

SUSTAINABLE MOBILITY IN RURAL BASQUE COUNTRY: RETHINKING THE SYSTEM FROM A LOW- DENSITY PERSPECTIVE

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Mobility as a precondition

In rural Basque Country, mobility is not merely a transport question: it is a basic condition for sustaining everyday life. Access to a health centre, holding down a job or taking part in social life depends, to a large extent, on the ability to travel across a territory where functional distances are greater than the maps suggest.

The Basque Country has a complex territorial configuration. Alongside dense, well-connected urban areas, there is an extensive network of villages and neighbourhoods characterised by dispersal, an ageing population and demanding topography. In these settings, low density is not an anomaly: it is the norm. And that reality profoundly shapes any mobility policy.

For years, solutions have drawn on urban models — more frequency, more routes, more infrastructure — that do not always fit rural contexts. The ecological transition, however, demands that this approach be reconsidered. The task is not to adapt the urban model to rural areas, but to design a system specific to rural conditions, built around its own logic.

Challenges: sustainability, access and viability

The first major challenge is decarbonisation in a context of heavy dependence on private cars. In many rural areas, the car is not an option but the only viable alternative. Electrifying the vehicle fleet is a necessary step, but it comes with clear limitations: high purchase costs, uneven charging infrastructure and lower economic capacity among parts of the rural population. Without accompanying measures, the transition risks generating new inequalities.

The second challenge is access to services. The progressive concentration of facilities — health, education, administration — in urban centres or comarca hubs has increased the need for travel. For those who cannot drive, this represents a structural barrier. At this point, mobility ceases to be an environmental problem and becomes a question of territorial equity.

Add to this the difficulty of sustaining conventional public transport financially. Systems based on fixed routes and rigid timetables operate efficiently in dense settings, but lose their rationale in territories with low demand. Maintaining them means accepting a high cost per user, which puts their viability under strain and limits their capacity to adapt.

The overall risk is clear: that the transition towards more sustainable mobility proceeds at different speeds, leaving rural areas at a disadvantage.

Solutions that work: flexibility, integration and appropriate scale

Faced with these challenges, the most promising solutions lie not in expanding the existing system, but in transforming it into one that is more flexible and attuned to real demand:

- **On-demand transport** is one of the key tools. It allows fixed routes to be replaced or supplemented by services that activate when need exists, optimising routes and resources. This approach improves coverage without significantly increasing operating costs, and is particularly well-suited to dispersed areas.
- **Shared mobility** also offers meaningful potential. In settings where many journeys share similar destinations and times, carpooling can reduce the number of vehicles in circulation and improve system efficiency. The main challenge is organisational: facilitating coordination and building trust among users. Digital matching tools, municipal mobility agreements and the role of a local mobility manager can be key to overcoming these barriers and embedding a culture of shared travel.
- **Intermodality** is another fundamental aspect. Rather than replicating urban frequency, it makes more sense to strengthen connection points between rural and urban areas: park-and-ride facilities, well-equipped nodes and reliable links to higher-capacity transport networks.
- Finally, **active mobility** — particularly cycling — can play a more significant role than has traditionally been ascribed to it. On certain corridors and over medium distances, it represents a viable alternative, provided it is supported by safe, adapted infrastructure.

Case studies: transferable lessons

Several European regions have made progress in implementing these approaches, offering useful reference points. In France, a number of territories have integrated **on-demand transport** into their public systems, allowing flexible bookings and adjusting supply to real demand. This has improved both efficiency and coverage in rural areas. Finland has developed hybrid models in which **subsidised taxi services fulfil public transport functions**. This approach prioritises flexibility and acknowledges that, in low-density settings, adaptability can be more efficient than standardisation. In the Basque Country, some initiatives driven by the provincial councils, local authorities and mancomunidades have begun to explore similar solutions, particularly **in on-demand transport and service digitalisation**. Although still at early or fragmented stages, they demonstrate the potential to adapt these models to the local context.

Designing from low density

Designing from low density means accepting a simple idea: mobility must work in rural areas too. It is not enough to adapt what already exists, nor to apply solutions conceived for the city. If there are no real alternatives, car dependence will remain the only option. Rural mobility is therefore a basic condition of the ecological transition — because decarbonisation is not just about changing technology, but about offering viable alternatives across the whole territory.

