MOBILIGN

Short project note for consortium and testbed discussion - DUT Call 2026, 15-minute City Topic 2

The decision problem

Employers, public authorities and mobility providers can each change commuting conditions through parking rules, public transport support, mobility budgets, shuttle or shared services, work schedules and related measures. A measure that looks sensible on its own can fail when employees cannot realistically change their commute, the organisation lacks authority or capacity, the transport system cannot absorb the change, or costs and access burdens fall unevenly across groups.

What the study would do

The project would be built around two contrasting real mobility decisions to be secured during consortium formation, rather than around a preferred method. Each case must involve a real forthcoming employee-mobility decision, an identifiable decision owner, sufficient employee access, meaningful employer-public authority-mobility provider involvement, a usable data route, and a credible path to implementation or strong operational validation. The decision owner and relevant public, mobility and employee/user perspectives would co-design a short Decision Brief defining the genuinely open levers, binding or disputed constraints, minimum data and how the evidence could change the decision. Potential settings may include large employers and institutions such as hospitals, universities, office or shopping centres, and industrial sites, provided that they offer a genuine decision context rather than simply a large employee population.

The current behavioural design uses a stated-choice experiment with a choice-based conjoint (CBC) structure, in which employees choose between realistic policy packages, to estimate how their commuting behaviour may change under realistic and individually feasible conditions. Uncertainty in those responses would be carried into a proportionate transport system model. Only portfolios that pass traceable feasibility constraints would enter multi-objective comparison across mobility, emissions, actor costs, accessibility and distributional outcomes. The strongest options would then be stress-tested under material future conditions.

At least one case would ideally provide either a live implementation or a comparably strong operational validation route. Where a live change occurs, we would freeze the model's ex-ante prediction and intervention definition before rollout, record material implementation deviations, and compare predicted with observed uptake afterwards. This creates an accountability check on the modelling without claiming causality when the real-world design cannot support it.

What is scientifically distinctive

The project would not claim that corporate mobility, stated-choice methods, optimisation, transport modelling or policy portfolios are individually new. The contribution is the decision architecture: a portfolio is not treated as decision-worthy until its implementation constraints are traceable, employee commute response and uncertainty are represented, system and distributional consequences are assessed, and robustness and transfer conditions are explicit. "Admissible Mobility Portfolio" is therefore a practical decision object within this architecture, not a new method by itself.

What remains deliberately open

The coordinator, foreign research partners, cities, final testbeds, budget and final modelling platform should not be fixed before real decision cases and partner-specific funding rules are verified. The immediate purpose of this note is now to identify a coordinator-grade research partner, qualified decision testbeds and complementary implementation partners, while retaining room to adapt testbed-specific design details to the verified cases.