15-minute City

Knowledge Hub

Practice recommendations
May 2026

DUT projects have identified five complementary pathways that regional and municipal governments can follow to increase the likelihood of residents in peri-urban areas adopting proximity-oriented lifestyles.

This publication was developed with the input from EMC2, InPUT, PROWD, SSWC and SuCoLo projects. Authors delved into what peri-urbanity means and its important role in the urban mobility transition.

AUTHOR:

Dennis Martínez-Moro
Bax Innovation

CO-AUTHORS:

Bram Vandeninden, Vlaamse Overheid | **Federico Mara**, Università di Pisa | **Mauro Baioni**, Università Roma Tre | **Soomin Woo**, Konkuk University | **Viola Süß**, Universität Leipzig | **Ana Poças Ribeiro**, TU Delft

PERI-URBANITY AND THE 15-MINUTE CITY

KEY MESSAGES

- A significant portion of Europeans lives in a peri-urban area, yet these territories remain a blind spot in most urban strategies and stay locked into car-dependent daily routines.
- The 15-minute City concept can be accommodated to fit peri-urban realities: they already hold many of its ingredients (population, a mix of functions, main streets, community networks, available space) but lack a planning lens that treats them on their own terms.
- Not all peri-urban areas are the same. Business hubs, industrial corridors, residential patchworks and satellite towns each demand place-based strategies, which makes early diagnosis a precondition for effective action.
- Five complementary pathways can help cities to act without redesigning the outskirts from scratch: know your territory, rethink main streets as the backbone of proximity, bring services and work to people, integrate sustainable logistics and flexible mobility, and build on social innovation.

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Co-funded by the European Union

WHY PERI-URBAN AREAS MATTER

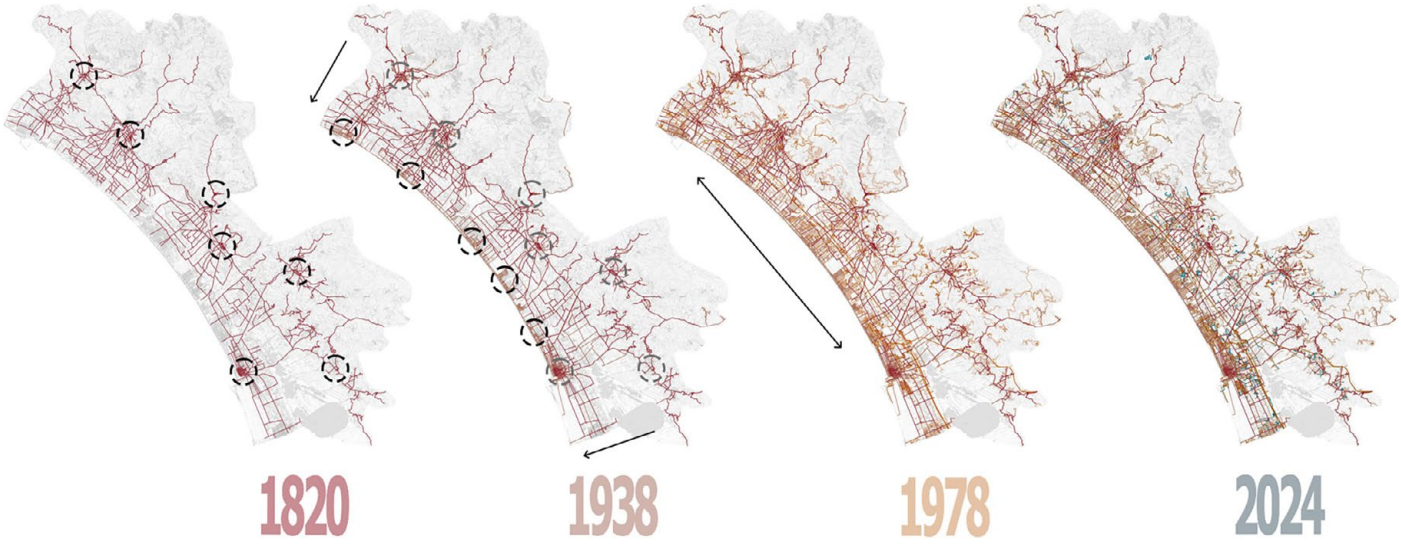
On average, 39% of the EU population lives in a city, 36% in towns, suburbs and peri-urban areas, and 25% in rural areas.[1] More than a third of Europeans therefore live outside the dense urban cores that dominate most urban-transition narratives, yet they often receive a fraction of the planning attention.

Peri-urban areas have two features that make them strategically important for urban mobility transitions. First, they are shaped by the past decades of rapid urbanisation that responded to growing demographics (for example, large residential-only zones). This growth often comes at the expense of proper planning for lived-in places, thus making them dependent on more mature urban cores. Second, they typically sit along important mobility axes, such as ring roads or highways, following a hardcore car-oriented mobility planning. These two components have resulted in a high car dependency from peri-urban residents to access daily services.

Ignoring peri-urban areas today in the 15-minute City debate has therefore a high cost. It not only leaves a vast share of the European population behind in a conversation about urban quality of life, it also affects how urban cores are shaped: for example, city centres have to keep providing significant car parking space for peri-urban residents to access their workplaces, leisure, education and other daily services. Treating peri-urban areas equally to urban cores is not an act of generosity towards the outskirts. It is a precondition for comprehensive urban mobility transition at scale.

Beyond the mobility argument: peri-urban areas are also where environmental pressures, economic dynamics and social change most visibly intersect. It is where new developments absorb natural environments, where logistics and industry expand, and where housing takes in demographic growth. For urban governments, that makes them a priority not just for managing problems of mobility, but for supporting place-based, resilient and inclusive development.

[1] Eurostat, Urban-rural Europe: introduction. ec.europa.eu/eurostat/statistics-explained.



The four stages of the Versilia conurbation formation (Italy), leading to the appearance of multiple and diverse peri-urban areas. Figure by: EMC2 project.[2]

A better understanding of "peri-urban"

Part of the reason peri-urban areas are overlooked is that they lack a clear planning definition. Where "district" or "municipality" enjoy legal and administrative consensus, the peri-urban tends to be an "other" category that aggregates different types of spaces between urban cores. Peri-urban areas are theoretically understood as the product of three layered dynamics: located along metropolitan mobility axes; function as an accumulated mix of housing, commerce, industry, logistics and agriculture; and the spatial form is inherited from the rapid (often weakly) planned urbanisation of the 20th century. Their heterogeneity is the rule, not the exception.

Concretely, the peri-urban landscape encompasses very different landscapes across Europe: business hubs of offices and hotels clustered near highways, such as La Défense near Paris or Diegem outside Brussels; industrial corridors of warehouses and big-box retail stretching along main roads, such as the A12 axis in the Netherlands or the Tiber Valley in Italy; residential patchworks where housing estates have sprawled in the countryside and absorbed former villages, such as the outskirts of Rome or the municipalities of the Flemish Diamond; and satellite towns that evolved from historic coastal or market villages into commuter-serving settlements, such as Sitges near Barcelona.

Peri-urban or suburban? While the terms are sometimes used interchangeably, there are some notable differences, especially regarding their formation. Peri-urban areas rarely grow as neat rings around a city, instead densifying and merging along mobility axes and available land. Density is therefore uneven: older, denser agglomerations sit next to low-density, more recent clusters. Land use is heterogeneous too, but at pedestrian scale the feeling is of monofunctional spaces requiring a car to access places.

Recognising this diversity in peri-urbanity is the first condition for any serious strategy or action plan. Not all peri-urban areas are the same, and a one-size-fits-all model would fail in most of them.

Peri-urbanity and the 15-minute City

The 15-minute City concept aligns proximity, diversity and density to offer an urban life of high value, one in which daily needs are reachable on foot or by bike. It is often read as a concept for dense urban cores only, but this assumption does not hold up.

In fact, many peri-urban areas already possess several of the ingredients the 15-minute City depends on: significant population, a functional mix (even if unevenly located), a degree of public transport connection (although often

[2] Mara, F., Anselmi, C. & Deri, F. Urban systems, when they conurbate: The diachronic-configurational approach to detect the shifting of centrality in Versilia. *Urban Des Int* (2025). https://doi.org/10.1057/s41289-025-00272-9

insufficient) and available space to retrofit. What they typically lack is the connections that make that mix usable on foot or by bike. Services exist but feel out of reach for most, and destinations are close but poorly linked outside the core area. Therefore, the car fills the gap almost by default.

Two aspects tend to be underestimated when planners approach peri-urbanity. The first is that proximity is not only physical. In areas where functions are spread out and infrastructure is thin, residents already rely on informal networks, community initiatives and local associations to access services and opportunities. These social ties are a genuine resource and deserve to be part of any proximity strategy alongside infrastructure investments.

The second is the question of scale. Peri-urban areas are rarely a single neighbourhood; they are a patchwork of settlements, corridors and centralities. The right model is not one 15-minute bubble but a **polycentric 15-minute system**: a network of walkable nodes, connected by cycling routes and public transport, where residents can meet most of their daily needs locally without depending on the car. Therefore, an optimal use of the 15-minute City model on peri-urban areas is one that prioritises a high accessibility level of local services paired with a high (sustainable) connectivity to the rest of the city.

PATHWAYS TO TRANSITION TO PROXIMITY-ORIENTED LIFESTYLES AMONG PERI-URBAN RESIDENTS

Five DUT projects (EMC2, InPUT, PROWD, SSWC and SuCoLo) have approached the links between peri-urbanity and proximity from different angles: spatial analysis, typological research, social innovation, flexible work and transit, and sustainable logistics.

Their approaches converge into a set of five complementary pathways that urban governments can follow and combine to create polycentric 15-minute systems, therefore increasing the likelihood of adopting proximity-oriented lifestyles among peri-urban residents.

Pathway 1

KNOW YOUR TERRITORY BEFORE YOU INTERVENE

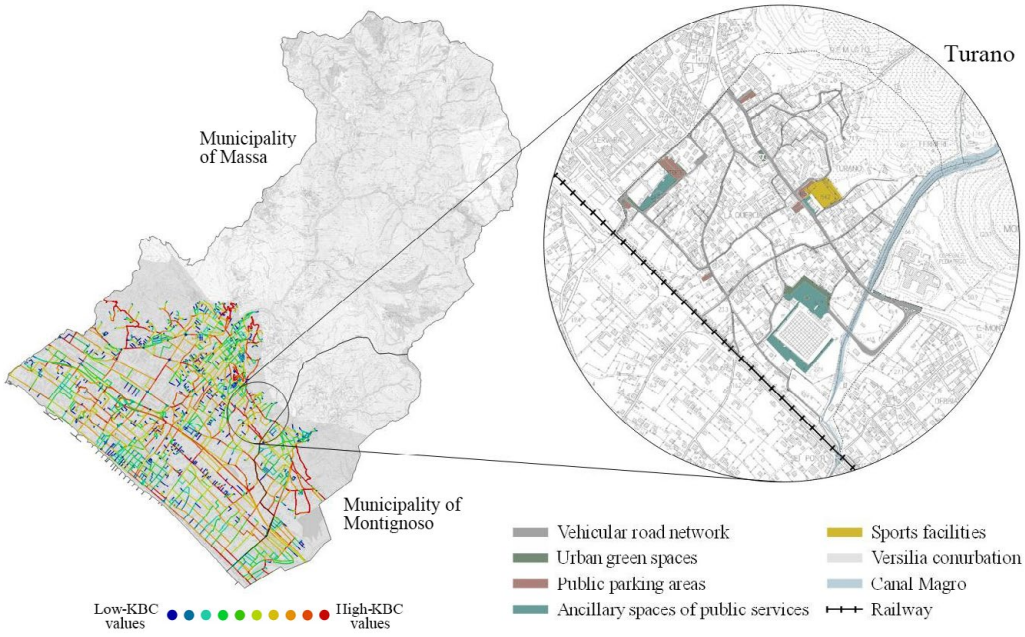
Peri-urban areas should not be treated as empty territories where proximity must be artificially produced. They are complex spatial systems where forms of proximity often already exist, but in fragmented, weakly connected or hard-to-read ways. The first move is therefore diagnostic.

A robust diagnosis dives into the typology and the centrality of the peri-urban area, analysing the street network's configuration, the centrality of different streets, population density, land-use coverage, public transport performance, population and service accessibility, and the historical evolution of the area's centrality. Additionally, social connections and daily routines should also be captured, often not appearing in maps but equally as crucial in assessing a peri-urban area's potential for proximity-oriented lifestyles.

Recommendations for urban governments:
consider commissioning a peri-urban diagnosis before drafting a strategy. Identify the corridors, centralities and local clusters with the greatest dormant capacity to accommodate proximity-oriented lifestyles. This evidence should form the base on which later investment decisions rest.

These pillars of analysis answer a question many urban governments never ask explicitly: where in our peri-urban territory does proximity already have a spatial and social foundation to build on?

This step is often made difficult by the lack of reliable, fine-grained data, which is precisely why early investment in the reconnaissance phase is essential. Simple methods, such as questionnaires and semi-structured interviews with key local organisations can offer a good layer of significant data already.



Analysis of connectivity and amentity location in Turano, outskirts location in Massa (Italy).
Figure by: EMC2 project.

Pathway 2

RETHINK MAIN STREETS AS THE BACKBONE OF PROXIMITY

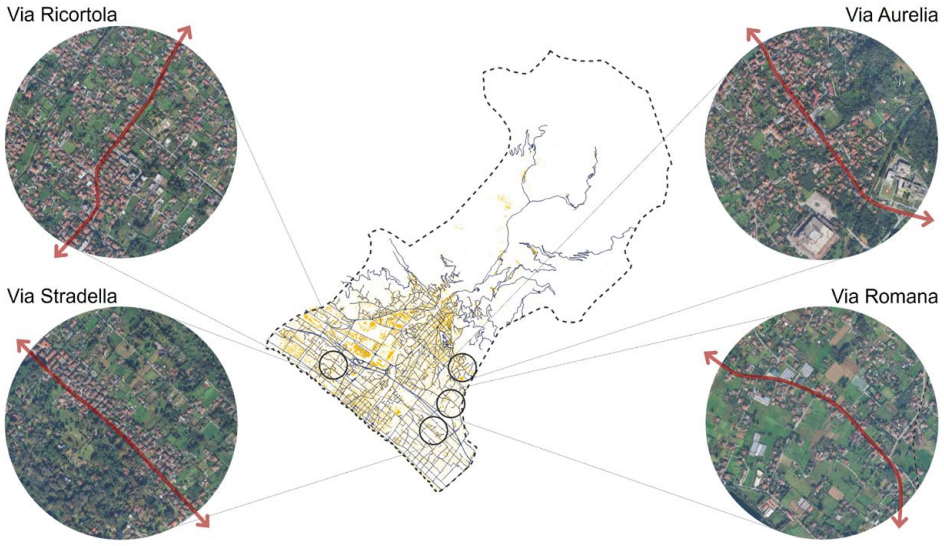
A common misreading of the 15-minute City reduces it to a constellation of dense service nodes, a handful of privileged "15-minute bubbles" surrounded by a car-centric *business as usual*. This does not work especially in peri-urban contexts, where everyday life is structured along roads, not neighbourhoods.

A better approach identifies **pedestrian-friendly main streets as the core** spatial asset of peri-urban transformation. Three moves follow from this shift:

- Meshed networks rather than isolated nodes. Design main streets as connected corridors that support walking, public life and encounter, rather than discrete islands of services.
- Selective densification along those corridors. The aim is targeted corridor development, redesigning existing main roads as lively, mixed-use, multimodal streets, while preserving the inner parts of the urban mesh and improving their pedestrian and cycling connections to the corridor.
- Planning at the supra-local scale. Proximity must be integrated with walking, cycling, public transport and intermodal connections across municipal boundaries, so that peri-urban areas become polycentric 15-minute systems rather than collections of isolated enclaves.

Recommendations for urban governments: consider treating the redesign of strategic main streets as the flagship peri-urban project of your metropolitan area, and restructuring budget and governance to follow the connecting corridor, even if it crosses municipal jurisdictions.

Proximity must also be connected to operability. Spatial visions alone do not deliver peri-urban transition; micro-scale analysis of public space, functions, barriers, user practices and regulatory constraints is what turns ambition into implementable projects.



Identification of potential pedestrian-friendly main streets in different locations across Massa municipality (Italy). Visual by: EMC2 project

Pathway 3

BRING SERVICES AND WORK TO PEOPLE

The peri-urban 15-minute challenge is linked as much to mobility as it is to placemaking. Peri-urban planning has long treated outskirts as places to sleep in and commute out from, to reach central workplaces, healthcare, retail and schools. The pandemic briefly showed that both employees and employers can function with far less long-distance travel.

Urban governments should therefore make it a deliberate objective to **relocate a share of everyday functions closer to where people live**. Three reinforcing moves follow:

- Decentralise the workplace. Shared offices near residential areas, hybrid-work agreements and neighbourhood co-working hubs can shift long commutes into short, active-mobility trips. Resident-preference surveys show openness to these arrangements, even when classical travel and census data do not capture it. Current planning tools struggle to model hybrid work and flexible office use, gap research that institutions are well placed to close.

- Recognise the services that already exist. Low-density peri-urban areas rarely lack daily services entirely. They host a partial but real fabric of non-conventional provision in education, healthcare, sport and well-being, trade and mobility, largely invisible to planners. Making these initiatives visible, supporting them with funding, legal recognition and co-design, and integrating them into strategic policy is cheaper and faster than green-field development.

- Watch for rebound effects. Decentralisation is not automatically sustainable. It can generate longer leisure trips, more aggregate household travel, or isolation among remote workers. Pair it with quality public space, strong intermodal links between 15-minute nodes, and active community life.

Recommendations for urban governments: consider commissioning studies on resident working culture preferences, running simulations of new commuting realities, piloting co-working hubs and flexible transit links to them, and formalising support for existing community-led initiatives.

Pathway 4

INTEGRATE SUSTAINABLE LOGISTICS AND FLEXIBLE MOBILITY

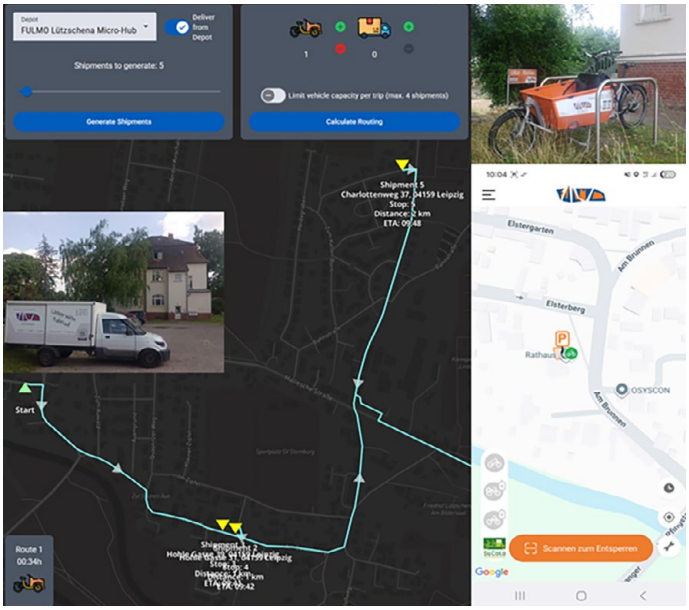
Peri-urban areas are often the weakest link in last-mile logistics and in everyday non-car mobility. Walking and cycling networks are incomplete or unsafe, neighbourhood pick-up points are missing, and low-carbon delivery options are neither visible nor convenient. At the same time, these areas offer real space to host alternatives, including underused public space and a partial fabric of local commercial services that could be better connected.

Practical, ready-to-use measures are already being piloted in peri-urban contexts across Europe, including in Leipzig (Germany), Salzburg (Austria) and Merano (Italy). These include cargo bike sharing schemes, parcel delivery by bike courier, parcel lockers and micro-hubs, and digital nudging on e-commerce platforms to steer residents toward low-carbon delivery options. A promising combination pairs shared cargo bike rental, distributed pick-up stations or micro-hubs, and incentives for sustainable delivery, supported by barrier-free public space and cycle networks safe for both private users and couriers.

Flexibility on the passenger side matters too. Flexible transit (demand-responsive services that fill the gaps left by fixed public-transport routes) is particularly promising in peri-urban areas where conventional buses are commercially difficult to sustain. As with shared offices, the barriers are as much in planning tools and data as in physical infrastructure. Transport models often assume fixed timetables and routes, and residents' willingness to pay for flexible services is rarely known. Investing in novel modelling tools, survey evidence and pilots can close this gap.

Recommendations for urban governments: consider combining infrastructure (safe cycle networks, micro-hubs, pick-up points) with services (shared cargo bikes, bike couriers, flexible transit) and behavioural instruments (digital nudges, incentives). These tools work best together, and alongside the decentralisation measures of Pathway 3.

Cargo bike delivery pilot in Leipzig's urban outskirts. Photo by: SuCoLo project



Composite overview of Leipzig's peri-urban logistics pilot, including snapshots of the routing optimisation and the cargo bike rental apps. Photo by: SuCoLo

Pathway 5

BUILD ON SOCIAL INNOVATION AND LOCAL NETWORKS

In low-density, fragmented contexts, access to opportunities and collective resources depends not only on physical proximity but on distributed social and institutional networks. Peri-urban areas can be home to strong community-led practices, including mutual support initiatives, local associations and co-design experiments, which sit outside standard urban welfare models and rarely show up in official indicators. Pathway 1 points out the importance of mapping these networks, and Pathway 3 draws on these networks for service provision; this pathway zooms in on the relational infrastructure itself.

Recognising and supporting these practices is a strategic lever, not a nice-to-have. Alternative mappings of social proximity can capture the quality and impact of these relationships and identify local networks and interaction places. An example is WeMi in Milan (an integrated welfare app connecting residents with professional social, care and home services), which sits on rich data on locations of users and the services provided. On that basis, regional and metropolitan authorities can design stable support mechanisms: cascade funding, legal recognition, co-design processes, and integration into strategic and cohesion policies.

Recommendations for urban governments: consider including the mapping of social proximity and resident preferences part of your peri-urban evidence base, and formalising relationships with local social-innovation actors (associations, NGOs, social media groups, etc.) rather than relying on ad-hoc partnerships. Using their reach can help pilot new solutions or scale existing ones.

Crucially, social innovation complements investment in transport and services; it does not replace it. A peri-urban strategy built only on community initiative will fail the same households it claims to serve. The four pathways above and this one must be planned together.

Milan

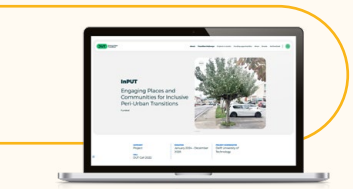
CLOSING REMARKS

Peri-urban areas may be diverse and often overlooked, but they offer real opportunities to bring proximity-oriented lifestyles beyond city centres. The researchers behind the DUT projects sought to provide strategic insights designed to re-evaluate ways of thinking, governance practices and urban mobility ambitions within relevant public urban governments. A central objective is to foster seamless accessibility and connectivity, ensuring these areas benefit from local proximity to services reachable via walking and cycling as well as robust integration of sustainable transport options (both to the city core and to neighbouring peri-urban areas), hence achieving a polycentric 15-minute system within the wider metropolitan region.

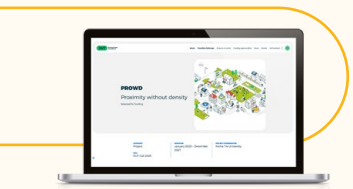
This insight piece does not propose to redesign the outskirts from scratch, but to work with the reality that is already there and gradually transition towards a proximity-oriented reality. With targeted, evidence-based, and well-coordinated interventions, built on a better understanding of peri-urban diversity and a willingness to treat these areas on their own terms, cities can unlock the existing potential of their outskirts and make proximity-based living a genuine possibility for millions of European residents.

CONTRIBUTIONS FROM DUT PROJECTS

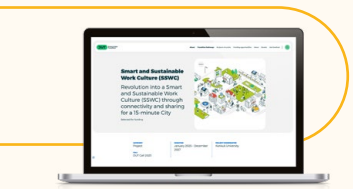
The **EMC2** project (Evolutive Meshed Compact City) contributed with insights to pathways 1 and 2. These insights were drawn from the development of a new planning model, including decision-support tools, that facilitates the integration of 15-minute city principles in European metropolitan peripheries.



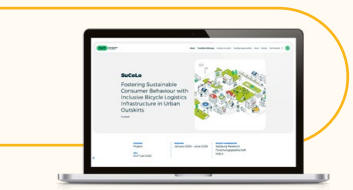
The **InPUT** project (engaging places and communities for INclusive Peri-Urban Transitions) contributed with insights to pathway 1. These insights were drawn from exploring how principles of proximity, accessibility and liveability can be extended across European peri-urban areas.



The **PROWD** project (PROximity Without Density) contributed with insights to pathways 3 and 5. These insights were drawn from the project's focus on reducing car dependency in low-density urban areas by recognising and building on existing "non-conventional" social initiatives promoted by residents or small enterprises in fields such as education, healthcare, and mobility.



The **SSWC** project (Smart and Sustainable Working Cultures) contributed with insights to pathways 3 and 4. These insights were drawn from the project's work on the development of a new policy framework that integrates new flexible working routines and demand-responsive transport into city planning practice.



The **SuCoLo** project (Fostering sustainable consumer behaviour with inclusive bicycle logistics infrastructure in urban outskirts) contributed with insights to pathway 4. These insights were drawn from the project's work on the development of different tools to foster more sustainable consumer behaviour and bike-centred logistics mobility in peri-urban areas.

For further information about DUT projects and contact details to project coordinators visit www.dutpartnership.eu

ABOUT THE DUT KNOWLEDGE HUB

This publication is an output from the Knowledge Hub.

The Knowledge Hub is DUT's instrument to gather a knowledge community, capitalise on project results, and facilitate the transfer of the project results to practitioners.

Each DUT project is represented by an expert who spends at least 5 person-months on Knowledge Hub activities. The experts, together with the management team of the Knowledge Hub(s) and the specific Transition Pathway programme management, are set to:

- Contribute to the strategic development of the Transition Pathway
- Synthesise results in collaboration with other projects
- Develop publications and participate in specific events
- Communicate with the scientific community and stakeholders

This publication was developed by projects funded under the Driving Urban Transitions Partnership, which has been co-funded by the European Commission. The content and views are the authors' own, and do not necessarily represent the views of DUT.

Editors: Ana Calvo and Katarina Schylberg, IQ Samhällsbyggnad

Design and layout: Hearts&Minds, Brussels

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