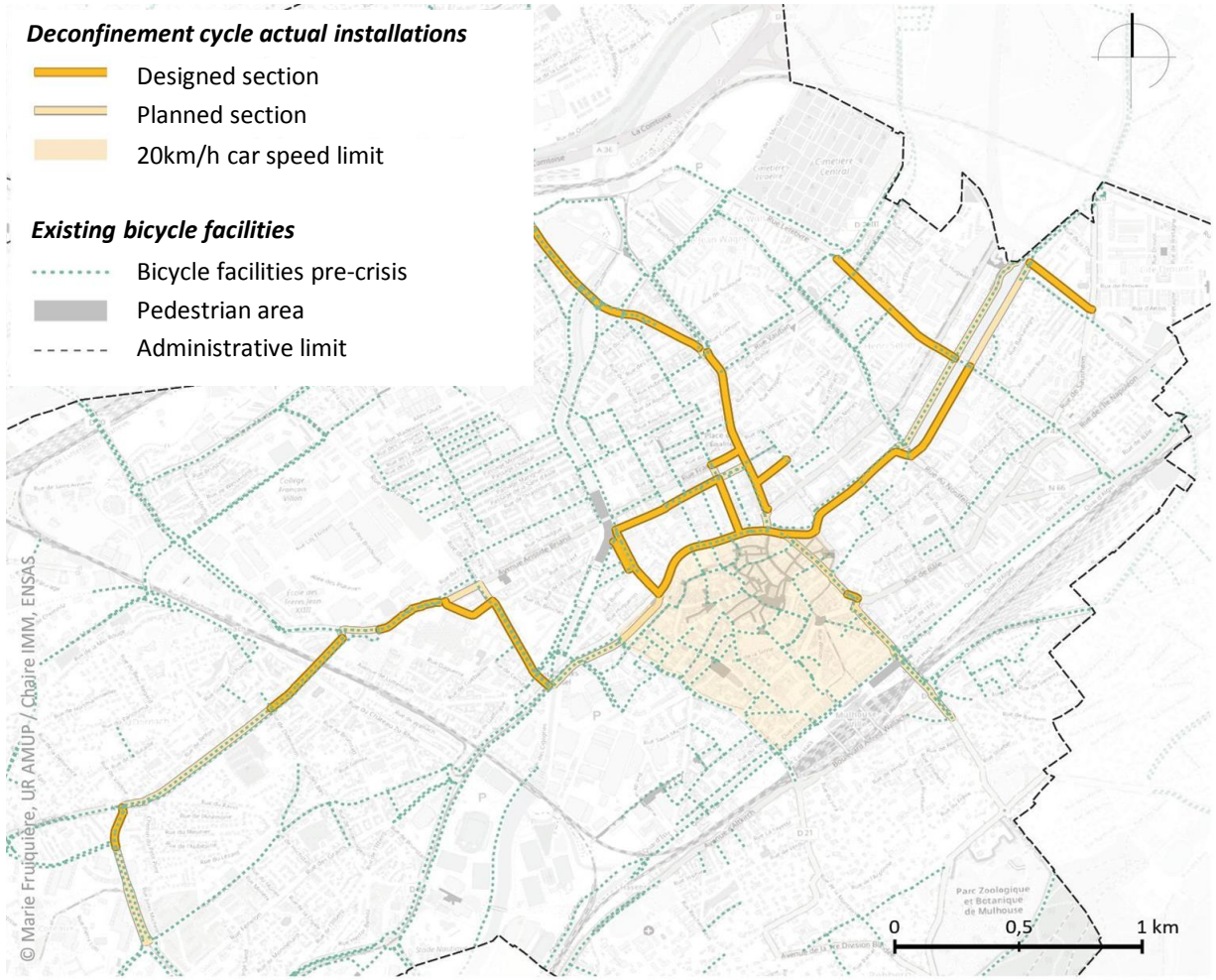
© City of Mulhouse.

From the announced project to the actual installations

Out of 13 km of announced routes, 8.5 km are implemented in the context of the health crisis



The objective of cycling axes



The implemented cycling routes

Sources :
Ville de Mulhouse, *Organisation stratégique après expérimentation* (Présentation), 14/09/2020
Ville de Mulhouse, *Parcourez le centre-ville autrement* (Dossier de presse pour l'événement du 20.09.2020), 14/09/2020
m2A, *Carte des aménagements cyclables de l'agglomération*, 2019
MUT'Action fieldtrip

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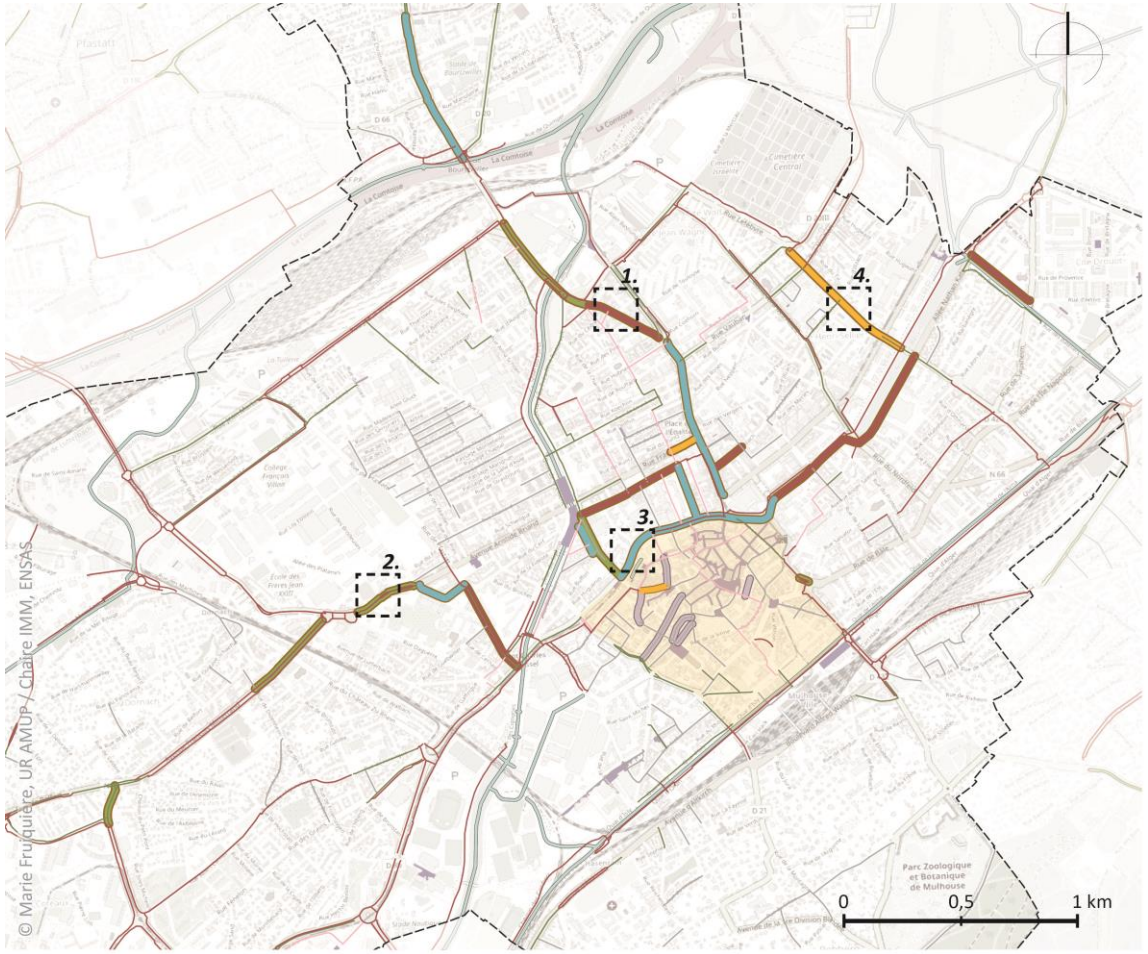
A large diversity of juxtaposed typologies



A wide typo-morphological variety of cycling and pedestrian facilities

Sources :
Ville de Mulhouse, *Organisation stratégique après expérimentation* (Présentation), 14/09/2020
m2A, *Carte des aménagements cyclables de l'agglomération*, 2019
MUT'Action fieldtrip

Deconfinement cycling facilities
Implemented from May 2020

- Bicycle path
- Bicycle lane
- "Vélorue" – Bicycle priority
- Shared lane with public transport
- 20km/h car speed limit

Deconfinement pedestrian facilities
Implemented from May 19th to September 30th, 2021

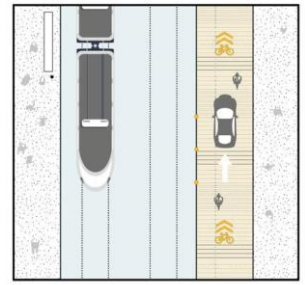
- Temporary
- Neutralisation of parking for the extension of terraces

Existing cycling and pedestrian facilities

- Bicycle path
- Bicycle lane
- Staked cycling continuity
- Cycling two-way street
- Pedestrian area
- Administrative limit

Bicycle path

Bicycle lane



« Vélorue », Bicycle priority

Shared lane with public transport

© UR AMUP / Chaire IMM, ENSAS – 2021. Production: Marie Fruiquière.

A large diversity of juxtaposed typologies

It can be explained by a strict application of the French national Cerema guidelines in Mulhouse

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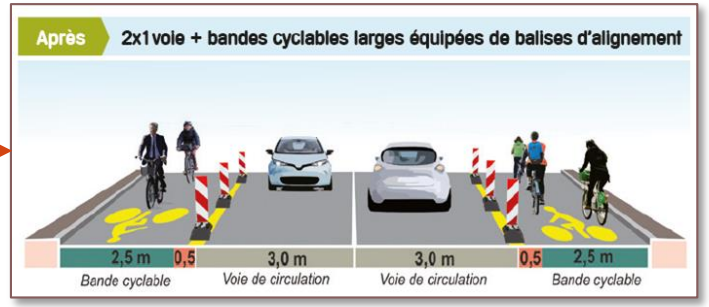

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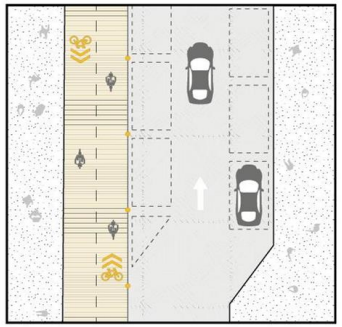
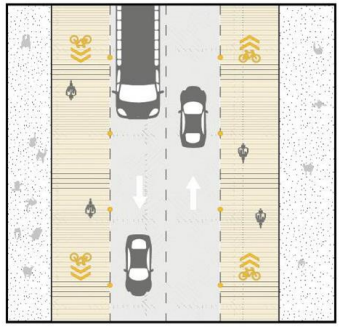
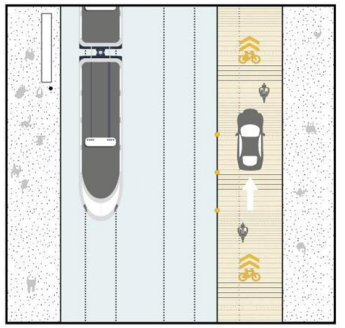
1. 

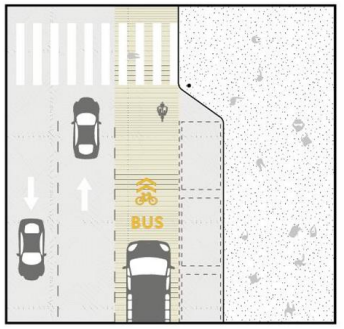
Bicycle path

2. 

Bicycle lane

3. 

« Vélorue », Bicycle priority

4. 

Shared lane with public transport

Transitory and ephemeral installations, fast and low cost

Reversibility as a mode of justification for decision-makers

Yellow construction paint or adhesive

Removable beacons and cones

Mobile road and information signs

K5D beacons | *K5C beacons* | *K16 squale separator* | *Concrete guardrail DBAT W5*

Boulevard des Nations – Rue de Belfort. May 2021.


Rue Engel Dollfus. May 2021


Rue Engel Dollfus. August 2020


Rue Engel Dollfus. May 2021


Rue Engel Dollfus. May 2021


Rue de la Navigation. May 2021.

Avenue de Colmar. August 2020

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III. Sociological analysis: Can we consider the pandemic as a driver of changes in urban mobility behavior?

Methodology of the surveys: ‘flash’ questionnaires

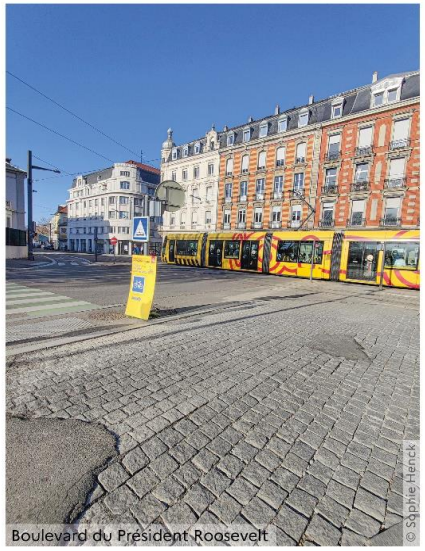
- We used **short questionnaires** (21 questions) taking 10 minutes maximum to answer in order to be able to interview people in the street in the course of one of their daily journeys in the city.
- **Two sites** were selected for the interviews: the intersection of boulevard Roosevelt and avenue Kennedy + avenue de Colmar where it meets rue Engel Dollfus

Boulevard du Président Roosevelt

Avenue Kennedy

Boulevard du Président Roosevelt

1st SURVEY LOCATION
BOULEVARD ROOSEVELT
AVENUE KENNEDY



Boulevard du Président Roosevelt

Rue Engel Dollfus

2nd SURVEY LOCATION
AVENUE DE COLMAR
RUE ENGEL DOLLFUS

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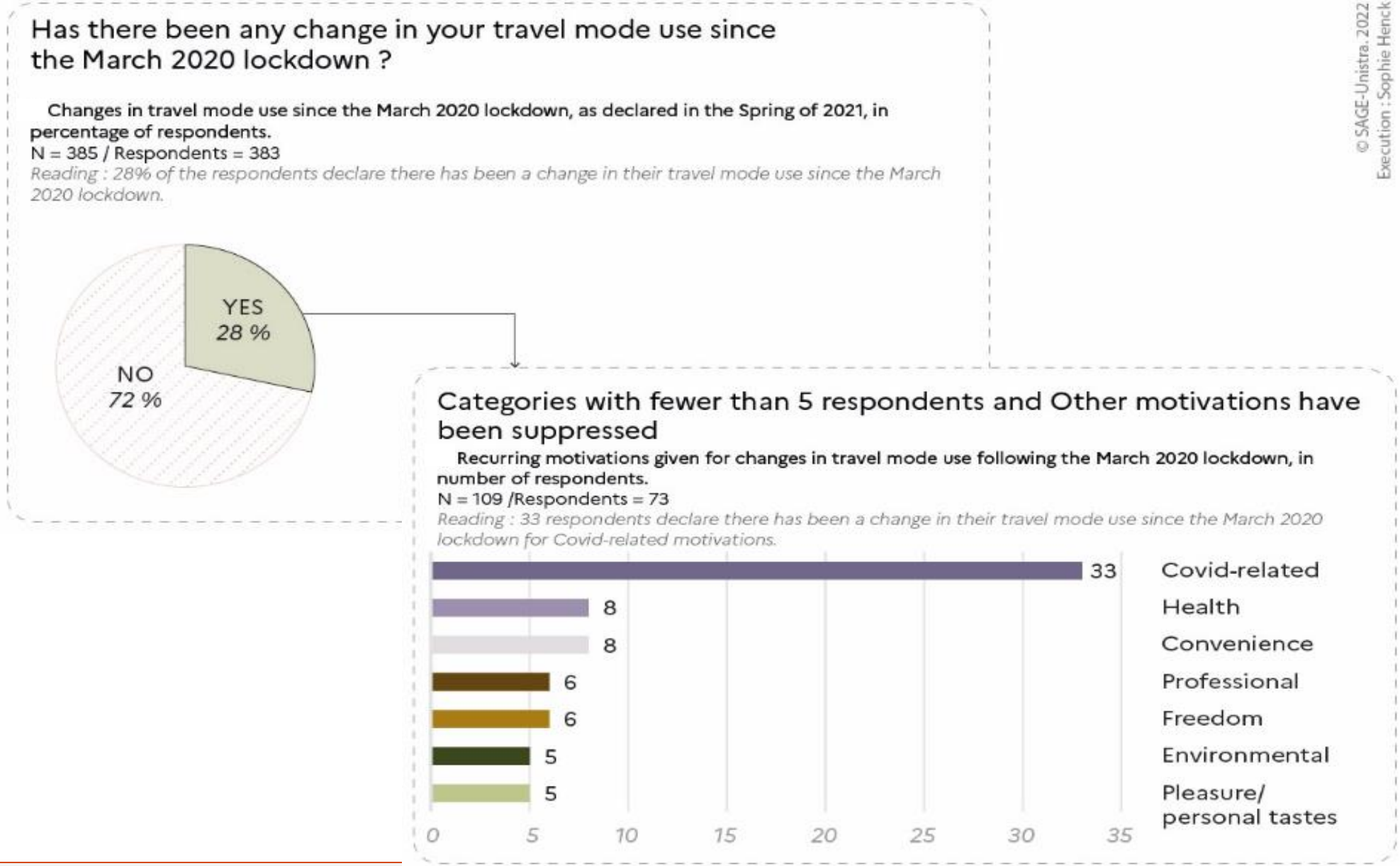
- The questionnaire was administered so as to **take into account different factors having an impact on active mobility practices:** the season (temperatures and weather conditions...), the difference between week days and week-ends / peak and off-peak hours.

→The survey was conducted in **two phases**: a first wave of interviews was conducted on the weeks of March 22, 2021 (1st site) and March 29, 2021 (2nd site), on Tuesdays and Saturdays, between 9 am and 12 am, then between 3 pm and 6 pm; then a second wave took place on the weeks of April 26, 2021 and May 3rd, 2021, following the same procedure.

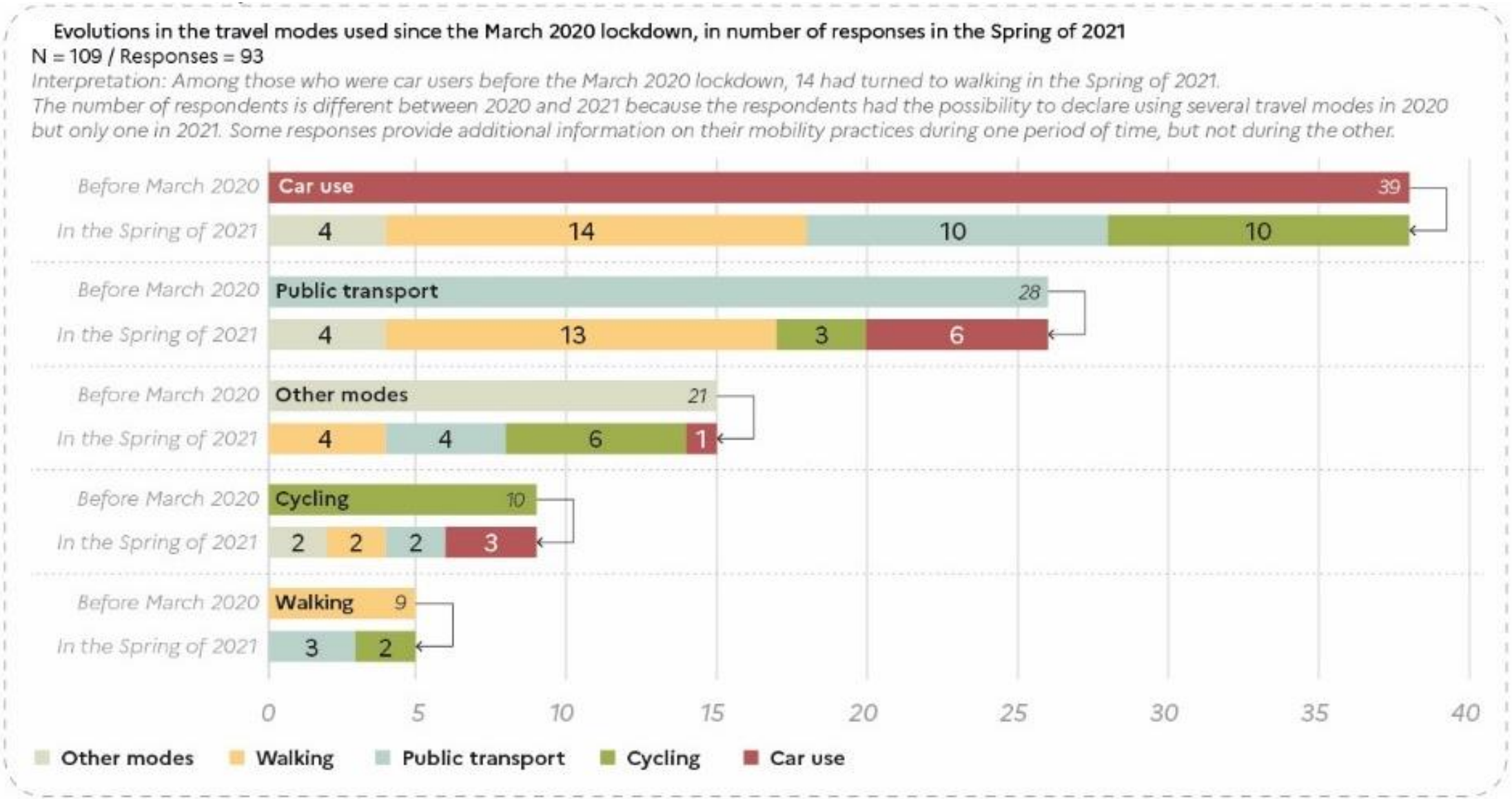
- The researchers approached 2005 people on site, 386 of whom agreed to be interviewed. In the end, we collected **385 usable questionnaires.**

The pandemic as a driver of changes in urban mobility behavior?

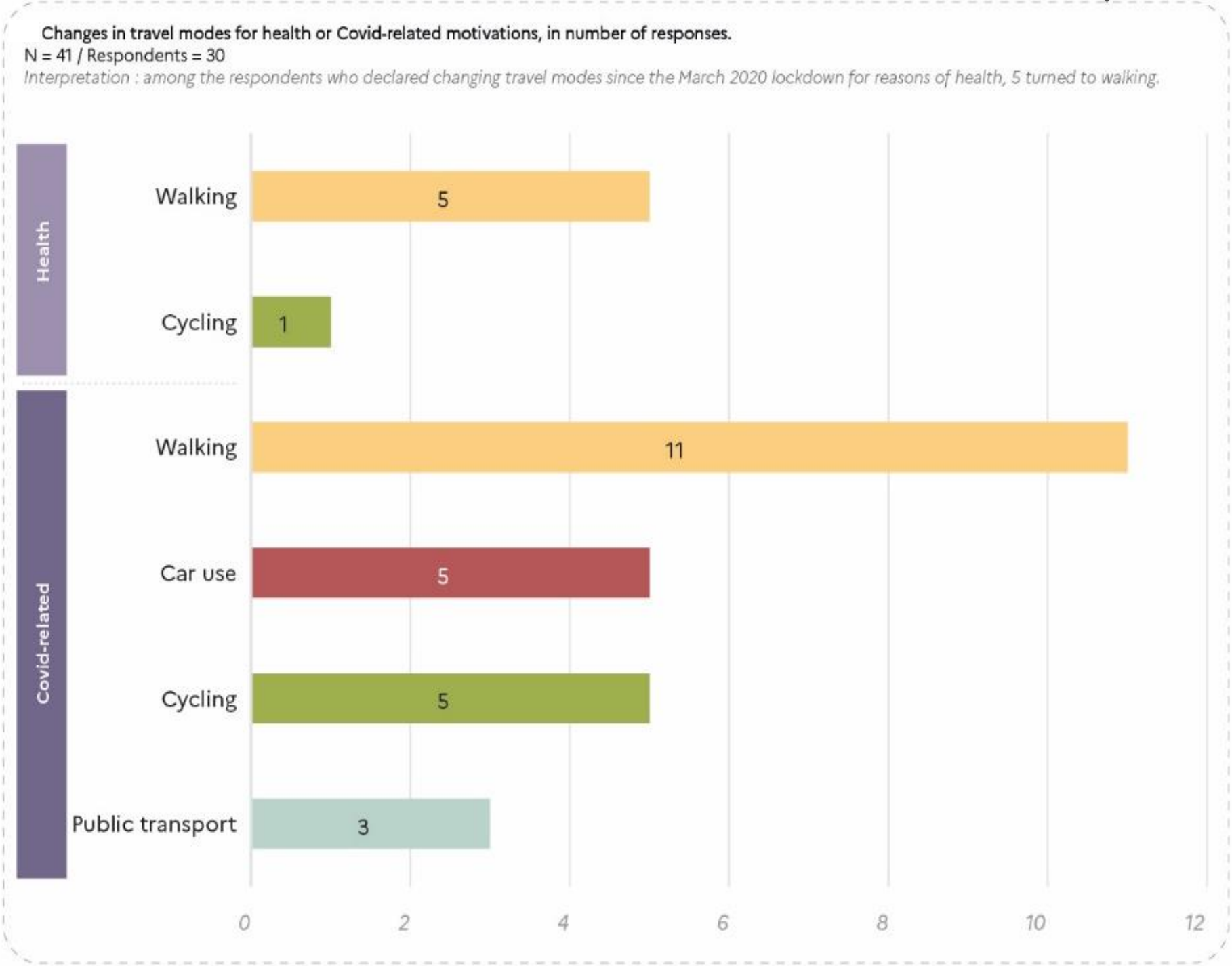
- ***Declared motivations for changing travel modes since the March 2020 lockdown***



➢ *Changes in the travel modes used by the respondents since the March 2020 lockdown*



Changes in travel modes for health or Covid-related motivations



Main results

- **Three conclusions can be drawn:**

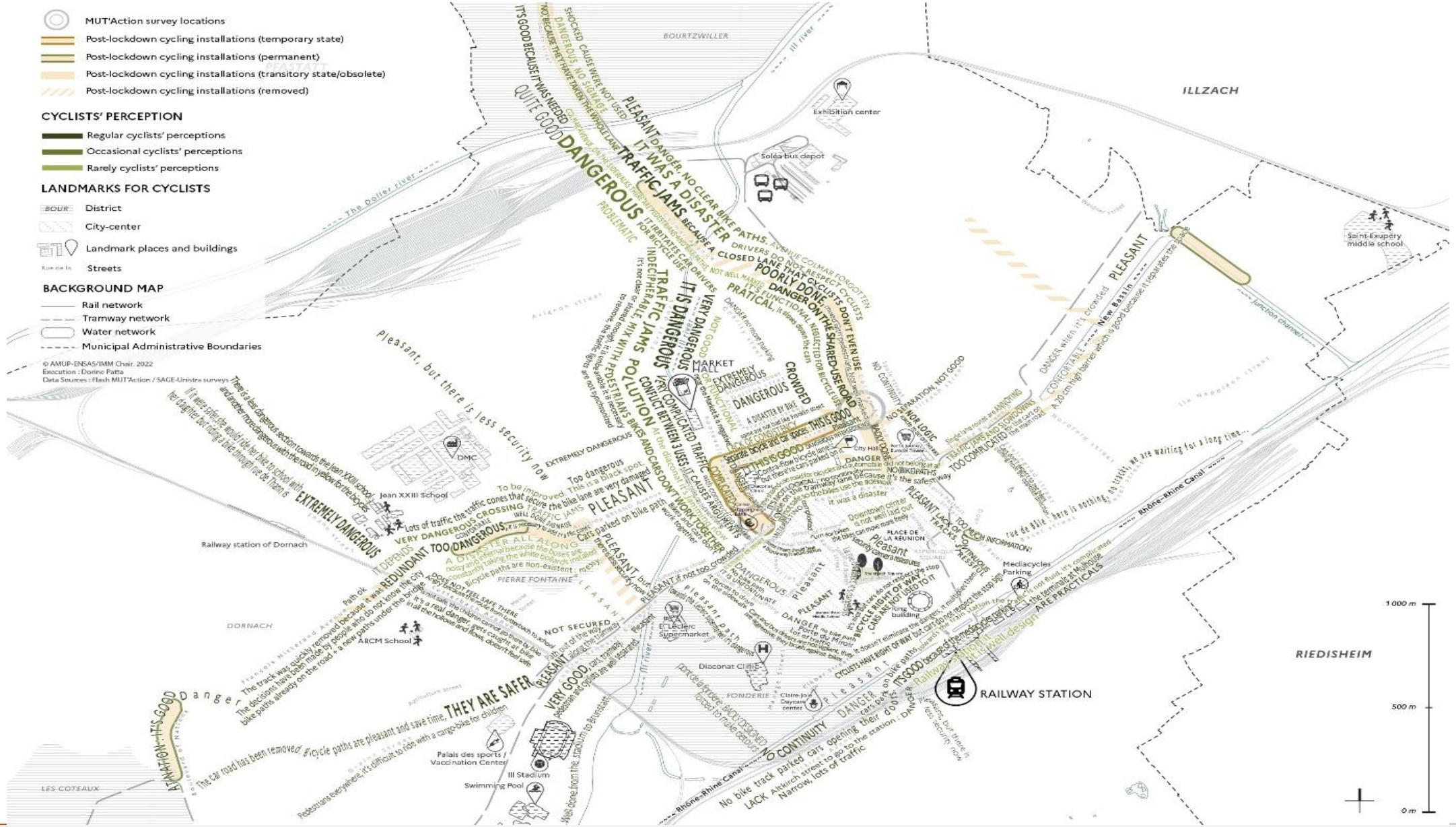
- First, **only a minority of respondents (28%) declared changing their urban mobility behavior** among the surveyed population, which qualifies the impact the period of lockdown has had in the middle term on people's organization of their daily journeys.
- Second, when there have been changes, they have mostly resulted from the pandemic context and have been **motivated by the desire to avoid physical proximity with others.**
- Third, we should keep in mind that people can use several travel modes every day; **the changes that occurred were mainly directed to walking and then to cycling.**

IV. Spatial analysis: The place of post-lockdown infrastructure in the subjective geography of Mulhouse as a *cycling city*

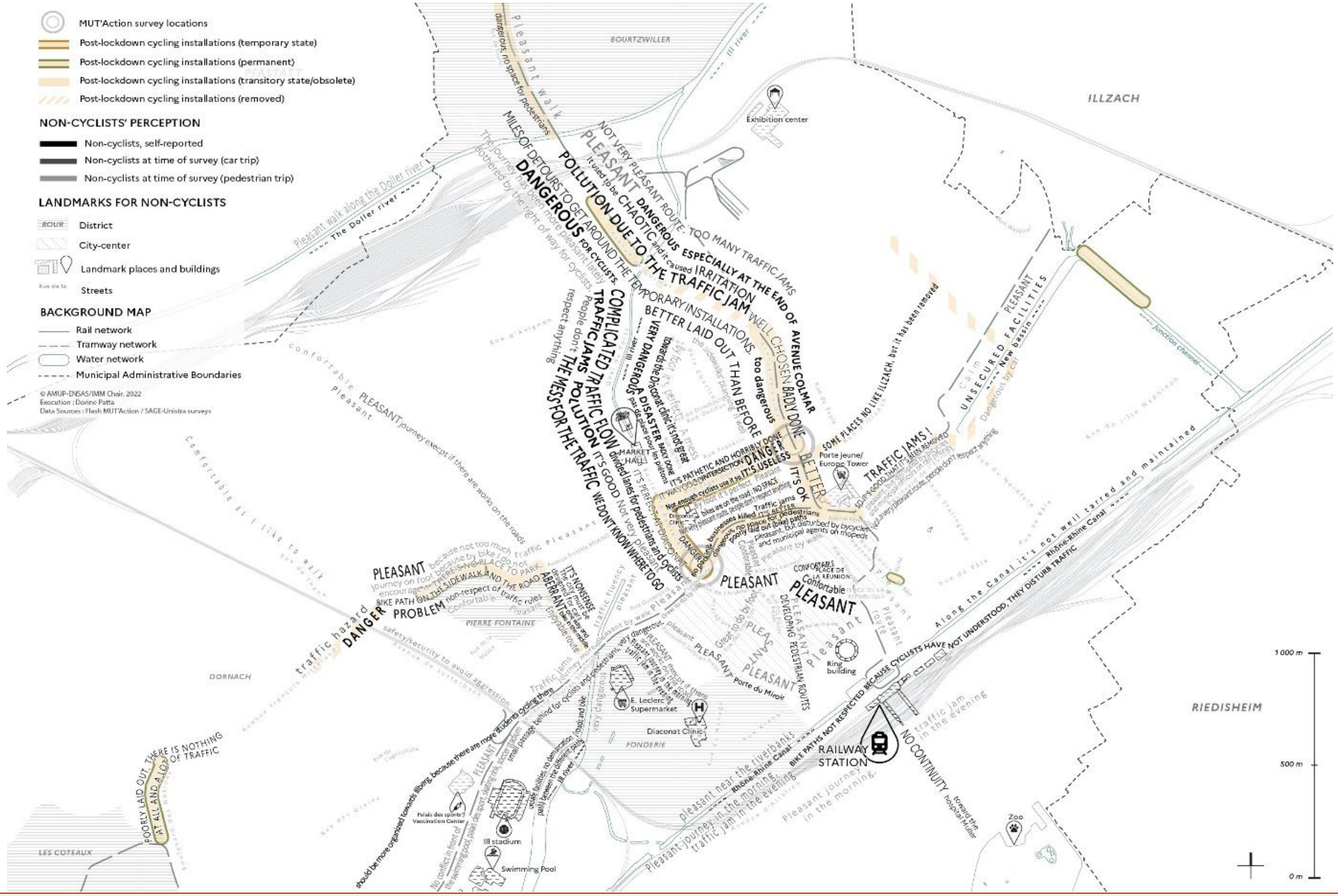
A spatial analysis methodology for a subjective mapping of the city

- Our aim was to describe the “cyclability” of Mulhouse as it is perceived by residents, and more particularly of post-lockdown bikeways, by mapping the residents’ practices and perceptions as drawn from the survey.
- In order to do so, we drew on three types of material: verbatim responses, outlines of their daily routes drawn by the respondents on a base map of the city of Mulhouse and the respondents’ written annotations.
- The maps are subjective in the sense that they show how the *cycling city* is experienced locally, by indicating the cyclists’ landmarks, their spontaneous feelings and opinions about the cycling locations and facilities available based on their experiences and frequency of use (daily / occasional / rare).

- ***Mulhouse and post-lockdown bikeways translated into the words of (regular, occasional, rare) cyclists' perceptions***



➢ *Mulhouse and post-lockdown bikeways translated into the words of non-cyclists*



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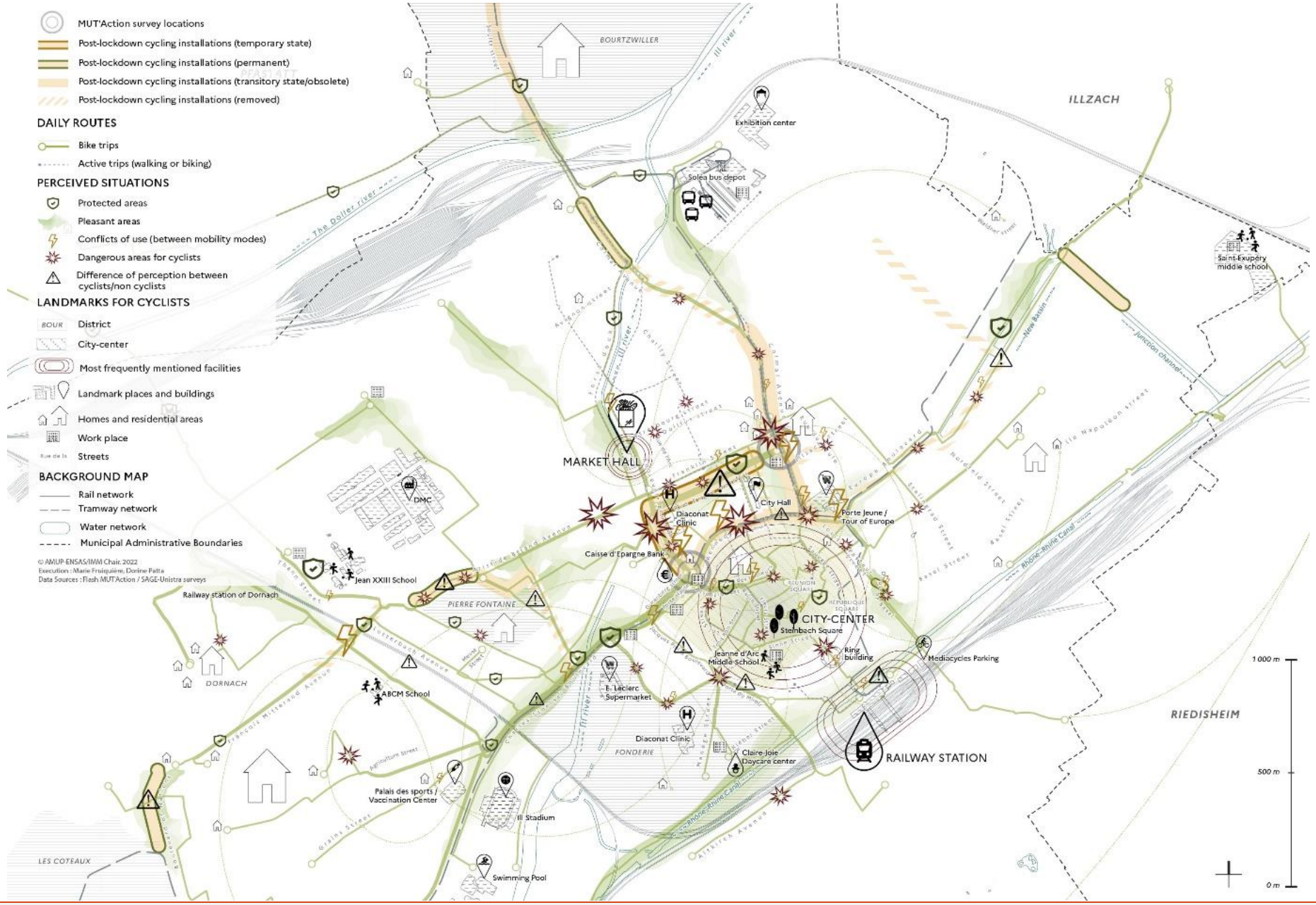
➢ *Mulhouse as a 'cycling city'. Cyclists' practices, landmarks and perceptions of space*



Main results

- First, the *cycling city* of Mulhouse shaped by the pandemic context, as it appears from cyclists' and non-cyclists' perceptions, is characterized by **discontinuity and the juxtaposition of sections perceived as pleasant and others as dangerous = no unique representation.**
- Second, some parts of the city are also **sites of conflicts between users of different travel modes**, particularly caused by the creation of temporary cycling infrastructure after the lockdown.
- Third, the minimally defined nature of the infrastructure contrasts with the profound impact it has had on the spatial distribution in the city streets. It is a **source of frustrations**, even if the respondents' comments also suggest their **desire for a wider-ranging transition**, for instance: "near the schools more are needed", "the pavement needs to be improved", "more decoration, more green spaces around the bike paths", "benches to rest on".

V. Conclusion

Conclusion

- The Covid urban cycling measures taken in Mulhouse in 2020 seem to belong **rather to a *temporary* urbanism approach than to a *tactical* one.**
- **Our surveys** show that there have been **few changes in urban mobility practices among the residents** surveyed on the sites where new post-lockdown infrastructure was created. Their everyday travel behavior has not been structurally transformed and, when their practices changed, the motivations they reported were mostly related to health reasons and the pandemic context. Since this is a particular, time-specific context, it is also likely to be temporary.
- **Our spatial analyses** show that, in order to be given legitimacy, the new policies must not reify the targeted residents but **recognize the diversity of their profiles, of daily travel practices** and of conceptions of urban facilities.

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SP2022, Nice, 6-9/9/22

SUSTAINABLE PLACES 2022

Sep. 6 - Sep. 9, 2022 | Nice, France

Thank you for your attention

Philippe HAMMAN | phamman@unistra.fr

Sophie HENCK | s.henck@unistra.fr

Andreea GRIGOROVSCHI | andreea.grigorovschi@strasbourg.archi.fr

Marie FRUIQUIERE | marie.fruiquiere@strasbourg.archi.fr