



CUMIN – SARA – New PHD Thesis



Mobility and Inclusivity :
Challenges and opportunities for
a fair energy transition

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Outline



Legal and general context



Research question & studied area



Planned methodology

Legal Context

Equal Rights and Opportunities, Participation and Citizenship of Persons with Disabilities Act 2005

Mobility Orientation Law (LOM) of 24 December 2019

Research Framework

CUMIN SARA Program

Energy transition – related stakes

Social justice and inclusivity

How can the objectives of decarbonising transport be articulated with the imperatives of inclusiveness and social equity?

Position in literature

CUMIN Program Framework

Key authors

- Julia Frotey
- Eugénie Masclef
- Elodie Castex
- Alla Ndiaye
- Alain Bouscayrol
- Eric Hittinger
- Anatole Desrevaux
- Martin Chaud

Technological (In)equity and Infrastructure

Mechanisms of (in)equity

- Mullen & Marsden 2016
- Simcock & Mullen 2016

Fair charging infrastructure network

- Ternes et al. 2024
- Israel et al. 2023

Transport inequalities and social inclusion

Short testimonies and lived experience

- Monyei et al. 2024
- Khahjehpour & Miremadi 2024

Just/Fair mobility transitions

- Tammaru et al. 2023
- Dadashzadeh et al. 2024

Models and tools for sustainable mobility

Framework for Assessing Accessibility

- Panikkar et al. 2023
- Antonakopoulou et al. 2024

Sustainable mobility model

- John & Derakshi 2022
- Venizia 2024

Do mobility innovations promote inclusion or generate new barriers?

How can "exclusive sustainability" be avoided in urban and energy planning?

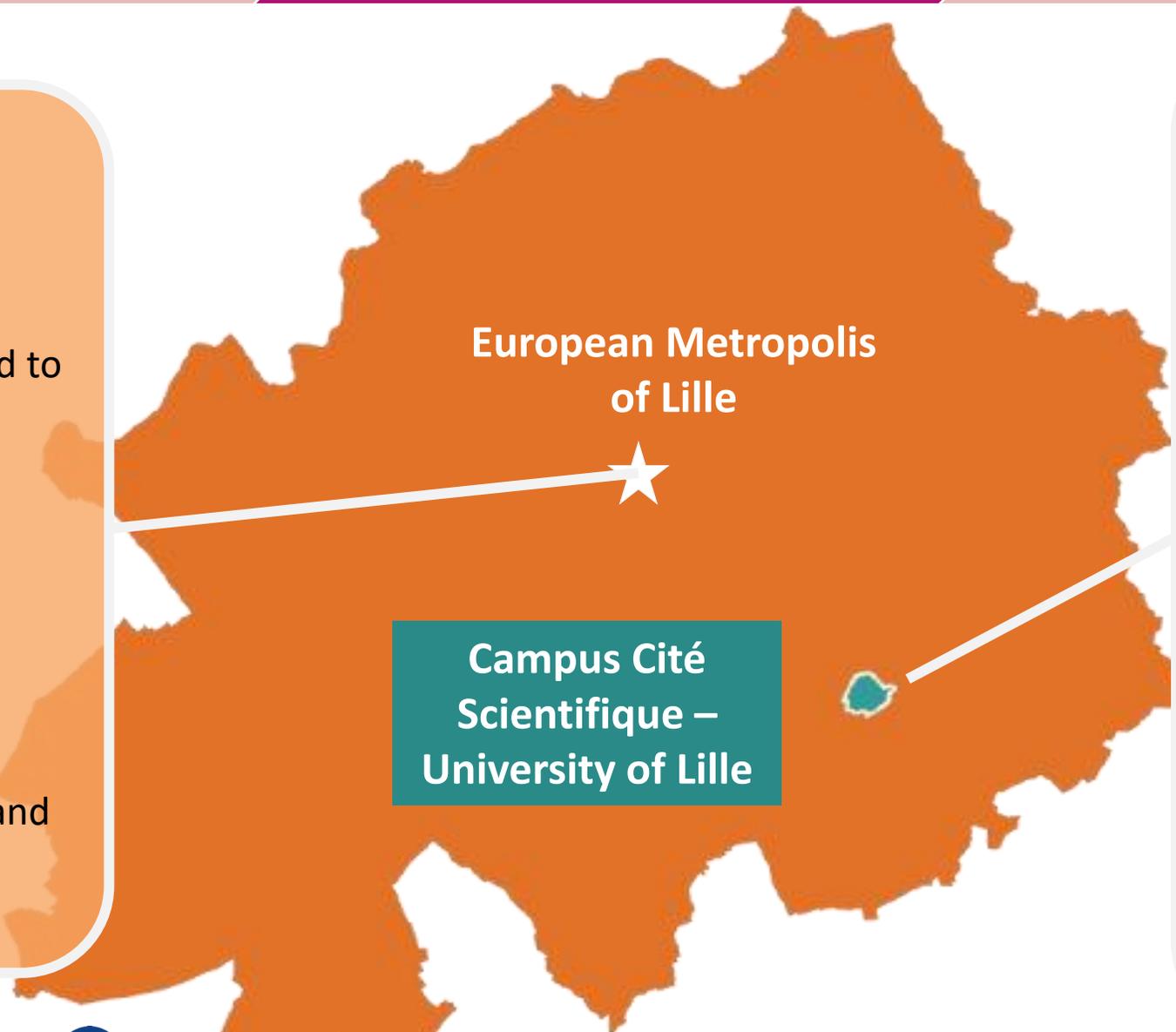
How can we ensure a truly inclusive energy transition for mobility?

What conditions can be met to articulate energy transition, inclusion and social justice?

What are the limits of current mobility policies in terms of inclusiveness?

EML: Why this territory?

- A territory committed to the energy transition
- Socio-economic and spatial diversity
- Innovative mobility infrastructure
- Access to local data and stakeholders



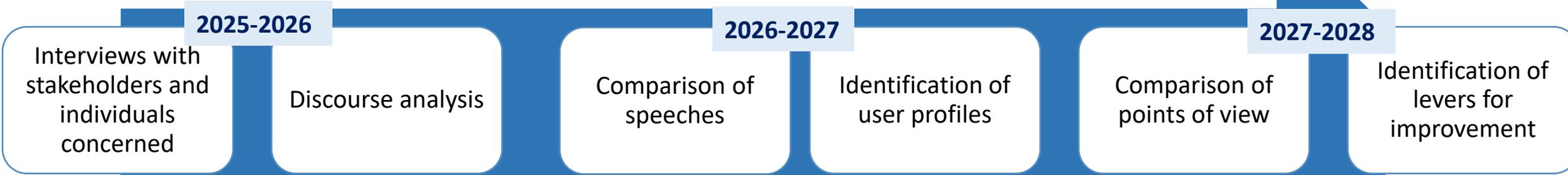
European Metropolis of Lille

Campus Cité Scientifique – University of Lille

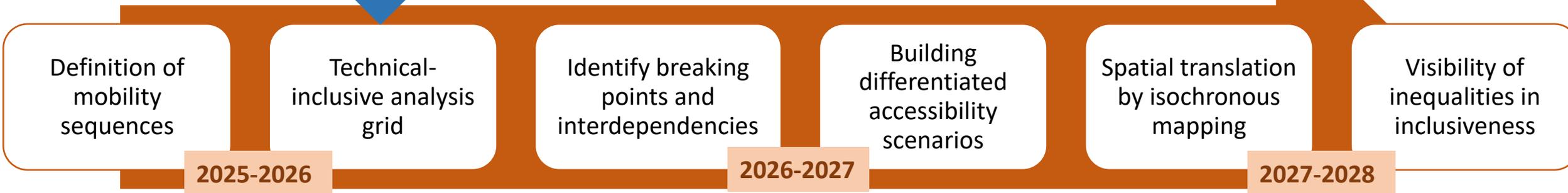
Cité Scientifique: Why this local scale?

- Students and academic staff
- Daily commutes (home-work/study)
- Mix of modes of transport
- Research & innovation projects on sustainable mobility

Qualitative analysis: Semi-structured interviews for inclusiveness criteria



Interviews inform inclusiveness criteria and scenarios



Map/technical analysis: Inclusiveness of carbon-free transport



Thank you for your attention, if you have any questions or remarks later, you can reach me at :

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More on the CUMIN- SARA Project : <https://cumin.univ-lille.fr/>



Faculté des sciences
économiques, sociales
et des territoires





CUMIN - SARA: New PhD Thesis

<https://cumin.univ-lille.fr/>



Evolution of practices and user profiles of electric mobility in the Hauts-de-France region

Basile Debuys, Elodie Castex
TVES



Summary



Project of research



Research area



Research methodology



**Planning & Perspectives
research**

Project of research

Ancrage scientifique	Objectifs de recherche	Périmètre d'analyse
Thesis of Agathe Delebarre, 2020	Analysis of governance and mobility issues to establish a preliminary inventory before the transformations induced by the 2019 Mobility Orientation Law. Brittany and Hauts-de-France regions.	Brittany and Hauts-de-France regions.
Thèse de Julia Frotey, 2021	Study on charging infrastructure for electric vehicles	first phase of electromobility, Hauts-de-France region
Thèse d'Eugénie Masclef, 2025	Study on the social acceptability of mobility-related projects. Campus Universitaire Cité Scientifique	Campus Universitaire Cité Scientifique - Université du Québec à Trois-Rivières
Projet MOUVE, 2018	Create a GIS database to locate charging stations and cross-reference them with layers of spatial data (buildings, roads, housing, etc.) and socio-economic data (Insee data).	Hauts de France Region
Projet ERICA, 2021-2022	Studies the integration of renewable energies in charging infrastructure for electric vehicles, combining governance analysis, social acceptability, and qualitative and quantitative methods.	Hauts de France Region

Project of research

STATE OF THE ART

AXIS 4: Spatial Justice & Equity (24 refs)

- (Orfeuill & Ripoll, 2015)
- (Lee et al., 2024)
- (Jha et al., 2025)
- (Ding & Wu, 2025)

AXIS 3: Sociology & Usages (66 refs - MAJOR)

- (Aguilera & Rallet, 2016)
- (Aksen & Sovacool, 2019)
- (Hoogland et al., 2023)
- (Anderson et al., 2023)

AXIS 1: Governance & Policies (27 refs)

- (Izembar, 2020)
- (Frotey, 2021)
- (Zhang et al., 2024)
- (Cain et al., 2024)

AXIS 2: Technical & Network (33 refs)

- (Gnann et al., 2018)
- (Ndiaye et al., 2024)
- (Yang et al., 2025)
- (Liu et al., 2023)

AXIS 5: Methodology & Modeling (15 refs)

- (Khalife et al., 2022)
- (Wolbertus et al., 2021)
- (Torkey & Abdelgawad, 2023)
- (Zang et al., 2025)

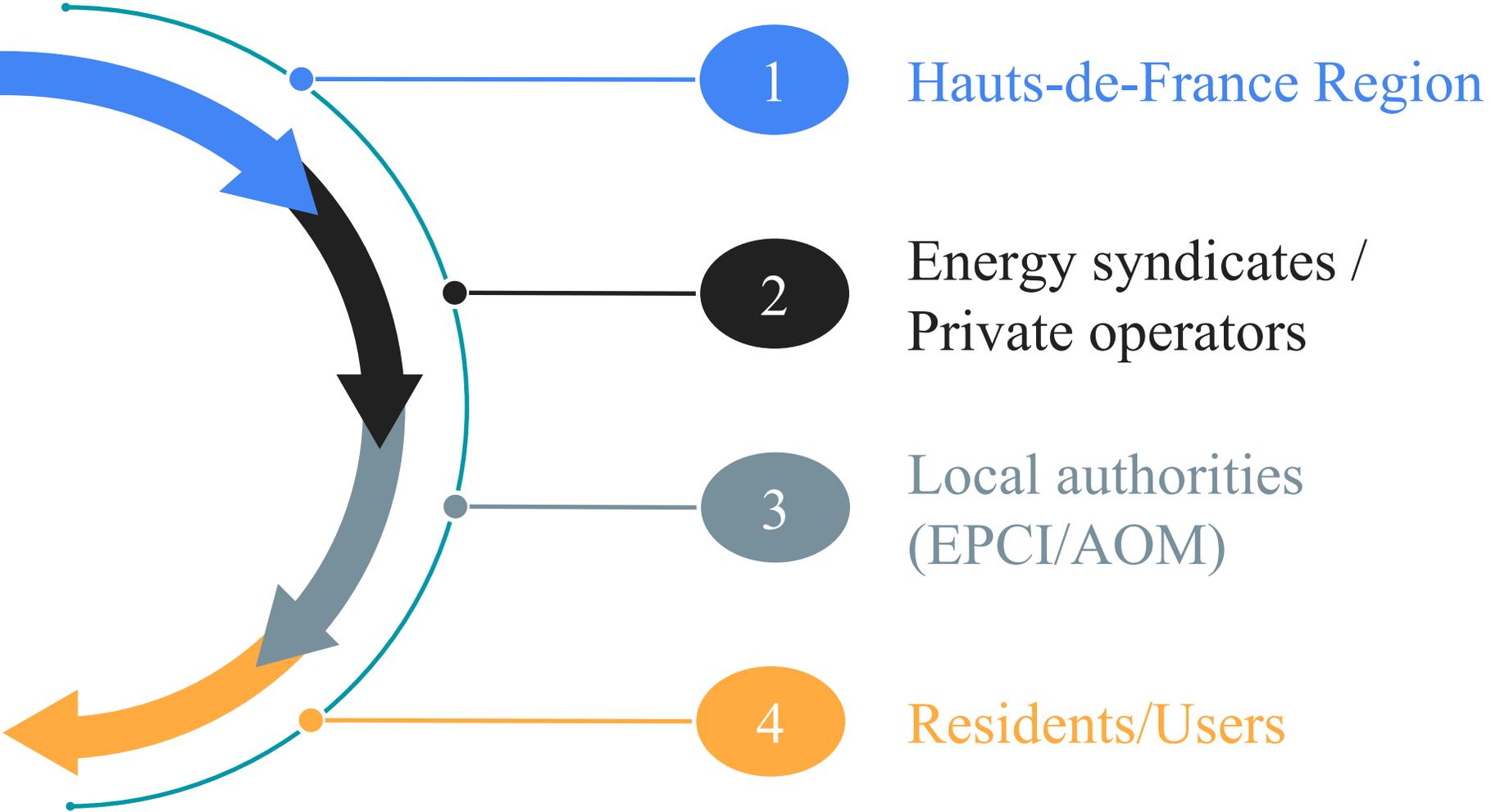
Problematic

What extent does the accelerated deployment under the LOM align with the new 'pragmatic' approaches of users to guarantee equitable mobility in the Hauts-de-France region?

Research methodology

Phase	Approach	Objectives	Methods/Tools
Quantitative Analysis	Data from EV Charging Infrastructure Updating the Mapping Database Updating the EV Charging Infrastructure Database Questionnaire	Identify typical user profiles	GIS (QGIS); Database processing
Qualitative analysis	Semi-structured (face-to-face) interviews with electromobility stakeholders Second phase with users	To delve deeper into motivations, practices, and perceptions	Semi-structured interview guide Thematic analysis / qualitative coding Typology based on responses / discourse analysis using processing software (e.g., NVivo)

Research area



Hauts-de-France region as a study area

Scientific continuity and local roots

- Integration with the TVES laboratory's research areas and the CUMIN program (Campus of University with Mobility based on Innovation and Carbon Neutrality).

A territory in transition

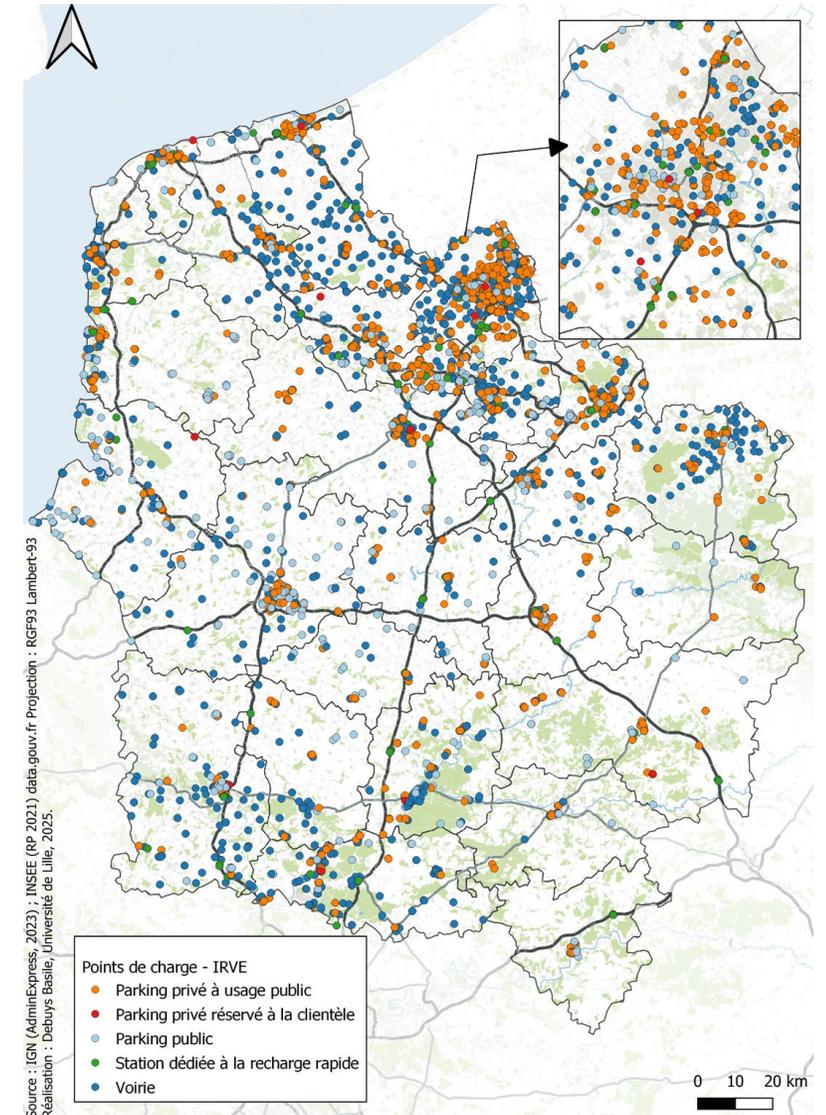
- Observation of the automotive industry's (manufacturers and suppliers) transition from internal combustion to electric vehicles.

A mobility governance laboratory

- Study of the effects of scale and the coordination between the various Transport Organizing Authorities (AOMs).
- Observation des effets d'impulsion des politiques publiques locales et régionales

Feasibility and operational support

- Mobilization of an established professional network to facilitate user identification.
- Strong institutional support with a request for regional co-financing to support the electromobility policy.



Planning

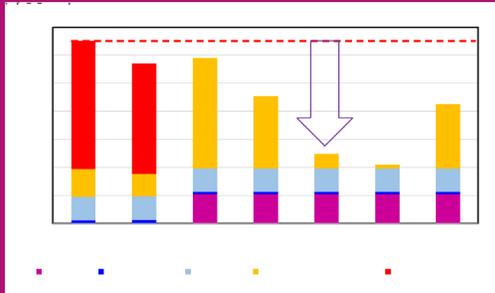
	Year 1													Year 2												
	oct.-25	nov.-25	déc.-25	janu.-26	febr.-26	marc.-26	ap r.-26	May-26	june-26	july.-26	agu-26	sept.-26	oct.-26	nov.-26	déc.-26	janu.-26	febr.-26	marc.-26	apr.-26	Ma y-26	jun e-26	july.-26	agu-26	sept.-26	oct.-26	
Understanding the scientific and institutional framework	█	█	█																							
Literature review and theoretical framework	█	█	█																							
Methodological design			█	█	█	█	█	█	█	█	█	█	█													
Data preparation and GIS testing			█	█	█																					
Interview preparation								█	█	█	█															
Interview										█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Field survey														█	█	█	█	█	█	█	█	█	█	█	█	█
Interview transcriptions													█	█	█	█	█	█	█	█	█	█	█	█	█	█
Analysis and interpretation of results															█	█	█	█	█	█	█	█	█	█	█	█
Preparation of phase 3 report																						█	█	█	█	█

Research perspectives

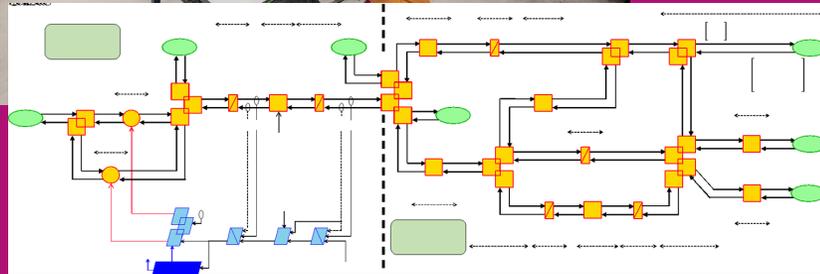
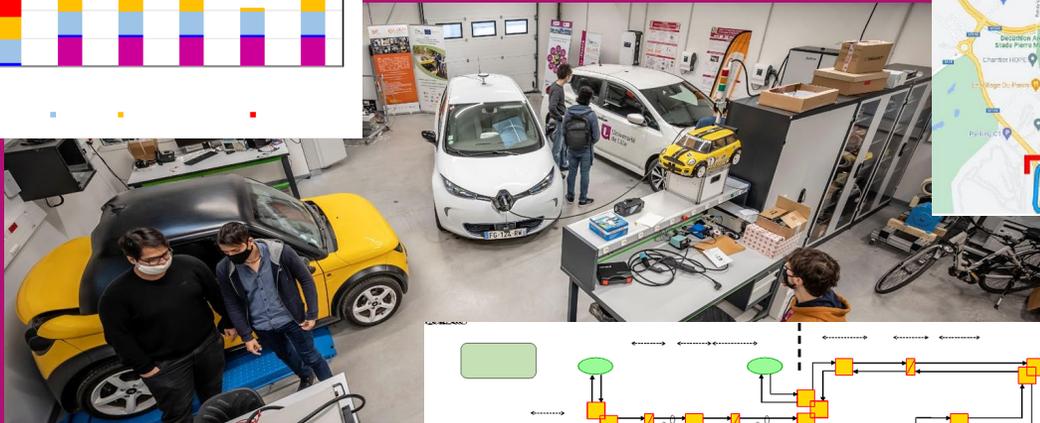
- Support the ongoing changes in the region concerning the shift of the automotive industry and equipment manufacturers towards the production of electric vehicles and related equipment.
- Identify the levers to be mobilized, if necessary, to reverse a trend or reinforce a trajectory in the mobility transition.
- Analyze governance dynamics and power relations between public and private actors to understand the rationale behind infrastructure deployment.
- Examine socio-spatial inequalities in access to electric mobility in order to guarantee optimal and equitable use of infrastructure across the territory.
- Design an analytical framework to provide local authorities and transport organizing authorities (AOMs) with insights into the state and location of existing charging infrastructure, to support their decisions regarding the modernization or reorganization of facilities, in line with urban and regional challenges.
- Produce a qualitative analysis of electric vehicle charging practices (uses, timing, locations) based on field surveys, to enrich current approaches to mobility studies on the energy transition.
- Develop a typology of electromobility user behavior.



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Our university as an exciting living lab towards eco-cities through an innovative transdisciplinary framework !



Objectives of research

A

Inform public policies on master plans for EV charging infrastructure deployment.

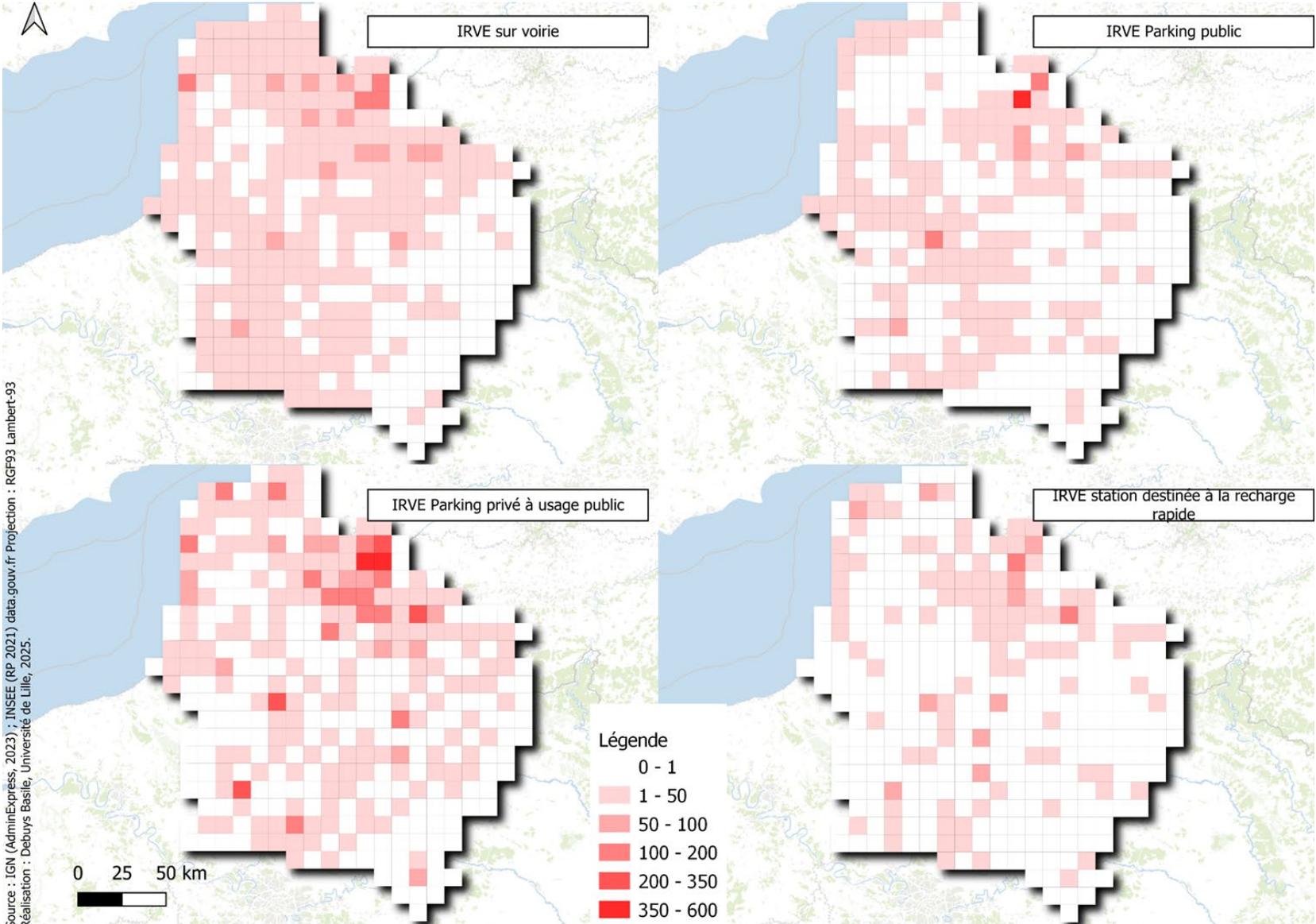
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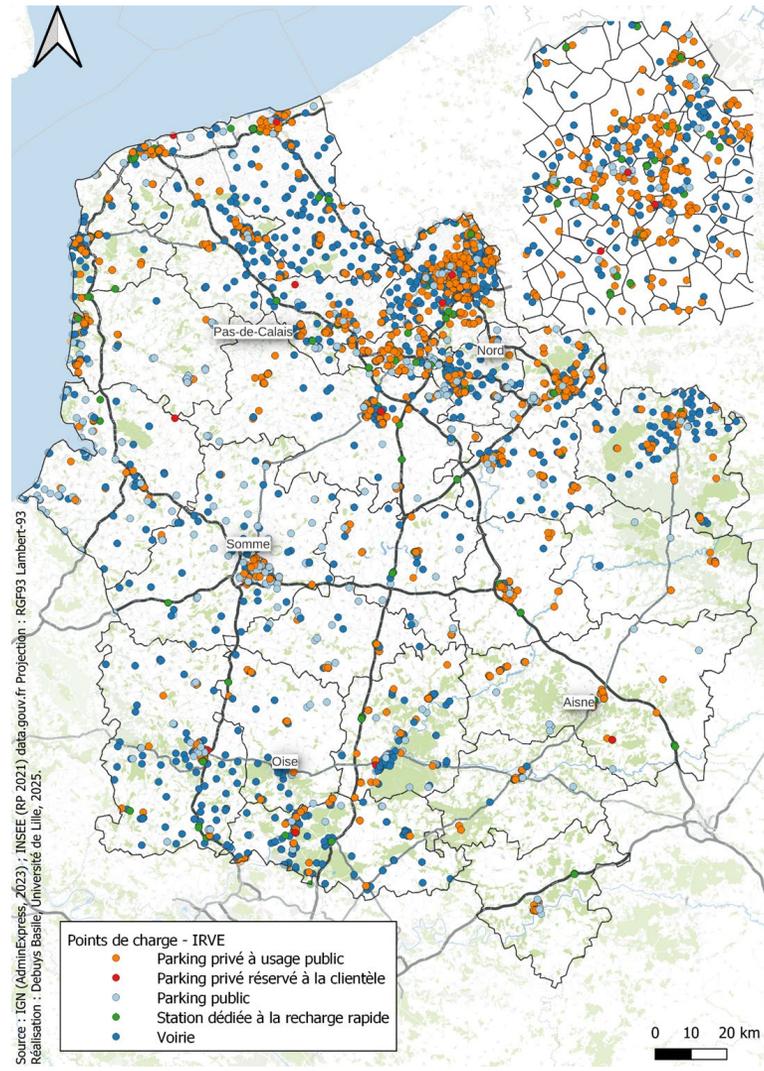
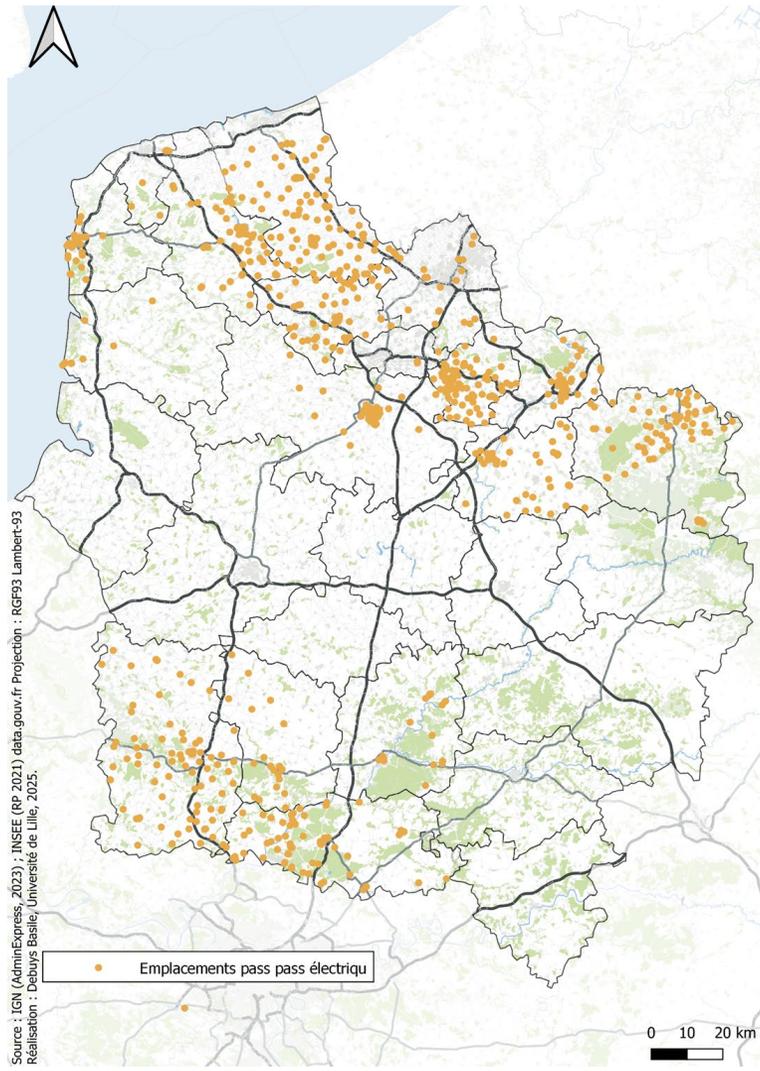
To provide answers regarding the real motivations of the inhabitants by taking into account the territorial markers likely to generate differences in behavior.

C

Highlighting elements of understanding on the impulse effects generated by laws such as the LOM, aid, announcement effects and decisions taken through local policies which can encourage users on the ground to take the plunge.

Hauts-de-France region as a study area





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- **URRY, J.** (2000). *Sociology beyond Societies: Mobilities for the Twenty-First Century*, London: Routledge.
- Loi D'orientation Des Mobilités 2019

Project of research

