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## **Driving Urban Transitions (DUT) Partnership**

Website: <https://dutpartnership.eu/>

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# Executive Summary

**The Driving Urban Transitions (DUT) Partnership to a sustainable future is an intergovernmental research and innovation programme addressing key challenges of urban transitions. Our vision is a climate neutral and resilient urban future for all. Our mission is to fund transformative research and innovation to build capacities of urban stakeholders and empower them to drive urban transitions in Europe and beyond.**

The 2025 update of the DUT Roadmap reflects a critical juncture in global and European sustainability and climate neutrality policy. As the urgency to translate high-level goals - such as the European Green Deal, the Urban Agenda for the EU, and the UN 2030 Agenda - into tangible local outcomes grows, DUT responds by reinforcing its mission: to fund challenge-driven and impact-oriented R&I that accelerates urban transitions.

This revised roadmap reaffirms DUT's foundational logic while integrating new knowledge, emerging megatrends and key learnings from its first years of implementation. It incorporates evolving priorities from European and international frameworks, such as the EU's Competitiveness Compass, Clean Industrial Deal, and the EU Missions on Climate-Neutral and Smart Cities and Adaptation to Climate Change, as well as the New European Bauhaus. In doing so, it positions DUT as a proactive and strategic actor within the changing urban innovation landscape.

The roadmap continues to centre DUT's work around three interconnected Transition Pathways:

- **15-minute City (15mC)** - boosting sustainable mobility and proximity in connected neighbourhoods
- **Circular Urban Economies (CUE)** - enabling regenerative urbanism and resource circularity
- **Positive Energy Districts (PED)** - pioneering climate neutral, resilient and socially just energy systems

DUT's updated approach is systemic, inclusive and agile. It addresses critical megatrends such as climate adaptation, digitalisation, ageing populations, the housing crisis and geopolitical

instability. It also strengthens transdisciplinary collaboration and embraces design, arts and cultural innovation as catalysts for social and ecological resilience.

This roadmap update also reaffirms DUT's role as a **policy enabler, knowledge broker and experimental lab for funders**. It outlines a portfolio of measures to align urban R&I with policy implementation, build capacity among urban stakeholders, scale successful innovations and embed DUT funded solutions in broader policy frameworks. With more than 250 projects expected by 2033, DUT is set to generate a critical mass of change-ready knowledge and partnerships.

To support diverse stakeholder engagement, the DUT Roadmap is designed as a concise and strategic guide to the Partnership's priorities for 2025-2033. It addresses a broad target group of policymakers, funding agencies, researchers and practitioners. Complementary fact sheets - tailored to urban government authorities, SMEs, and civil society organisations - will provide targeted entry points into DUT's activities and offerings. Additionally, information on annual calls and funding opportunities is regularly published on the DUT website. Through this updated strategic direction, the DUT Partnership reasserts its commitment to empowering cities not only to adapt to urban challenges - but to lead Europe's transition toward a more sustainable, climate neutral, inclusive and competitive future.



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# Introduction:

# The Driving Urban Transitions Partnership

## A public-public partnership to facilitate an innovation ecosystem for urban transitions

The Driving Urban Transitions (DUT) Partnership to a sustainable future is an intergovernmental research and innovation programme addressing key challenges of urban transitions. Our vision is a climate neutral and resilient urban future for all. Our mission is to fund transformative research and innovation to build capacities of urban stakeholders and empower them to drive urban transitions in Europe and beyond. To achieve this, DUT operates through three interconnected Transition Pathways: the 15-minute City (15mC) Transition Pathway, the Circular Urban Economies (CUE) Transition Pathway and the Positive Energy Districts (PED) Transition Pathway. These pathways provide a holistic and systemic approach to tackling urban challenges, fostering innovation and enabling cities to implement sustainable solutions.

The DUT Partnership is a co-funded European Partnership within the European Research and Innovation (R&I) Framework Programme, Horizon Europe. The DUT Partnership started in 2022, building upon and stepping up the ambition and efforts of the Joint Programming Initiative (JPI) Urban Europe. By developing and implementing a transformative (R&I) programme, DUT contributes to the achievement of the European Green Deal targets, to the UN 2030 Agenda for Sustainable Development, the Paris Agreement, the Urban Agenda for the EU, and the EU Mission on Climate-Neutral and Smart Cities (EU Cities Mission).

As cities are at the heart of Europe's competitiveness and resilience, DUT also aligns with the Competitiveness Compass, recognising urban areas as engines of innovation and sustainable growth. Furthermore, the Clean Industrial Deal, which is increasingly shaping Europe's green transition, informs the efforts of DUT in fostering a climate neutral, resilient and sustainable urban future.

DUT brings together over 60 partners from 30 countries, involving national and regional policy-makers, funders and urban related government agencies, to invest in urban (R&I) and strengthen the innovation ecosystem for urban transitions

in Europe and beyond. In collaboration with our partners, DUT connects and aligns European, national and regional strategies, fostering impactful urban innovation and supporting the implementation of innovative approaches.

DUT is a catalyst for transformational change that engages stakeholders in the strategic agenda setting, development and implementation of annual calls, and synthesises, communicates and translates the results of funded projects into practice. By emphasising co-creation and collaboration, we aim to build a strong community to accelerate urban transitions and scale impactful solutions.

Through our calls and activities, we are creating a critical mass of knowledge and action for urban transitions. To achieve our mission, we have put in place comprehensive measures that will be explained further in this roadmap.

**DUT's VISION:** *a climate neutral and resilient urban future for all.*

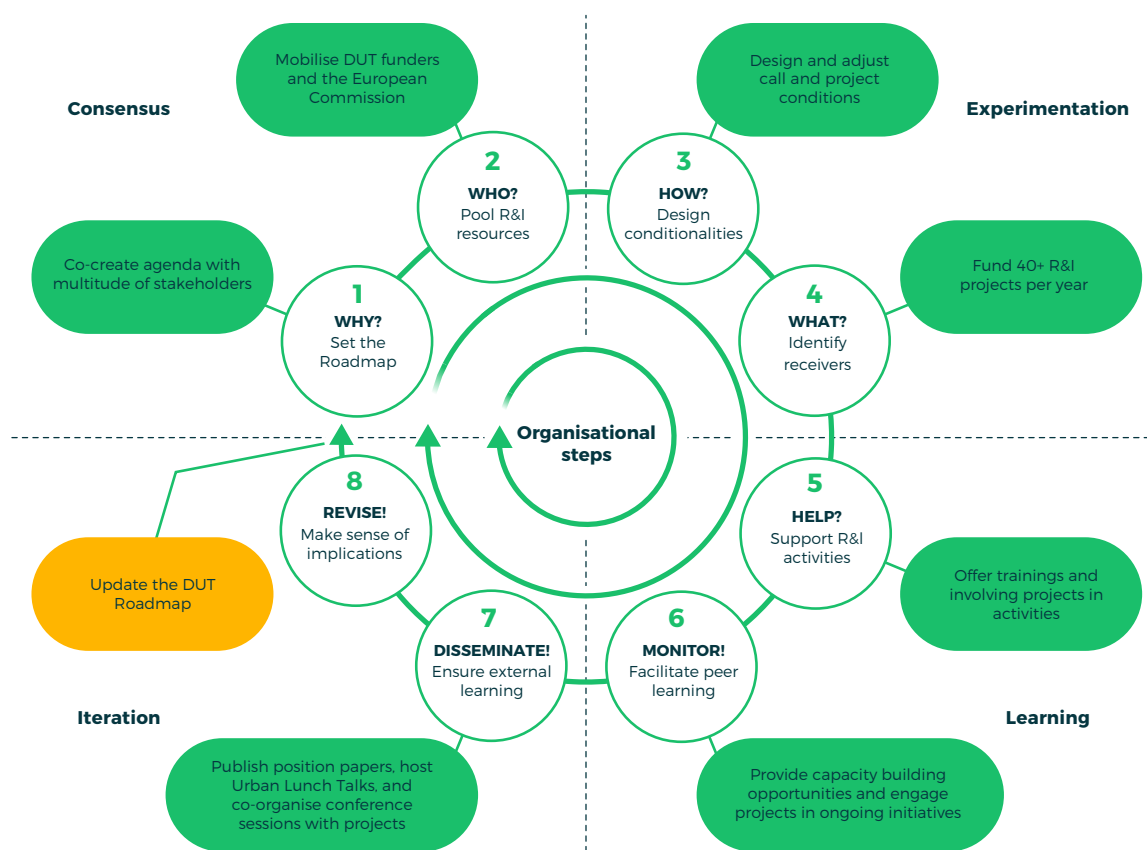
**DUT's MISSION:** *to fund transformative research and innovation to build capacities of urban stakeholders and empower them to drive urban transitions in Europe and beyond.*

# DUT's Roadmap: An Agile Tool for Acting on Emerging Challenges

At the start of the DUT Partnership in 2022, a strategic roadmap was developed to provide a long-term framework for DUT partners to coordinate actions, align priorities and join forces to drive urban transitions. DUT operates at the intersection of urban and climate neutrality policies and research policies, making the future of European R&I policy critical to its work.

This updated roadmap reflects recent changes and shifts in both of these domains as well as our achievements and learnings from the first years

of DUT. While the core approaches and focus areas of the partnership remain, it recognises the need for ongoing reassessment of our methods and longstanding assumptions in response to emerging knowledge and the necessity to future proof our cities in response to climate change. The roadmap has been co-created through a series of workshops with DUT member countries and consultations with key external stakeholders, ensuring a broad and inclusive perspective on future priorities and actions.



**Figure 1.** The approach used to revise the DUT Roadmap<sup>1</sup>.

<sup>1</sup> See also: Towards Experimentalist R&I Funding, relies on an iterative approach that helps DUT align its tools and methods towards fostering systemic change and experimentalism. It builds upon experiences gained and reflections made over the partnership's initial three years, and captures insights gathered from completing the initial cycle of consensus-building, experimentation, learning, and adaptation. In sum, these insights are derived from internal DUT operations, and the alignment measures necessary to navigate an increasingly volatile international political landscape.

## Developments in European and global (urban) policies

As we move into the second half of the 2020s, cities are navigating a rapidly shifting policy landscape. The question is no longer *why* urban transitions are necessary, but rather *how* the transition can be implemented in an increasingly complex and interconnected world. In 2025, we are now in a pivotal moment for global and European sustainability efforts. The UN Agenda 2030 has entered its final five-year phase, yet progress towards the Sustainable Development Goals (SDGs) remains insufficient. The Decade of Action<sup>2</sup>, meant to accelerate transformative change, has yet to deliver the systemic shifts needed to achieve these global targets, and the urgency to align policies, investments and innovations for sustainable urban transitions has never been greater.

Discussions about post-2030 policies and strategies are also gaining momentum. The UN's Post-2030 Pact for the Future<sup>3</sup> is shaping the next

phase of international cooperation, raising important questions about the role of urbanisation in global sustainability goals. Cities have long been recognised as engines of economic growth and hubs of innovation, but their role in achieving resilience against human-caused shocks (e.g. extreme weather events fuelled by climate change), social equity and economic stability will need to be further embedded in global frameworks. Cities and regions play a pivotal role in achieving Europe's climate neutrality goals, as they are responsible for implementing at least 70% of the European Green Deal legislation. Moreover, they are home to 75% of the EU's population and drive substantial demand for clean technologies necessary for their decarbonisation.<sup>4</sup>

Meanwhile, the EU is refining its own **vision for climate action**, and is expected to reinforce its global climate leadership, setting clear expectations for urban sustainability in the years leading up to 2030. The political priorities of the European Commission for 2024-2029 set the overarching direction for sustainability and innovation in Europe. President von der Leyen's guidelines reaffirm the European Green Deal as



<sup>2</sup> United Nations, 2020.

<sup>3</sup> United Nations Sustainable Development Group, 2024.

<sup>4</sup> European Local Government Networks, 2024.

the foundation of the EU's climate and environmental policy. However, the focus has now shifted from legislation to **implementation and delivery**, ensuring that the Green Deal translates into tangible impact on the ground.

With this growing emphasis on translating high-level strategies into tangible, measurable impacts in cities across Europe, **the Urban Agenda for the EU continues to serve as a vital framework**, promoting integrated, place-based, and participatory approaches to urban development. To support more effective implementation, new thematic partnerships and delivery mechanisms have been launched under the Urban Agenda for the EU. These structures aim to enhance multi-level governance, improve the coherence of urban-related policies, and foster knowledge exchange among cities, Member States and EU institutions.

The Draghi Report on EU competitiveness<sup>5</sup> and the Heitor Report on the future EU programmes for research and innovation highlight Europe's lagging competitiveness and stress the need for stronger investments in innovation, digitalisation, and industrial transformation. For urban transitions, this means ensuring that **research agendas align with real-world implementation, bridging the gap between knowledge creation and applied solutions**. The recently introduced Competitiveness Compass<sup>5</sup> and the Clean Industrial Deal<sup>6</sup> outline a bold strategy to support European industry, securing manufacturing while accelerating decarbonisation. This shift reflects a broader EU ambition: sustainability must go hand in hand with economic strength, innovation and industrial leadership and greater emphasis is added on how sustainability contributes to the strategic autonomy of Europe by decreasing foreign dependency on energy, fuels and resources.

**EU Cities Mission** is at its halfway point, with only five years left to meet its target of 100 climate neutral cities by 2030. While key advances have been made in local climate action planning (CCCs), the next phase must focus on scaling up solutions, securing long-term funding and embedding structural change across governance levels. Similarly, the **EU Mission on Adaptation to Climate Change**, which has gained increasing

relevance due to the rise in extreme weather events and biodiversity loss, further reinforces the need for integrated and systemic urban strategies for increased resilience.

The **New European Bauhaus (NEB)** adds a vital cross-cutting dimension to urban transitions by combining sustainability, inclusion, and beauty. Emphasising quality of life, cultural heritage, and civic engagement, the NEB complements the EU Cities and Climate Adaptation Missions and promotes holistic, people-centred approaches. Sustainability and design are increasingly seen as complementary forces in urban transformation and are an important feature of NEB. Integrating ecological responsibility with aesthetics helps cities foster innovative and liveable environments, from creative hubs to housing that supports biodiversity. Digital tools, including AI, are transforming urban planning, enabling experimentation with ideas before they are built.

### **Conclusion: Positioning DUT within an evolving policy landscape**

This changing policy context presents not only a challenge, but a clear strategic opportunity for DUT. As the focus shifts from high-level ambition to implementation and delivery, DUT positions itself as a key enabler of urban transformation - bridging research and innovation with policy uptake and local action.

DUT contributes to this next phase by offering a practical, impact-oriented framework that helps cities deliver on European and global sustainability commitments. It actively supports the missions and policy agendas through systemic R&I, while enabling experimentation, community building and replication of solutions beyond frontrunner cities.

Going forward, DUT will strengthen its alignment with emerging urban policy frameworks, including the Urban Agenda for the EU and forthcoming EU and global urban policies. By doing so, the Partnership ensures that its activities contribute directly to on the ground transitions - making cities not only ready for the future but equipped to lead it.

<sup>5</sup> European Commission, 2025a.

<sup>6</sup> European Commission, 2025b.



## Emerging urban megatrends

Urban areas are at the forefront of profound social, environmental, economic and technological change. As cities navigate increasing complexity and interdependence, several emerging megatrends are beginning to reshape the trajectory of urban development. These trends reflect shifting policy priorities, global pressures, and evolving local realities, highlighting the need for more integrated, forward-looking approaches to urban transformation. Identifying and understanding these megatrends is essential for shaping resilient, inclusive and sustainable urban futures, and to design a research and innovation program such as DUT in the years to come.

The Russian invasion of Ukraine has disrupted European urban policies, highlighting the **fragile nature of geopolitical stability at the global level** with cascading effects on energy security, food supply chains and migration patterns of those forcefully displaced. In turbulent times, marked by global disruptions in political and economic relations, European cities are intensifying their efforts to build resilience, safeguard democratic values and ensure long-term stability. In parallel, solidarity with Ukraine remains essential - not only in humanitarian and political terms but also through support for the recovery and sustainable rebuilding of its cities.

As the urban research and innovation landscape continues to evolve, **the urgency of tackling the interconnected crises of climate change,**

**pollution and biodiversity loss is growing.** While achieving climate neutrality and reducing carbon emissions remain key priorities, it is equally critical to make urban areas more resilient to the impacts of extreme weather, including heatwaves, floods and storms. Preparing cities for a future that may exceed the 1.5°C threshold requires strong adaptation strategies - ones that protect vulnerable communities, strengthen infrastructure and integrate nature-based solutions.

In recent years, **the housing affordability crisis** has significantly counteracted ambitions for just urban transformations. Many urban areas across Europe are suffering from an accelerated increase in housing prices due to a variety of reasons: increased demand for housing in cities, speculation, overtourism and the rise of platform urbanism, among others - resulting in super-gentrification. In order to revitalise the urban economies across Europe, addressing the housing crisis is essential to enhance economic competitiveness, attract talent and ensure just transitions for all.

**Demographic shifts towards older societies and increasing health challenges** caused by the climate crisis and pollution demand a fresh perspective on urban health and wellbeing. Cities should promote active living, resilience to climate related health risks, and enhanced social interaction through walkable neighbourhoods, green spaces and cycling infrastructure. With increased accessibility and safety in public spaces, outdoor activities can foster social connections. Incorporating creative approaches to urban design and integrating nature into urban areas not only



Urban challenges are deeply interconnected, often involving trade-offs between competing goals and interests. JPI Urban Europe, DUT's predecessor, responded to this complexity with a dilemma-driven approach - acknowledging that urban dilemmas arise when conflicting priorities lead to difficult, systemic choices. As urban priorities have evolved, DUT has built on this foundation by **shifting toward a more challenge-driven approach**. This shift places greater emphasis on tackling defined urban challenges through systemic, impact-oriented innovation. Co-creative methods like urban living labs remain central, while DUT's mission-led framework has further strengthened its focus on delivering tangible results and driving transformative change. Complementary to the challenge-driven approach, DUT has established a mission, which from the start has proven effective in maintaining a strong focus on impact and driving system innovation.

**The DUT Transition Pathways (TPs) has been effective entry points for breaking down urban complexities** into manageable components. These pathways balance system innovation with community-driven niche solutions, offering a holistic framework for tackling urban challenges and their connections beyond urban borders. Moreover, the TPs maintain a strong multi- and interdisciplinary foundation, reinforcing DUT's commitment to holistic and innovative urban transitions. At the same time, there has been a growing focus on cross-cutting issues in DUT calls,

along with a desire to strengthen connections between projects across the TPs.

To further strengthen its transformative capacity, **DUT has expanded its international engagement** by co-leading the Urban Transition Mission of Mission Innovation and through engaging in the Belmont Forum, a global network of funding agencies. These efforts reinforce DUT's ambition to mobilise resources and expertise beyond Europe, fostering global collaboration on urban transitions. In the next phase, DUT will further emphasise international collaboration, exploring joint funding for global projects and sharing DUT project results with urban stakeholders beyond Europe. Additionally, DUT will learn from international exchanges to integrate global knowledge and refine its approach to urban transitions.

Creating and implementing a transformative research and innovation programme is an ongoing process that requires continuous learning and adaptation. To support this development, DUT conducted an in-depth analysis of the barriers limiting the programme's transformative potential. The outcome of this work is the white paper *Transformative Research and Innovations*<sup>7</sup>, which identifies key challenges, provides strategic insights for DUT's Governing Bodies, and highlights **DUT as a "laboratory of and for funders" - a space for testing new tools, approaches and frameworks**. By embedding learning loops into its operations, DUT ensures that its activities

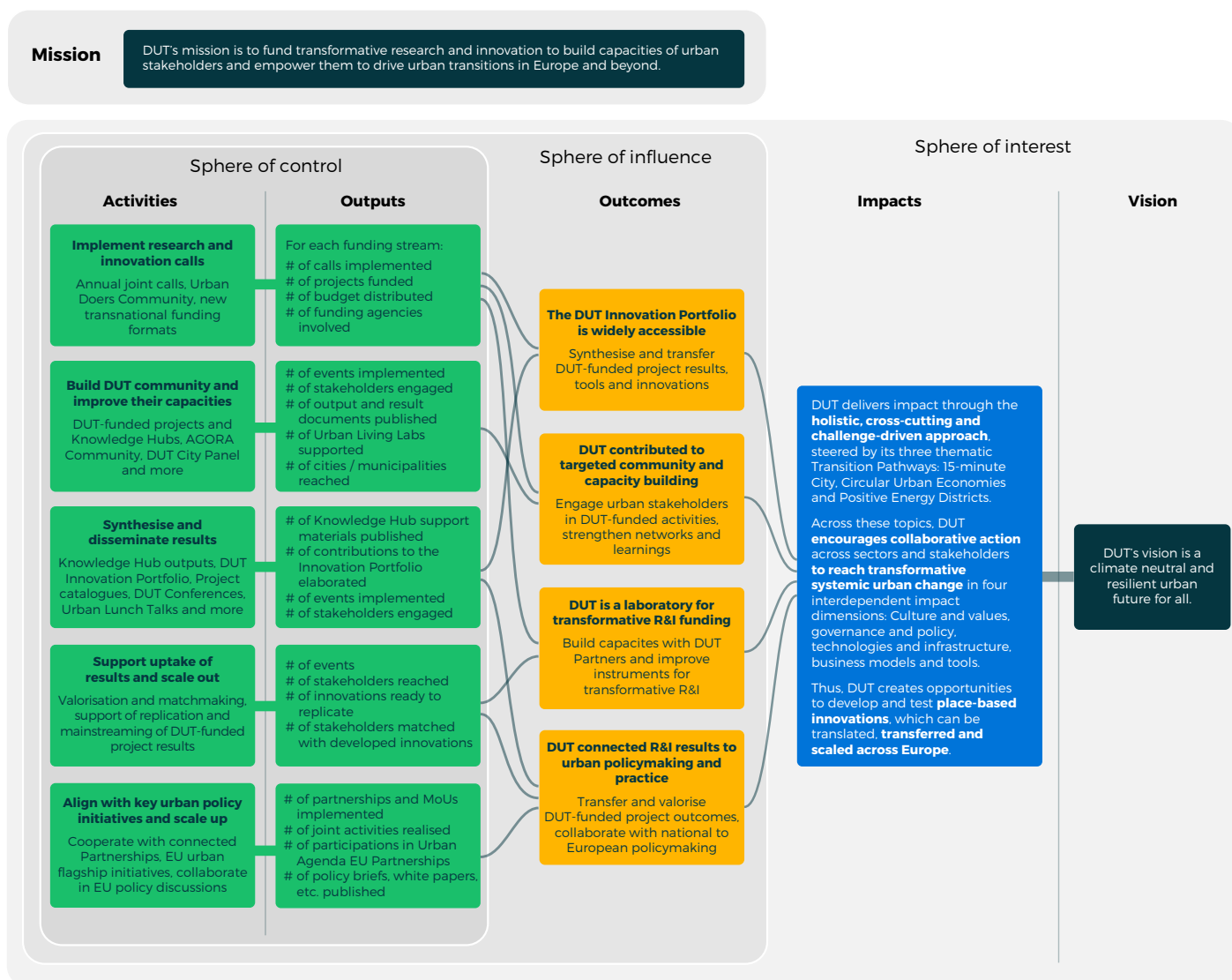


7 DUT Partnership, 2025.

and investments contribute effectively to urban transitions. The white paper serves both as a reflection on early learnings and a call to action, reinforcing DUT's commitment to advancing bold, systemic research and innovation. Some recommendations have already been put into practice - for example, the creation of the Urban Doers Community to support niche innovators. Others, such as strengthening the role of experimentation, innovation, and the arts and design in future calls, will guide the programme's continued evolution.

and track its impact according to the Theory of Change.<sup>8</sup> This logic is based on four mutually reinforcing outcomes: (1) generating a widely accessible innovation portfolio, (2) building a stakeholder community and capacities, (3) experimenting with and improving funding instruments, and (4) connecting research and innovation to policy-making. These outcomes align with DUT's mission to drive systemic urban transitions through research and innovation and are delivered through a portfolio of strategic activities. The logic has been translated into a monitoring framework and is visualised below.

Over time, **DUT has consolidated a clear logic of intervention** to guide its implementation



**Figure 3:** DUT Theory of Change and pathway to impact.

<sup>8</sup> Further details are available in the separate DUT communication on the DUT Theory of Change.

# From Strategy to Action: Implementing the DUT Mission

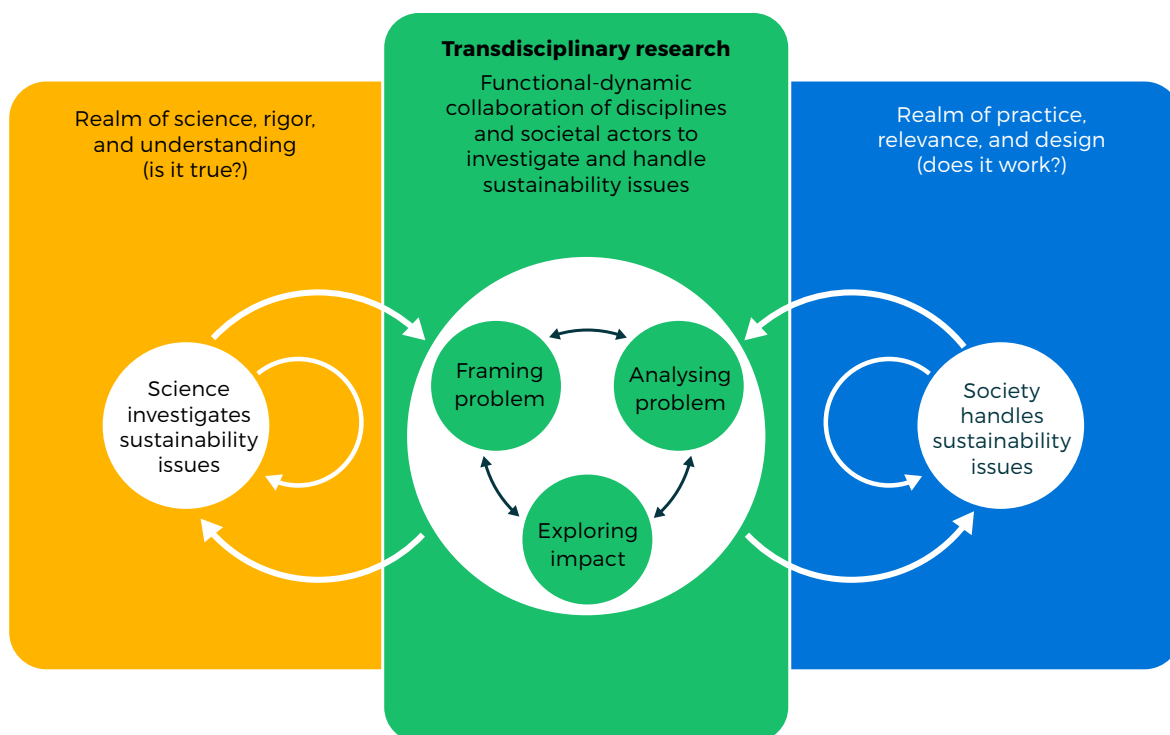
## A holistic approach to urban transitions

DUT's approach is guided by overarching perspectives that shape urban transition processes, ensuring that activities, discussions and funded projects align with systemic, inclusive and impactful transitions.

**A key feature of DUT's holistic approach is the emphasis on inter- and transdisciplinarity.** DUT operates from the assumption that urban transitions require solutions that integrate diverse knowledge, expertise and perspectives. Through collaboration across scientific disciplines, industry

sectors and local communities, the knowledge and solutions needed for the urban transitions are produced by co-created means. This enables our projects to address complex urban challenges from multiple angles, ensuring that the solutions DUT supports and funds are not only scientifically robust but also socially relevant, locally applicable and feasible in practice. By fostering such collaborative efforts, DUT ensures that the urban transition is driven by comprehensive and context-specific insights.

Recognising that transformative impact stems from system innovations, **DUT emphasises the systemic nature of urban transitions.** Cities function as interconnected, complex systems



**Figure 4.** The transdisciplinary logic and holistic approach of R&I projects in DUT.<sup>9</sup>

<sup>9</sup> Pohl et al., 2021.

composed of social, environmental, economic and technological dynamics. Identifying leverage points for scalable solutions is crucial to altering the structural conditions that shape urban development. To translate this systemic approach into practice, **DUT defines urban impact through four interdependent impact dimensions:**

- The **Culture and values** dimension focuses on how norms, behaviours and attitudes shape and are shaped by urban transitions. It examines how changes in cities influence people's lifestyles, values, and social relationships and vice versa, and addresses issues such as social equity, public engagement, community cohesion and cultural resilience. A proper understanding of sociocultural dynamics is crucial to ensure that transitions meet the diverse needs of all inhabitants, fostering a sense of ownership and participation in these processes.
- The **Governance and policy** dimension focuses on the structures, processes and strategies that guide urban change. It encompasses the role of multi-level governance - national and regional governments, local authorities, and institutions - in setting policies, making decisions and coordinating actions that drive systemic change. It emphasises the mental shift and capacity building required among practitioners and elected officials to take forward looking, transition oriented actions. At the same time, it addresses regulatory frameworks and the balance between top down and bottom up approaches, ensuring that policies are adaptable, forward thinking, and responsive to emerging challenges.
- The **Technologies and infrastructure** dimension involves the physical and digital systems that support urban life and enable transformation. It explores how technological advancements - such as smart grids, mobility systems, and digital platforms - can improve efficiency, reduce environmental impact, and enhance urban quality of life through connectivity and equitable access to services. These innovations also bolster the competitiveness and resilience of cities by enabling smarter infrastructure, reducing dependencies, and supporting the green and digital transitions.
- The **Business models and tools** dimension focuses on the economic structures, financial mechanisms, and operational tools that underpin successful urban transitions. It addresses the need to prioritise investments in liveable environments, promote socially responsible and inclusive business models, and develop scalable financing solutions for urban innovation. It also includes the design and deployment of digital tools and decision-support systems that enhance project management, transparency, and evidence-based policymaking.

These dimensions provide a foundation for systemic urban change, ensuring that transitions are not only sustainable but also inclusive and just. DUT employs a **challenge driven approach** to urban transitions, rooted in the understanding that cities are dynamic systems shaped by multi-faceted challenges. As DUT translates these principles into practice, a key challenge is how cities can address the urban transition as a wicked issue and by implementing processes and solutions that considers all the abovementioned impact dimensions.

DUT operates with the conviction that transformative change must be locally grounded to be effective. Therefore, **a place-based approach is key to DUT's modus operandi**, to ensure that the urban transition is rooted in local identities, social needs and ecological benefits. Understood and implemented as a bottom-up strategy place-making empowers local actors and communities to shape both their environments and broader systemic structures. Through strong science-policy-society cooperation, DUT ensures that research and innovation generate practical, scalable and systemic urban solutions.

## DUT builds upon three Transition Pathways

The DUT Partnership accelerates urban transitions through three thematic areas - known as Transition Pathways (TPs), which focus on key dimensions of urban transitions: urban mobility (the 15-minute City Transition Pathway (15mC TP)), urban energy (the Positive Energy Districts Transition Pathway (PED TP)), and urban resources and greening (the Circular Urban Economies Transition Pathway (CUE TP)). While each TP has its distinct thematic focus, they function as interconnected sub-programmes, ensuring that urban transitions are applied in a comprehensive and integrated manner. Since all TPs apply a common set of impact dimensions

to assess progress, several themes cut across the pathways and are addressed jointly.

Examples of such cross-cutting themes include resilience, climate adaptation, affordable housing, health and wellbeing, as well as the inclusion of design and cultural sectors in developing creative solutions for tomorrow's challenges. Due to the open-ended nature of DUT's call scoping, such themes may be tackled jointly in a single call or addressed sequentially across different TPs, as each pathway embeds and emphasises aspects of these topics differently.

Through their strategic and thematic activities, the TPs inform and align with a wide array of stakeholders and initiatives at European, national

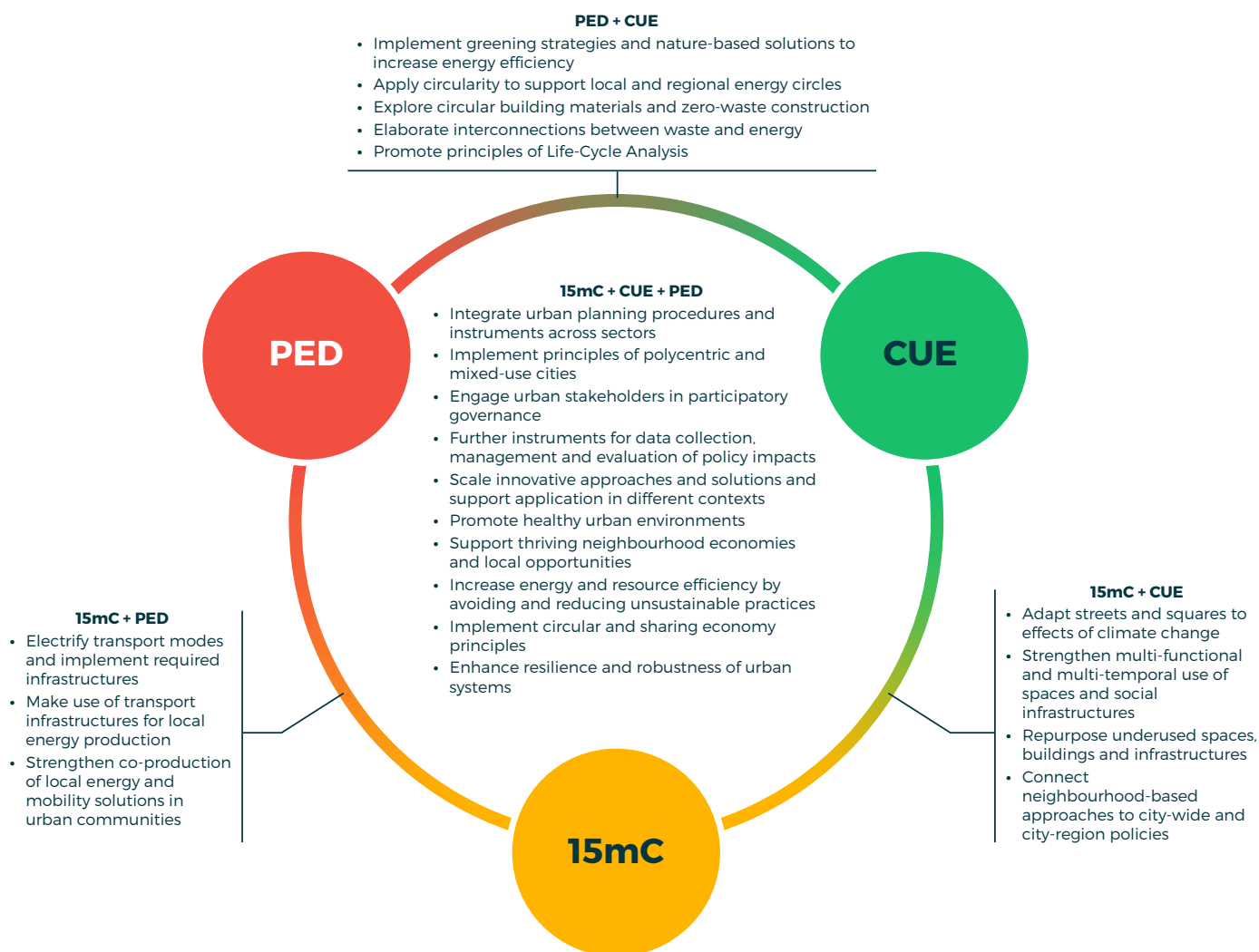
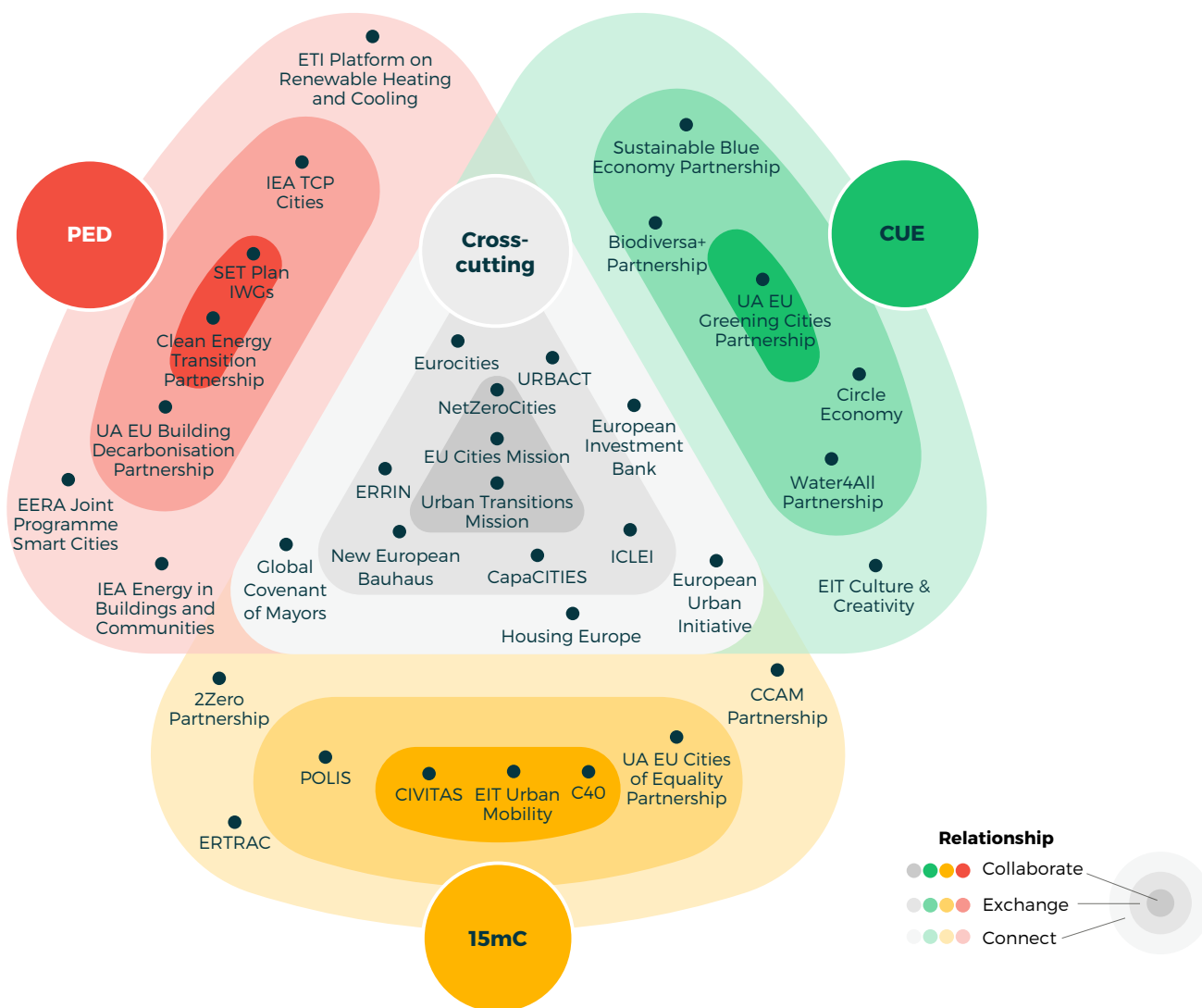


Figure 5. Cross-cutting themes of the Transition Pathways.



**Figure 6.** DUT as a connector in the urban innovation ecosystem.

and regional levels. While most coordination with national actors is managed through internal DUT processes, the TPs also engage in mutual collaboration with key external partners. These partnerships enable knowledge exchange, joint event co-creation and ongoing coordination to achieve shared goals. The figure above presents a selection of key collaborations across the DUT stakeholder ecosystem, distinguishing between overall DUT-level and TP-specific interactions, based on the depth and intensity of cooperation.

**policies to promote implementation of climate neutral, resilient neighbourhoods for all. It draws on research and innovation projects to showcase a diverse mosaic of approaches that drive mobility transitions. The 15mC TP<sup>10</sup> aims to enable analysis, development and testing of ideas, tools and innovations for 15-minute cities within co-creative and transdisciplinary settings.**

The current mobility system heavily relies on transportation in private cars as a way for city dwellers to meet their daily needs. This dependence generates significant negative externalities, including high CO<sub>2</sub> emissions, health issues through traffic accidents, air and noise pollution, long commutes and more, particularly concentrated in urban areas. Additionally, transport systems do not serve all equally, often disadvantaging vulnerable groups. Groups with disabilities face accessibility barriers, women may feel unsafe

## The 15-minute City Transition Pathway

**The 15-minute City Transition Pathway (15mC TP) addresses challenges of urban mobility, logistics, public space and proximity-based**

<sup>10</sup> In this chapter, 15mC TP as an abbreviation refers to DUT's Pathway on urban mobility transitions, while the term 15-minute City describes the general concept, which is currently developing worldwide.

due to poor infrastructure, low-income communities lack reliable options and immigrants may face language barriers. Rethinking and improving urban mobility is therefore crucial on all levels, not only to achieve climate targets in cities but also to ensure equitable access to opportunities and improving overall urban quality of life.

The 15-minute City concept offers an attractive take on existing urban and mobility planning paradigms. At its core, it envisions a future of liveable neighbourhoods, advocating for an ambitious social infrastructure agenda in which city dwellers can meet most of their essential needs within a 15-minute<sup>11</sup> walk or bike ride, while relying on sustainable transport options for longer distances. Thus, it hopes to increase urban health and quality of life by reducing the need to own a car and freeing up resources to improve local opportunities.

The 15mC TP builds on this vision and its compelling narrative by promoting the qualities of a mixed-use, polycentric city<sup>12</sup>, facilitating and showcasing the integration of mobility and logistics into urban planning and other sectors of urban policy. Being DUT's pathway dedicated to mobility transitions, the 15mC TP is centred on urban challenges in mobility and logistics and aims to reach beyond the traditional transport sector, addressing all relevant aspects and scales of urban policy - from streets and squares to entire city regions. It emphasises the "Avoid" and "Shift"<sup>13</sup> strategies to mobility policy, recognising technology as a key enabler but focusing on organisational, business, regulatory and societal innovations. Creative combinations of the latter will be crucial to overcome institutional inertia and user-based barriers.

*In these areas, the 15mC TP will develop a portfolio of innovations, tools, approaches, which result from DUT-funded projects, are tested in local case studies and ultimately serve as practical models showcasing feasible ways to achieve urban mobility transitions.*

## 15-minute City in a changing European environment

The 15mC TP aligns closely with Europe's ambition as outlined in the EU Green Deal and further implemented through the Sustainable and Smart Mobility Strategy and Urban Mobility Framework. These EU policies set high-reaching climate targets, requiring the transport sector to adopt measures such as local strategic plans for sustainable transport and logistics, urban traffic decarbonisation and the promotion of public transport, cycling, walking and multimodal solutions. The overarching goal is to make European cities more sustainable, inclusive and liveable.

Since DUT's launch in 2022, transport of passengers and goods has faced significant external shocks and large-scale transformations. The COVID-19 pandemic led to lockdowns, travel restrictions and supply chain disruptions, with particularly severe effects in urban areas. Russia's invasion of Ukraine triggered a surge in energy prices and initiated a new era of uncertainty in Europe.<sup>14</sup> Today, the transport sector accounts for a quarter of Europe's greenhouse gas emissions, making it the only sector still exceeding 1990 emission levels. It is also responsible for a third of Europe's final energy consumption, remaining overwhelmingly dependent on imported fossil fuels.<sup>15</sup> As transport demand continues to rise - especially urban mobility, with projections indicating that 80% of Europeans will live in cities by 2050 - the sector's transition towards net-zero emissions becomes increasingly urgent. Even more drastic growth is expected in freight transport.<sup>15</sup> Consequently, urban mobility transitions are key for all three dimensions of the EU Competitive Compass<sup>17</sup>, making it a priority sector for change and prosperity in Europe.

The 15-minute City concept helps addressing urban mobility challenges from an integrated perspective of urban policy, thus aligning well with principles of mixed-used planning, initiatives on the productive city, and increasing local

11 It is important to note that the pursued principles behind the concept, matter much more than the number of minutes mentioned. Which time-bound objective is set, will greatly depend on local context and conditions.

12 Polycentric city planning strategies promote a more balanced urban system, with amenities, services and opportunities distributed across neighbourhoods, rather than being concentrated in a central core.

13 Successful mobility transitions need to tackle the mobility system from a human-centred and holistic perspective, based on the principles "Avoid-Shift-Improve": "Avoid" refers to reducing the need for motorised travel as well as the length of trips. Modal "Shift" primarily emphasises the use of active and shared mobility as well as public transport. "Improve" centres on vehicle and fuel efficiency. GIZ 2019.

14 International Transport Forum, 2023.

15 European Parliament, 2021.

opportunities.<sup>16</sup> Designing attractive and inclusive streets and squares, thus deciding how we move through them, is essential for urban wellbeing and health and creates a thematic bridge to the New European Bauhaus. DUT's 15mC TP dedicates its greatest effort to integrate Europe's need for an innovative mobility system, lower car-dependency and more resilient neighbourhoods with strengthening essential aspects of inclusiveness and equal access to opportunities.

## Current status of the 15-minute City

At an international level, the 15-minute City concept and related proximity-based policies have reached maturity. Global organisations such as UN-Habitat and C40 are actively working to operationalise the concept, while many cities worldwide have adopted its narrative and principles to guide their efforts in sustainable mobility, urban design, neighbourhood infrastructure and local economic development. The *DUT Mapping of 15-minute City Practices*<sup>19</sup> identified 94 cities globally that align with the concept, implementing over 400 policies and measures.

While the 15-minute City is an urban planning approach with strong societal and environmental foundations, it is not a clear-cut, replicable formula. Instead, it lacks in specificity and requires local adaptation to fit specific urban contexts. As implementation progresses, the 15-minute City should be prepared to navigate the evolving political and economic landscape, where climate neutrality and social justice may become less prioritised in European policy agendas. To remain relevant, it should adapt by redefining urban lifestyles (focusing on health), exploring underlying economic rationales and fostering new social configurations as well as scalability of implementation.

To advance these discussions and address key implementation challenges, six Critical Issues were co-created with the DUT community as part of DUT's *15-minute City Position Paper*<sup>20</sup>. These

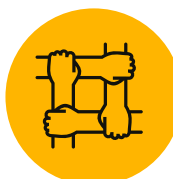
issues will shape related activities of the 15mC TP in the coming years and highlight urgent and central challenges that must be addressed to unlock the full potential of 15-minute City principles:



**Context is everything:** What exactly do we refer to when we talk about the 15-minute City? Which social functions of urban life can be targeted by it?



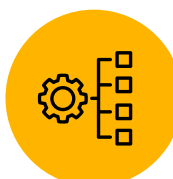
**Social justice:** How might we ensure that the 15-minute City promotes a just urban mobility transition where nobody is left behind?



**Involvement of people:** How might we ensure that the 15-minute City embraces the variety of urban lifestyles and offers people an active role in urban mobility transitions?



**From local to big picture:** How might the 15-minute City look in low-density and suburban neighbourhoods and what is needed realise its principles here?



**Organising the transition:** How might the 15-minute City contribute to organising and accelerating urban mobility transitions, tackling the essential and most urgent issues?



**Role of logistics:** How might the sustainable transport of goods be ensured in a 15-minute City, where people are encouraged to travel shorter distances?

<sup>16</sup> Europea Union, 2024d.

<sup>17</sup> The EU's Competitiveness Compass focuses on three core areas: closing the innovation gap, decarbonizing the economy, and reducing dependencies. European Commission, 2025a.

<sup>18</sup> Informal Ministerial Meeting on Urban Matters, 2020.

<sup>19</sup> DUT Partnership, 2024a.

<sup>20</sup> DUT Partnership, 2024b.

The scale of mobility transition challenges is immense, particularly in dense and diverse urban areas, where solutions must address decarbonisation, data gaps, administrative capacity building and shortage of funding - all while ensuring a just transition guaranteeing equal access and affordability. An integrated approach to innovation, acknowledging urban complexity, will enable deeper transformation. This is precisely where the strengths of DUT's 15mC TP come into play.

### Key Areas of Action

The 15mC TP aims to tackle the challenges of urban car-dependency, unequal access to opportunities and the negative externalities of mobility in cities. Through co-creative projects that engage

a wide range of urban stakeholders, the 15mC TP generates and shares knowledge and data to substantiate key aspects of the 15-minute City concept, while also developing and testing tools and practices for effective implementation. Although the 15mC TP primarily focuses on urban mobility transitions, it takes a holistic approach, integrating mobility and transport of goods with urban planning, public space use and design, neighbourhood economies and access to essential everyday services. Its overarching goal is to drive actions that enhance local wellbeing, quality of life and health benefits, ultimately accelerating the transition toward sustainable urban mobility.

Three Key Areas of Action (KA) define the thematic focus and scope of the 15mC TP, serving as a

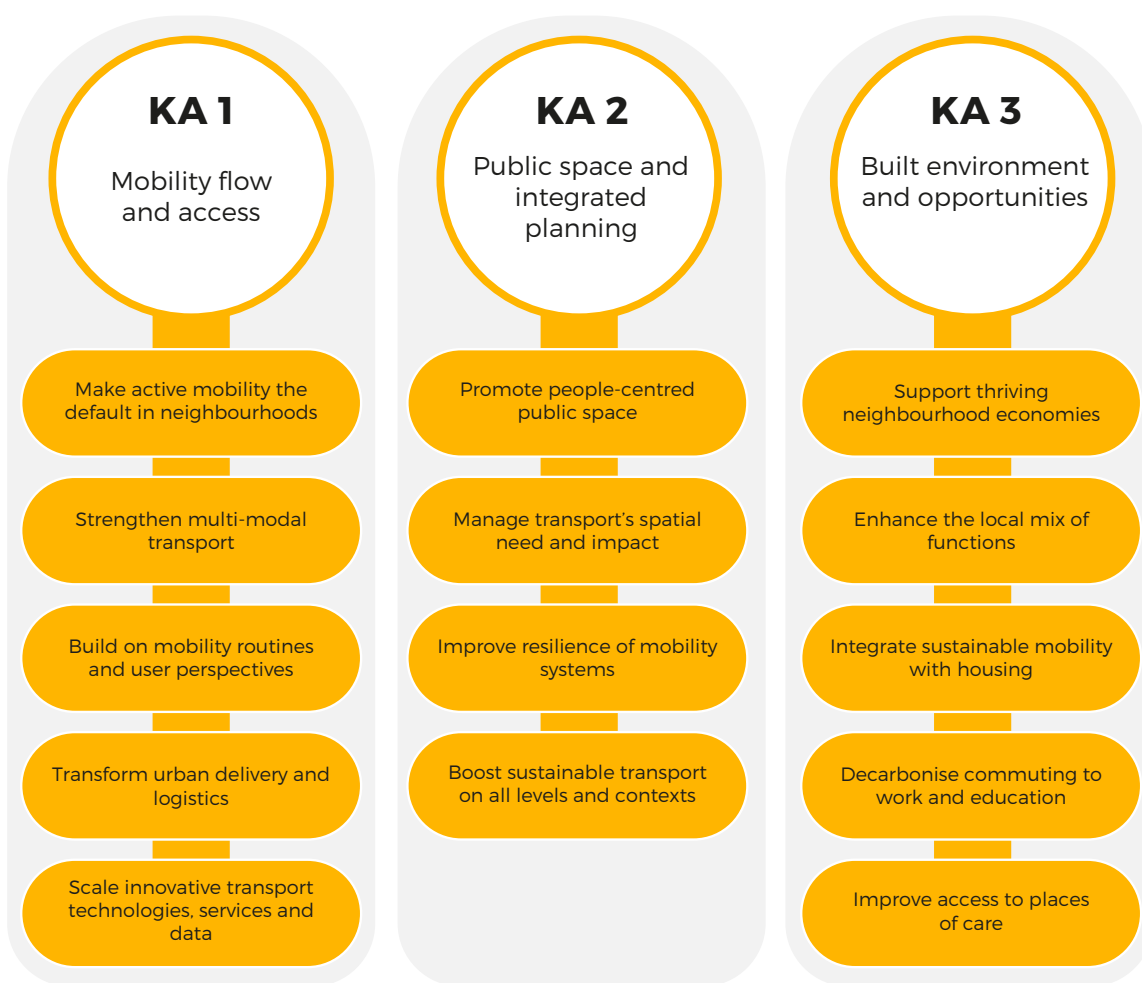


Figure 7. 15-minute City Key Areas of Action.



foundation for the annual call scoping process, as a guide for strategic activities and as an analytical framework for both DUT-internal and external work. Rather than being treated as isolated categories, the KAs intersect with each other and are addressed through DUT's four Impact Dimensions.<sup>21</sup>

As a transformative, transnational research and innovation programme, the first version of the 15mC TP's KAs were co-created in 2020 in collaboration with the community of city experts and national partners in DUT. Because they were elaborated with urban policy practitioners, they are formulated as ambitious policy objectives, which will be redefined into R&I topics in annual call scoping processes. Three years into the DUT Partnership, a review and update of the KAs was required to reflect on progress and refine strategic priorities. The revised KAs are presented in the following section.

### KA 1 - Mobility flow and access

KA 1 focuses on key aspects of mobility flows, from personal mobility to transport of goods, addressing issues related to transport modes, infrastructure, social behaviour and societal perspectives on emerging technologies. It takes a systemic approach to mobility networks, aiming to promote and connect sustainable mobility modes. KA 1 strongly builds on the "Shift" principle, strengthening conditions for sustainable and efficient mobility and underlying innovation processes. Thus, KA 1 is centred on topics promoting active and healthy mobility lifestyles as well as connecting neighbourhoods to city regions

better by supporting more efficient and sustainable transport modes, reducing emissions and pollution.

#### Themes:

- **Make active mobility the default in neighbourhoods:** Promote active urban lifestyles; improve quality and safety of trips; connected networks and amenities; promote health effects and societal co-benefits.
- **Strengthen multi-modal transport:** Integrate transport modes with high digital and physical accessibility; innovate concepts for shared and last mile mobility; co-create responses to issues of mobility poverty.
- **Build on mobility routines and user perspectives:** Enhance understanding and evidence of changing mobility patterns; highlight needs and capacities of (esp. vulnerable) target groups; co-create engaging narratives and participatory approaches.
- **Transform urban delivery and logistics:** Further integration of mobility, planning and logistics; improve steering of urban logistic flows and understanding of impacts; innovate concepts for local delivery and logistic hubs; further learnings on fleet management.
- **Scale innovative transport technologies, services and data:** Co-create new approaches to access and apply mobility data and evidence; advance understanding of impacts of mobility policies; contextualise applications of emerging transportation technologies.

<sup>21</sup> For more information see section "From Strategy to Action: Implementing the DUT Mission"

## KA 2 - Public space and integrated planning

KA 2 aims to reimagine the role of public squares and streets in a 15-minute City, tackling urban policies, instruments and initiatives to shape their design and function, but also to actively manage use of space, access and speed. Furthermore, it addresses resilience in mobility systems and infrastructure, along with the implementation of mobility and proximity policies across different urban scales - from neighbourhoods to entire city regions. Special attention is given to contextualise and learn from challenges in different settings, e.g. in small and mid-sized cities. Therefore, KA 2 contributes to enhancing individual quality of life and social cohesion by transforming public spaces and streets into accessible, safe, and inclusive areas, while fostering resilient, inclusive, and sustainable urban mobility systems that benefit communities across diverse city sizes.

### Themes:

- **Promote people-centred public space:** Reallocate urban space strengthening social functions; implement sustainable, resilient and inclusive design; address public space as contested arena
- **Manage transport's spatial need and impact:** Manage curb-side space, transport mode access and speed actively; rethink urban private car parking; navigate electrification of transport modes and charging infrastructure; undermine system factors of urban car dominance
- **Improve resilience of mobility systems:** Foster resilient and safe transport infrastructure; integrate climate change adaptation; promote unsealing and greening linked to mobility policies; build on perspectives of social justice and community needs
- **Boost sustainable transport on all levels and contexts:** Address mobility challenges and opportunities in all city sizes; conceptualise mobility from neighbourhood to city region; further implementation in low-density urban areas.

## KA 3 - Built environment and local opportunities

KA 3 concentrates on central principles and social functions addressed by the 15-minute City concept, emphasising the importance of proximity and mixed-use in neighbourhoods. KA 3 highlights the "Avoid" approach, focusing on measures to increase local opportunities, thus lowering the need and / or length of motorised trips. It promotes frameworks for thriving neighbourhood economies, building on principles of the foundational economy and the productive city. Furthermore, KA 3 explores ways to activate underused spaces and multi-functional uses of social infrastructure, while striving to make sustainable mobility modes the default in connecting the different social functions of urban life (living, working, supplying, caring, learning, enjoying).<sup>22</sup>

### Themes:

- **Support thriving neighbourhood economies:** Support neighbourhood services, manufacturing and business; implement principles of foundational economy and productive city; foster strong local networks and supply chains.
- **Improve the local mix of functions:** Promote mixed-use and adaptable spaces; strengthen neighbourhood centres; explore ways to activate underused lots, areas and ground-floor spaces; manage multi-functional use of spaces.
- **Integrate sustainable mobility with housing:** Integrate active and multi-modal mobility in housing developments; explore reduction of housing related parking; address mobility-related levers connected to housing affordability.
- **Decarbonise commuting to work and education:** Promote sustainable commuting options; implement corporate mobility management; advance understanding of new ways of working; ensure child friendly mobility to education.
- **Improve access to places of care:** Strengthen local social infrastructure; improve mobility centred on caregivers; promote innovative approaches to places of care.

22 Entrepreneurship Territory Innovation Chair with IAE Paris - Sorbonne Business School, 2019.



## The Circular Urban Economies Transition Pathway

**The Circular Urban Economies Transition Pathway (CUE TP) aims to foster urban places, communities and neighbourhoods that are sustained by circular resource flows and enhance the wellbeing of their inhabitants and ecosystems. It encourages urban planning and design characterised by regenerative urbanism, favouring the combination of circular principles, urban greening, and equal access to urban spaces and resources.**

To foster socio-ecologically rich places, the CUE TP relies on a broad understanding of urban resources, which transcends techno-economic views found in, for example, circular economy discourses:

- Material resources are not only understood as commodities to be extracted, but as elements embedded in social and environmental systems, where their flows are shaped by human practices, values, and relationships. As such, these resource flows should be characterised by collaboration and responsibility to reduce material use, and ensure materials are repurposed and redistributed in ways that reflect both societal needs and ecological sustainability.
- Natural resources, such as land, soil and water, are not only understood for their inherent scarcity but also for their interconnectedness with both human and ecological systems.

These resources play a critical role in sustaining biodiversity, improving people's livelihoods, and ensuring climate resilience. Their availability and management are shaped by social choices, cultural values and governance systems, influencing how they contribute to the ecological balance and wellbeing in urban environments.

- Human resources, too, are understood in a broader sense. Beyond workforce capacity, they encompass the creativity, knowledge and social capital that drive innovation and facilitate collaboration. When used well, this can ensure the equitable distribution of benefits in the transition to urban sustainability.

In short, CUE moves past the separation between humans and nature, supporting ideas that reflect a sustainable and restorative view of the world and cities. Founded in a holistic understanding of resources CUE supports R&I that addresses urban transition issues related to urban nature and greening, the circular built environment, and urban metabolism, and will curate a portfolio of innovative practices, instruments, and methodologies, emerging from DUT-funded initiatives in these domains.

*The aim of the CUE TP is to support the development of holistic, people oriented, and challenge-driven approaches and tools that collectively improve urban resource efficiency and protect planetary and human health. Via the projects funded by DUT, the CUE TP showcases what regenerative neighbourhoods sustained by circular resource flows might look and feel like.*

## CUE in a changing European environment

Urban resource management, with links to economic activity and environmental impact within and beyond city borders, is key for the European economy. Reduced and improved resource flows will not only limit environmental degradation, but it can also increase material autonomy and contribute to economic and social development related to new job creation and just job transition. Cities, as generators of 80% of global GDP, drive innovation growth and economic vitality, however, close to half (44%) of that GDP contribution is at risk due to nature loss.<sup>23</sup>

Since DUT was launched and the thematic focus of the CUE TP was first formulated, the European Union's sustainability and climate agenda has evolved and is now increasingly driven by a heightened urgency for cutting-edge innovation, strategic investment in high growth sectors, and a concerted effort to reduce Europe's dependency on external resources.<sup>24</sup> Circular practices are part of the new EU Competitiveness Compass, and it is prioritised in the Clean Industrial Deal<sup>25</sup>, bringing together climate action and competitiveness.

The new emphasis on strategic importance of circularity and an understanding of the role of urban nature for economic development present a significant opportunity. Investment in nature-positive and circular solutions in cities can tackle both biodiversity loss and resource depletion while ensuring quality of life and economic competitiveness. The restoration of ecosystems, habitats and species is crucial to achieve climate mitigation and adaptation objectives, secure necessary ecosystem services, and increase resilience to financial and environmental impacts.

The CUE TP operates along the lines of this strategic shift and addresses urgent environmental challenges and ensures that the call for competitiveness is underlined by social and environmental justice - making certain that urban transitions benefit all. Furthermore, it acknowledges the complexity of the interlinked urban challenges and cherishes the value brought by different urban actors, including those from the design, arts, cultural and creative sectors, for finding new solutions. In doing so, it mitigates the growing inequality identified as a challenge to Europe's competitiveness<sup>26</sup> and fosters social stability and economic participation based on the shared cultural European value of cooperation in a knowledge- and design-driven economy.



<sup>23</sup> World Economic Forum in collaboration with Wyman, 2025.

<sup>24</sup> European Union, 2024d; Von der Leyen, 2025

<sup>25</sup> European Commission, 2025b.

## Current status of the CUE TP

Urban areas and economies need approaches that sustain the health of people, animals and ecosystems; build resilience towards the effects of climate change; and address increasing social inequalities. Solutions to improve resource efficiency exist, however, these are often sector-specific or focus only on materials or recycling practices, not responding to the specific conditions of urban economies, nature, communities and places.

## Circular economy for resource efficiency, autonomy, and economic competitiveness

The circular economy is still widely viewed as an environmental policy or research subject, and its potential for economic growth, strategic autonomy and climate mitigation is still underexploited.<sup>27</sup> Current policies are directing investments towards a more resource efficient economy, but it is mainly oriented towards material resources (e.g. the Ecodesign for Sustainable Product Regulation<sup>28</sup> and the upcoming Circular Economy Act<sup>29</sup>). The circular economy accounts for only about 2% of EU GDP and to achieve systemic changes across various sectors local, regional and national governments play an important role according to OECD's recent report.<sup>30</sup> Future development needs to go beyond technology and address data needs, harmonisation of economic incentives, and improvement of market and regulatory conditions.

Emerging urban metabolism models and digital tracking tools (e.g. AI-powered material flow analysis and material passports) could drive system wide efficiencies but are not integrated into urban planning. Numerous examples exist of niche application of circular construction models and flexible, adaptive, and creative use of the built environment but to reach scale, they depend on further development of new business models, certification schemes, logistics and stakeholder collaboration, as well as general attitudes towards reuse and resource sharing.

Beyond the built environment, increased urban resource efficiency requires value chains and business models for local circular economies. Strategies such as urban food loops, sharing and access economy, and urban mining solutions can be explored and stimulated through Peer-to-Peer business models, circular business incubators, community involvement and circular procurement strategies. Simultaneously, the circular economy could be boosted through an increased focus on the demand side through regulatory frameworks and taxonomy on resources and waste, and strategies for promoting reduce, reuse and repair.<sup>31</sup>

From a societal perspective, awareness and acceptance of circularity, resource sharing, and modular design are growing. However, to achieve a full cultural shift, more demonstration projects, capacity building and community engagement are needed. Through ambassador programmes, education in schools, skills and capacity raising programmes, and consumer behaviour change campaigns, circular use of resources can be broken down into practical aspects that are relatable to citizens and inhabitants, and highlight the benefits that circularity brings.<sup>32</sup>

## Urban green for health, wellbeing and resilience

Urban greening is a major lever to improve cities' resilience and sustain the health of people, animals and ecosystems. In recent years, health, wellbeing, and cultural benefits of urban greening and ecosystem services have been increasingly valued. Current policy, such as the EU Nature Restoration Regulation<sup>33</sup> recognises the need for biodiversity protection and restoration of urban ecosystems. It requires a maintained and increased total national area of urban green space (including urban green canopy, buildings, and infrastructure), taking steps to transition from 'No Net Loss' and towards 'Nature-Positive concepts'.

Development of larger blue-green infrastructure projects is seen in many cities and a diversity of

26 European Union, 2024d.

27 Baldassarre & Saveyn, 2023.

28 European Union, 2024b.

29 European Commission, 2025b.

30 OECD, 2025.

31 Baldassarre & Saveyn, 2023.

32 European Environment Agency, 2024.

33 European Union, 2024c.



nature-based solutions, for instance addressing drainage, permeability, biodiversity promotion, heat shelters and soil protection, as well as aquaponic food production, are being piloted in different urban conditions. Investment in urban greening is growing, but insufficient funds and underdeveloped financing and business models are still major barriers for nature-positive urban areas. Cities call for policy development that address financial and administrative challenges for urban greening.<sup>34</sup> This includes new models for tax incentives, subsidies, green bonds and carbon trading schemes, and valuation of ecosystem services.

Generally, the involvement of the private sector remains an underexploited path for financing urban green. Multi-stakeholder R&I can further develop scalable investment frameworks for green infrastructure such as, public-private partnerships, innovative market-based financing and business cases for multi-actor maintenance of urban green areas, and schemes for payment for ecosystem services (PES).

<sup>34</sup> Crowley, 2025.

<sup>35</sup> Mahmoud et al., 2025.

<sup>36</sup> Bressane et al., 2024.

Finally, public participation and collaborative governance, are rarely considered an integral part of urban greening plans in cities across Europe.<sup>35</sup> Development of such models for planning, implementation and maintenance, could boost the quality of urban green areas and reduce vulnerability to climate change by socially marginalised groups - increasing the economic and social value of urban nature.

### Urban liveability and access to urban resources

To achieve regenerative urbanism, urban leadership, governance and regulatory frameworks must consider matters like diversity, equity, democracy and consequences of densification in cities when they address exclusionary urbanisation processes such as gentrification and segregation, regardless of whether these are based on ethnicity, religion, or other factors. Urban liveability and social sustainability can only be guaranteed by socially cohesive planning efforts that leaves no group of urban dwellers behind.

Urban green spaces can lead to an increase in community wellbeing and social cohesion and can address socio-economic disparities in urban settings. However, it can also lead to higher living costs, thereby displacing lower income residents<sup>36</sup> - also known as green gentrification. Sharing and circularity initiatives, such as sustainable food networks and sharing stations often stay in piloting phases, remaining isolated and without the capacity to scale up - thereby failing to reach a wider and more diverse group of urban dwellers.

R&I is needed for participatory and multi-actor approaches in policy cycles to avoid reinforcing existing patterns of inequality or exclusion and favour a just green transition. By engaging communities in initial planning stages, for example establishing continuous monitoring and feedback mechanisms to assess the social impacts of nature-based solutions (NBS) projects and creating policy frameworks that incentivise the inclusion of diverse demographics in urban planning, we can ensure that urban green spaces remain accessible and beneficial for all. Additionally, initiatives that ensure access to ecosystem services for marginalised and vulnerable

communities living in disproportionately less safe, resilient and green neighbourhoods are encouraged. The creation of scalable urban economic models that question the primacy of GDP growth and embrace concepts such as regeneration, cooperation, care, solidarity, wellbeing, prosperity and wealth creation within urban communities are needed.

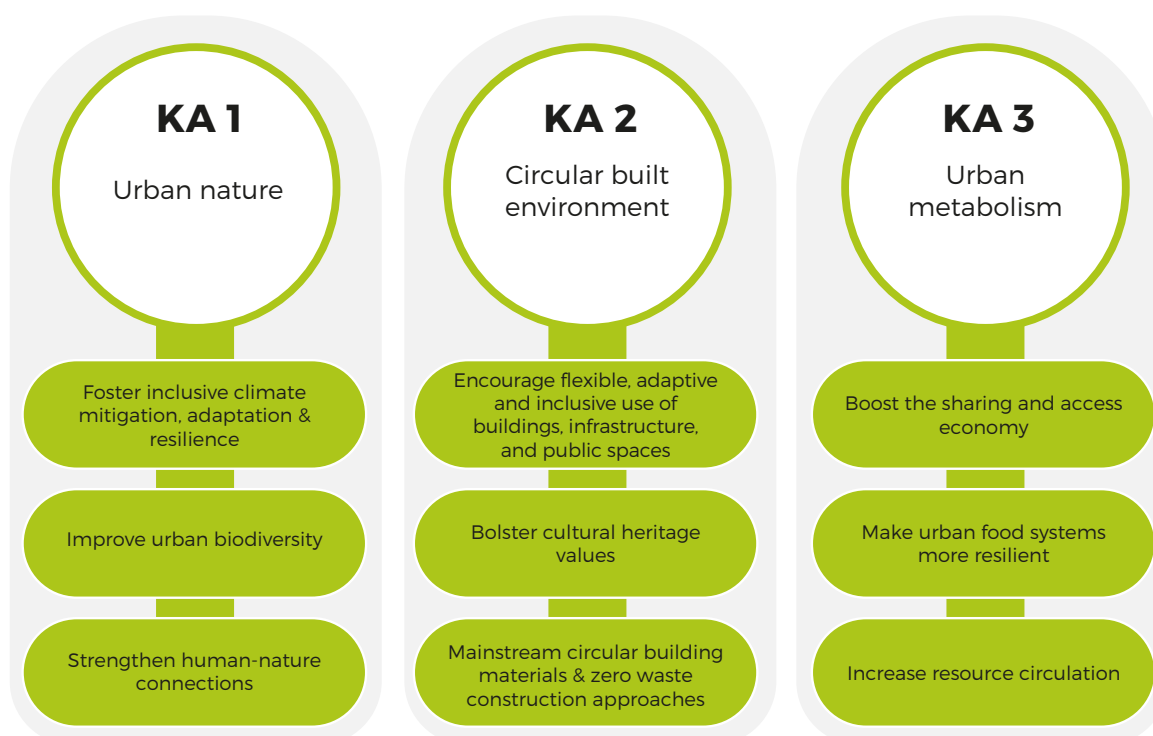
## Key Areas of Action

The CUE TP addresses issues related to degradation of ecosystems, unsustainable resource flows and increasing social inequality in cities. Encouraging co-creative approaches with representation of a variety of urban actors, the CUE TP focuses on three complementary fields or key areas (KA), representing the layers that a city is built on: the natural environment (KA 1- Urban Nature), the built environment (KA 2 - Circular Built Environment), and how cities function and are dependent on these environments - the flows of products and services, as well as people (KA 3 - Urban Metabolism). Each Key Area will be addressed through DUT's four Impact Dimensions.

Naturally, there will be topics and challenges that are cross-cutting across the different Key Areas, such as the emphasis on just access to spaces, resources and services.<sup>37</sup>

### KA 1 - Urban nature

KA 1 focuses on the natural layer in urban environments and building inclusive climate resilience of urban populations and ecosystems. KA 1 includes different multifunctional urban greening approaches across urban scales and neighbourhoods. These approaches address ecosystem services, blue-green infrastructure, ecosystem restoration and issues related to greywater and stormwater runoff collection, treatment and reuse. Through the means of, for example, nature-based solutions, these approaches can mitigate emissions, regenerate urban soil, increase urban biodiversity and reduce energy demands in ways that also promote healthy lifestyles and increase the attractiveness and quality of life in urban communities. This will improve cities' resilience and protect livelihoods across the continent for years to come.



**Figure 8.** CUE Key Areas of Action.

<sup>37</sup> For further context, the previous CUE Roadmap chapter focused on four process-oriented Key Areas, addressing aspects of the transition to circular and regenerative urban economies, areas and communities.

**Themes:**

- **Foster inclusive climate adaptation and resilience:** ensure robustness in the face of urgent effects of climate change affecting storm and wastewater, soil erosion and mudslides, and drought and heat stress management.
- **Improve urban biodiversity:** protect and regenerate urban biodiversity and local eco-systems including soil quality and nutrient cycles.
- **Strengthen human-nature connections:** ensure equal and inclusive access to green spaces and promoting social wellbeing through nature-inclusive design.

**KA 2 - Circular built environment**

KA 2 aims to transform urban construction and spatial planning through adaptive reuse, sustainable urban design, and circular material streams. Acknowledging that most of the European urban areas are already built and the necessary focus on maintenance, renovation, and upkeep that this entails, this KA supports innovation that creates more flexible and multifunctional urban spaces and buildings, while reducing construction waste and increasing material reuse. It includes urban mining approaches that strive towards increased circulation of inorganic materials from the built environment, like solid waste such as metals, glass and concrete structures. These approaches acknowledge how the handling and planning of urban waste is connected to landscape democracy issues, for example concerning exposure to landfill sites, sound pollution, hazardous materials, toxic aerosols, and smells. As increased circularity requires a different type of labour, innovation focused on job transition, reskilling and capacity building, and green job creation, are also supported.

**Themes:**

- **Encourage flexible, adaptive, and inclusive use of buildings, infrastructures and public spaces:** stimulate new ways to use, share and repurpose urban spaces, and encourage the temporary and multifunctional use of buildings. Integrate circular economy principles into urban planning and procurement.

- **Bolster cultural heritage value:** ensure the preservation and reuse of historic buildings as well as protection of cultural landscapes and immaterial cultural heritage.
- **Mainstream circular building materials and zero waste construction:** promote the use of recycled, bio-based and low carbon materials, material passports, and circular design and deconstruction principles, capacity building and green job creation.

**KA 3 - Urban metabolism**

KA 3 focuses on how the flows of materials and natural resources such as water and organic waste, can be better circulated in urban and metropolitan regions (including peri-urban areas and the urban-rural continuum). Critical scrutiny of current planning processes, business models, and urban design methods are encouraged to address how resource use could be planned differently to increase resource efficiency and use material in ways that are not derogatory in terms of nature and biodiversity loss. The importance of the sufficiency paradigm and using enough resources for urban products and systems is also a distinct and important priority. Thematically, this KA stretches from sharing and circular economy principles (such as the R-ladder) to the urban food system. It emphasises the reduction, regeneration and redistribution of resources while stimulating social cohesion, and includes issues related to different urban pollution streams.

**Themes:**

- **Boost sharing and access economy:** develop multi-actor approaches that facilitate the sharing of goods in cities, and address both technologies required (e.g. digital tools) and social acceptance and motivations.
- **Make urban food systems more resilient:** find innovative approaches for reduction and recovery of food waste, food waste minimisation, and shorten farm to fork distance through innovative, collaborative urban agriculture approaches.
- **Increase resource circulation:** strengthen social acceptance, logistics, technologies and business models for waste-to-resource systems.

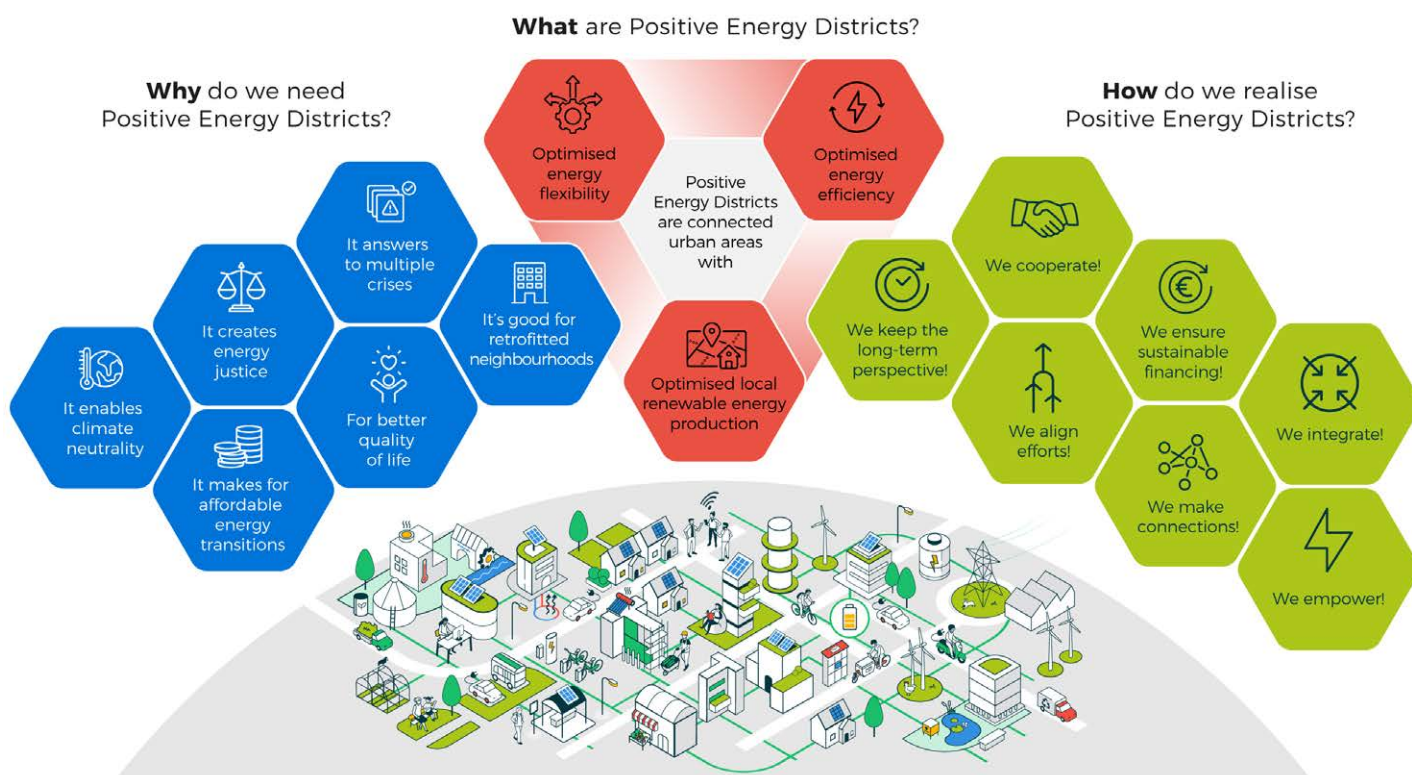
# The Positive Energy Districts Transition Pathway

**The Positive Energy Districts Transition Pathway (PED TP) aims to develop innovative solutions for planning, large-scale implementation, and replication of PEDs across Europe’s urban and peri-urban areas. By combining energy efficiency, renewable energy production, and energy flexibility at the local level, PEDs offer and contribute to affordable energy systems, affordable quality housing, and competitive, resilient and inclusive local economies for cities through energy communities, contributing to European goals such as the SET Plan and the EU Cities Mission.**

Europe aims to deliver more than 100 climate neutral and smart cities by 2030 and become the world’s first climate neutral continent by 2050.

With up to 80% of the EU’s energy consumption from urban activity<sup>38,39</sup> and a growing urban footprint of over 100 million residential and commercial buildings<sup>40</sup>, achieving this goal would bring transformational impact for European society. It is an imperative for the DUT Partnership as a transnational R&I funding programme to support the identification and promotion of feasible pathways, aiming at maximising benefits for all people living in Europe. Supporting this European ambition, PEDs represent key infrastructural elements in realising this transition, helping to transform Europe’s cities into inclusive, sustainable, and economically thriving urban zones.

*Positive Energy Districts are energy-efficient and energy-flexible urban areas, which produce local renewable energy, achieve net zero greenhouse gas emissions and play an active role in the energy system for achieving overall climate neutrality. (According to the updated PED Framework.)<sup>41</sup>*



**Figure 9.** The PED Framework.

38 Solar Power Europe, 2023.

39 European Commission, n.d.

40 RICS, 2020.

41 Finalised Updated PED Framework document to be published shortly.

By addressing the energy consumption and energy costs of cities, PEDs contribute to Europe's sustainable transition while also supporting local economic prosperity, energy resilience, and social thriving. Energy is one of the largest expenses for many European households<sup>42</sup> on electricity and heating. Since low-income households spend a higher percentage of their income on energy, PED development provides evidence for reducing energy bills, helping to mitigate Europe's ongoing cost of living crisis and promote social equality. Furthermore, PED development stimulates system transformation and climate resilience at the local level through local community building, not least by promoting energy communities, and new regional economies, facilitating the urgent refurbishment of existing neighbourhoods and urban regeneration.

### DUT supports impact-driven PEDs

The DUT Partnership supports the EU Cities Mission through a targeted R&I programme that fosters PED innovations at the city and city district levels. As the energy system becomes increasingly decentralised, the PED TP supports the strategic framework, as well as the integration and exploitation of novel technological tools and innovations, collaborations, and capacities needed by local authorities, financiers, and project developers to manage new investments, energy resources, infrastructure and energy market transformation.

Ultimately, the DUT Partnership aims to demonstrate PEDs as a viable and even obvious opportunity to realising Europe's sustainability and competitiveness goals together, offering clear added value to policy makers, local authorities, citizens and businesses. Beyond its intended environmental impact through renewable energy and GHG emission reduction, PED development supports the DUT impact dimensions:

**Culture and values:** PEDs promote energy-efficient behaviour and support community-building, energy inclusivity and local wealth creation based on local ownership of small-scale renewable and heating systems. They facilitate urban regeneration and enhance quality of life in urban neighbourhoods.

**Governance and policy:** With decentralisation of the energy system at its core, PED development promotes inclusive, community-based ownership and governance models and new forms of cooperation in a multi-level governance setting.

**Technologies and infrastructure:** PEDs combine energy efficiency of buildings, infrastructure and urban structures with maximal use of available and local energy resources. This reduces GHG emissions as well as grid congestion and the need for complex and costly energy distribution systems that transport energy from vast offshore wind parks or solar PV fields in rural areas, while also supporting regional energy autonomy and resilience against external environmental and economic shocks.

**Business models and tools:** By reducing energy consumption while increasing the self-generated energy, PEDs offer an energy bill reduction with the perspective of a positive ROI, reducing energy spending for cities and communities. For most homeowners, rooftop PV is the cheapest long-term option for meeting base consumption, with enormous yet untapped potential while V2X and stationary battery systems has yet to prove their economic viability for the homeowners in a broader sense.<sup>43</sup> Additionally, PEDs support the creation of local jobs in building renovation and the management, installation, and maintenance of local energy systems.

### PED in a changing European environment

European strategic priorities have significantly shifted since the launch of the first PED programme in 2018, delivered through a joint initiative of the European Strategic Energy Technology (SET) Plan and JPI Urban Europe. Alongside a greater territorial focus on industrial self-sufficiency, decarbonised industrial strategy, and European energy autonomy (as detailed in the overall DUT chapter), city and local authorities are now increasingly positioned as key players in addressing the climate crisis, a focus which is exemplified by the launch of the EU Cities Mission. Serving as hubs of innovation and competitiveness, cities will support the PED transition from viable concepts to scalable pilots.

<sup>42</sup> Odyssee-Mure, n.d.

<sup>43</sup> European best good practice (e.g. ASTER in Flanders) indicates that energy produced within neighbourhood level energy systems provides the lowest consumer cost per unit, at around half that of the average consumer electricity price in Europe, which, accounting for costs and taxes, is €0,28/kWh, and trending upwards.

Amidst these emerging priorities, PEDs represent a clear and strategic transformative opportunity, paving the way for cities and communities to support Europe's goal of strategic resilience. As learned through recent geopolitical events, an energy supply not controlled by foreign powers is critical for European energy autonomy, advancing environmental sustainability and stabilising household cost of living for the most vulnerable.

## Current status of the PED TP

In 2025, PEDs have reached the 'proof of concept' phase, technical viability demonstrated through experiments within controlled environments. European programmes have supported bottom-up initiatives piloting a wide range of innovations, including the PED Mission 2025, which has established over 100 initiator sites across Europe and created a PED ecosystem with thousands of innovators. Since 2020, through JPI Urban Europe and DUT Calls alone, 37 PED projects with more than 70 case studies and pilots have been funded.

Thanks to the findings and advocacy generated by European demonstrators, the key **regulatory PED building blocks** are now in place:

- The latest Energy Building Performance Directive<sup>44</sup> requires all new public buildings to be zero-emission from 2028 (and by 2030 for other buildings).
- The latest Renewable Energy Directive<sup>45</sup> provisions unmet energy needs to be covered by local renewable energy sources, through "solar-ready rooftops" and district heating.
- The Clean Energy for All Europeans package (2019) formally recognises energy communities and collective self-consumption, empowering local stakeholders to generate, consume, store, and sell on-site renewable energy.
- Finally, the Internal Electricity Market Directive<sup>46</sup> unlocks new opportunities for citizen-centric energy systems through tax exempt energy sharing and reduced system costs.

<sup>44</sup> European Union, 2024a.

<sup>45</sup> European Union, 2023.

<sup>46</sup> European Union, 2019.

<sup>47</sup> This shift is being accounted for in the updated PED Framework and in the updated PED Framework Definition (see above).



The necessary PED technologies are increasingly available and affordable:

Innovative renovation materials and construction techniques now enable zero emission buildings, integrating high performance building components, off-site prefabrication, and single day retrofitting for small dwellings. These architectural preconditions are essential for PEDs, paving the way for cities and communities to achieve energy autonomy.

Small-scale renewables are becoming the cheapest and most reliable source of energy for homes and businesses over the long-term.

Depending on local conditions, achieving a positive local energy surplus remains a challenge in R&I and urban practice, especially considering existing urban structures. This needs to be addressed by integrating new digital tools and technologies that optimise energy production and consumption across multiple buildings. Overall, for mainstreaming the PED concept, a greater focus is needed on demonstrating the positive impact on the overall energy system.<sup>47</sup>

## Building Europe's positive energy future

The DUT PED TP contributes to the goals of the SET Plan and to delivering 100 climate neutral cities in Europe. Through this updated 2025 Roadmap, we encourage bold initiatives and partnerships, with realistic impact able to be rolled out at the vast scale required for lasting urban transitions ensuring climate neutral and resilient cities and communities.

### The PED vision (renewed for 2025)

The PED vision is to establish PEDs and PED components<sup>48</sup> both as an effective infrastructural concept and a holistic neighbourhood-oriented urbanistic approach, contributing the crucial cornerstones of Europe's energy transition and climate neutral cities, by demonstrating:

- **The viability of fulfilling Europe's directives** of meeting 100% onsite energy demand, integrating energy technologies to support local energy resilience and autonomy.
- **The need for a socially just transition**, including new roles of city authority led urban regeneration and city management by integrating bottom-up energy governance approaches and fostering neighbourhood focused community aspects.
- **Compelling new economic opportunities** to address energy poverty and affordability for homes and businesses, including new investments into clean technologies, the exploration of new market roles and enhanced collaboration with finance industry.
- **A realistic pathway for operational PEDs in Europe by 2040**, aligning PED policy across the relevant regional, national and local governance levels.

### From innovation results to societal outcomes

To achieve these broader societal outcomes, the DUT programme will build on its project achievements and results. It will aim to add 10+ concrete, mature, and market-viable solutions per year until 2032/33 through a PED Innovation Portfolio, the PED TP has the dual ambition to:

1. Advance the maturity and societal impact of Positive Energy Districts, based on synthesising and advancing the results of the project portfolio through:
  - Concrete policy recommendations to policy makers and regulators, based on validated solutions and impact assessments for scaling up, and
  - Replicating proven solutions (AKA "scaling out") to cities ready to develop PEDs
2. To advance the maturity of individual ideas or concepts across the impact dimensions of Policy, Economy, Societal and Technology (PEST), through project pilots and innovative solutions, to significantly enhance the attractiveness and viability of PEDs at scale.

### The path ahead - integrating and scaling PEDs

As PEDs transition over the coming 2-3 years from proven concepts to demonstrated market, societal, and organisational viability, supported by strong multilevel stakeholder engagement and effective governance structures, there will be a growing need to integrate solutions within policies, business models, social structures and legacy technology systems. Viable innovations will be tested for true scalability, validated against existing or planned regulations and markets where change is outside PED practitioners' sphere of influence.

Beyond that, successful demonstrations should leverage opportunities to upscale PEDs from individual projects to typical city practice - by embedding the PED approach as standard within transnational European policy (the "macro" level" of governance), regional urban planning strategy (the "meso" level), and local project and market design (the "micro" level). This multi-level perspective of PED development therefore needs to be strengthened, with energy priorities and urban policy better integrated: To achieve climate neutral cities, PEDs are a crucial part of multi-level urban policies and increasingly need embedding in this context.

<sup>48</sup> PED components refer to the individual elements or features that make up a PED. These components include various infrastructural elements like renewable energy generation systems, energy storage solutions, energy efficient building designs, and smart grid technologies. Essentially, it is about the parts or building blocks that collectively contribute to the functioning of a PED.

PED development also needs to be embedded in the multi-level governance of energy policies, addressing not only the integration of PEDs in the energy system and the role of collective self-consumption and energy communities to achieve energy security goals, but also the potential of PEDs to contribute to Europe’s new reindustrialisation strategy. PEDs can play a key role in developing new industries without increasing overall energy consumption at the national level, while also ensuring that energy security and climate neutrality goals are not compromised.

While DUT is at its core an R&I funding programme focusing on ideation and piloting, its purpose is to deliver knowledge to stakeholders with replication in mind - supported by quantifiable impacts and viable pathways for large-scale uptake. Future calls of the PED TP will explore enhanced participation from new practitioners across several industries, sectors, and governance domains beyond “core” stakeholder groups (urban

authorities, utilities, real estate) to ensure viable uptake of DUT-enabled innovations, including (social) housing providers, sustainable mobility and transport providers, urban planners and designers, digitalisation developers, community based organisations and local cooperatives, private finance, public banks, and infrastructure, public health and wellbeing advocates.

### Key Areas of Action

The PED Key Areas of Action thematically cluster PED innovations and define new funding priorities. They are informed by creative and innovative PED solutions demonstrated within DUT projects so far and by identified gaps in knowledge, policy and practice, and focus on progressing solutions from initial demonstrations towards commercial scalability (i.e. from RL4 to maximum RL7). Whilst structured thematically, calls for proposals will actively explore valuable interconnections between KAs.

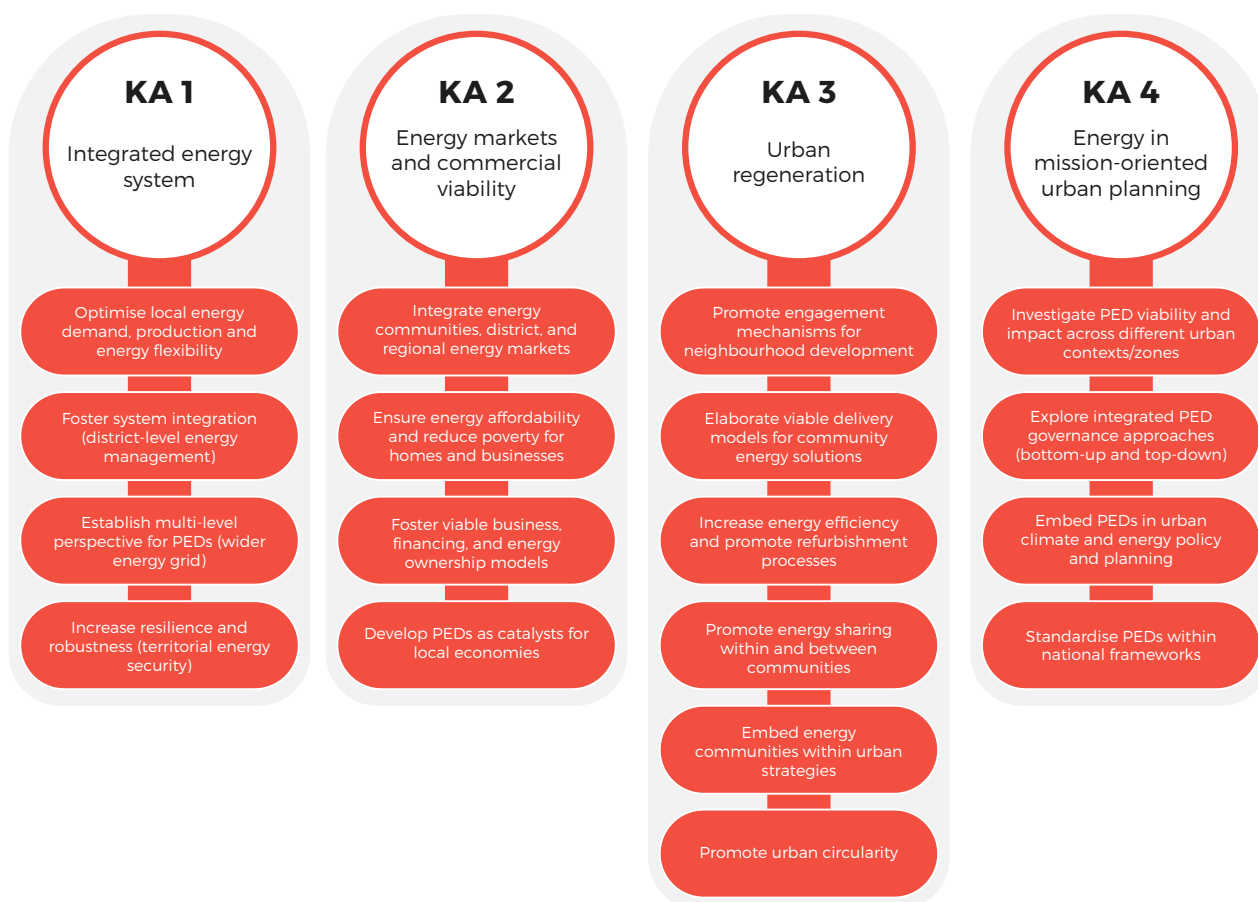


Figure 10. PED Key Areas of Action.

### KA 1 - Integrated energy systems

KA 1 focuses on the functional integration of mature distributed energy and digital technologies to enhance regional energy system resilience and autonomy. While local generation and storage technologies are becoming increasingly competitive and affordable, system integration and grid balancing remain key challenges. The KA demonstrates how PEDs can optimise localised clean energy generation and matching.

#### Themes:

- Optimise local energy demand, production and energy flexibility
- Foster system integration (district-level energy management)
- Establish multi-level perspective for PEDs (wider energy grid)
- Increase resilience and robustness (territorial energy security)

### KA 2 - Energy markets and commercial viability

KA 2 explores how innovative business, financing, and ownership models can support new local energy markets. Furthermore, amidst increasing costs of housing and general economic pressures,

it is crucial to reframe PEDs from costly investments to cost-effective alternatives to traditional energy and housing. The KA demonstrates how PEDs can realistically deliver a just energy transition within a challenging economic climate, through more affordable energy for end-users while creating compelling value propositions for a wide range of local economic actors.

#### Themes:

- Integrate energy communities, district, and regional energy markets
- Ensure energy affordability and reduce poverty for homes and businesses
- Foster viable business, financing, and energy ownership models
- Develop PEDs as catalysts for local economies

### KA 3 - Urban regeneration

KA 3 focuses on using PEDs as a lever for holistic local neighbourhood development, including strategies for local community-building and engagement, alongside inclusive forms of neighbourhood refurbishment and revitalisation which consider socioeconomic dynamics within neighbourhoods. It builds on the latest research



in energy communities and social innovation to explore scalable and effective stakeholder engagement models for PEDs. Recognising that participation remains a major barrier to scaling local and community energy projects, it tests alternative approaches balancing inclusivity and social benefits with true commercial viability and rapid diffusion. Particular focus is given to the organisation of refurbishment process, including energy efficiency and circularity aspects.

#### Themes:

- Promote engagement mechanisms for neighbourhood development
- Elaborate viable delivery models for community energy solutions
- Increase energy efficiency and promote refurbishment processes
- Promote energy sharing within and between communities
- Embed energy communities within urban strategies
- Promote urban circularity

#### KA 4: Energy in mission-oriented urban planning

KA 4 explores the integration of PEDs into mainstream urban planning processes, strengthening local authority capacity within the energy system and energy market design. With PEDs yet lacking formal European recognition, this KA identifies mainstreaming strategies through greater public sector adoption, enabling replication and scaling from local initiatives and contributing to broader policy frameworks.

#### Themes:

- Investigate PED viability and impact across different urban contexts/zones
- Explore integrated PED governance approaches (bottom-up and top-down)
- Embed PEDs in urban climate and energy policy and planning
- Standardise PEDs within national frameworks

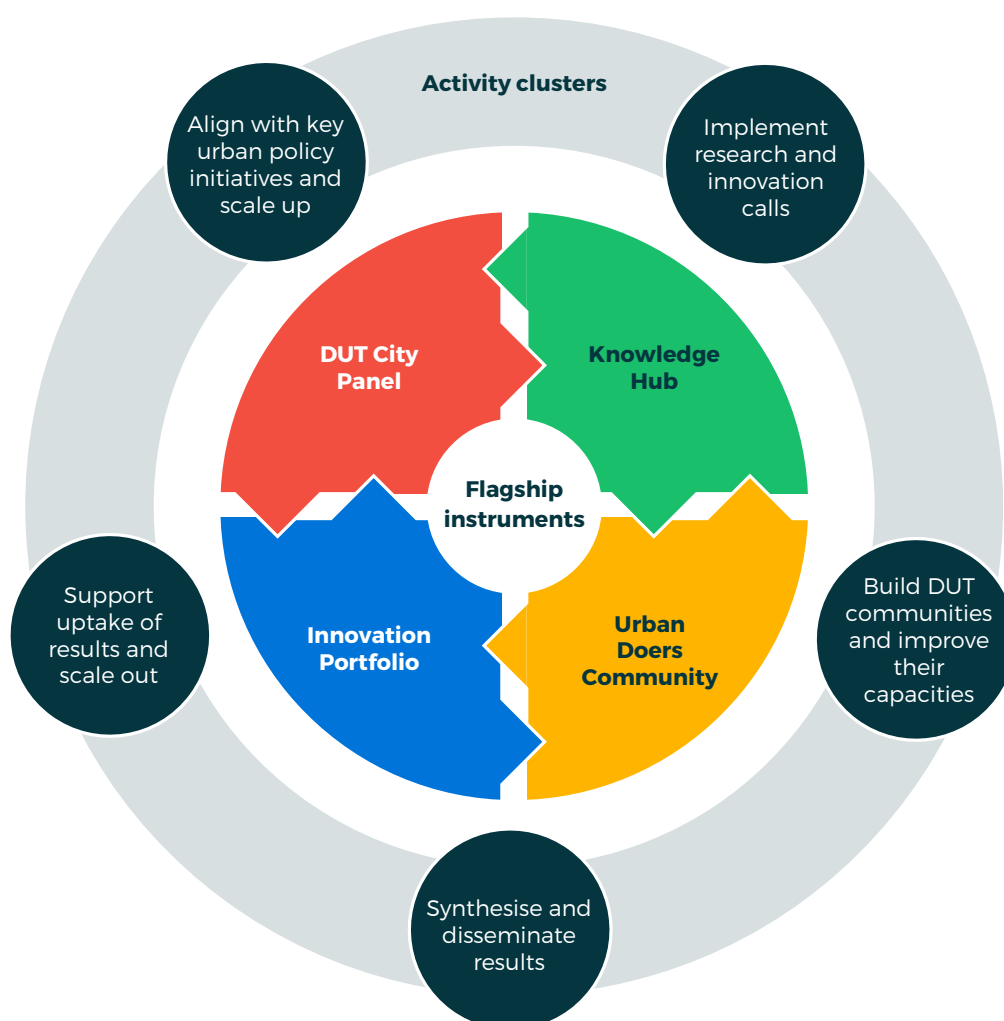




# DUT Activities to Enable Impact

DUT will implement a portfolio of accompanying measures to create and manage a wider innovation ecosystem involving all relevant stakeholder groups and strengthen impact creation. These measures and activities are key to realise the DUT Mission. Activities beyond joint calls ensure that the knowledge, approaches, and solutions developed by DUT-funded projects address the most pressing urban issues and build a critical mass to accelerate

urban transitions. The entire DUT portfolio aims to generate a global impact greater than the sum of its parts, while continuously informing the strategic development of DUT. With these measures, DUT ensures that its ambition of being a transformative research and innovation programme is met. These activities are aggregated into five clusters and four flagship activities:



**Figure 11.** Overview on DUT activity clusters and flagship instruments.

## Implement research and innovation calls

At the core of its activities, the DUT Partnership funds transnational research and innovation projects that co-create approaches, insights and practices to drive urban transitions. These projects are guided by the three thematic Transition Pathways and are rooted in collaboration with a wide range of urban actors.

An essential aspect of DUT's mission is the continuous improvement of framework conditions for funding. This includes broadening access to new partners and better engaging stakeholders who are often underrepresented in R&I programmes. DUT also develops and refines funding instruments to better align with its mission-driven approach - supporting inter- and transdisciplinary collaboration, local experimentation and the uptake of research outcomes in urban practice.

In addition to the activities outlined in the multi-annual call agendas, the DUT Partnership will continue to implement further rounds of the Urban Doers Community and experiment with new R&I mechanisms and funding formats. In doing so, DUT serves as a testbed for innovative instruments and enabling conditions that substantially trigger and support urban transitions.

### Multi-annual call agendas (MACAs)

Scoping for call topics in DUT is a co-creative process involving a wide range of stakeholders. The multi-annual call agendas (MACAs) serve as a guiding framework, providing entry points and strategic direction for the evolution of call topics as the Partnership progresses.

A challenge-driven approach underpins this process, informed by consultations with cities, transnational partners, and related initiatives. The MACAs visualise how launched calls align thematically with anticipated future calls, offering a timeline of how the Transition Pathways' key areas are expected to unfold throughout the remaining years of the DUT programme.

While each Transition Pathway may follow a slightly different process and design, the MACAs

are structured around four joint principles that enable ongoing refinement of relevant themes:

- **Key Area-oriented principle:** This principle is pathway-specific and ensures that the updated key areas are addressed. In each MACA, elements from the TPs' key areas are placed on a timeline, indicating both how they will be covered over the next years, and what has already been covered in the calls launched so far.
- **Co-creation principle:** This ensures that the DUT partners' agendas and priorities are considered also in MACAs. For this roadmap, this principle has been applied to update the items of the MACAs through the format and activities of the Steering Groups, in which the DUT partners participate.
- **Internal portfolio principle:** This applies a project portfolio principle to ensure that certain topics and cross-cutting themes are not over- or under-covered. This relies on assessment of topics, themes and approaches used in the funded DUT projects and comparing these to the desired output. The principle does help to chisel out call topics, but suggestions of new cross-cutting themes and strategic priorities might also be derived from work done according to this principle.
- **External portfolio principle:** This ensures DUT's activities are aligned with - but not duplicative of - other European initiatives, including other Horizon Europe instruments and past JPI Urban Europe ERA-NETs. This principle supports complementarity in timing, themes, and mechanisms, and is achieved through active participation, dialogue, and exchange with external partners.

As of this updated Roadmap's publication, four annual calls have been programmed under DUT, with two funded project cohorts currently underway (DUT calls 2022 and 2023). From 2024 to 2033, over 250 funded projects will be supported, developing, testing and scaling new approaches, practices and tools for urban transitions. These projects are expected to demonstrate multiple, potentially diverging pathways toward climate neutral and resilient neighbourhoods for all,

tailored to diverse urban contexts and promoting the transferability of knowledge and instruments.

Through these evolving calls, DUT's Transition Pathways contribute to the transnational learning and knowledge exchange on urban transitions. The following graphics on the TP specific MACAs illustrate the topics addressed in previous calls, their intended impact across four dimensions, and anticipated challenge areas for the next set of calls (2026-2028). These indications should be seen as initial input for the broader co-creation process of annual call scoping with DUT Partners and the wider DUT community.<sup>49</sup>

## The multi-annual call agenda for the 15mC TP

The call topics implemented so far in the 15mC TP have focused on **addressing needs of urban practitioners working on sustainable mobility and proximity policies**. Their aim has been to connect researchers with needs of city administrations and municipalities and tools of private sector actors to build the necessary knowledge, tools and capacities to explore, assess and implement urban policies aligned with 15-minute City principles. The three annual call topics usually invited different perspectives, by offering one core mobility priority, one proximity policy focus and one emphasising engagement or tools for the mobility transition. These topics constantly interlinked the 15mC TP's Key Areas of Action.

Looking ahead to the upcoming DUT Calls 2026 to 2028, the 15mC TP will continue this integrated approach, addressing mobility and transport challenges alongside urban planning, public space and proximity policies, while involving needs and perspectives of diverse stakeholders in elaborating solutions. In addition, the TP will **strengthen its focus on the economic foundations** of sustainable mobility and proximity, **highlighting viable business models and transferable approaches** to support the implementation of ambitious urban mobility transitions.

Thematically, future priorities will include innovative financing climate neutral and inclusive mobility, resilient and climate-adapted transport systems, public-private alliances for sustainable commuting and activating un(der)used spaces, logistics within 15-minute City frameworks, transfer and contextualisation of promising measures across urban scales, and more. Testing and application of methods and processes with demonstrated local impact will furthermore gain importance. Although the currently funded projects are still in early stages, future calls will build further on their most promising outcomes and address key remaining questions.

The following graphic brings the call topics, themes and impact dimensions, applied in past calls, together with a perspective and orientation on what we intend to cover in the 15mC TP for the upcoming DUT calls.



<sup>49</sup> Note that the MACAs for the three TPs do not follow the exact same design. This is both due to their respective differences in thematic scope but also since their ways of working together with their steering groups, mapping activities and stakeholder led to slightly different paths and logic over the years.

	Call 2022	Call 2023	Call 2024	Call 2025	Call 2026	Call 2027	Call 2028	
Call topics (2022-25) / priorities TBC (2026-28)	<ol style="list-style-type: none"> <li>Strengthen the mix of urban functions and services</li> <li>Foster sustainable options for personal mobility and logistics in urban outskirts (and beyond)</li> <li>(Re)imagine urban public spaces and streets for vibrant, sustainable neighbourhoods</li> </ol>	<ol style="list-style-type: none"> <li>Integrated policies and evidence to reduce car-dependency</li> <li>Mobility and planning policies for proximity-oriented developments</li> <li>Empower people for urban mobility transitions</li> </ol>	<ol style="list-style-type: none"> <li>Advancing urban mobility: innovations for inclusive and youth-centric mobility systems</li> <li>Reconsidering urban mobility systems: towards system innovation and proximity policies for sustainable city regions</li> <li>Evidence for the urban mobility transition: data and indicators for effective decision-making</li> </ol>	<ol style="list-style-type: none"> <li>Next steps for multimodal urban mobility, building on the travel experience</li> <li>Reimagining parking – transforming urban parking policies</li> <li>Mobility policymaking in context of radical contestation</li> </ol>	<p>Priorities (TBC) Corporate mobility and city climate alliances</p> <p>Prepare urban mobility for the challenges ahead – activate resilience and un(der)used spaces</p> <p>Push proximity through innovations in neighbourhood opportunities</p>	<p>To be decided in call scoping 2027-2028, building on these priorities:</p> <ul style="list-style-type: none"> <li>Co-create sustainable logistics in 15-minute cities</li> <li>Advance proximity-oriented policies</li> <li>Elaborate innovative ways of financing mobility policies and infrastructures</li> <li>Make sustainable mobility the default on neighbourhood level</li> <li>Scale 15-minute City principles from the neighbourhood to the city region</li> <li>Provide innovative answers to boost urban health and wellbeing</li> </ul> <p><b>Follow-up on best of open questions and uptake of results of 15mc projects from calls 2022 &amp; 2023</b></p>		<ul style="list-style-type: none"> <li>Culture &amp; values</li> <li>Governance &amp; policy</li> <li>Technologies &amp; infrastructure</li> <li>Business models &amp; tools</li> </ul>
<b>KA1</b> Mobility flow and access	<ul style="list-style-type: none"> <li>Make active mobility the default in neighbourhoods</li> <li>Strengthen multi-modal transport</li> <li>Build on mobility routines and user perspectives</li> <li>Transform urban delivery and logistics</li> </ul>	<ul style="list-style-type: none"> <li>Make active mobility the default in neighbourhoods</li> <li>Strengthen multi-modal transport</li> <li>Build on mobility routines and user perspectives</li> <li>Transform urban delivery and logistics</li> </ul>	<ul style="list-style-type: none"> <li>Build on mobility routines and user perspectives</li> </ul>	<ul style="list-style-type: none"> <li>Make active mobility the default in neighbourhoods</li> <li>Strengthen multi-modal transport</li> <li>Build on mobility routines and user perspectives</li> <li>Transform urban delivery and logistics</li> </ul>		<ul style="list-style-type: none"> <li>Strengthen multi-modal transport</li> <li>Transform urban delivery and logistics</li> <li>Scale innovative transport technologies, services and data</li> </ul>	<ul style="list-style-type: none"> <li>Make active mobility the default in neighbourhoods</li> <li>Build on mobility routines and user perspectives</li> </ul>	
<b>KA2</b> Public space and integrated planning	<ul style="list-style-type: none"> <li>Promote people-centred public space</li> <li>Boost sustainable transport on all levels and contexts</li> </ul>	<ul style="list-style-type: none"> <li>Manage transport's spatial need and impact</li> <li>Improve resilience of mobility systems</li> </ul>	<ul style="list-style-type: none"> <li>Boost sustainable transport on all levels and contexts</li> </ul>		<ul style="list-style-type: none"> <li>Promote people-centred public space</li> <li>Improve resilience of mobility systems</li> <li>Boost sustainable transport on all levels and contexts</li> </ul>	<ul style="list-style-type: none"> <li>Manage transport's spatial need and impact</li> <li>Boost sustainable transport on all levels and contexts</li> </ul>	<ul style="list-style-type: none"> <li>Promote people-centred public space</li> <li>Boost sustainable transport on all levels and contexts</li> </ul>	
<b>KA3</b> Built environment and opportunities	<ul style="list-style-type: none"> <li>Support thriving neighbourhood economies</li> <li>Enhance the local mix of functions</li> </ul>	<ul style="list-style-type: none"> <li>Enhance the local mix of functions</li> <li>Decarbonise commuting to work and education</li> </ul>	<ul style="list-style-type: none"> <li>Enhance the local mix of functions</li> <li>Decarbonise commuting to work and education</li> </ul>	<ul style="list-style-type: none"> <li>Integrate sustainable mobility with housing</li> </ul>	<ul style="list-style-type: none"> <li>Support thriving neighbourhood economies</li> <li>Enhance the local mix of functions</li> <li>Decarbonise commuting to work and education</li> </ul>	<ul style="list-style-type: none"> <li>Enhance the local mix of functions</li> <li>Decarbonise commuting to work and education</li> </ul>	<ul style="list-style-type: none"> <li>Enhance the local mix of functions</li> <li>Integrate sustainable mobility with housing</li> </ul>	<ul style="list-style-type: none"> <li>Improve access to places of care</li> </ul>

Figure 12. 15-minute City multi-annual call agenda.





## The multi-annual call agenda for the CUE TP

The upcoming 2026-2028 calls in the CUE TP are likely to emphasise several interconnected thematic areas. While final priorities will be defined through the call scoping process, emerging focus areas may include artificial soil technologies, and the Polluter Pays Principle as **pollution looks like an increasingly important concern**. These themes could be complemented by initiatives that foster a **nature-positive economy** and impact finance models. Calls may also explore new business models for **marketing and commerce**, with particular attention to **true pricing** and **socially sustainable enterprises**, an area that has, so far, been less prominent within the CUE impact dimension on business models and tools.

**Urban and housing related challenges** are expected to feature strongly, with possible calls centred on socially sustainable housing supply, urban functional areas, and crowd funding solutions for urban development. Additionally, **technology and data-driven solutions** might play a significant role, particularly in the use of AI and digital technologies to trace materials and goods, offering more transparency across both business and commerce systems.

In terms of **governance and social engagement**, CUE may see an increased focus on **bottom-up governance principles**, as well as enhancing public and citizen participation through education and awareness-raising activities. Finally, there could be an emphasis on **innovation in training and knowledge management**, ensuring the development of skills aligned with these evolving priorities. These are still tentative directions, subject to further clarification in the coming months.

	Call 2022	Call 2023	Call 2024	Call 2025	Call 2026	Call 2027 and call 2028	
Call topics (2022-25) / priorities TBC (2026-28)	<ol style="list-style-type: none"> <li>Urban resource sharing and circularity</li> <li>Nature-based solutions (NBS)</li> <li>Urban food systems</li> </ol>	<ol style="list-style-type: none"> <li>The built environment as a resource base</li> <li>Knowledge and optimisation of resources flows between urban and rural areas</li> <li>Planning and designing urban areas with nature: towards a regenerative urbanism</li> </ol>	<ol style="list-style-type: none"> <li>Creating a new paradigm for urban water cycles</li> <li>Circular models for regenerating, repurposing, protecting and conserving urban space for biodiversity</li> <li>Multi-city strategies for circular urban economy monitoring and management</li> </ol>	<ol style="list-style-type: none"> <li>Resilient green and social infrastructure</li> <li>Sustainable tourism - circular benefits and challenges</li> <li>Public procurement to foster urban greening and circularity</li> </ol>	Priorities (TBD) Adaptive reuse of existing urban structures and spaces Maintenance of building stock, and urban green, blue and blue-green spaces production in the city	To be decided in call scoping 2027-2028	<ul style="list-style-type: none"> <li>Culture &amp; values</li> <li>Governance &amp; policy</li> <li>Technologies &amp; infrastructure</li> <li>Business models &amp; tools</li> </ul>
<b>KA1</b> Urban nature	Nature based solutions Urban forest / tree planting Urban commons	Green roofs / green wall Regenerative mindsets Regenerative planning Regenerative design	Urban water cycles PES schemes: incentive-based mechanisms Micro-climatic analysis Valuation of eco-system services	Health and wellbeing Stewardship Bio-cultural diversity	Urban blue-green infrastructure	Artificial soil technologies Citizen science Polluter pays principle Nature-positive economy Micro-credits for circularity Impact finance	
Cross-cutting between KA1 and 2			Sustainable drainage systems Permeable pavements Cost benefit analysis	Public procurement PPP model	Maintenance		
<b>KA2</b> Circular built environment	Local resource utilisation P2P business models Local trading	Urban mining		Multi-scale circular buildings Social infrastructure Circularity in cultural institutions City as a playground	Sustainable drainage systems Capacity building for repair Cultural heritage in the digital age The city as public sphere Spaces for creative sectors Space for democracy The social contract beyond commercial spaces	Tax incentives Taxpayers feedback Urban functional areas Crowd funding Socially sustainable housing supply	
Cross-cutting between KA2 and 3	Sharing above profit Incentive systems for value chains based on recycling / re-use Waste reduction policies Sharing economy	Circular supply chains	Recycling analytical tools and methods Blockchain for circularity of material flows Multi-scale LCA	Multiculturalis Accessibility Leisure and sports Product-service systems	Recycling & re-use technologies	Experience commerce True pricing	
<b>KA3</b> Urban metabolis	Urban agriculture Aquaponics Digital platforms and technologies for the circular economy (eg. product and material sharing platforms) Green and ethical values in business and consumption Integrated resource management	Local administrations changing mindset / organisation Administrative boundaries Urban/rural regional cooperation	Data infrastructure Adaptive monitoring Accountability systems Social environmental accounting	Cultural ecosystems Ecological behaviour of companies and customers		Tracing materials, goods and services using transparency based digital technologies Data technology/AI Public, democratic and professional values Citizen and social engagement Education and awareness raising activities Innovation in training and knowledge management Bottom-up governance principles	

Figure 13. CUE multi-annual call agenda.<sup>50</sup>

<sup>50</sup> The items displayed in the CUE MACA are the result of an extended series of workshops and discussions in the CUE steering group. They are a means to visualise, at a granular level, items that have been or could be addressed in CUE topics in DUT Calls. As such, they function as valuable entry points for the call scoping processes for CUE.

## The multi-annual call agenda for the PED TP

Building on the PED TP topics addressed in the first four DUT calls and the strategic direction outlined in earlier sections of the Roadmap, the remaining calls will focus on strengthening the role of PPEDs as a viable and scalable tool for the urban energy transition. The aim is to further establish PEDs as a widespread practice across Europe.

Key priorities in upcoming calls are likely to emphasise:

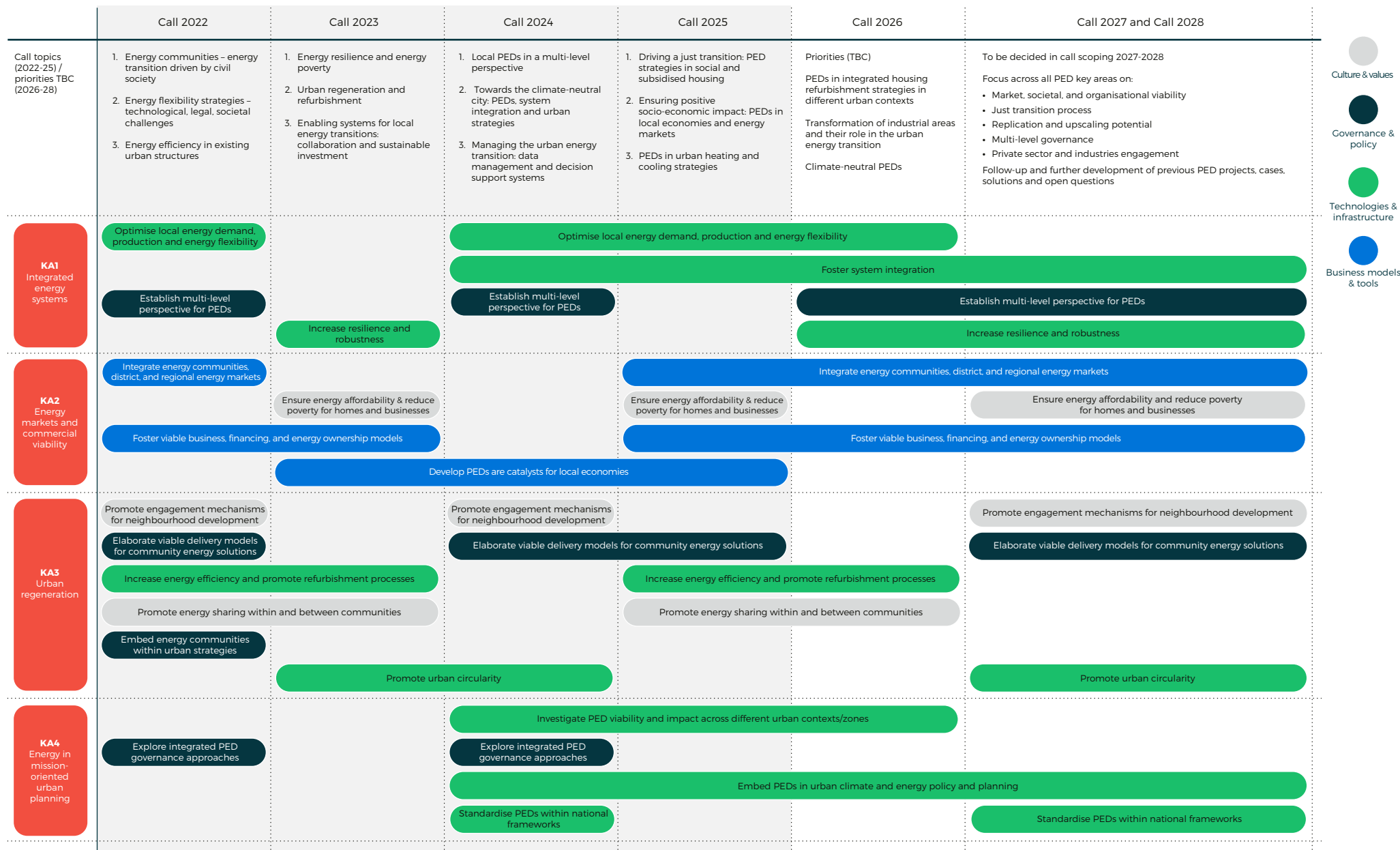
- Just transition process
- Replication and upscaling potential
- Multi-level governance
- Private sector and industries engagement

Thematic priorities will also be informed by previous PED projects, with a focus on building upon existing knowledge, tested solutions, and open questions identified to date. The goal is to leverage past efforts and create continuity in innovation, supporting long-term development and implementation of PEDs across diverse urban contexts.

These directions remain indicative and will be further refined as part of the annual co-creation and call scoping process within the DUT community.







-  Culture & values
-  Governance & policy
-  Technologies & infrastructure
-  Business models & tools

Figure 14. PED multi-annual call agenda.

## Cross-cutting indications for the remaining DUT years of operation

To deepen impact and respond to evolving urban challenges - as reflected in the MACAs above - DUT is considering several cross-cutting priorities for its upcoming calls. These themes complement the Transition Pathways and contribute to a more systemic, inclusive, and scalable urban transformation agenda.

### Continuation of the project pipeline

Building on previous calls, DUT aims to support the scaling of promising results by enabling follow-up funding. This approach fosters continuity, addresses unresolved challenges, and encourages replication and knowledge transfer - reinforcing DUT's role as a long-term platform for transition.

### Unlocking private capital for urban transitions

This priority focuses on developing innovative finance mechanisms to attract private capital to urban transitions. Research into de-risking strategies, capacity building, and investment-readiness

is key to enabling cities to engage effectively in, for example, public-private partnerships (PPPs). Strengthening collaboration with financial actors will support the development of scalable and sustainable urban solutions.

### Urban health and wellbeing

Pressing societal issues - such as loneliness, social isolation, and mental health - are increasingly urgent in dense urban areas, especially in the context of ageing populations and limited access to inclusive public spaces. Future calls may support integrated solutions that promote social connection, strengthen physical and mental health, and enhance resilience through people-centred urban design and inclusive governance.

### Tackling the housing challenge

Affordable and inclusive housing remains a persistent issue across many urban regions. DUT will explore new approaches, partnerships, and cross-sectoral formats to integrate housing more effectively into broader urban systems - including mobility, energy, and spatial justice - supporting just and sustainable neighbourhoods.



## Build the DUT community and improve stakeholder capacities

Alongside its core activity of funding research and innovation, DUT actively supports the implementation of its mission by building a vibrant stakeholder community and enhancing capacities across sectors. DUT brings together key urban actors to respond to the needs of urban challenge owners and to co-create thematic outputs. Through workshops, training sessions, and interactive formats, DUT fosters knowledge exchange, strengthens communities of practice, and supports the uptake of innovative and transformative approaches.

To connect its diverse stakeholder ecosystem, DUT has established several engagement formats. By actively supporting DUT-funded projects, organising dedicated events, and offering training on Urban Living Labs and related methodologies, DUT ensures that project outcomes are not only developed but effectively implemented. Exchange and peer learning are facilitated through the DUT City Panel and the Public Officer & Practitioner Community, which enable urban administrations to share experiences, insights, and practical solutions. The AGORA Dialogues further provide opportunities for co-creation, allowing stakeholders to help shape urban transition pathways.

Looking ahead, DUT will broaden its impact by mobilising new and currently underrepresented stakeholders - particularly key private urban actors, including SMEs. By involving these groups more directly in the DUT Community, stronger collaboration between public and private sectors is enabled, driving innovation and supporting the development of scalable, market-oriented solutions. This expanded engagement helps ensure that urban transformations are not only inclusive and resilient, but also economically viable and aligned with the needs of business and industry.

A key milestone in DUT's engagement strategy is the biannual DUT Conference, typically held in Brussels, which brings together the broader community to discuss urban innovation and policy



developments. By combining engagement, peer learning, and capacity building, DUT equips stakeholders across governance levels and sectors to drive the transition towards climate neutral, inclusive, and resilient cities - reinforcing the Partnership's overarching mission.

## Synthesise and disseminate results

To amplify impact and accelerate urban transitions, DUT systematically organises, synthesises, and disseminates the results of its funded projects. By curating and refining knowledge outputs, DUT ensures that research findings, innovative solutions, and good practices are accessible, actionable, and widely shared-supporting evidence-based policymaking and practical implementation.

The Knowledge Hub plays a central role in this work. It consolidates insights from funded projects, thematic workshops, and expert mappings, transforming them into accessible knowledge products that inform urban policy and practice.

The Innovation Portfolio, featuring selected learning cases, will be prominently showcased on the DUT website, offering a structured overview of key outcomes and success stories. In addition, all project results will be openly published, searchable and accessible - ensuring broad availability to urban practitioners, researchers and policymakers.

To strengthen outreach and engagement, selected projects will be highlighted through targeted dissemination activities, including:

- Articles and features on the DUT website
- Contributions to Urban Lunch Talks, DUT seminars and workshops
- Participation in external events to support knowledge transfer and cross-sector dialogue.

## Support uptake of results and scale-out

To maximise impact, DUT actively supports the uptake, implementation, and mainstreaming of results from DUT-funded projects. This ensures that research and innovation (R&I) outcomes reach stakeholders and target groups beyond the boundaries of individual projects. By fostering knowledge exchange, skills development, and capacity building, DUT empowers urban practitioners, policymakers, businesses, and civil society actors to apply and scale successful approaches, insights, and practices in diverse urban contexts.

DUT also explores and develops new formats and funding schemes to support real transformative action, making applied R&I results tangible and visible at local, regional, and national levels. This includes activities designed to promote the scale-out of solutions into urban policy and practice. For example:

- Innovative knowledge valorisation formats, such as matchmaking and micro-funding initiatives, which address cities' practical needs and enable direct connections between R&I actors and urban stakeholders.
- A structured impact assessment framework for projects, accompanied by mainstreaming and replication guidelines, to facilitate the broader adoption of successful R&I outcomes.

Through these efforts, DUT strengthens skills development, evidence-based policymaking, and implementation capacity. It ensures that transformative solutions are not only piloted but effectively embedded into policies and programmes. By doing so, DUT reinforces the role of cities as

engines of sustainable economic competitiveness, bringing innovation into the urban and neighbourhood spaces where it can be tested, adopted, and scaled.

## Align with key urban policy initiatives and scale up

DUT leverages synergies with major European urban initiatives to ensure that insights from DUT-funded research and innovation projects inform urban policy, support uptake, and contribute to broader strategic frameworks. Through its co-funded transnational governance structure, DUT fosters alignment between regional, national, and European urban policies.

The Partnership actively engages in European urban policy discussions, including the Urban Agenda for the EU Partnerships, EU Council Presidencies, the European Urban Initiative, and URBACT. DUT contributes through participation in conferences, workshops, and policy focused activities. In parallel, DUT collaborates with EU flagship initiatives - such as NetZeroCities, CapaCITIES, the New European Bauhaus, the SET Plan, and CIVITAS - through joint workshops, publications, conference sessions, and policy briefs. Furthermore, DUT maintains close cooperation with thematically aligned partnerships, including Clean Energy Transition, Water4All, Bio-diversa+ and 2ZERO, to build synergies, enhance complementarity and influence policy agendas collectively.

To ensure that urban sustainability transitions are informed by the latest research and innovation, DUT seeks to position itself as a global knowledge hub for urban transitions. It contributes to international frameworks such as the Global Research and Action Agenda on Cities and Climate Change (GRAA) - recently updated by the Global Covenant of Mayors (GCoM) and UN-Habitat following the 2024 Innovate4Cities Conference in Montreal. The GRAA informs the upcoming IPCC Special Report on Climate Change and Cities, and DUT's contributions help bridge European and global efforts in climate resilient urban development.

DUT also expands the international outreach of its funded calls by fostering new partnerships through the Mission Innovation Urban Transitions Mission (UTM) and the Belmont Forum. As co-lead of the Urban Transitions Mission, DUT collaborates closely with global partners such as GCoM to promote evidence-based policymaking and ensure that research and innovation shape urban transformation across all levels of governance.

## Flagship instruments

Within the DUT portfolio, several flagship instruments and activities - piloted during the first and second phase of the Partnership - go beyond established formats. These initiatives play a critical role in enhancing DUT's strategic impact and advancing urban transitions.

### Knowledge Hub

#### Aim:

To synthesise results from DUT-funded projects, generate thematic insights, and translate findings into actionable knowledge for capacity building and policy engagement.

#### Target groups:

Researchers, project partners, DUT thematic experts, policymakers, and capacity building actors.

#### Expected outcomes:

- Thematic conclusions and key learnings for each Transition Pathway
- Integration of insights into strategic DUT processes
- Foundations for policy briefs, training materials, and the Innovation Portfolio

### Innovation Portfolio

#### Aim:

To curate and showcase selected innovations from DUT-funded projects that demonstrate high potential for urban transformation, using a structured and selective approach.

#### Target groups:

Policymakers, practitioners, investors, cities, and innovation intermediaries.

#### Expected outcomes:

- Publicly accessible, multimedia presentation of selected cases via a dashboard
- Increased visibility of transferable solutions
- Integration of high-impact cases into DUT's learning, scaling, and dissemination activities

## Urban Doers Community

### Aim:

To support and engage urban niche innovators who drive community-based experimentation and transformation at the hyperlocal level but are often excluded from mainstream R&I funding.

### Target groups:

Grassroots and neighbourhood initiatives, micro-enterprises, NGOs, social entrepreneurs, civil society organisations, designers, and other creative actors.

### Expected outcomes:

- Support and visibility for grassroots urban solutions
- Stronger connections between local experimentation and European policy
- Enriched diversity and inclusiveness within the DUT stakeholder community

## City Panel

### Aim:

To engage cities and municipalities as active contributors to the design and implementation of urban transitions, strengthening the link between research, policy, and practice.

### Target groups:

City administrations, municipal officers, public service providers and authorities involved in DUT projects and urban transition agendas.

### Expected outcomes:

- Strategic alignment with city needs and ongoing initiatives (e.g. Cities Mission, UTM)
- Knowledge exchange and peer learning among cities
- Stronger capacity for implementation through communities of practice such as the DUT City Panel and the PoP Community



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The Driving Urban Transitions (DUT) Partnership brings together over 60 partners from 30 countries to invest in urban R&I. Every year, DUT funds 40+ projects to build capacities of urban stakeholders and empower them to drive urban transitions in Europe and beyond.

Want to shape the future of urban transitions with us?

- Join the DUT consortium: Contact us at [info@dutpartnership.eu](mailto:info@dutpartnership.eu)
- Join a DUT-funded project: Apply through our annual DUT Calls, launched every September.



[dutpartnership.eu](http://dutpartnership.eu)