THE COPENHAGEN WAY

INSIGHT & ACTION AT A CRITICAL MOMENT FOR EUROPEAN CITIES

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CONTENT

ENDORSEMENTS

“This report is an important and timely contribution to the European agenda. It shows with clarity that urban resilience and competitiveness depend on our ability to mobilise long-term capital for shared goals. By documenting Copenhagen’s transformation and pointing to the pathways ahead, it demonstrates how investment, when anchored in trust and clear governance, can generate returns while strengthening the social and environmental fabric of our cities. It is an invitation for investors, policymakers, and civic actors to see cities not as costs, but as the infrastructure of Europe’s future prosperity.”

Torben Möger Pedersen,
Chair of CIP Foundation. Former CEO of PensionDanmark (1992-2023)

“Copenhagen is one of those cities many of us look to in order to glimpse a sense of the emergent future that is shaping our built environment. As Europe looks over the horizon towards an uncertain future, this report serves as inspiration that the right interventions can lead to the wellbeing and prosperity its citizens are demanding.”

James Drinkwater,
Head of Built Environment, Laudes Foundation

”This piece of work recalls Whitman’s “Song of Myself”. Here, Copenhagen speaks itself into being: pausing, reflecting, cataloguing its past, and proceeding to fill its next fold of the future - offering inspiration to others along the way. It stands as a valuable example of how a city can narrate its own transformation, not only preserving memory but also projecting possibility and reinvention.”

Cristina Gómez Garcia-Reyes,
Lead, Urban Innovation, Business Development, World Economic Forum

“Sharing knowledge and experiences between cities is a powerful way to accelerate sustainable urban transitions. What makes this report particularly compelling is how it showcases the strength of collaboration between local actors, the private sector, and civil society that has enabled Copenhagen to transform, within just a few decades, into the green and thriving place we know today. Cities are certain to benefit from learning about the Copenhagen Way through this report, which aligns so closely with the partnership and transformative work that C40 is advancing with Urban Partners and Ramboll to accelerate Green and Thriving Neighbourhoods worldwide”

Mark Watts,
Executive Director, C40 Cities

EXECUTIVE SUMMARY

It is hard to imagine today, but in the early 1990s, Copenhagen was a city in decline. Its population was shrinking, unemployment was high, housing was outdated, and the municipal budget was on the verge of collapse. Three decades later, it ranks as the world's most liveable city and one of Europe's most competitive urban economies. This transformation shows that systemic change is possible within a generation when long-term vision, institutional innovation, and cross-sector alliances come together.

This report, The Copenhagen Way, has been developed by BLOXHUB, Ramboll, and Urban Partners with contributions from a wide network of Danish and European stakeholders. It documents the city's transformation, identifies the ways of working that enabled it, and sets out the pathways needed to sustain resilience and competitiveness in a rapidly changing Europe.

Europe now stands at a crossroads. Its share of global GDP has fallen from 29 % in 1992 to 17 % in 2022. Growth is stalling, trust is eroding, and climate limits are pressing. These pressures converge in cities, yet cities are also Europe's greatest asset. They generate most of their GDP, concentrate talent and innovation, and can deliver systemic change at scale.

With Denmark holding the EU Presidency in late 2025, this report draws insights from Copenhagen as a living model and puts forth actions to strengthen Europe and its cities.

THE COPENHAGEN WAY IN PRACTICE

Copenhagen's renewal did not come from one big plan or a single flagship project. It unfolded step by step, with each decision building on what came before. Renewal programmes first improved housing and later evolved into holistic regeneration of entire neighbourhoods, bringing residents directly into the process. Long-term municipal planning provided direction and continuity, sequencing growth and infrastructure in ways that kept the city coherent and enabled investments. Significant investments became turning points. The metro and harbour redevelopment, financed through land value capture and impressively delivered by By & Havn with pension funds, turned urban infrastructure into an engine of growth. The city's year as European Capital of Culture in 1996 embedded culture as a driver of identity, innovation and competitiveness. The Øresund Bridge expanded the labour and housing market across borders, while initiatives like Medicon Valley and Science City created powerful knowledge and innovation ecosystems. Climate ambition was not treated as a cost but as a foundation for progress. The Eco-Metropolis plan, the 2025 Climate Plan, and the Cloudburst strategy integrated decarbonisation and adaptation into how the city was built and lived in. Together, these shifts reshaped everyday life: families moved back, people swam in the harbour, bikes became the norm, and public spaces became central to urban identity. What emerges is a clear lesson. Transformation was not about one-off projects but about consistent ways of connecting direction with delivery and aligning actors around common goals with a holistic investment toolkit.

THE COPENHAGEN WAY FORWARD

Copenhagen is not a blueprint but a proof of concept. Its transformation shows how cities can turn crises into catalysts for renewal. The task now is to evolve these lessons for a new era, where Europe's strength lies in a network of resilient, competitive cities acting together.

While the ways of working that rebuilt Copenhagen are more relevant than ever, the specific solutions cannot simply be repeated. Housing is becoming less affordable, spatial and carbon budgets are shrinking, and innovation remains fragmented. The report identifies six pathways that define the agenda ahead.

- Firstly, Europe must connect its cities to achieve scale.
- Housing must also be treated as infrastructure, aligning affordability with climate goals and attracting long-term capital.
- Energy systems must be integrated across borders, extending Copenhagen's sector-coupling experience to support a European Energy Union that is reliable, affordable, and low carbon.
- Water and climate adaptation must be embedded as drivers of value and prosperity.
- Mobility must be understood as the management of scarce space.
- Underpinning all of these areas, planning must be redefined as more than regulation. It is the framework that connects long-term direction with delivery, aligning systems, actors, and capital across cycles. In this role, planning enables cities to stay liveable and affordable while building the resilience and competitiveness that Europe now requires.

Taken together, these pathways show how Copenhagen and Europe can remain liveable, affordable, and competitive while navigating a more constrained and uncertain future.

The Copenhagen Way is both a story and an invitation: to treat cities as critical infrastructure for Europe's future.

INTRODUCING THE COPENHAGEN WAY

Why this project

Copenhagen's transformation from a near-bankrupt city 30 years ago to the world's most liveable city today is a testament to the fact that it is possible to achieve transformative urban impact in a generation, and to the powerful role cities can play in building a more resilient future. This project brings together progressive Danish organisations that have helped shape Copenhagen into the world-leading city it is today and that share an urgent conviction that Copenhagen does not rest on its laurels but continues to innovate to address the next generation of challenges as part of a wider network of European cities that must take bold action at a critical time in Europe. This initiative aims to inspire and inform cities across Europe and beyond, demonstrating that sustainable, inclusive transformation is not only necessary but also possible.

BLOXHUB, Ramboll, and Urban Partners have joined forces with a shared wish to learn from Copenhagen's history and secure the best possible future for the city and Europe. By bringing together an ever-growing coalition of urban stakeholders, we aim to learn from the past and help shape a dynamic and resilient future for Copenhagen, Denmark, and Europe that upholds the values of social, environmental, and economic well-being.

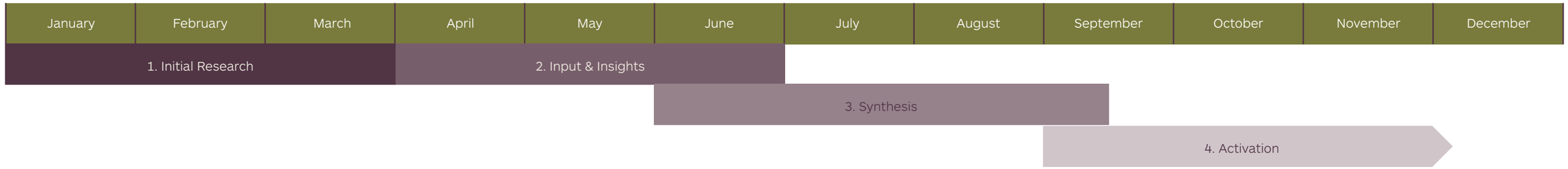
INTRODUCING THE COPENHAGEN WAY

PROJECT PURPOSE & PROCESS

As Denmark assumes the EU Presidency in the second half of 2025, Copenhagen stands at a pivotal moment to reinforce its role as a frontrunner in resilient urban transformation. In the partnership between BLOXHUB, Ramboll, and Urban Partners, we developed a joint project dedicated to exploring Copenhagen's urban regeneration success story and to inform collective action for securing green and thriving cities as critical infrastructure for Europe's future.

The project builds on continuous stakeholder engagement with key Danish and international stakeholders that have unfolded through four phases:

THE COPENHAGEN WAY



Initial Research (January–March)

We gathered insights into Copenhagen's transformation journey from a city marked by industrial decline and population loss to a global benchmark in urban liveability. Interviews, desktop research, and stakeholder engagement helped uncover the "invisible" ecosystem of policy frameworks, institutional collaborations, and design innovations that underpin the city's visible achievements.

Input & Insights (April–June)

Through thematic workshops and roundtables, we invited experts to co-create a shared vision for Copenhagen's next phase of transformation. This phase focused on identifying current and emerging challenges such as housing shortages, social equity, and climate resilience that cities across Europe also face.

Synthesis (June–July)

We consolidated these insights into this report, capturing key ways of working that enabled Copenhagen's transformation and bold actions for future challenges. This publication sets out actions and a guiding framework for urban transformation, both locally and internationally. A draft of this publication was shared for feedback to ensure that it reflects collective priorities and multiple perspectives, building a shared foundation for what we call The Copenhagen Way.

Activation (Fall & Onwards)

The publication will be launched in September 2025 aligning with final months of the Denmark's EU Presidency. The outcome will be brought to high-level international events, positioning Copenhagen as a living lab for bold, future-proof urban solutions. Insights will be shared with European and global cities seeking socially just, green, and competitive urban futures.

WHY EUROPE

Europe stands at a crossroads: a pivotal moment where decisions can no longer be deferred. Growth that once felt secure is stalling. The EU's share of world GDP has dropped sharply from 29% in 1992 to 17% in 2022[1], Cohesion is fraying. Trust, already fragile, breaks faster than it is built. The climate crisis is no longer a distant prospect for the future. It is here, reshaping lives and economies in real time.

These pressures converge in the everyday realities of European cities. From the cost of living that stretches household budgets, to housing that becomes increasingly difficult to access. From floods, storms and heatwaves that disrupt daily life with increasing intensity, to urban systems shaped for another era and now straining under demands they were never designed to handle. It is a test of Europe's capacity to adapt, unite, and compete in a changing world. If this moment holds a challenge, it also has an opportunity to act, align, and rediscover Europe's strength. The continent is home to cities widely regarded as among the best in the world in terms of quality of life, which is an extraordinary asset for those who live in them.

Continued transformation is essential, ensuring Europe does not become a museum and that its welfare foundation is preserved and linked to future-proof economic resilience. We must come together to invest and create the future we want. Urban regeneration projects across Europe represent a €4 trillion opportunity, yet many investors remain on the sidelines, treating this as a public-sector issue. They could not be more wrong. The most transformative cities are those where private investors and developers actively collaborate with governments to build solutions, not just projects.

A single centre does not define Europe. It is shaped by a web of cities, bound together politically, economically, culturally and geographically. Their fates are shared. The strength of one depends on the resilience of others. This interdependence is not a weakness to be managed; rather, it is a strength to be leveraged. It is Europe's greatest resource. It allows cities to specialise and form clusters of knowledge that, together, create capabilities no single city could achieve alone, from the bioeconomy to design, from energy systems to advanced manufacturing. It offers diversity of thought and approach, drawing on different histories and cultures while working toward shared goals. This combination of scale and diversity, if directed with purpose, is what makes Europe capable of competing on a global stage without losing what makes it distinct.

The task is clear. A resilient Europe requires a network of resilient cities, learning from one another, acting together, and building the scale and cohesion needed to compete in a shifting world. Coordinated urban strength will determine whether Europe can remain competitive, cohesive, and climate-resilient in the years ahead.

1. Dixon, H. (2024, April). What to do about the EU's relative decline. Reuters.

"I believe that Europe must rediscover this spirit. The spirit of boldness, action and renewal. It is time for Europe to rise up once again. To rally around the next great European project. Thus, I believe that our next great era – the next great unifying project – is about building an independent Europe."

Ursula von der Leyen,
President of the European Commission

Source:
Von der Leyen, U. (2025, May 29). Speech by President von der Leyen at the award ceremony of the International Charlemagne Prize of Aachen. European Commission – Press Corner. https://ec.europa.eu/commission/presscorner/detail/en/speech_25_1366

WHY CITIES

Cities are Europe's critical, competitive infrastructure. They concentrate people, ideas, and economic benefits on a large scale, with more than 50% of EU GDP generated in urban regions.[2] Proximity and density – the essence of cities – are two of the most powerful levers for addressing climate, economic, and social challenges. Higher density enables more efficient use of resources, from energy to infrastructure, and enhances access to jobs, services, and opportunities. Every 1% increase in urban population density is linked to a 0.79% reduction in CO_2 emissions per capita.[3] Compact development can cut infrastructure costs by a third and ongoing service costs by 10%, while doubling a city's size leads to roughly 25% lower resource use per capita and about 15% more outputs such as patents, innovations, and economic activity.

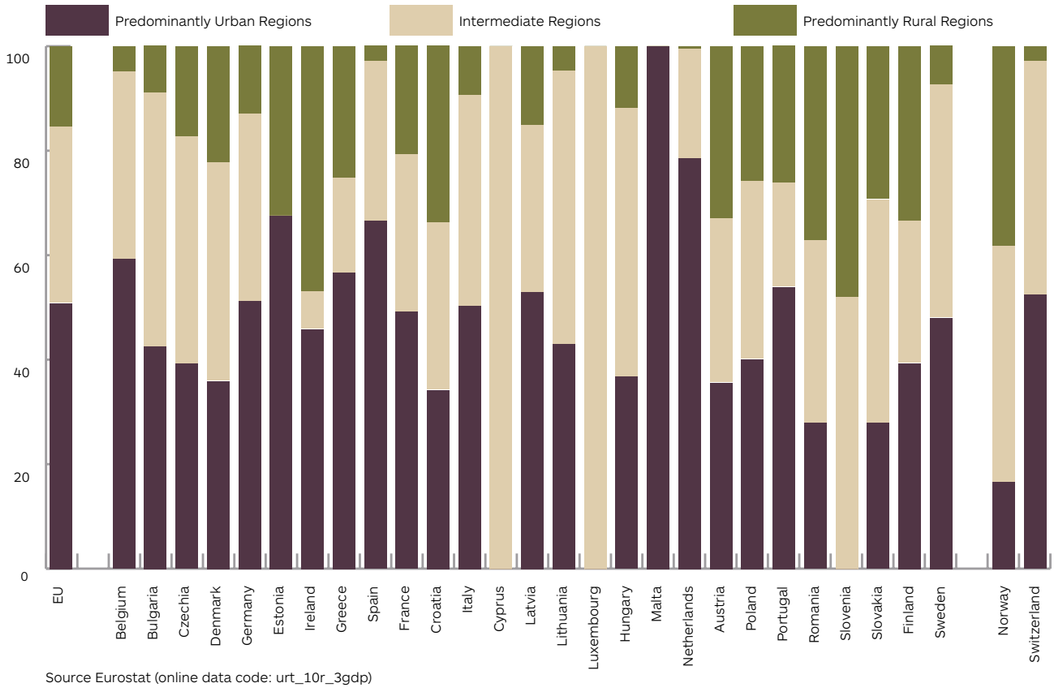
Cities carry the weight of transition, but also offer opportunity of delivery. When they thrive, they generate value far beyond their borders. When they falter, the cost is shared widely. They are not ends in themselves, but infrastructure for national and European resilience.

Cities are also where innovation happens in practical ways. This is why industrial policy and city planning must be understood as deeply connected. The design of a city is never neutral; it determines who gets access to what, how we use our resources, and how we prepare for what lies ahead. As Geoffrey West and others have demonstrated, cities have a significant influence on the productivity and health of entire regions.

They are not backdrops to strategy. They are where policy becomes housing. Where innovation becomes infrastructure. Where resilience becomes something we can walk through. Planning is no longer only technical, but also social, economic, and political, and the interface where people meet policy.

The choices made in cities today will determine Europe's ability to remain liveable, competitive and cohesive in the years ahead.

Share national GDP, by urban-rural Typology 2021



Source Eurostat (online data code: urt_10r_3gdp)

2. Eurostat. (2024, May) . Urban-rural Europe – economy. European Commission.
3. Ribeiro, H. V., Rybski, D., & Kropp, J. P. (2019, July). Effects of changing population or density on urban carbon dioxide emissions. Nature Communications

WHY COPENHAGEN

Copenhagen was a very different city 30 years ago. The population was shrinking as families left for the suburbs. Much of the housing stock was outdated, poorly maintained, and unfit for modern needs. The city's economy was stagnating, unemployment was high, and public confidence was low. At the same time, the municipal budget was close to collapse, forcing austerity measures and leaving little room for investment in the future The remarkable transformation it has undergone in a relatively short time is a testament to the fact that systemic urban change is possible within a generation. At a time when so much about the future of Europe can feel bleak, it is essential to remember that in past crises, Europeans have taken bold action to shape the future we want. Copenhagen has not only delivered growth and competitiveness, but also achieved this while improving liveability, protecting social equity, and advancing environmental ambitions, as highlighted by its regular ranking as one of the world's most liveable cities. Copenhagen was again ranked the most liveable city in the world in 2025 by The Economist, and it punches above its weight in terms of delivering European growth with La Salle highlighting in their latest European City Growth Index that

> *"Ahead of Europe, both Stockholm and Copenhagen are becoming powerful innovations leaders with their major focus on renewable energy, industrial tech, and healthcare."*

Copenhagen reached an all-time high as the number four European city in the European Cities Growth Index in 2023, surpassing its weight compared to other European cities. Copenhagen is not perfect, but it has made long-term, ambitious decisions that offer learnings worth sharing.

The city's trajectory has been neither accidental nor linear. It has been the result of one coherent, long-term, cross-sector effort. A culture of co-responsibility, planning as learning, and with policy direction maintained across election cycles.

It happened through frameworks that treated land, capital and infrastructure not as separate domains but as levers for shaping public value. By & Havn, a public development company for the city, became a mechanism for capturing land value and reinvesting it into mobility, public space and long-term urban development. Pension funds assumed the role of co-creators, building the city while securing value for Danes in their later years. Housing, energy, water, waste and mobility were not treated as isolated services but as systems of shared resilience.

But Copenhagen cannot rest on its laurels. Today, the conditions that enabled its transformation are shifting. Housing is less affordable. The planetary boundaries are closing in. Innovation is fragmented. Trust is under pressure. And the spatial, political and carbon budgets are shrinking.

What Copenhagen offers is not a blueprint but a living model. One that must now be tested, stretched and reshaped to meet a new set of demands. The task is no longer to repeat what worked but to evolve it. To use the city's foundations not as fixed solutions but as infrastructure for the next phase of responsibility. Not because it failed, but because the context has changed. What worked must be built on. What held us back must be left behind.

The task ahead is not to protect what was, but to redesign what needs to be. This report seeks to gather those learnings so that we can build upon them in Copenhagen and throughout. Grounded in practice. Informed by research and sharpened through dialogue.

It is an invitation to rethink what cities are for. To recognise that direction is not control. And that transformation, when done well, is never the end. It is the foundation for what must come next. Our ambition for this report is that it will serve as an inspiration and driver for the continued collaboration.

On behalf of the project group:
Ditte Lysgaard Vind (BLOXHUB), Signe Kongebro (Ramboll), Jesse Shapins (Urban Partners),

THE COPENHAGEN WAY

1. THE ADAPTIVE CAPACITY OF COPENHAGEN

Since the sweeping transformation that began in the late 1980s, the role, metrics of urban success, and the priorities and challenges facing cities have shifted dramatically. A core strength of Copenhagen's transformation has been its adaptive capacity: rather than defending fixed models, the city builds flexible frameworks that can be retuned as needs evolve. Copenhagen city strives to test, learn, and recalibrate through continuous self-examination of its policies and practices. This culture of constant learning, remaining critical, innovative, creative, and bold has enabled the city not only to keep pace with global shifts but also to define and shape future urban metrics.

2. LONG-TERM STRATEGIC PLANNING AND GOVERNANCE

Copenhagen's adaptive capacity is underpinned by a tradition of flexible yet mission-driven long-term planning, anchored in clear visions, high ambitions, and the governance authority to realise them. The city administration's Planstrategi/Kommuneplan, a strategic plan for the city council, sets a holistic, citywide framework across economy, housing, mobility, climate, and infrastructure, and is typically updated every four years. At its core is a commitment to a long-term vision, with the flexibility to plan, monitor,
and revise in response to emerging challenges and needs. The Rækkefølgeplanen sequences development and infrastructure to link vision with delivery, while successive Fingerplan updates align regional growth with policies for modes of urban transport. Cross-cutting infrastructure and climate action plans are situated within this framework, enabling priorities to be implemented while metrics are adjusted as conditions evolve.

3. SYSTEMIC INNOVATION

Copenhagen's long-term planning is underpinned by its ability to advance mission-driven systemic innovation, linking long-term vision to financial models, delivery vehicles, cross-sector strategic alliances, and governance structures into coherent frameworks for implementation. Over the years, the creation of delivery vehicles such as By & Havn and the development of financial models like land-value capture have translated bold visions and long-term thinking into practice.

Systemic innovation in Copenhagen is a continuously evolving process. Large-scale urban projects have been utilised as living laboratories for innovative approaches to land use, governance, and inclusion, with lessons consistently fed back into planning frameworks, standards, and policies for enhanced integration. From Ørestad to Nordhavn, two neighbourhoods at the opposite ends of the city, Copenhagen has demonstrated its capacity to adapt to shifting definitions of urban success. This approach is also evident in the Cloudburst Plan, established in 2012, where a visionary strategy was embedded in regulatory and funding frameworks, driving climate adaptation through the use of nature-based solutions. Through changes to the utility law (Forsyningsloven) and related financing rules, utilities were enabled to co-fund projects that deliver wider social value. Systemic innovation has thus provided the scaffolding for mission-driven urban transformation, allowing the coordinated management of land sales, partnerships, and implementation.

4. HOLISTIC INVESTMENT MINDSET

Rather than approaching development from a mindset of scarcity and austerity, Copenhagen demonstrates that the pie can expand, and that shared prosperity and abundance can be achieved in concert with environmental aims. Copenhagen demonstrates that value is created holistically across social, environmental, and economic dimensions and that actively investing in the future is essential to achieve it. A collaborative investment mindset treats finance as an enabler, not a constraint. The question is not whether we can afford to act, but how we can design models that unlock capital for the outcomes we need and avoid future costs.

Capital can take many forms and be combined creatively with land, government finance, institutional capital, private funds, delivery capabilities, and community resources. Institutional investors, such as pension funds, have played a decisive role in Copenhagen's transformation, bringing patient capital, a long-term perspective, and stability. Realising this potential depends on trust, shared governance, and clear roles and responsibilities. When these elements align, investment becomes more than a transaction; it becomes a collective strategy for building resilience, competitiveness, and liveability, ensuring that the benefits are sustained and widely shared.

5. ALLIANCE-DRIVEN PRACTICE AND CO-RESPONSIBILITY

An evident hallmark of Copenhagen's systemic innovation is its ability to leverage cross-sector public–private–civic partnerships as a driver of urban transformation. This approach has fostered enduring collaborations among public institutions, private actors, and civic stakeholders, creating platforms for co-designing solutions, exchanging expertise, sharing risk, and bringing innovation into practice. In doing so, it has established a model of alliance-driven practice and a shared sense of co-responsibility for urban development.

These alliances enable the coordination of investments and align strategic planning with a broad, systemic perspective, linking private capital to broader societal goals and engaging a diverse range of stakeholders. In practice, this includes risk sharing with pension funds and other institutional investors, utility-municipality collaboration on climate adaptation, partnerships with cultural and knowledge institutions to anchor new districts, and participation mechanisms and public hearings.

6. CITY-MAKING AS CULTURE

In Copenhagen, culture has not only functioned as a sector to be supported, but also as a guiding principle and practical tool for shaping the city. Since the 1996 European Capital of Culture year, the city has treated cultural investment as a driver of regeneration, innovation, and placemaking, leveraging museums, performance venues, festivals, and creative hubs to catalyse urban transformation. Culture has been embedded into long-term development strategies as a means to revitalise districts, activate public spaces, and anchor new urban areas in a strong sense of identity. Over time, the definition of culture itself has expanded. City-making is now understood as a form of culture in its own right where architecture, design, food, innovation, and public space programming are integral to how people live together. By approaching culture as part of the city's core infrastructure, essential to economic competitiveness, social cohesion, and environmental resilience, Copenhagen has turned creativity into a strategic capacity. This approach has not only enhanced the city's international standing but also ensured that cultural ambition remains central to its adaptability and leadership in global urban development.

Sandkaj, Århusgadekvarteret. By Cobe and Sleth
Rights: COBE

THE COPENHAGEN WAY IN PRACTICE

While it is easy to celebrate the things we see in Copenhagen – people swimming in the harbour, families using cargo bikes rather than cars, new flood resiliency infrastructure being constructed – it is essential to understand the ways of working that underpin these visible transformations. It is the modes of collaboration across sectors and strategic approaches that have enabled quality transformation. They are also the ingredients that ensure the city does not rest on its laurels and continues to take bold action with innovations to address future challenges. It is these foundational ways of working that we refer to as The Copenhagen Way.

EVIDENCE OF COPENHAGEN'S RESILIENT URBAN TRANSFORMATION – INSIGHTS FOR A CHANGING EUROPE

Copenhagen's transformation from a city on the verge of bankruptcy to a thriving hub of liveability and resilience exemplifies the critical role that cities can play in shaping a sustainable and competitive future. Over the past few decades, Copenhagen has shifted from a period of decline, marked by depopulation and fiscal crisis, to becoming a competitive, vibrant, and revitalised metropolis. Today, the city is recognised as a model for liveability and human-centred design, a front-runner in the green transition, and a centre for culture, creativity, knowledge, and innovation.

However, this transformation did not occur in isolation; it unfolded within the context of changing roles for cities and shifting global dynamics. It was not the result of ideal conditions, but rather a direct response to emerging trends and pressing challenges.

What sets Copenhagen apart is its ability to respond to evolving challenges and opportunities without compromising its core values, and to leverage crises as catalysts for change. The city addressed its ongoing decline by embracing the emerging dynamics of the knowledge economy and the need to attract talent, pursuing cross-border collaboration, implementing new infrastructure, and renewing the urban environment in the late 1980s and early 1990s.

It recognised early on the growing importance of culture, creativity, liveability, and environmental action as drivers of urban competitiveness, making these principles central to its transformation. In later years, the climate and decarbonisation agendas became not only tools for environmental action but also drivers of growth, increased liveability, and prosperity.

Equally important is the city's commitment to remaining in a constant state of reflection and learning, with a strong ability to adapt to changing conditions and shifting priorities. This adaptability has allowed Copenhagen to respond proactively to new challenges, while keeping liveability, sustainability, and inclusivity at the core of its agenda.

It is important to stress that Copenhagen is not a perfect city and faces many of the same challenges as other European cities. Looking back at Copenhagen's transformation in this chapter is not to present it as flawless, but to provide evidence of what cities can achieve when they dare to make bold decisions, collaborate across sectors, set ambitious long-term targets, and see themselves not as isolated systems but as crucial nodes in a larger regional and European network.

Copenhagen's story is an illustration of the value of coupling vision with pragmatism, and aligning policy, investment, and partnerships to address both immediate needs and long-term resilience. Equally important is the recognition that this transformation was not the product of a complete model, but of a constellation of actions shaped by shifting agendas, each rooted in its own time yet united by shared, long-term goals.

This chapter will outline a set of key actions that have shaped Copenhagen's transformation since the late 1980s. While it cannot capture the whole story, it aims to provide a focused account of the strategies, policies, and collaborative approaches that have defined the city's journey.

COPENHAGEN IN NUMBERS – FROM BANKRUPT TO WORLD'S MOST LIVEABLE CITY

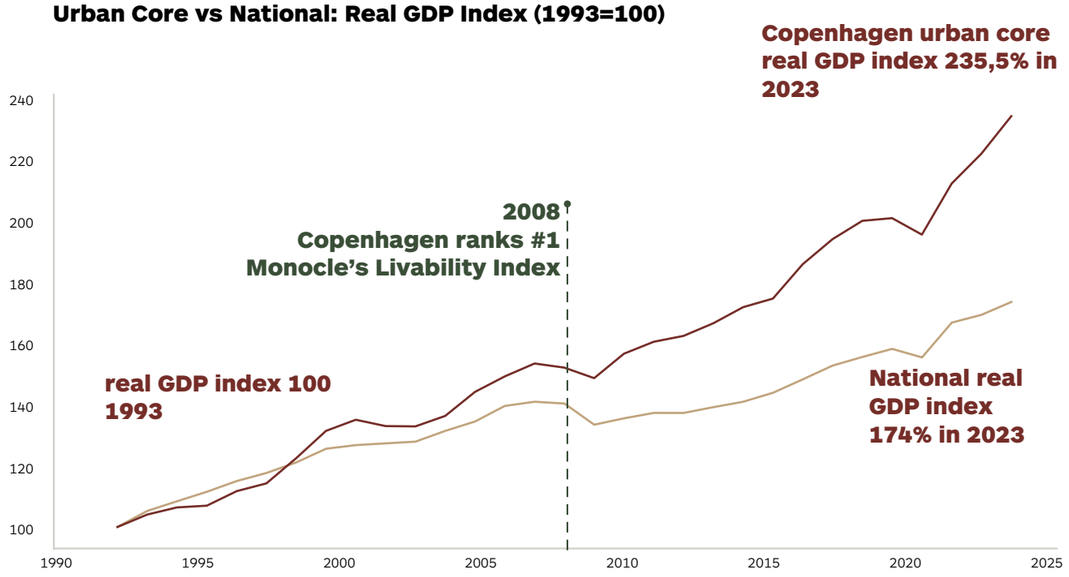
In the early 1990s, Copenhagen faced severe challenges: 17.5% unemployment, declining tax revenues as families moved away, a debt of over 10 billion DKK, and annual budget deficits of 2–3 billion DKK.

During the 1960s and 1970s, more than a third of the urban population relocated to the suburbs, leaving behind a growing proportion of students and elderly residents who contributed less to municipal tax revenues. This migration, combined with the city's economic difficulties, left much of Copenhagen's building stock undesirable and in poor condition.

The housing stock at the time consisted mainly of small two-room apartments with shared bathroom facilities, layouts that were increasingly unable to meet the needs and expectations of modern, economically active residents. As a result, the city struggled to attract and retain the substantial tax-paying population essential for revitalisation. Hence, a fundamental transformation was urgently needed to secure the city's future.

This began with urban renewal and long-term strategic planning, supported by both public and private investment. The city initiated comprehensive urban renewal efforts, driven by state and municipal investments and regulations, aimed at restoring or removing deteriorating buildings and neglected urban spaces. By upgrading housing quality and enhancing the urban realm to improve liveability, Copenhagen successfully reattracted families and rebuilt a strong tax base.

Urban Core vs National: Real GDP Index (1993=100)



Source: Statistics Denmark , www.statbank.dk/NRHP

THE COMPETITIVE & LIVEABLE REGION

The late 1980s marked a global shift in the role of cities as key drivers of national competitiveness and economic growth. These changing dynamics reshaped the planning landscape and redefined what makes a city attractive and competitive. The emerging knowledge-driven economy positioned urban success around a city's ability to attract creative talent and financial investment.

Building on this, a city's competitiveness was increasingly understood as its ability to attract people and resources, with strong emphasis on investment and creative capacity as prerequisites for growth and resilience. The global view of cities as nodes in international networks further emphasised that urban planning must adopt an international outlook and be rooted in a commitment to quality. These shifts helped define what constituted a successful city in an era of globalisation.

Building on these global tendencies, policies softened national borders between EU member states and increased economic and cultural exchange through the implementation of the new EU Single Market policies.

These new policies introduced a shift from competition between nations to competition between regions, opening new opportunities for collaboration and repositioning. At the time, however, Denmark lagged in terms of critical mass, cultural capacity, capital investment, and infrastructure. Yet this context represented a kind of "burning platform" — a moment of urgency that also provided a unique opportunity for transformation. For Copenhagen, it became clear that drastic measures were needed to bring the city to a level of completeness that could meet new global criteria. A form of "shock treatment" was required to accelerate Copenhagen's revitalisation.

In the years that followed, Copenhagen's development was defined by political courage, determination, and a clear ambition to advance its urban agenda. One of the first and most notable milestones was the introduction of the city's first municipal plan in 1991. This was followed by a series of strategic actions, partnerships, and policy reforms aimed at strengthening the city's competitive position.

Importantly, Copenhagen realised early on that an attractive city is not just an economic hub. It is also a composition of urban life, vibrancy, liveability, and overall well-being. The city embedded these "soft" values into its strategic planning from the outset, positioning itself as not only globally competitive but also liveable and socially inclusive.

THE FOUNDATIONS OF THE WELFARE CITY

"The Copenhagen Way" in practice is primarily a testimony to urban transformation efforts from the late 1980s onwards. However, it is essential to recognise that the transformation of a city does not occur in a vacuum. New planning is rarely developed from scratch; instead, it builds upon the city's existing capacities, assets, and institutional memory. The city's transformation since the late 20th century has been defined by its ability to implement new paradigms while preserving the strengths of the existing context.

Copenhagen's approach has been to draw on decades of transformation while acknowledging that the goal is not to create a static model to be replicated, but to strengthen what already works and operate effectively within a given context. Many of the factors we now consider central to a liveable city stem from systems, policies, and ideologies that predate the development boom of the late 1980s.

The first policy models that laid the foundation for the affordable housing sector emerged in response to severe housing shortages at the beginning of the 20th century. In 1916, the government established a housing commission to explore the state's role in financing, planning, and managing housing production. This led to the creation of Boligselskabernes Landsforening (the National Federation of Housing Associations) in 1919, a milestone in establishing a nationally organised social housing sector.

In parallel with housing policy, Denmark implemented extensive social reforms that formed the foundation of the welfare state, including the 1938 Housing Act, which enabled the state to support social housing associations through loans and subsidies.

During this same period, many of the welfare institutions, public spaces, mobility infrastructure projects, and energy networks that remain fundamental to Copenhagen's liveability, competitiveness, and daily life were developed. Examples include Fælledparken, Rigshospitalet, Idrætsparken, the district heating system (fjernvarmesystemet), Bispebjerg Hospital, and Kastrup Airport.

The city's transformation since the late 20th century has been defined by its ability to implement new paradigms while preserving the strengths of the existing context. By building on what worked and correcting what did not, Copenhagen has turned inherited systems into a platform for innovation, integrating lessons learned into a coherent development strategy where the old and the new reinforce one another. This capacity to recognise and harness existing strengths, while addressing weaknesses, is essential for any resilient urban transformation. It ensures that innovation is grounded in context, continuity, and institutional knowledge, providing a stable yet flexible platform for long-term change. By identifying both what worked and what did not, Copenhagen has been able to utilise its inherited systems as a foundation for innovation, allowing the old and the new to complement each other within a coherent development strategy.

Dronningegården, iconic welfare architecture in the heart of Copenhagen.
Built 1943–1958 by Kay Fisker and Svenn Eske Kristensen, it stands as an example of the welfare dream: high-quality living with space, light, and dignity for ordinary people.
Rights: Københavns Stadsarkiv | Photographer: Mogens Falk-Sørensen

KEY ACTION: URBAN RENEWAL (SANERING, OMRÅDEFORNYELSE & KVARTERLØFT)

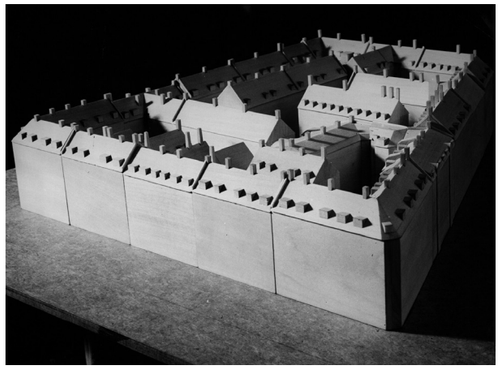
The declining industrial profile of the city, combined with regional migration and suburban expansion, had left Copenhagen in a state of both physical and economic decay. The city's architecture was unable to attract or accommodate a strong tax-paying population. The inadequate housing quality and size, combined with the modernist ideal of the good life outside the city, had already led many residents to relocate to emerging suburban areas. As a result, the city's demographic composition was dominated by students and elderly residents, who contributed relatively little to the municipal tax base.

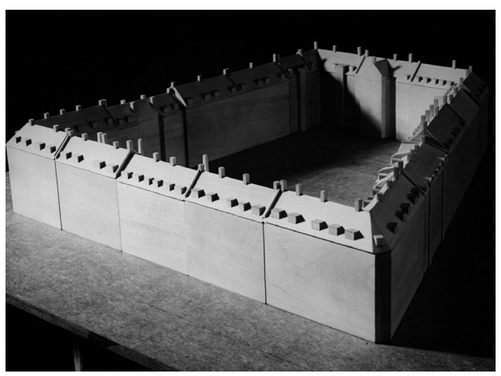
Initial steps to counter this situation began with a comprehensive urban renewal strategy through a partnership between the state and the city under Byfornyelsesloven (The Urban Renewal Act) of 1982, which introduced both policy reforms and a structured funding plan. The law increased the capital allocated to renewal projects and encouraged public participation and resident ownership in housing developments. Crucially, it also marked a significant shift in decision-making authority, transferring power over development and renewal from the state to the municipal level. This mandate change has had a lasting influence on Copenhagen's development.

As the renewal process unfolded, it became clear that improving the physical condition of the housing stock alone was not enough to address the city's growing challenges. In response, the initial strategy evolved, and the government launched the Kvarterløft program in 1993. This initiative emphasised holistic planning, cross-sector partnerships, citizen involvement, and public–private collaboration. Supported by the Ministry of Housing's Bypulje fund, it enabled municipalities and local organisations to implement long-term, community-driven projects.

In 1995, Project Renovation aimed to modernise the construction sector, improve efficiency, and enhance international competitiveness. Inspired by studies of other European cities, it promoted product and process development, ecology, and internationalisation. Over the course of three years, 100 projects were completed, including innovations such as prefabricated bathrooms in Copenhagen apartments.[4,5]

The revitalisation of the housing stock marked a significant turning point in Copenhagen's transformation. Over time, the objectives and scope of the renewal laws evolved, and the spirit of these early initiatives carried forward, eventually shaping policies such as Områdefornyelse (see p. 123). While these shifting initiatives have had a visible and lasting impact on the city's development, it became increasingly clear that physical renewal alone would not be enough to prepare Copenhagen for the demands of a changing world.





Before and after the clearance of a courtyard in Vesterbro.
The aim was to replace cramped, compact courtyards with more livable and healthier urban spaces. At the time, the challenges of large-scale demolition were not yet fully recognized.

Rights: Københavns Stadsarkiv | Photographer: Mogens Falk-Sørensen

4. Ministeriet for By, Bolig og Landdistrikter. (2013). Byfornyelsesatlas DK2.
5. Jensen, J. O. (2015). Private følgeinvesteringer ved områdefornyelse. Ministeriet for By, Bolig og Landdistrikter.

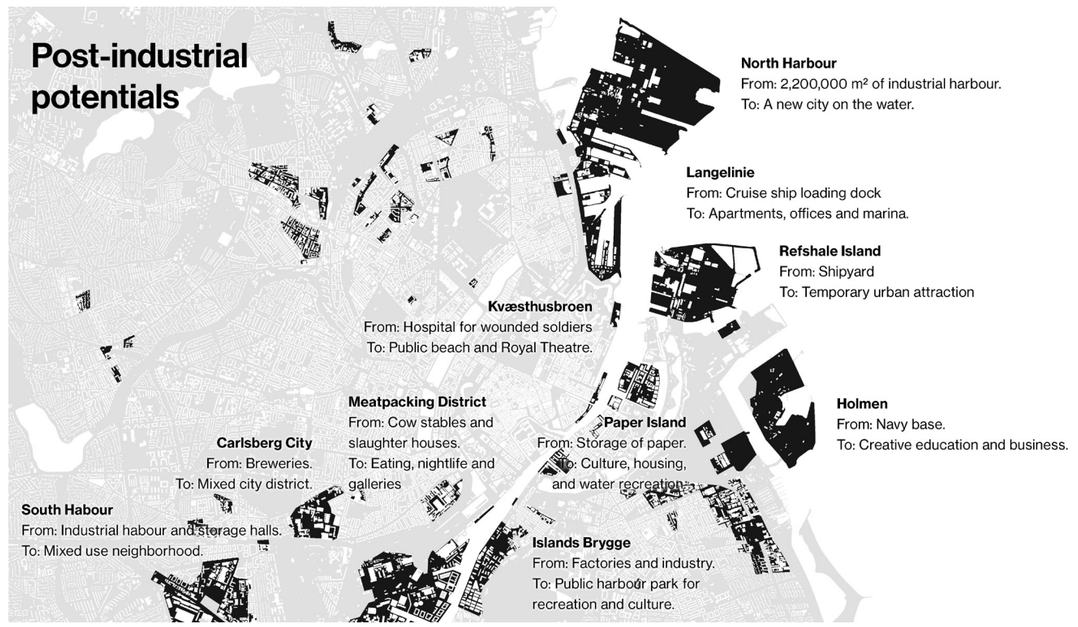
KEY ACTION: THE MUNICIPAL PLAN – A TOOL FOR STRATEGIC AND FLEXIBLE LONG-TERM VISION

The first municipal plan was approved by the state in 1989, marking a strategic shift in governance and decision-making towards a long-term vision to revitalise the city. Simultaneously the dissolution of the state's Metropolitan Plan Office and the regional planning authority (Hovedstadsrådet) transferred much of the decision-making power from the state to the municipality, giving the city far greater authority over its future development. This empowered Copenhagen to shape its own destiny to a much greater degree through a long-term, strategic, inclusive, investment-aware and iterative plan.

Essential to the plan was its integrated approach to urban development. It was not just a land-use plan, but a holistic framework that considered housing needs, economic development, environmental quality, and transport. The plan provided a reference point for coordinating cross-sectoral policies and aligning all urban initiatives, and set the framework for developing future policies and actions on urban form, transportation, housing, environment, and economic development. backed by a partnership-based governance models and aligned with financial tools.

Another key aspect of the municipal plan is that it provides a stable yet flexible framework for long-term planning. The plan spans a 12-year horizon, incorporating long-term thinking into all city policies, while also being revised every four years to respond promptly to new challenges or opportunities.

This ethos of collaboration, shared responsibility, a holistic vision for the city, and a flexible long term framework has shaped the future development of Copenhagen ever since, ensuring that urban development is carried out in close partnership with civic society, state agencies, private developers and public institutions.



Map of Copenhagen's post-industrial sites, some already developed, others underway, and some still prospective.
Map by COBE, from the book Urban Living Room (2016) Rights: COBE

KEY ACTION: REGIONAL EXPANSION (ØRES, ØRESUNDSBROEN, EXPANSION OF CPH AIRPORT)

Greater Copenhagen, a relatively small metropolitan region compared to many other European capitals, needed to address its lack of critical mass, a crucial factor in urban competitiveness. To do so, Copenhagen and Malmö established a cross-border partnership, forming the ØRES consortium to strengthen the Øresund Region's international profile, deepen commercial ties, promote commuting, and foster cultural and business exchange on both sides of the Sound. The most notable outcome was the decision to build the Øresund Bridge (Øresundsbroen), a fixed link between the two cities.

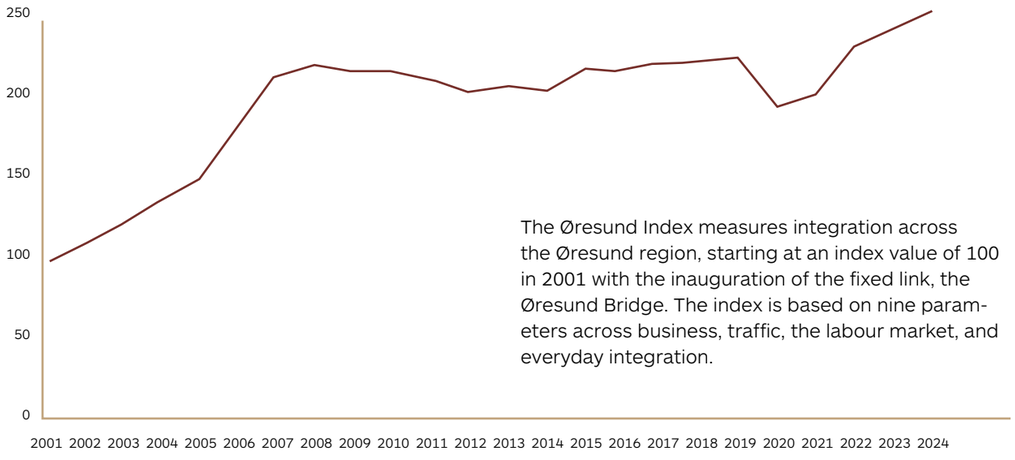
This new infrastructure included a direct connection from Malmö to Copenhagen Airport (Kastrup). The airport was expanded during the same period and became the new airport for SAS, taking over from the Stockholm airport. Major infrastructure projects accompanied the bridge on both shores. It also helped catalyse research and innovation hubs, financial collaborations (see the key action "City of Knowledge and Innovation"), the merger of Copenhagen Malmö Port, and an expanded housing market and critical mass across the Sound.

Labour market integration rose considerably after the bridge opened, driven primarily by commuting from Sweden to Denmark. New districts on the Swedish side continue to be developed, and Malmö's real estate market has become increasingly integrated with Greater Copenhagen. Proximity to Copenhagen Airport has helped attract major research facilities and companies to the region.[6] In parallel, efforts to establish Greater Copenhagen as an international player included the expansion and modernisation of Copenhagen Airport. SAS designated Copenhagen as its primary hub, reinforcing Kastrup's role as the region's gateway.

The fixed link between Copenhagen and Malmö was realised through a cross-national collaboration under Øresundsbro Konsortiet (1991). The bridge was financed through international market loans, with the two states sharing responsibility with creditors and receiving support from the EU TEN-T program. Debt service and financial returns are covered solely by road tolls and railway fees.[7]

Airport upgrades were financed by Københavns Lufthavne A/S (approximately DKK 6 billion in 1994 prices). During the 1990s, shares in Copenhagen Airports were listed and sold to private investors.[8]

The Øresund Index



The Øresund Index measures integration across the Øresund region, starting at an index value of 100 in 2001 with the inauguration of the fixed link, the Øresund Bridge. The index is based on nine parameters across business, traffic, the labour market, and everyday integration.

Data: ØRESUNDSINSTITUTTET. INTEGRATIONEN OVER ØRESUND – UDVIKLINGEN 2000 – 2025. (2025).

6,7. Global Infrastructure Hub Ltd & Ramboll. (2021, February). Connectivity across borders: Global practices for cross-border infrastructure projects.
8. Marfelt, B. (1994, December). Milliarder får vinger i Kastrup. Ingeniøren.

KEY ACTION: INFRASTRUCTURE GUIDED DEVELOPMENT AND LAND VALUE CAPTURE

In 1992, to increase competitiveness and attractiveness and to draw creative talent, Copenhagen put state-of-the-art infrastructure at the centre of its plan – the city decided to build a metro. The metro was not only about mobility; it was designed to attract residents and private investment, lift land values in underused areas, and generate tax revenue for continued development. It marked a new approach in which strategic investments and cross-sector partnerships became active tools for de-risking, driving growth, and creating opportunities.

A milestone in this development was the creation of an agency, a joint venture between the state and the municipality, through the Ørestad Act of 1992: Ørestadsselskabet (later restructured as By & Havn and Metroselskabet). The company, a publicly owned but commercially run entity, was tasked with developing the metro and the Ørestad district, linking key districts and enhancing access to the airport, thereby strengthening the city's appeal. The model allowed development to proceed in market terms, while public ownership ensured stability and long-term, holistic planning.

In brief, the partnership and land-value-capture model worked as follows: the state and city transferred public land, typically former industrial sites, to Copenhagen City & Port Development; the city rezoned the land, raising its value; the company borrowed against that value to fund the metro and other enabling infrastructure; and it then sold or leased plots to developers, using the proceeds to service the debt.[9]

These instruments soon shaped Copenhagen's broader urban strategy, extending far beyond transportation. The shift was clear from the start: under the Ørestad Act, two lines were routed through sparsely populated parts of Amager rather than along the dense Amagerbrogade corridor. This choice supported Ørestad's expansion strategy, enabled the development of new districts from Kløvermarken in the north to the airport in the south, while increasing land values along the corridor.

Orientkaj Metrostation by COBE
Rights: COBE | Photographer: Rasmus Hjortshøj

9. Katz, B., & Noring, L. (2017). The Copenhagen City and Port Development Corporation: A model for regenerating cities.

KEY ACTION: REVITALISATION OF COPENHAGEN HARBOUR

The transformation of Copenhagen's old industrial harbour stands as one of the city's most ambitious urban development projects. Building on the land value capture model first tested in Ørestad, the harbour project applied the same financial principles to a far broader urban agenda. It demonstrates how a holistic vision for the city can be realised through innovative governance, diverse partnerships, and carefully structured financial models.

At the heart of this process is By & Havn, a state- and municipally owned but independently operated development corporation, created through the merger of Ørestadsselskabet and the Port of Copenhagen. While By & Havn provides the strategic backbone, implementation is carried out through multiple structures and project-specific partnerships.

Large-scale redevelopment has often been organised as joint ventures between By & Havn and Danish institutional investors, particularly pension funds such as PensionDanmark, ATP Ejendomme, and PFA. In these arrangements, By & Havn typically contributes serviced land and planning expertise, while pension funds provide long-term capital and development capacity. This model spreads risk, ensures financial stability over decades-long build-outs, and enables the coordinated delivery of housing, offices, public spaces, and infrastructure in complex, multi-phase districts such as Nordhavn, Marmormolen, Kronløbsøen, and Fælledby.

To free up valuable waterfront space, the ports of Copenhagen and Malmö merged in 2001 to form Copenhagen Malmö Port (CMP), a Swedish company owned equally by By & Havn and the City of Malmö. This operational consolidation enabled large industrial port functions to be relocated, thereby opening up prime inner-harbour sites for urban development.

Copenhagen Industrial Habour 1955
Rights: Københavns Stadsarkiv | Photographer: Mogens Falk-Sørensen

The harbour vision extended beyond real estate. It sought to reclaim the water itself as a public asset, a clean, accessible, and vibrant blue space that could enhance quality of life and make Copenhagen more attractive for residents, businesses, and investors alike. This vision drove an ambitious environmental program in the 1990s, in which the municipality and utility companies partnered to clean the harbour. Wastewater systems were upgraded, underground detention basins constructed, and pollution sources eliminated. By 1999, the harbour was declared clean enough for swimming.

What followed was a new era of public access and recreational infrastructure. The first harbour bath opened at Islands Brygge in 2002, setting the tone for a series of bathing facilities, promenades, and the Havneringen, a continuous waterfront route for pedestrians and cyclists. Bridges, public squares, and parks were added, while earlier cultural investments were leveraged to strengthen the harbour's identity. The creation of cultural institutions has played a catalytic role, deliberately located along the waterfront to activate underused areas and anchor new patterns of urban life. Together with these cultural venues, the public realm has been stitched into the city fabric, making the harbour both a destination and an integral part of daily urban life.

Crucially, these investments in the public realm were never viewed merely as social or environmental amenities; they were strategic tools for economic development. Clean water, accessible public spaces, active mobility routes, and cultural landmarks increase the desirability of surrounding districts, attract private investment, and reduce market risk. In this way, liveability has been assigned tangible economic value, becoming both a competitive advantage and a de-risking strategy for long-term urban transformation.

Krøyers plads.
By Cobe og Vilhelm Lauritzen Architects

KEY ACTION: BUILDING CULTURAL CAPACITY (CPH CULTURE CAPITAL 1996)

Recognising the value of creative talent and cultural capital in strengthening urban competitiveness sparked a growing interest in expanding Copenhagen's cultural sector. A strong cultural foundation was seen not only as a source of attraction but also as a driver of economic and social vitality.

One of the earliest and most influential steps was Copenhagen's designation as European Capital of Culture in 1996. The initiative became a catalyst for rebranding the city, elevating its cultural profile, and expanding its cultural production capabilities. Oversight was placed with a dedicated agency, Kultursekretariatet, which coordinated an ambitious program supported by substantial investments from the state, municipality, and private partners. Funding covered both permanent and temporary projects, fostering new cross-sector partnerships among public institutions, municipalities, investors, cultural organisations, and local communities. The year's success lay not just in new museums and venues but in the networks, collaborations, and civic engagement it inspired.

In parallel, the role of culture was underscored by the 2000 report Danmarks Kreative Potentiale, published by the Ministry of Culture and the Ministry of Business. The report recognised culture as a driver of competitiveness and called for stronger alliances between the creative and commercial sectors. A trend has been visible in Copenhagen's planning strategies since the early 1990s.[10]

This period firmly positioned culture as a central pillar of Copenhagen's urban development. In the years that followed, the city continued to invest in major cultural landmarks such as Skuespilhuset and Operaen. At the same time, the very definition of culture began to broaden, encompassing not only the arts but also innovation, design, and city-making as shared civic practices.

Urban festivals became a vivid expression of this shift, helping transform Copenhagen from a city of the arts to a city where culture is also about how people live together. The Sharing Copenhagen initiative in 2014 reinforced this perspective, presenting the city as an open laboratory for sustainable urban solutions through 90 partnerships and over 240 events that weaved together culture, policy, and design. Today, it continues as a public grant program supporting green, social, and cultural initiatives driven by civil society.

The creation of BLOXHUB in 2016 further institutionalised this "second wave" of culture. A partnership between the state, the municipality, and philanthropic actors, BLOXHUB formalised cross-sector urban innovation as part of Copenhagen's cultural offering, creating a platform where members and the public collaborate on shaping the city's future.

Ny Carlsberg Glyptotek – extension in the left upper courtyard by Henning Larsen.
Inaugurated during Copenhagen's year as European Capital of Culture in 1996
Rights: Henning Larsen | Photographer: Rasmus Hjortshøj

KEY ACTION: BOLSTERING THE KNOWLEDGE AND INNOVATION SECTOR

Another key element in the competitiveness of cities – also embedded in the concept of K-regions – is the role of knowledge and a strong innovation sector, along with the ability to attract and retain talent and researchers, as well as provide robust institutions. Today, Copenhagen ranks among the highest-performing innovation cities in several international indexes. This position has been achieved through a variety of partnerships, policies, and grants designed to strengthen specific innovation sectors and promote closer collaboration between countries, institutions, industry, and the city.

The establishment of the Øresund Region and the later inauguration of the Øresund Bridge incentivised new collaboration structures across Copenhagen and Skåne. These developments paved the way for partnerships that expanded capacity and critical mass within the research and development sector. One such initiative was Øresund University, a consortium of twelve universities across the Øresund, working to integrate education systems between Denmark and Sweden.

Another major initiative was the establishment of Medicon Valley, a non-profit organisation now known as Medicon Valley Alliance. The alliance aims to increase competitiveness, attract talent and companies, and boost both innovation and commercialisation in the life sciences sector by pooling strengths across the Øresund. It focuses on collaboration between universities, hospitals, and industry, following the so-called triple helix model. Medicon Valley has been highly successful in establishing itself as the leading life sciences cluster in the European Union.

Medicon Valley effectively illustrates how collaborative structures between sectors, supported by policymaking, public-private partnerships, and regional integration, can create an innovation powerhouse. Grants and infrastructure have reinforced public innovation policies and mission-driven policymaking in both Denmark and Sweden. At the same time, large firms have contributed funding, expertise, and spin-offs that sustain the cluster and attract foreign talent. The attraction of financial investments, research centres, innovation hubs, and startups has been crucial in drawing R&D to Copenhagen and has played a decisive role in the development of the Danish R&D system.

On a more local scale, the launch of Copenhagen Science City (later expanded) brought together the University of Copenhagen's North Campus, Rigshospitalet, COBIS, and other bioscience hubs in nearby science parks. The goal was to break down silos by clustering hospitals, academia, and companies in proximity to enhance collaboration.

A substantial part of the innovation sector is the state's investment into state-of-the-art R&D institutions. Denmark ranks second in the EU (after Luxembourg) in government R&D spending per capita – a clear and sustained signal of public financing for universities, institutes, and mission-driven initiatives. Another cornerstone is the state's provision of risk capital through EIFO, the state-owned export and investment fund, which acts as a de-risking mechanism and provides loans and guarantees for companies selling across borders. This is complemented by major institutional funding and grants, especially from the Novo Nordisk Foundation.

The results of these investments are clearly visible in the growth of Denmark's life science ecosystem. Eastern Denmark now hosts approximately 700 companies and 58,000 employees. In 2023, Denmark exported EUR 23 billion worth of life science goods, accounting for almost 20% of its total exports. Medicon Valley's ecosystem alone has attracted EUR 6.4 billion in investments, underscoring the deep capital commitment to the sector.

10. Kulturministeriet & Erhvervsministeriet. (2000). Danmarks kreative potentiale – Kultur- og erhvervspolitisk redegørelse.

KEY ACTION: URBAN RENEWAL
(HOLISTIC URBAN RENEWAL)

As the city progressed with its urban renewal (Områdefornyelse) efforts, the legislative frameworks gradually shifted focus from the physical upgrading of individual buildings to a more integrated approach centred on the renewal of entire neighbourhoods and public spaces. The frameworks increasingly emphasised reinforcing synergies between the various actors involved and promoting partnerships among civic, institutional, private, and governmental stakeholders. The mandate and focus of urban renewal efforts also became more dynamic, adapting to changing contexts and evolving in response to emerging needs.

The 1998 "helhedsorienteret byfornyelse" law further advanced this integrated approach. As public funding for physical upgrades and building renovations declined, the shift encouraged municipalities to focus on their role as mediators between involved partners and to rely on combined public and private funding through partnerships, supporting a more holistic approach to urban development. Over the following years, this helped create models for how private capital could be funnelled into renewal efforts and how municipalities could take on a coordinating and enabling role.

Building on this, the 1999 "Fremtidens By" policy marked the end of the Kvarterløft era, shifting priorities toward neighbourhood-wide renewal and strengthening social cohesion, particularly in vulnerable areas. It focused on business conditions, democratic engagement, social housing, spatial planning, and overall urban governance.

A strategic restructuring in 2001 decentralised urban policy from the state to municipalities, transferring planning responsibilities to different ministries and emphasising composite financing models. This led to increased reliance on private funding through public-private partnerships and direct contributions from property owners and residents.

Sønder boulevard before renewal

In 2003, a revision of Byfornyelsesloven separated urban renewal (områdefornyelse) from building renewal (bygningsfornyelse), reinforcing the importance of synergy between actors. From then on, municipal renewal strategies focused on planning and participation, public space upgrades, social and cultural infrastructure, and traffic improvements. Many projects, including social housing initiatives like "Byer for Alle," were implemented through public-private partnerships. [11]

SPILLOVER EFFECT:

Between 2006 and 2011, for every 1 krone of public investment in urban renewal in cities, private homeowners invested 2.4 kroner. The private investments supported not only building restoration but also local businesses and neighborhood amenities.[12]

For every
1.0 kr.
Public investment

2.4 kr.
Private homeowner investment

Sønder boulevard renewal by SLA
Rights: SLA | Photographer: Magnus Kitten

11. Ministeriet for By, Bolig og Landdistrikter. (2013). Byfornyelsesatlas DK2.
12. Jensen, J. O. (2015). Private følgeinvesteringer ved områdefornyelse. Ministeriet for By, Bolig og Landdistrikter.

Cykelslangen by Dissing+Weitling
Photographer: Rasmus Hjortshøj

KEY ACTION: STRATEGY: A METROPOLIS FOR PEOPLE (METROPOL FOR MENNESKER).

The focus on human-centred development has been an integral part of Copenhagen's urban transformation since the 1990s. Key efforts, such as urban renewal, harbour cleaning, the expansion of cycling and pedestrian-friendly infrastructure, and the revitalisation of public spaces, gradually positioned Copenhagen as a city recognised for its commitment to people-oriented urban planning. These overlapping policies, frameworks, and initiatives laid the groundwork for Copenhagen to be named the world's most liveable city by Monocle magazine's Liveability Index in 2008.

The city's first explicit liveability strategy was introduced the following year. The urban strategy A Metropolis for People marked a significant milestone in Copenhagen's planning history. It was developed through a collaboration between the architecture and urban design office Gehl and the City of Copenhagen. The strategy was inspired by the growing influence of international liveability indexes and their emerging metrics. It introduced a new urban life policy with the explicit goal of making Copenhagen the world's most liveable city. Building on earlier investments in public space and cycling infrastructure, it used new and innovative city data and urban life measurements to articulate a vision for strengthening and diversifying public life.

It envisioned a city for all – one that encouraged pedestrian movement, invited people to linger and engage, and transformed the urban environment into a stage for events, markets, and everyday interaction.

To support this ambition, the city began publishing annual Urban Life Accounts in collaboration with the Technical University of Denmark (DTU). These reports tracked key indicators, identified areas that needed improvement, and provided insights into evolving patterns of public life. The accounts became an essential tool for guiding future planning and the retrofitting of urban spaces to support vibrant, inclusive, and coherent public life.

Many of the initiatives that shape Copenhagen's liveability are closely intertwined with the city's broader sustainability agenda. A particularly influential step in aligning these priorities was the 2007 Eco-Metropolis plan, which integrated environmental goals with the city's vision for liveability. This trajectory was further reinforced by the 2012 Climate Plan, which expanded Copenhagen's smart city efforts in support of a resilient, low-carbon urban future.

More Urban life for all

80%

of Copenhageners will be satisfied with the opportunities they have for taking part in urban life.

More people to walk more

20%

of incresed amount of pedestrian traffic

More people to stay longer

20%

More time spent in urban space than they do today

CLIMATE ACTION

The continuous need for adaptation and action toward more sustainable urban environments and construction has been the platform on which much innovation has been built. This laid the foundation for comprehensive climate action, advancing both operational and embodied decarbonization through green mobility, renewable energy production, energy-efficient buildings, and low-carbon materials.

Simultaneously, the need for climate adaptation has also served as a lever to advance the liveability agenda. By integrating liveability, inclusivity, and climate action, Copenhagen has become not only more resilient but also more competitive, attracting residents, businesses, and investment, all while pushing toward a more sustainable urban environment. The idea of intertwining the social and environmental agendas is one of the keys to Copenhagen's development.

The Copenhagen Climate Plan laid the foundation for comprehensive climate action, advancing both operational and embodied decarbonization through green mobility, renewable energy production, energy-efficient buildings, and low-carbon materials. The plan also addressed climate resilience with projects like Skt. Kjelds Plads and Enghaveparken, as well as broader measures for mitigating storm surges and sea-level rise.

KEY ACTION: 2007 PLAN: ECO METROPOLIS OUR VISION OF COPENHAGEN 2015

In 2007, the City of Copenhagen launched its ambitious vision, Copenhagen Eco Metropolis: Our Vision for Copenhagen 2015. The plan aimed to make Copenhagen the environmental capital of Europe and the world's leading eco-metropolis by 2015. It was not only an effort to advance the city's sustainability agenda, but also a strategic move to embed environmental concerns into Copenhagen's culture, urban life, and identity.

As the vision stated:

> *"The world will come to Copenhagen to see how to create modern environmental policies in the 21st century. Copenhagen will become a capital where visitors experience a green and safe urban environment and return home with an understanding of how environmental concerns can, in practice, support dynamic urban development."*

In short, the plan utilised the green agenda as a lever to enhance the city's liveability, demonstrating that a capital can thrive because of its environmental ambition, not despite it.

The Eco-Metropolis strategy outlined a holistic and integrated approach with multiple objectives. One key target was to reduce carbon dioxide emissions by 20 % between 2005 and 2015. Achieving this required coordinated efforts across mobility, energy, construction, urban development, and public engagement. It addressed a wide range of interrelated challenges tied to both sustainability and liveability.

A primary objective was to position Copenhagen as a green and blue capital. By 2015, the goal was for 90 % of residents to be within a 15-minute walk of a park, beach, or swimming area, driving the transformation of urban spaces into pocket parks and the creation of new recreational zones, such as beaches and harbour baths.

Mobility was another core pillar. The plan aimed for 50 % of all commutes to work or school to be made by bicycle, and to reduce serious cycling injuries. Other actions included retrofitting municipal buildings to cut energy use, addressing air and noise pollution, and promoting ecological solutions.

While the original targets and indicators have since evolved, the Eco-Metropolis vision had a lasting impact. It was integrated into Copenhagen's municipal planning and helped align cross-agency efforts under a unified strategy. This alignment turned the green, decarbonised, and liveable agenda into a core driver of the city's ongoing development.

KEY ACTION: CLIMATE PLAN 2012 (CPH 2025)

Following the Eco-Metropolis vision, the City of Copenhagen, in close collaboration with the state, launched a more ambitious and comprehensive climate plan. The goal was to make Copenhagen the world's first carbon-neutral city by 2025. This marked a significant shift from the earlier 2015 target of reducing emissions by 20 % to aiming for an 80 % reduction.

Like the previous plan, this new strategy aimed to achieve green growth by showing how the green transition could align with economic development and improved urban quality of life. It specifically sought to leverage decarbonization efforts to create jobs, drive innovation within the sector, improve public health, and enhance the overall quality of the urban environment. The plan was structured around four main pillars or focus areas, each requiring collaboration across sectors and shared responsibility.

To achieve this goal, nearly all actors involved in the urban planning and development sectors had to collaborate. Policy frameworks were created to align efforts with the broader climate targets. The city utilised its regulatory and coordinating powers to guide the process, for example, by establishing new municipal building codes and standards, and by funding a range of pilot projects.

The municipality also implemented strict energy standards for its own buildings, aiming to reduce energy consumption by 40 % through retrofitting and the adoption of smart energy solutions. This was intended to lead by example and to position municipal buildings as models for clean-tech innovation.

One of the key initiatives was the municipality-funded EnergyLab Nordhavn, developed in collaboration with DTU and other research and educational institutions. It served as a living lab for testing new technologies, bridging innovation and industry, and enabling the commercialisation of clean solutions.

Another significant initiative was the launch of Energispring, a partnership that brought together 58 private building owners, developers, and housing associations, covering approximately 39 % of Copenhagen's building stock. The platform facilitated knowledge and data sharing while encouraging participants to commit to energy savings.

In addition to supporting the goal of carbon neutrality, the climate strategy also increased demand for clean-tech solutions. It established Copenhagen as a testbed for new energy and smart technologies, strengthened the innovation ecosystem, and boosted the commercialisation of clean-tech products and services. In doing so, it helped drive growth in what is now referred to as the green economy.

A key factor in the success of the green transition was the close collaboration between the state and the municipality. Significant decarbonization efforts, such as the transformation of the power grid, required coordination across multiple levels of government. The BIO4 project at Amagerforbrændingen was made possible through municipal funding, provided via HOFOR's capital budget, and supported by district heating customers. The Avedøre power plant was financed through national funding, and the Amager Bakke project was also part of this coordinated effort.

Regulatory frameworks played a crucial role in enabling these initiatives. Denmark's Mineral Oil Tax and CO_2 Tax Act, for example, exempts biomass from both energy and carbon taxes. Tariff structures also contributed to making renewable energy solutions financially feasible.

In line with the launch of the 2012 climate plan, the Heating Supply Act was adopted to support the use of biomass, geothermal energy, and waste heat as primary low-carbon heat sources. Many of the large-scale projects realised in the late 2010s had already been set in motion through earlier national policies. Long-term energy agreements, the Heating Supply Act, and tax exemptions provided a stable policy foundation for advancing the transition.

Grønningen-Bispeparken Climate-park by SLA
Rights: SLA | Photographer: Mikkel Eye

KEY ACTION: CLIMATE ADAPTATION (CPH 2025)

As an overarching strategy to address the warmer and wetter climate that Copenhagen is facing, the city launched its Climate Adaptation Strategy in 2011. This strategy recognised the threats posed by cloudbursts, rising sea levels, and increasing groundwater levels as significant risks to urban resilience.

The strategy was soon followed by the more targeted Cloudburst Management Plan in 2012, developed in response to a devastating cloudburst in 2011. That event underscored the urgency of climate adaptation and demonstrated that the time to act was now. It highlighted the need for policies and frameworks aimed at strengthening the city's ability to withstand future cloudbursts. The event catalysed necessary changes, prompting immediate implementation and the launch of projects to address the growing risk of urban flooding.

The speed of implementation was made possible through the development of quickly developed frameworks, legislative changes, and public-private partnerships. One of the most prominent partnerships was between the Copenhagen utility service company HOFOR, the private consultancy Ramboll, and the Municipality of Copenhagen.

Ramboll served as the primary private partner in developing the Cloudburst Plan, working closely with the municipality and utility services.

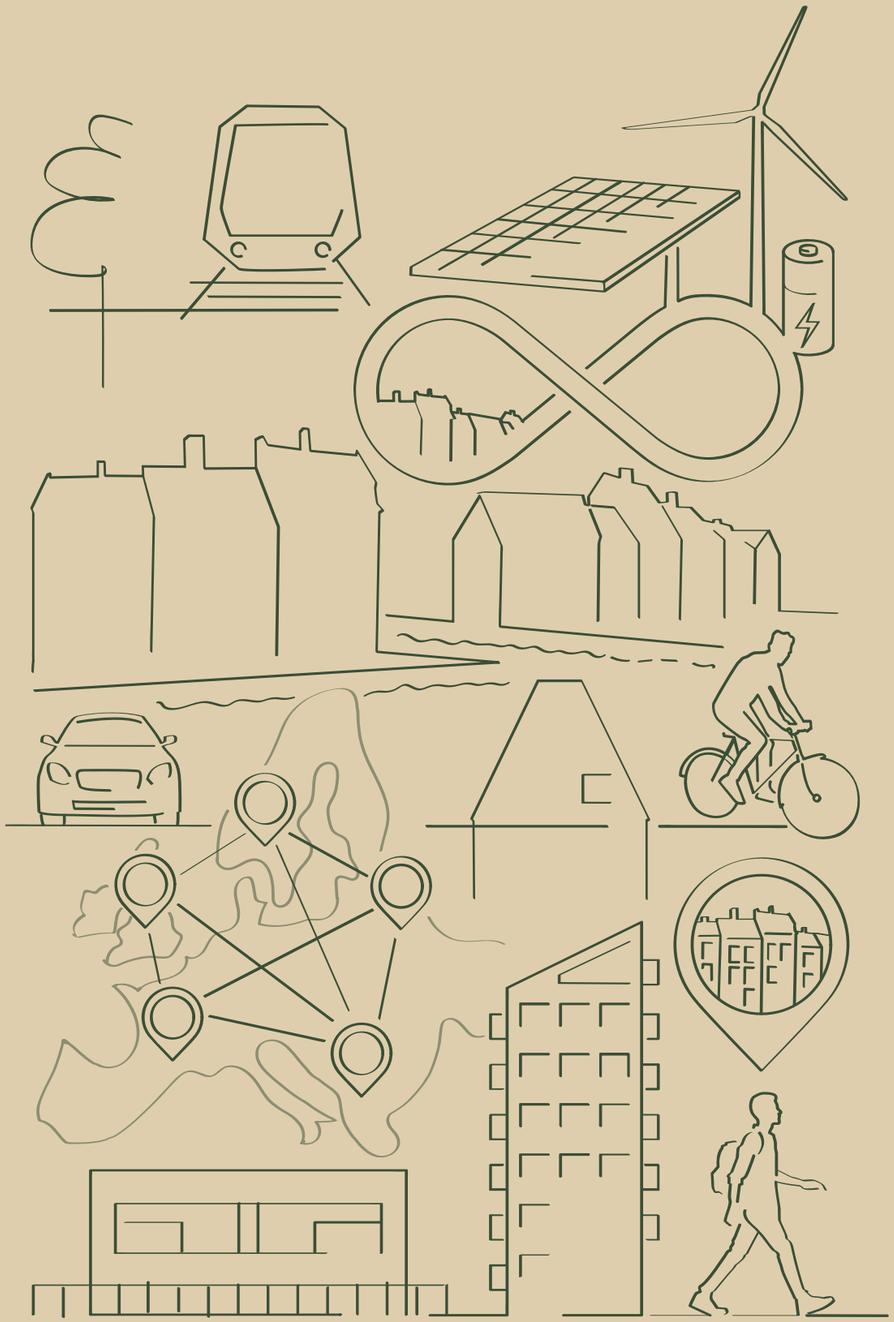
Consultants, engineers, and city officials co-created solutions, with Ramboll tasked with organising stakeholders across agencies, sectors, and municipalities for integrated planning and implementation. A process now known as the "Cloudburst Formula." This model became an innovative example of collaborative climate adaptation planning. This collaborative model relies on co-financing through municipal taxes and investments from utility companies, enabling shared responsibility and integrated solutions across municipal and utility systems.[13]

Another critical step in realising the Cloudburst Plan was the needed change in legislative frameworks and the amendment of Forsyningsloven (the Danish Utility Act). Due to legal constraints, Copenhagen's primary utility service, HOFOR, initially faced challenges in financing above-ground adaptation projects.

The regulatory shift was a game-changer, enabling HOFOR to utilise revenue from water usage in combination with municipal tax funding to finance new types of adaptation projects. This change created the financial foundation for HOFOR to use both grey and blue-green solutions for climate adaptation, such as rainwater basins, stormwater boulevards, and nature-based solutions, including blue and green infrastructure that simultaneously add public and ecological value to adaptation projects.

Since 2011, the city has initiated around 300 blue-green infrastructure projects and major cloudburst tunnels, transforming streets, parks, and courtyards into multifunctional spaces that not only manage rainwater but also provide recreational and ecological value. Projects like Tåsinge Plads, Lindevangsparken, Enghaveparken, and Klimakarré illustrate how cross-sector partnerships can turn climate adaptation into opportunities for urban regeneration and community development.

13. American Society of Landscape Architects. (2016). The Copenhagen Cloudburst Formula: A strategic process for planning and designing blue-green interventions. ASLA Professional Awards.



THE COPENHAGEN WAY FORWARD

Acting on Today's Challenges to Secure a Resilient and Competitive Future for Europe

Copenhagen's transformation is both impressive and instructive. The Copenhagen Way shows what is possible when bold decisions are coupled with strong cross-sector partnerships and when vision is paired with pragmatism. This is what happens when a city translates challenges and shifting global dynamics into tangible plans, anchored in ambitious targets and actionable programmes, and pursues them through coherent, long-term governance. By accepting that reality is complex and that transformation requires innovative, cross-sector governance, linking energy, mobility, buildings, water, citizens, and regional cooperation, Copenhagen has become a reliable proving ground for solutions ahead of a wider roll-out.

Copenhagen is clear proof of concept: cities can be operationalised as drivers for innovation and catalysts for societal change. Cities that are open to experimentation, practice inclusive governance and foster cross-sector collaboration can deliver tangible benefits across the urban ecosystem and turn challenges into competitive advantages at scale.

However, the city also faces harsh realities and cannot continue to repeat the same playbook. Like other European cities, it must innovate to confront climate pressures, soaring housing costs, spatial scarcity, overconsumption, competitiveness gaps, and widening social divides. Some tools that helped in past crises now risk amplifying new ones if left unchanged. For example, the land-value capture model, which once accelerated resilient transformation, is now straining Copenhagen's social and ecological fabric.

The task now is to sustain ambition, update the tools and innovate to meet future challenges. By integrating affordability, decarbonization and social cohesion while maintaining economic prosperity, the city can continue to lead as an example of urban resilience in Europe. This will require deeper collaboration, action at the right scale and the same courage and openness that made Copenhagen's transformation possible in the first place.

To open up the opportunity space and seize the potential of cities to ensure a thriving, resilient Europe, we present five key scenarios that could help shape the future of the European resilient town.

CATCHING UP ON SCALE: LEVERAGING EUROPE'S CITIES

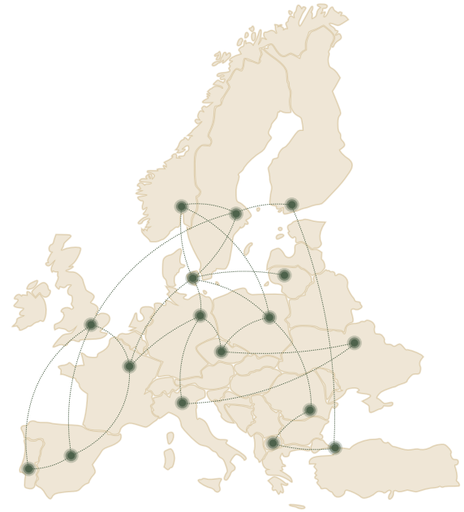
WHAT IF EUROPE COULD TURN ITS CITIES' DISCOVERIES, CIRCULAR ECONOMY, AND DIVERSE CAPABILITIES INTO A UNIFIED SYSTEM OF INNOVATION, JOBS, AND RESILIENCE?

What if discoveries in one European city could scale instantly across the continent? What if circularity were not an environmental side project, but a shared economic model that keeps resources in use, cuts costs, and creates jobs across all skill levels? What if Europe's diversity became a strength rather than a barrier, as different capabilities combined into one system of innovation and resilience?

This is the opportunity before us. Europe's weakness is not that its cities compete, but that they remain fragmented. Talent, research, and capital too often stay confined within national borders. By connecting across them, Europe could set a new global standard of prosperity: competitive, sustainable, and inclusive.

The purpose is clear. Acting alone, even Europe's most advanced cities cannot match the scale of global hubs. Acting together, they could pool strengths across borders, circulate talent, and transform diversity into advantage. Past examples demonstrate the potential: the Øresund Bridge, which links Copenhagen and Malmö, has created a single labour market and a joint innovation space, while the Fehmarn Belt tunnel promises to extend this integration to Hamburg and beyond.

The next leap is the Y Innovation Corridor. By linking the homes of Hamburg, Copenhagen, Malmö, Gothenburg, Oslo, and Stockholm to more than 14 million people, Northern Europe could operate as one integrated innovation region. High-speed rail, shared energy networks, and digital backbones would fuse labour markets and supply chains. Circular material flows across borders would reduce costs, decrease dependency on imports, and make resource resilience a competitive advantage.



European Union

WHY: EUROPE'S CITIES MUST CONNECT TO COMPETE AND WIN TOGETHER

Cities are Europe's most powerful engines of innovation and growth. They are where people, ideas, and capital converge; where research meets entrepreneurship; and where cultural and technological breakthroughs emerge.

Yet they remain underleveraged in the continent's competitiveness strategy. The Draghi report underscores this: the EU faces an innovation gap, including a mid-tech gap and broader shortfalls, with too few high-tech sectors reaching global scale and persistent difficulty in commercialising research and scaling R&D into world-class products and firms. Much of this is due to heavy regulatory burdens and the bureaucracies created by a patchwork of national regulatory frameworks, which slow processes and impose high costs.

While each city cultivates its own strengths, from Copenhagen's circular innovation to Hamburg's logistics and Barcelona's digital creativity, the real opportunity lies in connecting these strengths across borders. Acting alone, even the most advanced cities struggle to match the scale and dynamism of innovation hubs in the United States, China and India. Acting together, European cities could form networks capable of rivalling or surpassing them, generating the critical mass, diversity of thought, and market scale needed to drive global competitiveness and deliver European resilience.

The science of cities shows why this matters. When cities grow, they do not scale linearly: doubling a city's size leads to roughly a 25% reduction in per-capita resource use, energy, water, and raw materials, while generating about 15% more outputs,[14] such as patents, innovations, and economic activity. This phenomenon, which West refers to as "urban metabolism," explains why thriving cities fuel thriving nations.[15]

This is not just theory. Europe has already seen glimpses of what this could look like. The Øresund Bridge, which links Copenhagen and Malmö, along with partnerships between businesses and institutions on both sides of the strait, has transformed southern Scandinavia into a single labour market. Daily cross-border commuting surged from about 3,300 in 2000 to 18,000 by 2010, boosting regional GDP, expanding access to talent, and sparking joint research and business ventures. Similarly, the forthcoming Fehmern Belt tunnel between Denmark and Germany promises to deepen ties and extend these benefits into a broader northern European network.

14. Bettencourt, L. M. A., Lobo, J., Helbing, D., Kühnert, C., & West, G. B. (2007, April). Growth, innovation, scaling, and the pace of life in cities. Proceedings of the National Academy of Sciences.
15. West, G. B. (2017). Scale: The universal laws of growth, innovation, sustainability, and the pace of life in organisms, cities, economies, and companies. Penguin Press.

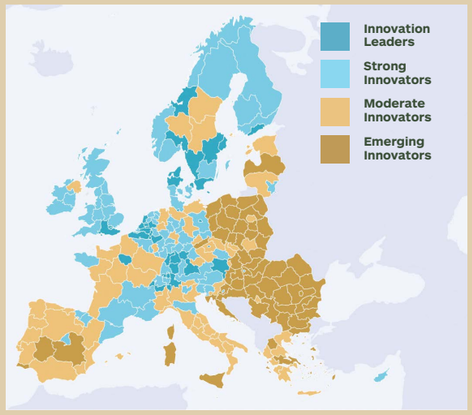
However, much still needs to be done in Copenhagen and other European cities to unlock innovation, as different policy environments across borders create friction, often resulting in mismatched infrastructure and fragmented coordination on green and digital transitions.

Copenhagen's transformation illustrates this potential. In just a few decades, it moved from near bankruptcy to becoming one of Europe's most liveable and competitive cities. An example of how urban governance, innovation, and public–private collaboration can unlock economic, social, and environmental vitality. But past success does not guarantee future advantage. Europe faces intensifying competition from the United States and Asia, a fragmented single market, and accelerating technological and environmental pressures.

To stay competitive, Europe must rethink how its cities work together. They must connect across borders to reach critical mass, broaden the diversity of thought, and scale breakthroughs faster. Stronger cross-city collaboration can turn fragmented strengths into a continental advantage, ensuring that ideas developed in one city can quickly benefit the whole union.

This chapter examines how Europe can utilise its cities as centres of R&D, knowledge, and human capital to drive competitiveness in the decades ahead. It argues that urban innovation, if matched with regulatory alignment and deeper cohesion, can transform today's challenges into engines of growth and resilience for Europe as a whole. To leverage our cities and drive innovation to increase competitiveness and resilience, we must ensure scale. Therefore, before diving into the specific example of cities as drivers of circular innovation, we must first address the opportunity to structure the European region toward achieving scale.

EUROPEAN INNOVATION SCOREBOARD



This map from the European Innovation Scoreboard shows that innovation in Europe is intensely concentrated in cities and metropolitan regions. Darker areas mark higher innovation performance, and it is clear that urban hubs like Paris, Madrid, or Copenhagen significantly outperform their national averages. Innovation begins in cities, where they serve as the drivers of talent, research, and entrepreneurial activity. At the same time, the map reveals significant differences across Europe's urban regions: while Northern cities, such as Copenhagen, perform at the top, many other metropolitan areas still lag. This makes the case for stronger knowledge exchange and for Copenhagen to share its lessons as a leading urban innovator.

https://projects.research-and-innovation.ec.europa.eu/en/statistics/performance-indicators/european-innovation-scoreboard/eis#/eis

UNLOCK THE SCALE NECESSARY TO DRIVE COMPETITIVENESS

Innovation, especially the commercialisation and its implementation at scale, moving from pilots to a new norm, requires structural support. Europe already has several levers to drive and structure scale, from aligning regulations to deliver on the single market, seizing the potential of the Industrial Green Deal, and aligning investments and collaborations across cities through innovation corridors. Here are key actions that could be utilised today to ensure increased European competitiveness and resilience.

The Y Innovation Corridor: Scaling through regional integration

Thinking at a regional scale is essential if Europe is to remain competitive, sustainable, and deeply connected. STRING Megaregion, a cross-border political partnership, has already demonstrated how cross-border collaboration can unite Hamburg, Copenhagen, Malmö, Gothenburg, and Oslo in a shared vision for high-speed, green transportation, the "Scandinavian 8 Million City."[16] But this is only the beginning. By extending this corridor to include Stockholm, a powerhouse for innovation and a key hub for Scandinavian cooperation, we can shape a new "Y Region." This expanded network, with its distinctive Y-shaped geography, has the potential to bind Northern Europe's most influential cities into a single, integrated innovation corridor.

A connected Northern Europe

The Y Region would unite over 14 million people and some of Europe's most dynamic urban economies into a shared ecosystem. Imagine Northern Europe not as isolated hubs, but as one integrated innovation corridor, physically connected through high-speed rail and projects like the Fehmarn Belt Link, digitally linked by advanced networks, and powered by coordinated energy systems. With aligned regulations, investment frameworks, and cross-border research partnerships, this corridor could pool talent, accelerate commercialisation, and scale green and digital solutions at a pace that no single city could achieve alone.

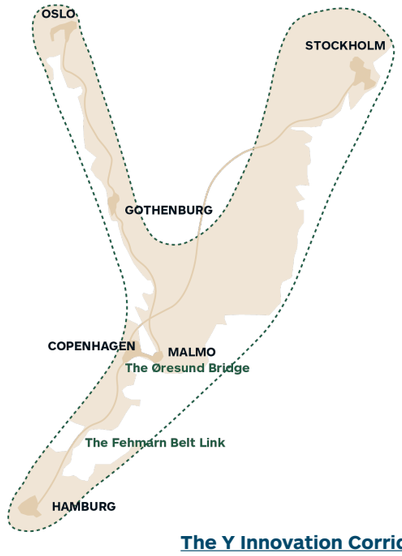
16. STRING. (2019, September). The Scandinavian 8 Million City.

Europe's next competitive edge

Such a megaregion would rival the United States and Asia while defining a distinctly European model of competitiveness, sustainability, liveability, and inclusivity. It would accumulate the critical mass to accelerate the green transition, enhance global market presence, and foster a shared European identity built on collaboration rather than competition.

If Europe's cities embrace this shift from isolated urban champions to a connected regional network, the benefits would be transformative. Innovation would spread faster, talent would circulate more freely, and economic growth would reach a broader range of communities. Physical links would become cultural and economic bridges, binding the Union together, not just through infrastructure, but through a shared vision.

Copenhagen's success shows what one city can achieve. The next frontier is unlocking what Europe's cities can accomplish together. The Y Innovation Corridor is our chance to realise that potential.



The Y Innovation Corridor

To harness the innovative power of Europe's cities and drive continental competitiveness, Europe must align its greatest strengths, the Single Market, its research base, and public-private collaboration, into a coherent system that connects discovery to delivery and scales it up.

A cross-border pathway from discovery to scale

Europe's research base is world-class, yet ideas stall on the way to market. Two persistent gaps remain: the impact gap, which refers to the difficulty of turning discoveries into products and services, and the champion gap, which refers to the difficulty of scaling firms into global leaders. Both reflect a common problem: too much friction between discovery and scale.

The fix is a single pathway that aligns finance, demand, talent, and governance across borders.

1. Finance and demand must pull in the same direction. Patient capital and risk-sharing facilities should target firms that are ready to scale across regions. Shared procurement pipelines should create visible markets, allowing innovators to plan their investments effectively. When six cities buy to the same standard, a real market appears overnight.

2. Talent and research must be able to move freely. Joint appointments, shared labs, and mobility programmes should make it normal for teams to work across institutions and borders. Horizon Europe belongs here as connective tissue, linking universities, firms, and cities into projects that run from proof of concept to first customers.

3. Governance must evolve. Openness to new models of cross-border governance is essential. Joint authorities can coordinate standards, permitting, and investment where benefits and risks cross borders. Recent analysis shows that such bodies reduce overhead and capture economies of scale. The y corridor is the right place to prove these models in practice. It can test corridor-wide regulatory sandboxes, standard sustainability documentation, and shared approval pilots, then lift what works to the Union.

The single market: Align rules to reduce friction

Europe's ultimate platform for scale is the Single Market. Introduced in 1993, it was designed to enable the free flow of goods, services, people, and capital, and has delivered significant economic gains. It remains the backbone of European integration.

Yet its potential to drive innovation has never been fully realised. For researchers and entrepreneurs, the Single Market is not truly a single market. Instead of one system, they face a patchwork of national approval regimes. A company that wants to launch a new solution must often apply 27 times. This duplication delays market entry, increases costs, and undermines competitiveness.

Closing the innovation gap requires Europe to make the Single Market live up to its promise. That means establishing EU-wide approval pathways for priority sectors, harmonising sustainability standards, and ensuring interoperability of data systems. Without these reforms, the continent will remain a leader in discovery but a follower in delivery.

> *"Denmark cannot do this alone. Nordic and European collaboration is essential."*
>
> Majbritt Skov, Deloitte Economics

Her point applies to all member states: without alignment, Europe's innovation potential will remain trapped in silos, unable to scale.

Circularity and the green transition: scaling Europe's distinct advantage

The entire chapter argues that Europe must achieve scale through regional innovation corridors, the single market, and a single pathway from discovery to delivery. The green and circular transition is where this logic comes into its sharpest focus.

CASE: THE FEHMARN BELT LINK

https://www.sn.dk/art578337/ringsted-kommune/erhverv/kamp-om-grunde-er-begyndt-femern-forbindelsen-varsler-erhvervsboom/

The upcoming Fehmarn Belt tunnel promises to extend the benefits of the Oresundsbroen to link Copenhagen and Hamburg directly, enhancing mobility, trade, and supply chains. Beyond boosting investment and economic growth, such projects strengthen European identity by physically and symbolically connecting cities across borders. The Danish Ministry of Transport estimates the tunnel will deliver a net present value of about €3.5 billion for Europe over the first 50 years of operation.

Climate risks do not respect borders, and neither can Europe's response. Scaling resilience requires shared energy grids, regional flood protection, and cross-border resource systems. These are investments that only function at scale. Cities can test them, but regional corridors, such as the Y Region and the single market, are the structures that make them viable.

Circularity translates this necessity into an industrial advantage. By standardising secondary materials, enabling their free movement, and coordinating demand through shared procurement, Europe can create continental markets in reuse and recycling. This reduces dependency on imports, stabilises costs for households and firms, and generates local jobs that cannot be offshored.

Efficient logistics are essential for scaling reuse and recycling across Europe. Establishing a standardised, EU-wide digital platform for secondary materials would facilitate the matching of supply and demand, ensuring consistent classification, quality assurance, and traceability.

Reverse logistics, where distributors or installers collect used products when delivering new ones, can be a simple yet highly effective approach, according to Fleming Voetmann. In the construction industry, where millions of small-scale installers operate across fragmented markets, engaging these actors is crucial.

To succeed, this system must integrate seamlessly into existing supply chains, leverage empty return journeys to reduce costs, and connect stakeholders through industrial symbiosis platforms, whereby by-products from one process become valuable inputs for another. In the flat glass sector, Europe currently recycles only about 5% of glass from construction and demolition back into flat glass production. However, the industry has the potential to increase this if all end-of-life glazing were recycled. The use of recycled cullet in new production could rise from 26% to approximately 40%[17].

In other words, the same levers that enable discoveries to transition from the lab to the market include regulatory alignment, joint governance, and shared infrastructure. These can make the green and circular transition investable. Scaling circularity is not a separate environmental agenda but Europe's best chance to compete globally on its own terms.

By embedding the transition into the structures of scale, Europe can turn its vulnerability to climate pressure into its most distinctive competitive edge: a model of prosperity where resilience itself becomes the measure of strength.

17. Glass for Europe. (2020). Flat Glass in Climate-Neutral Europe: Triggering a Virtuous Cycle of Decarbonisation.

INTERVIEW:

INVESTING AND COMMERCIALISING RESEARCH & INNOVATION ACROSS THE EU

Q: What are the key learnings from the recent report you have been leading: "Meget mere end forskning – Fra innovationskløft til konkurrenceløft" ("Much More Than Research – From the Innovation Gap to a Competitiveness Boost")

A: What's new, and possibly more relevant for your work, is how we document the value chain for knowledge work in a Danish context. While Mario Draghi identified a single innovation gap, we found several. These gaps stem from four key drivers: human capital, financial capital, culture, and infrastructure. For each, we examined what holds back the complete translation of research into competitiveness, from talent shortages to insufficient funding models, from risk aversion to fragmented systems.

Q: One of the key recommendations you mention is building a more "MIT-like" system. What does that mean in practice, and how does Greater Copenhagen fit into that?

A: It means creating structures and incentives that allow different scientific fields to collaborate and enable the whole ecosystem to function as one. For example, engineers at the Technical University of Denmark with innovative ideas might need support from Copenhagen Business School graduates to commercialise those ideas.

Denmark is strong in research and innovation, but we face two significant challenges. First is the impact gap, our difficulty in bringing innovative ideas to market and creating private-sector revenue from them. Second is the champion gap, even when ideas reach the market, we often fail to scale companies into global leaders. Both can be addressed by improving collaboration across disciplines, institutions, sectors, and borders.

My hypothesis about Copenhagen's transformation is that it began with ecosystem collaboration to change the status quo around the 1990s. A key trigger was Copenhagen's designation as European Capital of Culture in 1996. That milestone created a shared vision for the city, aligned incentives, and attracted private-sector investment.

Q: From an economics perspective, what are the barriers, and how can we overcome them to enable greater regional integration?

A: Regulation is a typical argument; each country has different rules and approval processes, but the bigger barrier is the limited flow of human capital across borders in the region. Cultural and mental differences are also significant, particularly the challenge of working with people who think and operate in different ways. Overcoming these requires not only harmonised standards but also a mindset shift towards openness and co-responsibility.

Q: What would your dream be for Greater Copenhagen?

A: My dream is that Greater Copenhagen becomes an innovation hub, a kind of Scandinavian Silicon Valley. Not necessarily in IT alone, but a technology-driven hub built on the combined strengths of all the great universities in the region and a vibrant business environment, connected to the broader European innovation ecosystem.

Majbritt Skov,
Partner & Head of ESG M&A and Deloitte Economics

EUROPEAN CITIES AND COMPANIES SCALING UP CIRCULARITY AS THE DEFAULT OPERATION MODE

Circularity should be adopted as a core tenet of cross-border collaboration. It is essential not only for climate action but for Europe's economic resilience and resource independence. For resilient European cities, circular economy strategies strengthen self-sufficiency by reducing dependence on imported raw materials, supporting local industries and jobs in refurbishment, remanufacturing, and recycling, and cutting greenhouse gas emissions through longer product lifecycles and higher recycled content.

To do so, cities would need to redefine competitiveness itself. No longer a race for short-term efficiency, it would instead be measured by the capacity to sustain and improve collective well-being within planetary boundaries. This shift recognises that resilience is not a fallback but a strategic stance, built not through austerity or protectionism, but through the intelligent design of institutions, infrastructure, and innovation systems.

Circularity becomes the enabling logic. European cities, through their density, purchasing power, and control over land use, can drive demand for secondary materials, modular construction, reuse platforms, and shared mobility. Crucially, they are also innovation powerhouses: their scale, diversity, and proximity make them fertile ground for testing and refining new models, from urban resource exchanges to circular construction techniques, which can later be scaled across regions.

The transition to a circular economy as the default operating model requires coordinated action across multiple levels of governance and economic activity. The EU has laid essential foundations through the European Green Deal and the Circular Economy Action Plan (CEAP[18]), setting the direction for systemic change. However, scaling circularity to become the (new) norm demands strategic integration across policy frameworks, business models, financing mechanisms, and digital infrastructure.

According to Fleming Voetmann (Vice President of External Relations and Sustainability at VELUX), the most significant barriers to circular transformation are not always technical or financial; they can be internal and cultural.

> *"Our current model is successful, so there's no immediate pressure to change, at least not internally."*
>
> Fleming Voetmann, VELUX

This paradox of highly efficient linear models coexisting with an urgent need for transformation illustrates why political leadership, corporate vision, and public-private partnerships are crucial to making circularity a default strategy.

The Single Market, as discussed earlier, should enable European countries and companies to align and standardise efforts towards making circularity the default operating model. Cities like Copenhagen offer compelling examples, acting as living laboratories for these approaches by testing business innovations such as take-back schemes, refurbishment pilots, and service-based product models. The challenge now is to align regulation, finance, and logistics so that successful pilots can be scaled across the continent.

The effect is not incremental but structural. The EU currently imports a significant share of its resources from outside its borders, making material dependency a strategic vulnerability in an era of geopolitical and supply chain volatility[19]. A shift to circular construction and reuse could cut primary material consumption by up to 32% by 2030[20] and lower emissions from the built environment by nearly 40%[21].

To make circularity the default strategy for cities and businesses, regulations must actively enable, not unintentionally block, circular practices. Well-intentioned EU rules on hazardous waste and chemical safety can, in practice, become counterproductive barriers, as emphasised by Fleming. Once a construction product, such as a window, is removed from a building, it is often classified as hazardous waste, even when the material can be safely handled and reused. This classification not only slows recycling but also undermines business models built around take-back and refurbishment schemes.

18. 18: European Commission. (2020, March). Circular Economy Action Plan.
19. European Commission. (2020, March). Circular Economy Action Plan.
20. Ellen MacArthur Foundation. (2019, September). The circular economy in detail.
21. Peake, L., Plumpton, H., Dhaliwal, J. (2023, March). Circular construction: building for a greener UK economy. Green Alliance.

Policy reform should therefore focus on harmonising standards for safe material reuse with realistic thresholds for legacy substances, streamlining cross-border transport of secondary materials, and introducing low-cost price signals such as landfill and incineration fees that shift market behaviour toward reuse and recycling, as demonstrated in the Netherlands, where a €10 landfill charge per window spurred significant take-back rates.

At the same time, better coordination of public and private investments through blended finance, green bonds, and risk-sharing mechanisms can help de-risk circular projects and attract private capital on a larger scale. Reuse and repair industries generate local, non-offshorable jobs across various skill levels, from manufacturing to logistics and design, thereby strengthening labour markets and embedding value creation in place.

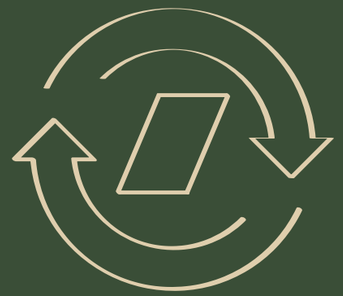
> *"When they collect a window, they should return the old one"*
>
> Fleming Voetmann, VELUX

A simple principle that, if scaled, could transform how construction materials flow across Europe.

Delivering this shift requires systemic alignment. Isolated pilots and corporate roadmaps are insufficient. Cities must lead experimentation, while the EU provides scale: shared standards for secondary materials, cross-border financing, and coordinated innovation programmes can turn fragmented efforts into continental markets. Networks of cities, from Copenhagen to Milan, from Amsterdam to Vilnius, can pool demand, reduce risk for industry, and influence European industrial strategy with a unified voice.

By treating circularity as an economic strategy rather than an environmental niche, European cities, amplified by the EU's market scale, can secure resource independence, reduce cost-of-living pressures, and demonstrate that competitiveness and justice can reinforce one another. In doing so, they position Europe not only to withstand uncertainty but also to lead the next era of global urban innovation.

CASE: THE TAKE-BACK AND COLLECTION SYSTEM



In the Netherlands, a successful scheme encourages window recycling by combining convenience with financial incentives. Instead of paying €12 to landfill a window, installers can place it in a VELUX collection container. Once 30 windows are gathered, they are collected and sent to a recycler—VELUX coordinates the threshold but does not recycle the glass itself.[22]

This model is supported by a national scheme requiring manufacturers and importers to pay €0.30 per square meter[24] of insulated glass to the Vlakglas Recycling Nederland foundation.[25] The fee makes returning used windows more cost-effective than disposal, changes the behaviour of installers, and creates a scalable, low-cost circular material flow. Denmark uses a similar system, but with a 100-window threshold, which may be less practical in day-to-day operations.

22. Shore, Rodriques. (2019). Transition to Circular Business Models, Dimensions of value and barriers of implementation: the case of the Velux Group. Roskilde University.
23. Netherlands Enterprise Agency, RVO. (n.d.). Sheet glass waste disposal fee. Business.gov.nl
24. Vlakglasrecycling Nederland. (2020, Februar). Glass International.

INTERVIEW:
COPENHAGEN: LEADING THE WAY IN CIRCULARITY

Q: Do you see Copenhagen as a testing-ground for broader European solutions?

A: Yes, our hope is to take the learnings we already have, as well as those we will gain in the future, from Copenhagen and apply them in other European cities facing similar or even greater affordability challenges.

Geopolitical issues have been a driving force in this process, and more recently, the circular economy and resource efficiency, as defined by the EU, have re-emerged as key topics.

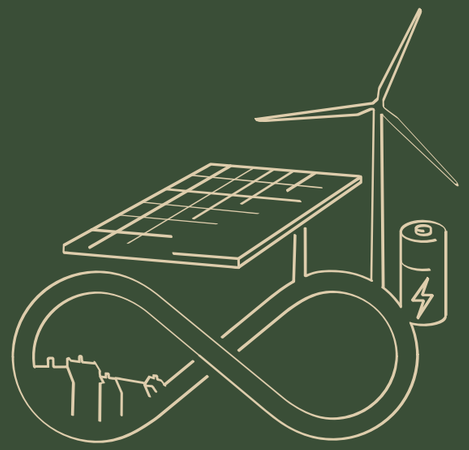
Affordable housing is also connected to these efforts, with some actors in Copenhagen exploring how zoning laws could be rethought to encourage adaptive reuse or modular construction. This is where circularity really comes into play, not just as an environmental goal but as an economic strategy that strengthens local resilience, reduces dependence on imported materials, and creates non-offshorable jobs in reuse and refurbishment.

When you connect all these dots, geopolitical shifts, circular economy, and affordability, it becomes a fascinating discussion. However, in practice, it's also highly complex, given the numerous actors involved, the fragmented nature of the construction industry, and the fact that regulations often vary between countries. Overcoming those barriers will require aligning policy, finance, and logistics.

Fleming Voetmann,
Vice President of External Relations and Sustainability, VELUX

THE COPENHAGEN WAY FORWARD

ENERGY INDEPENDENCE



ENERGY UNIFICATION FROM METROPOLITAN TO EUROPEAN SCALE

Copenhagen as a blueprint to realise the European Energy Union

What if Copenhagen's energy system were not just a local success story, but a model for Europe? The city already integrates electricity, district heating, cooling, and waste streams into a single network. The next step is to scale this across borders, connecting national grids, sharing renewable energy generation, and balancing energy across regions.

The city has adopted the sector coupling approach. District heating absorbs surplus wind and solar electricity, storing thermal energy for later use. Waste heat flows across industrial clusters and neighbourhoods. Linking sectors reduces losses, improves efficiency, and builds resilience, which are lessons directly relevant for Europe.

Scaling this model requires connecting city and national systems into a European framework. Governance matters as much as infrastructure. Copenhagen succeeds because municipalities, utilities, and industries collaborate through long-term planning, trust-based partnerships, and shared ownership. Europe faces similar challenges with aligning regulations, harmonising markets, and coordinating investments.

Energy unification isn't about new gadgets. It's about organising existing assets across sectors and borders. Copenhagen demonstrates that integration works when actors share ownership, residents understand the system, and planning incorporates the interactions between electricity, heat, gas, industry, and transportation. Applied at the European scale, these principles could underpin a reliable, efficient, and low-carbon Energy Union.

Why: Energy integration is essential

Energy integration is no longer optional. Europe faces rising geopolitical risks, volatile energy and raw material prices, and intensifying climate impacts. Mario Draghi identified Europe's high energy costs as one of the primary drags on competitiveness and a key contributor to the cost-of-living crisis, which is fuelling polarisation. Cities and countries cannot rely on isolated systems. Sector coupling and cross-border coordination are essential for reliable, affordable, and low-carbon energy. But the political and technical challenges are real. National energy mixes differ, regulations are misaligned, and local opposition can slow infrastructure projects.

Energy unification requires systems thinking on a large scale. Cities, industries, and countries must plan collectively, aligning their strategies to optimise resources and enhance resilience. Copenhagen demonstrates how integrated, long-term planning between entities and authorities, along with shared infrastructure, makes integration feasible. Scaling this to Europe could deliver cheaper, more reliable, and low-carbon energy, which is a necessity for climate, competitiveness, and security of supply.

THE EUROPEAN ENERGY UNION

Copenhagen's energy transition, based on sector coupling, combines district heating, waste heat, and integrates renewables, and is often described as a local success story. But it could serve as a prototype for the kind of cross-sector, cross-border integration that the EU is now trying to scale up through the Energy Union.

Why Europe is integrating its energy systems

Europe's drive to integrate its energy systems is about far more than climate targets. It's about security of supply, market efficiency, and resilience. Historically, each country built its energy infrastructure nationally, with limited interconnection. Today, the rapid electrification of transport and heating, the gradual phasing out of coal, and the projected end to Russian fossil fuel imports have created a powerful incentive to link systems across borders.

The Energy Union is the EU's master plan for a secure, sustainable, and affordable energy system built on five pillars:

1. Security, solidarity and trust
2. A fully integrated internal energy market
3. Energy efficiency
4. Climate action and decarbonising the economy
5. Research, innovation and competitiveness

The practical work involves building new cross-border interconnectors, synchronising grid operations, harmonising market rules, and coordinating investment in renewable generation and storage. Projects like the proposed offshore wind energy islands in Northwestern Europe and market coupling mechanisms for cross-border electricity trading are already demonstrating what integration can deliver in terms of cheaper electricity, greater system resilience, and more efficient use of renewables.

Launched in 2015, the European Energy Union set out an ambitious vision for transforming the EU's energy system. While significant progress has been made since then, urgent challenges remain and demand more decisive and coordinated action. To accelerate this transition, the EU has expanded its strategy under the banner "Completing Europe's Energy Union." As part of this renewed effort, an Energy Union Task Force was established in June 2025 to enhance coordination and drive delivery on key objectives[25].

In a further step, the European Commission proposed in July 2025 to allocate 29.9 billion EUR to cross-border energy infrastructure under the next Multiannual Financial Framework, almost five times the funding available in the current seven-year budget[26]. This unprecedented investment reflects the EU's determination to strengthen energy security, enable the green transition, and accelerate the integration of Europe's energy systems.

Lessons from Copenhagen for the Energy Union

The principles of the European Energy Union are already in operation in Copenhagen at a city scale. Just as district heating absorbs surplus wind and solar power locally, cross-border interconnectors can shift renewable generation from one region to another when conditions differ. Shared infrastructure enables the reduction of waste, smoothing volatility, and lowering costs. The governance approach is equally relevant as Copenhagen's success rests on trust-based public–private partnerships, long-term planning, and joint ownership across municipalities. This is a model Europe must emulate to overcome national differences in regulation, energy mix, and investment priorities.

Integration is not without challenges. But the benefits are compelling with cheaper energy through shared resources, better crisis resilience, and higher renewables utilisation. Copenhagen shows that with the right infrastructure, governance, and public engagement, these ideas can move from policy vision to operational reality.

GREATER COPENHAGEN IS A CASE STUDY IN INTEGRATED ENERGY PLANNING

Public ownership and strategic partnerships

Copenhagen's success in energy efficiency stems from strong collaboration between national energy policies, local authorities, and a wide network of stakeholders. The Greater Copenhagen region has demonstrated how to plan and implement an integrated energy system, including district heating, district cooling, and gas in symbiosis with the power grid and the buildings. This enables the energy utilities in the region to utilise fluctuating renewable electricity from wind and solar, as well as efficient heat sources and waste resources, for the benefit of society and to deliver cost-effective, clean, and low-carbon energy to end-users.

A key strength of the system lies in the public and municipal ownership and co-ownership of utilities, as

25. Directorate-General for Energy. (2025, June). In focus: Completing Europe's energy union. European Commission.
26. European Commission. (2025, July). Proposal for a Regulation of the European Parliament and of the Council establishing the Connecting Europe Facility. EUR-Lex.

well as consumer cooperatives. This allows cross-sectoral energy solutions to be implemented efficiently and with public interest in mind, to the benefit of end users. Long-term investments, such as carbon capture from centralised power generation sources, are enabled by this model.

The energy landscape is shaped by collaboration among 20 municipalities, as well as utilities HOFOR, CTR, VEKS, Vestforbrænding, ARC, ARGO, Ørsted, and Biofos, along with 20 local district heating companies that form the Greater Copenhagen district heating system. The state-owned utility, Energinet, and the consumer-owned utility, Radius, are responsible for all power transmission and distribution. The Danish Energy Agency has played a significant role in shaping the Greater Copenhagen Energy System since 1979, setting the direction for further development.

District heating is the city's battery

District energy is more than just heating and cooling. It's the city's shared infrastructure that links consumption, production and storage across technologies and sectors. Because of its scale and integration, the system enables the use of multiple energy sources and the implementation of new technologies that benefit from economies of scale, like large-scale heat pumps, large electric boilers, and carbon capture. By connecting nearly all buildings in the city, the district heating grid acts as a balancing mechanism for the electricity grid. It absorbs excess wind and solar power when electricity is abundant and inexpensive, and reduces load when demand is high. It even generates electricity at times of peak demand, when electricity is expensive. The water-based thermal storage, combined with the ability to shift production sources hour by hour, provides balancing services to the power system, enabling the district heating system to act as a large-scale electric battery, a virtual battery.

District energy also connects the electricity grid and Power-to-X technologies (better known as green hydrogen outside of the Nordics and Germany). Power-to-X is still a nascent technology, but electrolysis and carbon capture will, in the future, create a large amount of waste heat. This surplus heat can be captured by the district heating grid, reducing losses and improving overall system efficiency.

Environment and security of supply

The key driver for deploying district heating has been cost-effectiveness for society, including the cost of environmental impact, such as the cost of carbon and harmful emissions. The limited harmful emissions from the generation of heat and power based on renewable energy sources, and from the handling of the resulting waste, have almost no impact on the total harmful air pollution in the city compared to other sources. Likewise, the centralised and controlled production facilities eliminated the impact of noise in residential areas. Besides the system of multiple heat sources and local backup plants, this improves the security of supply in both the short and long term.

Collective energy systems require shared understanding

The efficiency of the system depends on high connectivity and public awareness. In a dense urban setting, residents are part of an energy community. Efficiency and sustainability come from shared infrastructure and a collective understanding of how the system works to the benefit of all.

> *"In a city, you are part of an energy community. Developers, regulators, consultants, and consumers should understand how buildings fit into the larger energy system."*
>
> Anders Dyrelund, Ramboll

KEY ACTIONS FOR ENERGY

Based on insights from the interviews and supporting research, the following actions within water must be implemented to secure Copenhagen's resilience and strengthen Europe's future:

Strengthen European energy integration by sharing Copenhagen's expertise, connecting with cross-border grids, and contributing to the European Energy Union to enable reliable, low-carbon energy at scale.

Optimise district energy and sector integration by expanding the district heating network, connecting buildings, industry, and mobility systems, and using thermal storage and Power-to-X technologies to balance renewable electricity and maximise efficiency.

Foster public–private collaboration by leveraging municipal ownership, trust-based partnerships, and long-term planning to accelerate investments in carbon capture, grid modernisation, and other infrastructure essential for a resilient energy system.

INTERVIEW WITH JUDITH NEIJZEN:

COPENHAGEN AS EUROPE'S ENERGY TESTING-GROUND

Q: Why is Copenhagen so important as a testing-ground for energy innovation?

A: Copenhagen is a frontrunner, an ultimate testbed and example. It is a combination of many factors, including brave leadership, sometimes even spurred by financial hardship. Other cities in Europe need to see that change is not necessarily scary; it can actually help pull you out of financial difficulties and make a city more competitive. From a corporate perspective, this competitiveness angle is crucial and often underemphasised in urban planning circles.

Q: Can you share examples of innovations with export potential?

A: One example is the Copenhagen Metro system, which integrated smart solutions like excess heat capture. We have worked with partners to bring similar solutions to Warsaw, and documented the case so others could replicate it. Copenhagen does not always promote its achievements loudly, perhaps it is a cultural thing, but it is important to capture better and communicate these successes so others can learn from them.

Q: Could this kind of solution work elsewhere in Europe?

A: Possibly, but Copenhagen is somewhat unique. You need a large-scale district energy system and an integrated organisation like HOFOR. You also need a top-down structure and an incentive system willing to make the upfront investment. In other parts of the world, you might have to deal with multiple utilities across different zones of a city, and that fragmentation makes it hard to realise the full benefit. Denmark's holistic partnerships and trust-based governance make our job easier.

Q: How do you see public–private co-responsibility in this context?

A: Copenhagen benefits from transparency and relatively low conflict of interest between sectors. This supports making quick connections, which are essential for taking action or trying something new for a few years to see where it leads. The electric ferries in Copenhagen are a good example. They required public investment, but open communication, even before procurement, encouraged the private sector to think beyond a buyer-seller relationship and tailor solutions.

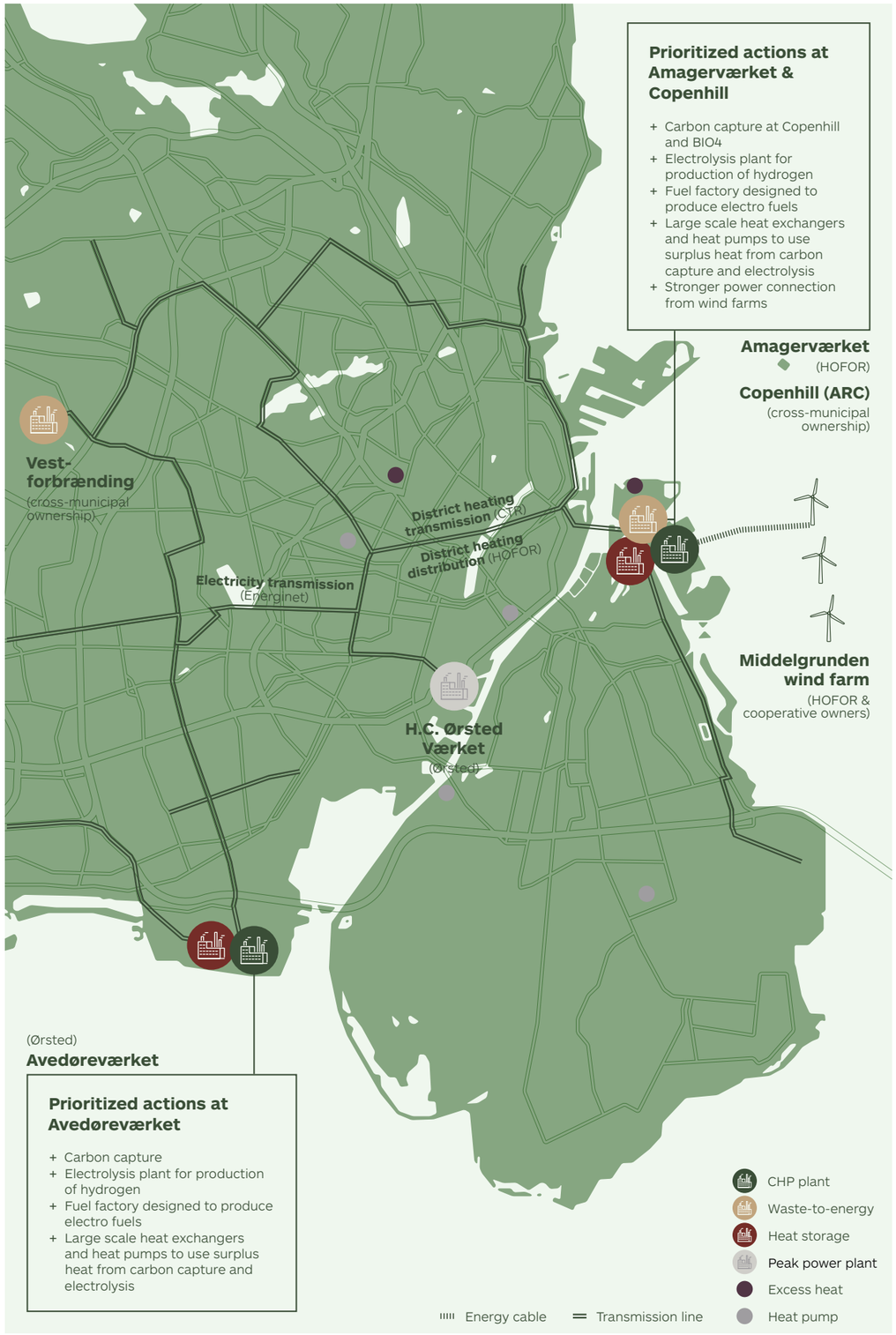
Q: What is the next frontier for energy innovation in Copenhagen?

A: We call it Energy Efficiency 2.0, which is essentially all about sector integration. Our approach is to electrify where possible, implement flexible solutions, and then integrate sectors, for example, by utilising excess heat from a data centre in a nearby industrial area. By 2030, up to 53% of global energy input is projected to be wasted as excess heat, and 2030 is not far away. Master planning is essential here because only the city holds the mandate to connect these sectors. It is complex, but if anywhere could do it, it is Copenhagen.

Q: What risks or pressures will accelerate this agenda, and how can Copenhagen prepare?

A: Rising electricity demand will be a major pressure point. The electrification of transport and heating, combined with AI and digital systems, will put a strain on the grid. Many of the solutions already exist, but they must be integrated into long-term planning. For example, if we expand the metro, what impact will that have on the energy grid? We need to think beyond silos and work closely with the national government to stay aligned. That collaboration has been a key factor in Copenhagen's success, and it must continue to be a key factor.

Judith Neijzen,
Head of Analysis and Thought Leadership, Danfoss



INTERVIEW WITH ANDERS DYRELUND:

HOW COPENHAGEN IS POWERING THE SUSTAINABLE METROPOLIS OF THE FUTURE

Q: Copenhagen is widely known for bikes and swimming in the harbour. How do we ensure it's also recognised as a state-of-the-art energy city?

A: The energy system is the invisible foundation of the liveable city. People swim in the harbour and breathe clean air because waste is transformed into energy instead of pollution and because there are no small stacks in operation, only large, efficient central plants. The city has taken the lead before, for example, when multiple municipalities joined forces to create incinerators for Vestforbrændingen and ARC on former landfills. Today, we are again frontrunners with carbon capture. However, to achieve global recognition, we must demonstrate how public and consumer ownership of critical infrastructure enables sustainability on a larger scale.

Q: What's your dream scenario for Copenhagen's energy future?

A: The dream is a fully integrated, fossil-free system where all buildings are connected to the district heating grid and all large buildings with active cooling demand are connected to clusters of district cooling, maximising efficiency and flexibility. The district energy grid would support both heating and cooling for homes, institutions, and businesses, utilising seawater, surplus electricity, and recovered heat from power generation, data centres, deep geothermal, etc. and from Power-to-X. The gas grid would be phased out except for industrial processes and as an important backup for heating and electricity. By 2050, we would have carbon capture at all three major incineration plants and some large biomass-fuelled plants, with infrastructure to utilise the carbon for renewable gas and oil and to store the remainder. The use of surplus biomass as a source of carbon and as a backup fuel for wind and solar energy will stimulate the forest industry and timber production for the building sector.

Q: How can we strengthen the idea of "the city as a battery"?

A: District heating already stabilises the power system by absorbing excess electricity when wind and solar produce too much power, and avoiding electricity use when prices spike. It's smart and flexible. By linking electric boilers and heat pumps to thermal storage, we can convert surplus renewable energy into heat. To enhance this, we need better regulation – especially correcting misleading energy factors in building codes, time-based tariffs, and public awareness about how individual actions, when combined, can affect the system.

Q: What sectors need to be more involved to achieve this vision?

A: Buildings are key. It's a mistake to treat them as isolated units. In a city, you are part of an energy community. Developers, regulators, consultants, and consumers should understand how buildings fit into the larger energy system. Also, we need industrial partners for carbon capture and Power-to-X, like producing synthetic fuels from captured carbon and green hydrogen. The energy, waste, and construction sectors all need to work together.

Q: What's the role of stakeholders going forward?

A: Copenhagen is in a strong position because many utilities are municipality-owned or co-owned. This gives the city influence and ensures that efficiency gains benefit residents. HOFOR, CTR, ARC, and others already collaborate, but we must ensure alignment across sectors. New actors, such as Copenhagen Infrastructure Partners, are essential for investment-heavy solutions like carbon capture. We also need to engage citizens, not just with facts, but with the story of why this matter is so essential. If people understand how district energy enables a clean, quiet, and liveable urban life, without pollution or noise, in a cost-effective way, they'll support the right choices.

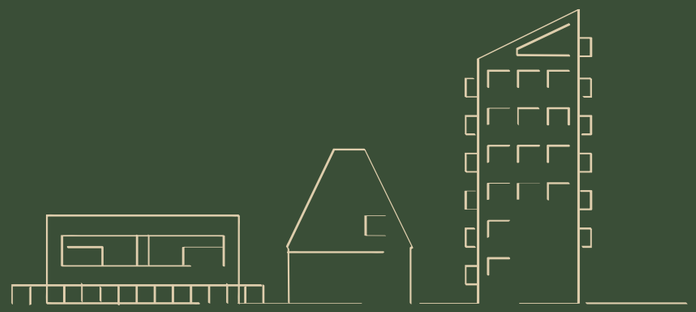
Q: What is your core message about energy to those of us living in cities?

A: When you live in a city, you are part of something bigger. You rely on others, and others rely on you. Energy is not just about technology, it's about community. Understanding how your energy use fits into the bigger picture is a step toward a better city for everyone.

Anders Dyrelund,
Senior Market Manager, District Energy, Ramboll

THE COPENHAGEN WAY FORWARD

HOUSING AS INFRASTRUCTURE



WHAT IF, IN THE FUTURE, WE STRUCTURED AFFORDABLE AND ACCESSIBLE HOUSING AS CRITICAL INFRASTRUCTURE?

The current housing crisis presents a unique opportunity to position Europe as a global leader in sustainable urban development. A renewed housing system could generate employment, stimulate economic growth, and improve the quality of life. It could transform Europe's cities into hubs for talent, investment, and innovation, and strengthen Europe's capacity to act as a stable and unified force in a time of geopolitical uncertainty. When we invest in housing, we are not simply constructing buildings. We shape the future of Europe's economic resilience, environmental stability, social cohesion, and global leadership.

To facilitate this, we must recognise affordable housing as a strategic tool for improving societal well-being. Building on this, we can imagine a future where investments are pooled and directed toward more holistic solutions that deliver both affordability and climate mitigation and adaptation.

Reliable infrastructure and services, such as mobility and childcare facilities, would reduce investment risks while improving access to peripheral urban areas, particularly underutilised industrial zones suitable for retrofitting. New legislation could support the funding of affordable housing practices, and more effective use of existing space could be enabled through strategic retrofitting and redistribution.

To achieve this goal, we must reform financial structures by integrating planning across sectors and strengthening collaboration across municipal borders.

The sustained demand for tenants across European cities supports stable returns for investors and reinforces the perception of housing as a resilient and reliable asset class. The increasing and persistent demand for urban housing also highlights the potential to view housing more explicitly as a form of essential infrastructure.

> *"This is more than a housing crisis. It is a social crisis. It tears at Europe's social fabric. It weakens our cohesion. And it also threatens our competitiveness.."*
>
> Ursula von der Leyen, *State of the Union speech*, 10 September 2025, President of the European Commission

WHY

The rapid urbanisation of the past few decades and the massive influx of people into European cities have placed severe pressure on housing markets. In most cities, the primarily market-driven housing sector has seen skyrocketing prices, and in most European cities, income has grown more slowly than housing costs. Millions are longing for a future where housing is not a commodity but the backbone of thriving, inclusive cities.

The existing system has led to an affordability crisis across nearly all major European cities. Today, more than 10.6% of the urban population in the EU lives in households spending over 40% of their disposable income on housing, a threshold regarded as severely overburdened. In Danish cities, the situation is particularly acute, with 23.3% of city residents facing this burden[27]. Meanwhile, a recent analysis of 36 major European cities found that not a single city met the traditional affordability benchmark of a rent-to-income ratio of 30 %. Instead, average rent-to-income ratios hover around 56%.[28]

The consequence of inadequate housing is a significant strain on society. The deepening inequality caused by high housing costs is a major factor contributing to political alienation and the rise of political extremism, threatening social cohesion and democratic stability. Furthermore, the lack of adequate and affordable housing sets barriers to labour mobility, hinders talent attraction and retention, and forces key workers out of cities[29], effectively challenging cities' social and health infrastructures and undermining their overall competitiveness. The disproportionate impact of housing costs on younger generations[30] plays a significant role in Europe's demographic decline and affects the mental health of the population.

Hence, today, Europe's housing crisis is not just about affordability; it's a systemic risk. When homeownership and rent become unattainable, social trust erodes, inequality deepens, and economic stability falters. As Mayor of Barcelona, Jaume Collboni, describes it, the housing crisis is a social emergency and an existential threat jeopardising the future of Europe. And if Action is not taken, he warns: "We're running the risk of having the working and middle classes conclude that their democracies are incapable of solving their biggest problem."[31]

At a time when Europe must act with unity in an increasingly volatile world, this crisis threatens to pull us apart. The need for housing also poses increasing pressure on the planet. The built environment is one of the world's leading sources of CO_2 emissions, yet as we continue to strain the environment even further, we still fail to meet demand.

Paradoxically, we are building too much, yet still unable to provide the housing that is needed. The effects of inadequate housing clearly demonstrate that housing is one of the most fundamental components of a city's or nation's success. However, the system we have relied on to meet this demand is unable to deliver.

Hence, Europe faces a dual challenge: reducing the carbon footprint of its buildings while ensuring housing remains accessible. We cannot afford a housing market where affordability and sustainability conflict. Instead of choosing between social and environmental priorities, we must align them to achieve a more sustainable balance. This means rethinking investment structures, scaling circular construction, and ensuring long-term affordability. Done right, housing can be the engine that drives both social equity and climate action while enabling competitiveness.

27. European Commission, Eurostat. (2024). Housing in Europe. Publications Office of the European Union.
28. Housing Europe. (2024). The private rental sector and housing affordability in European cities: It is time for better data and improved monitoring.
29. CBRE Investment Management. (2024, March). Europe's forgotten middle: Where housing crisis meets an investment opportunity.
30. Bonneyrat, S. (2024, September). Becoming adults: quarter of young Europeans face housing problems. EUobserver.
31. Hernández-Morales, A. (2025, February). Housing crisis is as big a threat to the EU as Russia, Barcelona mayor says. Politico.

Source State of the union speach:
European Commission. (2025). 2025 State of the Union Address by President von der Leyen, 10 September 2025, Strasbourg.

BUILDING AN ALLIANCE OF CO-RESPONSIBILITY

Align Public, Private, and Civic Power to De-Risk and Deliver Affordable Homes

Creating a framework to deliver on affordable housing requires co-responsibility: a shared mission across public authorities, private developers, financial institutions, and civil society. National and city governments must provide regulatory clarity, targeted guarantees, and taxation models that lower risk and reward social and environmental performance. Private actors bring innovation, design excellence, and operational efficiency. Civil society ensures legitimacy, rootedness, and long-term stewardship. This alignment not only diversifies responsibility but also distributes risk and reward more equitably, fostering resilient housing ecosystems.

Such alliances have proven successful in other contexts. Denmark's experience with financing renewable energy offers a template. Wind farms transitioned from state-led projects to mixed public-private ownership, demonstrating stable revenue streams and profit-sharing structures that catalysed broad investment while building local support. Applying similar principles to housing could transform underused building stock, accelerate retrofits, and enable mixed-income developments that remain affordable over time.

> *" Housing in urban areas or nearby could benefit from similar models as those used in the renewable energy sector, as it shares key characteristics such as guaranteed demand, long-term commitments, and stable partnerships between public and private actors. The affordability agenda does not necessarily need to rely on government subsidies but can be supported through the provision of services and infrastructure, which would help de-risk investments for private developers. While substantially increasing accessibility to the city centre."*
>
> Torben Möger, Chair of the CIP foundation

Innovative models already point the way forward. Profit-sharing and tenant shareholder schemes, pioneered by companies like Home.Earth aligns the interests of residents and investors, fostering stable tenancies and community resilience. Blended finance mechanisms that combine public guarantees with private capital are emerging to fund both environmentally conscious new builds and deep retrofits. Community land trusts secure affordability across generations by separating land ownership from housing costs.

Clear responsibilities and transparent financial structures

Clear responsibilities and robust financial structures are essential to translate ambition into delivery. Aligning the agenda with land-use, mobility, utilities, and climate policy within a single integrated planning framework brings the roles of public and private actors to the forefront and distributes risk fairly. Clear objectives, standards, and lines of responsibility clarify who funds what and provide transparency on governance and financing. Coordinated transit and social infrastructure help secure tenant demand and reduce uncertainty for private capital. Planning in concert with energy and utility networks raises building-level efficiency, while all-electric systems reduce lifetime costs and emissions. This system can outline requirements for both private investors and public authorities, delivering affordable housing and essential services while achieving social, environmental, and economic outcomes.

What follows are examples of how this alignment can take shape in practice: from the provision of transport and services that unlock new sites for development, to financial instruments that make affordable housing investable, to planning frameworks that integrate climate adaptation and affordability into a single action. Together, these tools illustrate how shared responsibility can shift housing from a speculative asset to an essential public good, and why this shift is necessary to deliver the scale of transformation Europe's cities now demand.

EXPANDING OUR UNDERSTANDING OF AFFORDABILITY AND INCREASING MOBILITY ACROSS THE HOUSING MARKET

Introduce multiple affordability tiers

Europe's affordable housing systems have traditionally catered primarily to very low and low-income groups. However, the noticeable and sustained increase in housing prices over recent decades has also placed significant pressure on the middle-income group, which comprises approximately 64% of the population. This group often falls between the eligibility thresholds for social housing and the financial capacity required for homeownership, leaving them disproportionately affected by the housing crisis in Europe.[32]

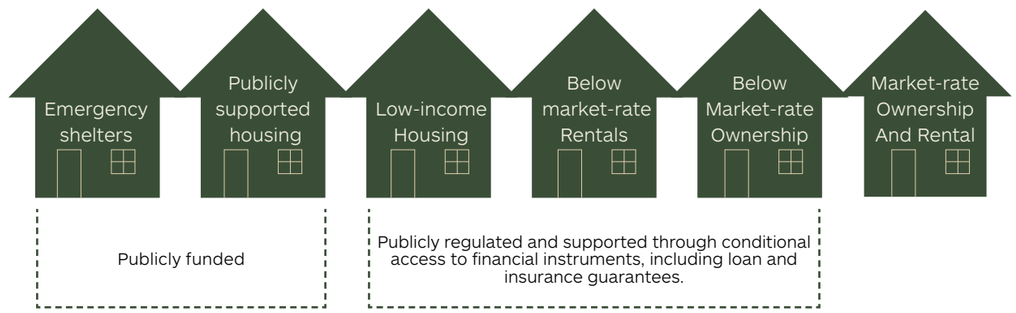
At the same time, this crisis presents a new opportunity for the private sector to engage more actively in improving housing affordability. Housing targeted exclusively at households without stable employment remains particularly difficult for the private market to deliver without public subsidies. However, if we reimagine the concept of affordability to include a broader range of income tiers extending from low to middle-income households, the private sector could play a much more significant role in addressing the housing agenda.

Increase mobility across the housing system

This broader understanding of affordable or adequate housing also presents an opportunity to address another persistent issue in the housing sector: the lack of mobility across the system. Currently, the housing system is highly siloed, divided primarily between social housing, private rental, and homeownership. Transitions between these forms often place a significant financial burden on individuals and create bottlenecks that further strain both the affordable and social housing sectors.

Developing a more diverse housing system that better reflects the varied needs and incomes of the population would be more effective. This housing continuum model encompasses social housing, affordable rental housing, shared equity or co-ownership, and market-rate ownership. It would improve residents' ability to move more flexibly between housing types over time, alleviating pressure in various typologies for those who need it most.

This expanded concept of affordability offers substantial innovation potential. To make new housing typologies attractive and viable for private sector involvement, we must create the right enabling conditions. From an institutional perspective, this could include favourable guarantees, low-interest loans, partnership structures that share or reduce financial risk, and the provision of essential services and infrastructure to mitigate investment risk. From a policy perspective, zoning regulations combined with conditional access to land could help ensure a balanced mix of housing types that reflect the population's needs.



32. OECD. (2019). Under pressure: The squeezed middle class. OECD Publishing.

REFRAME HOUSING AS “INFRASTRUCTURE”

To advance the affordability agenda, we need to develop financial models that are attractive and relevant to the industry. At the same time, we must address the dual challenges of affordability and decarbonization. Achieving these goals requires close collaboration between public and private actors, unlocking innovation, mobilising capital, and building a shared commitment to long-term development. This includes forming alliances that pool resources, share risks and rewards, and align investments with both social and environmental value. Bringing private capital into affordable housing will require rethinking and redesigning financial frameworks and policy structures. These must be aligned with clearly defined affordability goals and structured to reduce the risks associated with both housing provision and decarbonization. Fortunately, many tools already exist to support this effort, including cross-sectoral partnerships, innovative financing models, and targeted loan guarantee mechanisms.

> *“Many private-sector urban stakeholders and commercial banks have identified affordable housing as a strategic priority. However, few are actually delivering on these intentions, as it is difficult to build the business case.*
>
> Jakob Pilegaard Hansen,
> Head of DK Large Cap, Origination, EIFO

Treating housing as an essential infrastructure

The persistent and growing demand for housing across European cities reveals two realities: housing is among the most resilient asset classes, and simultaneously one of the most pressing social and climate challenges of our time. Treating housing as essential infrastructure on par with energy grids or transport systems opens the door to a new investment logic, one that can mobilise significant private and institutional capital while directly addressing the transformation our cities so urgently require.

Infrastructure investments typically deliver lower returns than speculative real estate but involve far larger sums of capital and are designed for stability over decades. This shift from short-term profit expectations to long-term, patient capital is precisely what is needed to align housing delivery with climate goals and social equity. A framework that positions housing as infrastructure can thus attract pension funds, sovereign wealth funds, and other institutional investors seeking reliable, de-risked opportunities with measurable impact.

Enhance accessibility to low-cost capital for the affordable housing agenda

The growing trend of urbanisation, both nationally and across Europe, has contributed to increased long-term tenant security within cities. This tenant stability, combined with predictable income patterns, provides a solid foundation for rethinking the financial framework that underpins affordable housing. One promising approach is to introduce new forms of guarantees and insurance that reduce the loan premiums typically required by private lenders. These financial incentives should be conditional: developers should only gain access to favourable terms if they commit to delivering housing that creates both social and environmental value. This model also presents an opportunity for the public sector to steer the agenda by offering public loans with integrated guarantees, coupled with clear requirements that ensure new housing contributes to broader societal and ecological goals.

> *“From both an export and a solution perspective, there could be significant value in creating a financial model that can be replicated and in showcasing how financial innovation can drive affordability.”*
>
> Jakob Pilegaard Hansen,
> Head of DK Large Cap, Origination, EIFO

Provision of services and transport infrastructure

When aiming to increase the supply of housing under conditions of spatial scarcity and the need to decarbonise, retrofitting old industrial sites on the outskirts presents a valuable opportunity. These sites are often underutilised, located in lower-cost areas, and largely inaccessible, making them an unattractive investment case for private capital.

However, providing high-quality public transport and social infrastructure not only improves accessibility to these areas but also serves as a tool for reducing investment risk. This reveals a hidden potential in the planning and provision of infrastructure when aligned with the affordability agenda. Infrastructure can offer the necessary mobility for residents while giving private investors greater confidence in entering new development zones.

Planning infrastructure in partnership with private developers and guided by a clear social and environmental agenda can help identify areas suitable for retrofitting. Establishing partnerships early among all involved actors creates a framework for defining specific requirements and responsibilities. This approach also enables the integration of climate adaptation measures by leveraging natural systems and local soil conditions, thereby informing the direction of new development.

This approach will require an expanded group of stakeholders and partnerships for infrastructure planning across municipal borders, which are essential to advance this agenda. Stakeholders involved in decarbonization and adaptation must be consulted to ensure coordinated and sustainable development.

CASE: HAFEN CITY & CITY OF HAMBURG

THafenCity Development drives the social and affordability agenda through a range of policy structures that allow for innovation and long-term impact. A key turning point in Hafen City development came with the update to the HafenCity Masterplan in 2010, which explicitly incorporated social mix goals by requiring 20% subsidised housing units. This share was later increased to one-third with the 2011 citywide policy shift.

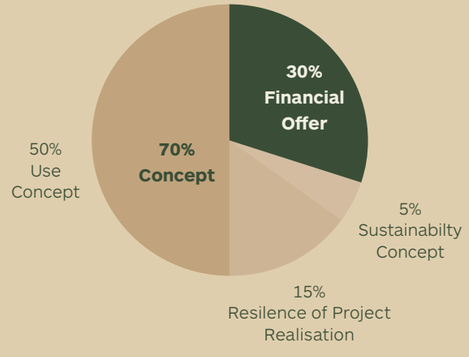
The revised master plan also introduced a new tendering process that prioritised concept quality over profit. Known as the 70/30 rule, 70% of the evaluation criteria focused on the proposed concept, while only 30% was based on the financial offer. This shift opened the door for innovative housing solutions and new actors to enter the development process. These changes were introduced in response to early criticism of HafenCity’s initial development phase, which was seen as overly homogeneous and dominated by high-end, luxury housing.

The housing agenda was soon taken up by the City of Hamburg, which introduced the new law Mix of Thirds (Drittelmix) in 2011 as a broader strategy for affordable housing. The policy mandates that new developments include one-third publicly subsidised affordable housing, one-third middle-income housing, and one-third market-rate housing, aiming to ensure a more socially inclusive urban fabric.

The first pilot project to reflect these policies and regulatory frameworks was Am Lohsepark, followed by Elbbrücken in 2014, which was masterplanned to implement the new affordability model fully. These neighbourhoods featured a high share of projects developed by housing cooperatives and non-profit developers. They included substantial amounts of subsidised units, positioning HafenCity as a testing ground for a new model of social sustainability.

Beyond its affordability agenda, HafenCity also focuses on developing urban concepts that enhance public life, encourage community participation in planning, and support the implementation of social infrastructure.

HafenCity 70/30 Tender Weighting Rule



Conditional land access

Sustained tenant demand and low vacancy rates give residential development in successful cities an infrastructure-like risk profile, characterised by stable, long-duration cash flows. This reduced revenue risk strengthens the public sector's bargaining position in land disposition, allowing it to attach binding social and climate conditions without deterring private capital. The public sector can leverage this by establishing clear terms of entry that require private developers to deliver both affordability and decarbonization, aligning private investment with public objectives. A complementary approach is to prioritise concept over price in land tenders, selling or leasing sites not to the highest bidder, but to proposals that credibly deliver social and environmental outcomes, thereby supporting innovation and decarbonization, as demonstrated in Hamburg's HafenCity.

Activate Housing Associations as a Climate-Adaptation Infrastructure

With resources tightening and urban space increasingly scarce, housing associations are a largely untapped lever for climate action. They steward extensive assets, including buildings, roofs, open spaces and land, which makes them ideal platforms for integrated climate solutions. Treating housing associations as part of a broader network of infrastructure can mobilise the sector as an active agent of climate adaptation.

In coordination with utility system operators, adaptation agencies, the research and development sector and municipalities, they can put land and buildings to multiple uses, for example, on-site renewable energy generation, green roofs and rain gardens for stormwater retention, biodiversity enhancement and green corridors, while generating new revenue streams and reducing energy and maintenance costs.

At the same time, they can act as reliable purchasers and early adopters of innovative climate solutions, strengthening competitiveness in the green and clean tech industries.

The opportunity is clear

By reframing housing as infrastructure, we can mobilise the scale of capital required to simultaneously decarbonise Europe's building stock and address the housing crisis. The task ahead is not merely technical; it is a rebalancing of values and priorities. It demands that housing be recognised as a human right and a public good, even when it is financed through private markets. Building an alliance of co-responsibility is about reshaping our collective understanding of value, social, environmental, and financial, in the places where we live.

Translating this vision of housing as infrastructure into practice requires moving from broad principles to concrete mechanisms and clarifying who delivers what, and under which conditions. Co-responsibility does not mean diffusing responsibility; it means defining shared roles so that public, private, and civic actors can each leverage their strengths to deliver more than any could alone.

Tingbjerg
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THE COPENHAGEN WAY FORWARD

BLUE PROSPERITY

INVESTABLE CLIMATE ADAPTATION AS A DRIVER FOR BLUE PROSPERITY

Turning water from a risk and a threat to an investable and exportable asset in climate adaptation

Copenhagen is often seen as a model city in sustainable urban development, but its next chapter may be defined by planning with water rather than against it. This vision reimagines the capital not as a city that holds water back, but as one that lives with it, treating water as both a co-designer of the urban landscape and a driver of economic value. In this future, the boundaries between land and water are no longer fixed. They are adaptive, responsive, and designed to shift over time.

The city's history of land reclamation has contributed to its rapid growth, but it has also heightened its vulnerability. One third of Copenhagen sits on reclaimed land, much of it low-lying and exposed to both rising sea levels and inland stormwater. If Copenhagen is to prepare for a wetter future, it must evolve from a defensive mindset to an adaptive one, moving from controlling nature to collaborating with it. In this process, it is key that climate adaptation becomes an investable asset that is structured, financed, and valued like any other urban infrastructure, generating returns, creating jobs, and enhancing long-term prosperity.

Achieving this requires a change in both planning and mindset. It calls for new investment models that account not only for the direct returns of adaptation but also for the long-term costs of inaction, which can far exceed the price of proactive measures. It requires recognising water as a cross-sectoral challenge that links housing, infrastructure, climate, biodiversity, and recreation.

This involves developing a shared planning framework, a coordinating interface plan that integrates housing, water, energy, transport, and other urban systems into a single, long-term vision. This framework must ensure that space is reserved for all necessary elements from the outset, so that future water systems can be integrated into city growth rather than retrofitted at high cost. By embedding Copenhagen's hidden hydrological map into this plan, development can work in harmony with the natural flows beneath the city, rather than building over them. Such an approach requires strong collaboration between municipalities, utility companies, and other stakeholders.

Adaptation will also have to reach beyond the city's borders. Stormwater catchments, coastal defences, and groundwater systems extend into neighbouring municipalities, making metropolitan-scale cooperation essential for success. This is as much about governance and shared responsibility as it is about engineering. If Copenhagen succeeds, it will do more than protect its citizens and infrastructure. It will pioneer a global model for blue prosperity, where climate adaptation is not simply a cost to be absorbed, but an investable, exportable asset that strengthens resilience, drives economic opportunity, and redefines what it means to live well in a changing climate.

Why: Copenhagen must invest to prepare for a wetter, riskier future

The risks of climate inaction in Copenhagen are growing. By 2100, annual precipitation is expected to rise 30-40% and sea levels may increase by up to one meter[33]. These changes will challenge the city's ability to manage stormwater, cloudbursts, and coastal flooding. The 2011 cloudburst caused damages of 5-6 billion DKK in Copenhagen[34], while the expected national damage costs from cloudburst flooding and storm surges are projected to amount to 54 billion EUR over the next 100 years[35].

These are not abstract risks. Low-lying areas, such as Amager and reclaimed land in Nordhavn, are especially vulnerable. Much of the city's infrastructure was not built for the intensity or frequency of future climate events. Housing, energy systems, and mobility networks are all facing increased exposure to water damage.

Despite the urgency, a crucial gap remains: incentives to invest in proactive climate adaptation are unclear. Current financial models often fail to capture the full value of adaptation, including avoided damage, social benefits, and green job opportunities. Without clear frameworks for return on investment, decision-makers and private actors struggle to prioritise. This lack of value language creates systemic barriers: Who benefits, who pays, and how to translate long-term risks into actionable financial terms? Without answers, climate adaptation risks will continue to be viewed as a burden and an expense rather than an asset and an opportunity for innovation and growth.

Delaying investments leaves the city vulnerable. Adaptation projects take years to design and build. Every year of hesitation raises future liabilities as infrastructure ages and extreme weather grows more frequent. Beyond economic loss, inaction poses a threat to public health, safety, and equality.

Copenhagen's future also cannot be considered in isolation. Rising geopolitical tensions, resource scarcity, and energy pressures highlight the need for resilient, self-reliant cities. Water management is no longer just an environmental issue but is also central to urban stability and global leadership. The way a city manages its water is becoming a key indicator of competitiveness worldwide.

WATER AS A CROSS-SECTORAL AND CROSS-MUNICIPAL CHALLENGE

Water as a foundation for planning

The growing risks of flooding, storm surges, and sea level rise require planners to integrate water as a fundamental element of urban development. Louise Grøndahl, an expert in climate adaptation and cloudbursts at the utility company HOFOR, emphasises that handling water in the future requires an integrated system, where above-ground solutions retain and delay water and complement the underground sewage system. She further advocates that the early planning of urban development is essential in achieving this.

Historically, water management planning has been treated as an engineering problem, with water systems often hidden underground. However, with urban density increasing and extreme weather becoming more frequent, this separation is no longer sufficient. Today, planners must view the city in vertical sections, both below and above ground, to understand how infrastructure and natural flows interact.

A coordinated interface plan

A more holistic approach means involving multiple stakeholders earlier and across sectors. Louise stresses the need for aligning municipal development with climate adaptation, water, energy, and social priorities. This would help secure space for water retention, flow, and treatment at an early stage rather than relying on costly retrofits later. Stronger collaboration across municipal borders is also essential, as climate

33. City of Copenhagen. (2014). Copenhagen: Solutions for sustainable cities. https://kk.sites.itera.dk/apps/kk_pub2/pdf/1353_58936bneke.pdf
34. Teknik og miljøforvaltningen. (2012). Københavns Kommunes Skybrudsplan. City of Copenhagen.
35. Danmarks Tekniske Universitet. (2025). Økonomiske konsekvenser af oversvømmelser – Prisen ved at vente med klimasikring.

risks don't stop at administrative lines. As a multi-utility company managing drinking water, wastewater, and rain- and groundwater, HOFOR positions itself as a key integrator in such cross-sector efforts. Broader responsibilities could also make the utility system more resilient and financially viable.

The importance of long-term planning with space for flexibility

Urban planning cycles, often tied to 4-year political terms or 12-year municipal plans, are too short for addressing water risks that have evolved over decades. Louise argues that the city must plan 20-30 years ahead, using flexible systems that can adapt to shifting climate scenarios. True resilience demands thinking beyond single infrastructure systems and building urban planning systems that can adapt and evolve.

NATURE-BASED SOLUTIONS ARE A DIFFERENT WAY OF THINKING

Planning with nature in mind

Copenhagen's climate resilience depends not just on better infrastructure, but on rethinking how we approach water, risk, and value. As Rikke Juul Gram, partner and creative director at Schønherr, explains, traditional city planning typically begins with buildings, roads, and utilities, but often overlooks the topography, soil, and natural water systems beneath. By understanding and designing with the original landscape in mind, cities can manage water more naturally and sustainably.

> *"We need to accept that sometimes land is dry, sometimes it's wet, and sometimes it's in between. We must give space to the water and create a city that can live with it."*
>
> Rikke Juul Gram, Schønherr

Much of Copenhagen is situated on reclaimed land, leaving large parts of the city vulnerable to sea-level rise and flooding. Continuing this strategy without reconsidering its long-term impact risks locking in future disasters. In contrast, a nature-based approach invites water into the city, creates room for seasonal flooding, and transforms water from a threat and risk into recreational areas and parks.

Infrastructure beyond roads and pipes

Today, major urban plans often centre on mobility or energy infrastructure. Nature-based solutions challenge this paradigm by treating blue and green systems as infrastructure in their own right. Vegetated floodplains, rain gardens, permeable surfaces, and wetlands are not just aesthetic add-ons. They also manage stormwater, reduce the urban heat island effect, sequester carbon, and support biodiversity, and they do so at scale when embedded into planning frameworks. According to Rikke, this shift in mindset should lead to new orders of decision-making. Instead of fitting water into the plan, the plan must begin with water.

Scaling up good ideas

Copenhagen already has strong nature-based pilot projects, but many of them are still too small to address future risks. Rikke states that a broader, regional approach is needed. This means working across municipalities, integrating nature into the plans, and unlocking financing from actors who benefit from reduced risk, including insurers and landowners. Copenhagen has the opportunity to demonstrate how water can become a catalyst for transforming cities in Europe, if its infrastructure, economy, and planning evolve in tandem.

> *"We have a lot of good examples of rethinking infrastructure as part of the landscape, but the scale needs to be bigger. We need a regional plan that integrates nature-based solutions across Greater Copenhagen, where water systems, land use, and biodiversity are planned together."*
>
> Rikke Juul Gram, Schønherr

INTERVIEW WITH LOUISE GRØNDAHL: FUTURE-PROOFING OUR CITY WITH WATER

Q: Why should water management be considered a part of the city's critical infrastructure?

A: Because water affects various aspects of our everyday life. From transport and housing to health and safety. Floods, rising groundwater, and a potential lack of drinking water aren't isolated events, they impact how we live and how the city functions. That's why we have to plan water systems as long-term system infrastructure and not as short-term individual utilities.

Q: How can utility systems be designed to create multiple benefits beyond water management?

A: Many of the cloudburst projects we're involved with now are designed to deliver more than just technical solutions. They create valuable recreational spaces, enhance biodiversity, and promote public health. Traditionally, there was a clear divide between what happened underground, like pipes and cables, and what happened above ground, like parks or roads. But today, especially as we densify the city and face climate pressures, these boundaries are blurring. This multifunctional approach not only makes efficient use of limited urban space but also enriches neighbourhoods in many ways.

Q: What would make coordination between stakeholders easier?

A: Coordinating all these pieces is definitely complex. What we really need is a shared planning framework, something like a "coordinating interface plan" that aligns housing, water, energy, and other urban needs in one place on a long horizon. This would ensure that there is an area reserved for water systems and other critical elements from the outset, when new developments or infrastructure projects are planned. Such a framework helps avoid costly retrofitting and conflicting priorities down the line.

Q: What kind of planning horizon are we talking about?

A: We have to think much further ahead than we typically do today. The municipal 12-year plans are a solid start, but still fall short when it comes to water management. The climate challenges we face unfold over decades, so we need to plan 20-30 years into the future and design systems that are flexible enough to adapt as needed. This means building in capacity for future upgrades or expansions and keeping options open as conditions change. Long-term thinking is essential to avoid being caught off guard by new risks and to make investments that pay off for generations.

Q: What role does technology play in strengthening the resilience of water utilities?

A: Technology is a powerful enabler for making water utilities more resilient and efficient. While water management fundamentally relies on underground pipes, there's growing recognition that we need to complement these with adaptable above-ground solutions. For instance, we're now thinking about how to design foundations for flood barriers that can be raised incrementally as water levels rise. Smart monitoring systems also enable us to track the health of our infrastructure in real-time and optimise operations. But technology alone isn't a silver bullet. It needs to be part of a holistic approach, integrated with strategic planning and cross-sector collaboration, to truly build resilience.

Louise Grøndahl,
Expert in Climate Adaptation and Cloudburst, HOFOR

INTERVIEW WITH SANNI N. BREINING:

EXPANDING THE VIEW OF ECONOMIC VALUE IN CLIMATE ADAPTATION PROJECTS

Q: What's the challenge with the way we currently assess the value of climate adaptation?

A: The challenge is that traditional economic models don't capture the whole picture. They focus on direct costs and benefits, which often makes grey, technical solutions look more attractive. However, nature-based solutions deliver a wide range of indirect benefits, from biodiversity and carbon capture to mental health and neighbourhood identity, which are often not included. That creates a bias in decision-making. We're missing out on long-term value because our models are short-sighted. We also lack a common language for value creation. If we can't talk about it, we can't act on it. We need to consider not just the added value of acting, but also the lost value of doing nothing. Floods aren't just an environmental problem. They destroy our homes, infrastructure, and heritage. It's time to shift from viewing flooding as a cost to seeing climate adaptation as an investment, just as we do with new buildings or infrastructure projects.

Q: So how do we fix it?

A: We need to further supplement existing models with socioeconomic investment case models. These quantify the broader value and not just what's saved, but what's gained. They can show how a nature-based solution pays off over time, even if the short-term investment is higher. These models also help us weigh risks over longer horizons. When we consider the potential cost of inaction, such as damage to infrastructure, we see just how valuable preventive solutions are. At the same time, we are still in the early stages of developing these tools. Work is underway to quantify better co-benefits, such as improved mental health or reduced insurance claims, but the methods are still evolving and have not yet been widely implemented. The potential, however, is significant, especially when it comes to showing which stakeholders stand to gain, building trust, and creating stronger alignment across sectors. By combining traditional models with these new approaches, we move towards a more holistic, evidence-based foundation for decision-making. One that makes the benefits of action clearer and gives planners, politicians, and investors greater confidence.

Q: What about the stakeholders who benefit?

A: That's a key point. Often, the benefits fall to parties other than the investors. For example, a municipality might pay for a green infrastructure project, but the state saves on health costs. Or a water utility reduces flood risk, while private property values go up. To address this, we need models that make the distribution of benefits more transparent, allowing us to create smarter cost-sharing agreements among stakeholders. However, better models alone are not enough. Legislation and regulation play a decisive role in determining how costs and benefits can actually be shared. Smarter cost-sharing, therefore, depends on both improved modelling and supportive framework conditions. When those align, the conversation becomes far more collaborative.

Q: Are people ready for this change?

A: More than ever. Everyone navigates risk, whether in public institutions, insurance, or private investment. They're looking for long-term, stable returns and resilience offers that. If we can prove the case with evidence, we can unlock more investment. And even though the methods are still in development, we now have better tools than ever to generate that evidence. However, to fully realise this potential and enable it at scale, stronger political priorities and supportive framework conditions are needed. There's also generally increasing pressure to take climate resilience seriously, which means that decision-makers are more open to alternatives. I think we're reaching a maturity point where we don't just want to mitigate risk, but also invest in liveability and better futures.

Q: Is this only relevant for Copenhagen?

A: Not at all. Every city facing climate pressure should rethink how it values resilience. If we do this right in Copenhagen, it could become a reference for Europe. The challenges here such as aging infrastructure, climate impacts, dense development are common across urban areas. So, this isn't just about local protection. It's about leadership in financing and delivering the next wave of resilient, green cities.

Sanni N. Breining
Head of Sustainable Economics,
Management Consulting, Ramboll

CLIMATE ADAPTATION SHOULD BE INVESTABLE

Economic models that reflect real value

Sanni N. Breining, Head of Sustainable Economics at the Management Consulting division of Ramboll, explains that a key challenge is that nature-based solutions often appear less cost-effective in traditional economic models. That is because these models often exclude broader benefits, such as mental and physical health, reduced urban heat island effects, biodiversity, and community cohesion, etc., or only partially include these benefits through shadow prices and sensitivity analyses. Models and tools that reflect a broader socioeconomic value are emerging, but they require further refinement to prioritise nature-based solutions. Sanni calls for supplementing traditional assessments with long-term investment case models that capture both risk reduction and co-benefits. These demonstrate how holistic projects yield benefits over decades, not just in direct savings, but also in enhanced resilience and improved quality of life.

> *"There is a need for us to expand our understanding of what economic value is."*
>
> Sanni N. Breining, Ramboll

The power of quantification

Planning for climate adaptation requires bold decisions, and bold decisions require courage. Sanni argues that quantitative data can help provide that courage. The risks of inaction are well understood as billions of DKK in potential flood damages, loss of critical infrastructure, and threats to housing and mobility. Yet, decision-makers often hesitate to commit to large-scale adaptation because traditional assessment models fail to reflect the long-term value of preventative action. Quantitative models that integrate not just immediate costs and savings, but also long-term risks and co-benefits, can change the conversation. They offer evidence-based projec-

tions that help planners, politicians, and investors make a compelling case for action. At the same time, numbers are never neutral, but rest on assumptions and uncertainties and should be complemented by other assessments. Climate adaptation is not only a question of economic rationality, but also about how risks and responsibilities are distributed, aspects that models alone cannot resolve. Still, quantitative insights provide a solid foundation for making risks and benefits visible, thereby creating a stronger and more transparent basis for informed, courageous decisions. Courage then becomes more than political will as it becomes a rational, supported choice.

New models for a new reality

Today's economic models in public planning are efficient, but they fail to account for the complex realities of climate resilience, including carbon sequestration, health outcomes, improved liveability, and biodiversity gains. Christian Nyerup Nielsen, global division director for water at Ramboll, states that as a result, these economic models often favour "grey" technical infrastructure over "green" nature-based solutions, which appear less efficient since their broader benefits remain unaccounted for. Sanni agrees and advocates for a more innovative approach, where existing models are not discarded but used to expand the toolbox. Full investment case models can include avoided damages, social and ecological returns, and value over time. They help clarify who benefits, whether it's municipalities that prevent losses, healthcare systems that avoid long-term costs, or private landowners who gain from flood-resilient neighbourhoods.

"The dream is that we can work with nature-based solutions instead of purely technical solutions. Nature-based solutions are more sustainable and resilient, and in the vast majority of cases, will yield a superior socio-economic return on investment compared to traditional grey solutions. But regulations and economic models need to incentivise them instead of challenging them."

Christian Nyerup Nielsen, Ramboll

Making value visible

The political and institutional landscape is increasingly prepared to adopt a broader economic perspective. Stakeholders are more open to thinking long-term and across sectors. But to unlock real investment, they need tools that make value visible, tangible, and specific. Copenhagen's ability to build resilience depends on how well we measure and communicate both risk and return. With the right data, adaptation becomes not just an environmental goal but a sound investment strategy. Numbers won't solve everything, but they can shift mindsets. When we make value visible, we turn the ambitions into actions.

SCALING DANISH SOLUTIONS FOR GLOBAL IMPACT

The market position for Danish water technology

In 2021, Denmark's export strategy for water technology introduced a goal of doubling the sector's measurable impact from 20 billion DKK in 2019 to 40 billion DKK in 2030[36]. The strategy leverages Copenhagen's climate adaptation experience as a crucial demonstration platform for technologies that can be exported globally. Denmark's competitive advantages within the field of environmental technology are substantial. Denmark ranks third globally in environmental technology (measured by patents per capita), and the water and environmental technology sector accounts for 3.7% of total Danish exports. With growing international demand for sustainable solutions, the sector is expected to see an average annual growth rate of 5%[37].

Exporting a system of integrated planning and nature-based solutions

Copenhagen serves as a testbed for both technical and nature-based innovations aimed at addressing extreme weather events. This role positions the city as a potential frontrunner in the growing global market for climate adaptation solutions. Importantly, many of these solutions not only mitigate climate risks but also enhance urban liveability, with examples including Skt. Kjelds Plads and Enghaveparken, which simultaneously manage stormwater and create vibrant public spaces. These projects illustrate the potential not only for exporting physical infrastructure and smart water solutions but also for exporting systems of implementation. Solutions developed at the neighbourhood or district level, such as collaborative models involving the utility company HOFOR, local stakeholders, and municipal planning departments, demonstrate how integrated governance can meet multiple objectives. In this case, climate resilience is achieved alongside improved quality of life.

KEY ACTIONS FOR WATER

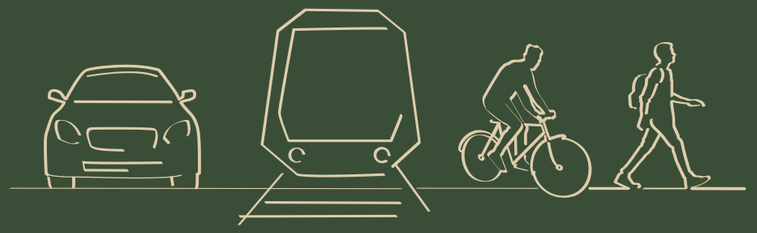
Based on insights from the interviews and supporting research, the following actions within water must be implemented to secure Copenhagen's resilience and strengthen Europe's future:

1. Make nature-based solutions a central part of urban water management for flood control, biodiversity, and public spaces.
2. Create a 20–30 year integrated plan linking water, housing, energy, and mobility, with reserved space for water systems.
3. Utilise economic models that value long-term climate benefits and co-benefits to justify investments in adaptation.
4. Build regional collaboration for shared costs and coordinated nature-based adaptation across municipalities and stakeholders.
5. Export Copenhagen's integrated climate adaptation solutions and water technology to global markets.

36. Ministry of Foreign Affairs of Denmark, Ministry of Industry, Business and Financial Affairs, & Ministry of Environment of Denmark. (2021). Export strategy for water.
37. IRIS Group. (2023). Miljøteknologi: En styrkeposition for fremtiden.

THE COPENHAGEN WAY FORWARD

MOBILITY = LAND-USE



MOBILITY IS ALL ABOUT TAKING OR GIVING SPACE

Reclaiming space through humanised mobility planning

Copenhagen is, in many ways, fighting over its own physical footprint, with mobility at the centre of the conflict. The city must serve multiple, sometimes conflicting needs, including transportation infrastructure, housing, climate solutions, and public life.

The pressure, however, opens opportunities for innovation. Imagine a Copenhagen where streets and neighbourhoods prioritise people over vehicles. Dense, comfortable networks for walking, cycling, and micromobility coexist with shared cars, shared bikes, and e-scooters. Public transport is fully integrated and accessible, connecting high- and low-density areas with opportunities for shared mobility. Shared mobility reduces parking demand, freeing streets for greenery and social life. Electric vehicles cut noise and emissions. Local trips become easier without private cars, and public transport stops become more accessible.

This vision transforms the city into a more open, green, and human-centred space. Streets double as social spaces, local commerce benefits, and land is freed for climate adaptation, biodiversity, and mixed-use development. By rethinking space allocation and mobility priorities, Copenhagen can move more people using less space, creating a liveable, sustainable, and socially responsive city.

Why: Copenhagen's space crisis begins and ends with mobility

Copenhagen is running out of space. In a city famed for cycling and liveable streets, its mobility challenge is clear. Nearly half of rush hour traffic comes from bikes, yet bike paths occupy only 6% of the space between buildings. Cars dominate 49% of streets and 9% of parking, but many of these cars are rarely used during the day. Car ownership has increased by 28% since 2014, more than double the population growth of 13%[38]. Most new vehicles are electric, but they still take up the same space and rely on the same infrastructure.

Another essential issue associated with cars is space. With increasing space scarcity, ongoing urban migration, and the urgent need for climate adaptation, spatial tensions are growing. All of these demands compete for limited land, and this tension is expected to intensify as the city densifies and adapts to climate change. The choice of mobility therefore extends far beyond transportation itself, as it is fundamentally a prioritisation of space and what our cities are for.

Cars are by far the most space-intensive mode of transportation. The extensive land use devoted to car-based mobility and paved roads leads to soil sealing, preventing natural surface-water retention and increasing flood risk. Asphalt-paved roads are also a key driver of urban heat, a problem more prevalent in other European countries but increasingly visible in Copenhagen. The incompatible nature of car traffic with other urban programs, such as public spaces or other kinds of social or green infrastructure, is straining an increasingly populated city and undermining biodiversity and public life. Mobility is therefore a prioritisation of needs, and prioritising the car, in effect, deprioritises biodiversity, liveability, climate adaptation, and physical health.

At the same time, public transport is struggling to keep pace. Only 17% of trips are made by metro, bus, or train, far below the municipal target of 25%[39]. Cities such as Vienna[40] and Zurich[41] achieve 30–40% modal share with more integrated, affordable, and inclusive systems. Infrastructure investments are uneven. Rail benefits from permanence, comfort, and value for developers, while buses and shared mobility systems often lack funding, despite being flexible and inclusive, especially in areas that metro lines will not reach for decades, as well as for the elderly and people with disabilities.

Without decisive action, the gap between Copenhagen's liveability ideals and physical reality will grow. Mobility is no longer just about transportation, but also about space and accessibility. Addressing the space crisis requires rethinking street allocation, embracing flexible and shared mobility, and investing in public transport that works for all residents. Copenhagen's future liveability, sustainability, and social cohesion depend on resolving this mobility and space challenge.

Political courage is key

Copenhagen has practical tools to influence mobility, but applying them requires consistent leadership and political courage. Jacob Deichmann, specialist chief consultant in mobility at Ramboll, states that road pricing and parking reforms are politically sensitive but have proven to work in other countries.

> *"We've known for decades that road pricing works, but it still hasn't been implemented in Copenhagen. Parking reforms are politically sensitive but effective in terms of car ownership. In Denmark, we tend to underestimate what people are actually willing to do. But the tools exist; however, they only work if they're applied consistently, and that requires political leadership."*
>
> Jacob Deichmann, Ramboll

MOBILITY IS EMOTIONS AND POLITICS

Mobility is personal and emotional

Mobility is challenging to plan for because it involves not only technical aspects, but also emotional considerations. Everyone has a personal relationship with how they navigate the city, and each person has their own expertise on their own mobility habits. The challenge for planners is to balance these individual perspectives with a broader view of the city's overall mobility needs. Friction arises where personal experience collides with collective planning. That makes mobility incredibly volatile, political, and unpredictable. People react strongly to changes in how they navigate the city, and that makes bold planning particularly challenging.

Mobility is not only about getting from A to B. It also reflects and enables a way of life. A key part of solving mobility issues is changing people's lifestyles, which in turn helps address the space issue. Copenhagen has already been successful in becoming and branding itself as the world's bicycle capital. This is a result of numerous efforts in intentional policy, cultural support, and smart urban planning. According to Robert Martin, partner at Beta Mobility, this is also due to Copenhagen having an enjoyable and flexible lifestyle that the transportation system has been built around. However, in a city where car ownership is increasing and space is continually being occupied by cars, this lifestyle is currently changing.

In this, consistency and long-term vision matter. Gradual car reduction has been a priority over the years, even in the face of resistance, and this direction must be continued. Maintaining investments and clear political priorities over time allows residents to trust that policies will endure, enabling long-term shifts in behaviour and a city that is both liveable and sustainable.

MOBILITY AS A SOLUTION TO COPENHAGEN'S SPACE ISSUE

Cars continue to take up more space, even if Copenhageners don't drive more

In Copenhagen, every square meter of space counts. How we move around the city directly shapes how that space is used.

> *"The main mobility challenge in Copenhagen is a question of space. Car ownership has been increasing over the last decade, and even though 80% of new cars are electric, they still occupy the same amount of space. That imbalance is unsustainable in a growing, densifying city."*
>
> Jacob Deichmann, Ramboll

38 Teknik og miljøforvaltningen. (2024). Mobilitetsredegørelse. City of Copenhagen.
39. Teknik og miljøforvaltningen. (2024). Mobilitetsredegørelse. City of Copenhagen.
40. Province of Vienna. (2024). Vienna in figures 2024
41. Federal Office for Spatial Development. (2015). Mobility and transport microcensus.

CASE: THE 5-MINUTE CITY OF NORDHAVN

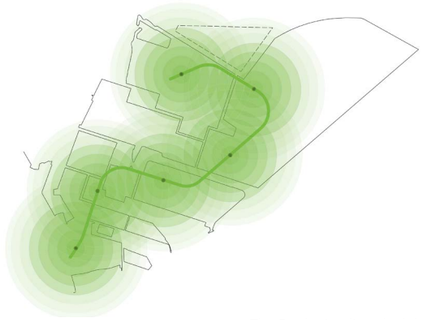
How Nordhavn is solving the space challenge with mobility planning

Nordhavn is an example of a new development area reimagining urban life with a focus on reducing car traffic. It has been planned in accordance with a transit-oriented development model, focusing on public transport, as well as the five-minute city concept, where all amenities are within a short walking distance from any point.

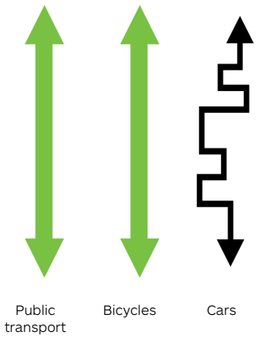
The elevated metro track will cover a bike corridor linking neighbourhoods and islets. Soft mobility is prioritised, making walking, cycling, and transit more convenient than driving, and ensuring that multiple areas are developed, either partly or completely, car-free. Parking is pushed to the edges of the neighbourhood, freeing up streets for greenery, public life, and active uses.

Jacob Deichmann, mobility specialist at Ramboll and heavily involved in the mobility vision for Nordhavn, points to the so-called rail effect as a key driver of Nordhavn's development. The metro's permanence and quality attract investment, encouraging the development of housing, offices, and services near stations, which in turn strengthens the district's compact and mixed-use character.

By & Havn plays a key role in aligning stakeholders behind a shared vision, ensuring mobility is coordinated holistically, and sticking to the vision throughout the planning of Nordhavn. The result is a lower carbon district where public space, greenery, and the waterfront are seamlessly integrated. This reduces commute times and enhances quality of life in an area that will eventually house 40,000 residents and provide 40,000 workplaces.



The 5-minute city principle
Strukturplan for Nordhavn, By&Havn, COBE, SLETH, Polyform & Ramboll



Therefore, planning for the future requires integrated solutions that recognise how different forms of mobility and mobility initiatives either consume or free up space in the city. As Jacob Deichmann mentions, a key challenge is to reduce the number of trips with a private car that could just as easily happen by bike, foot, shared mobility, or public transport. There are two ways to approach this: either by making it more challenging to use the car in the city or by making it easier to use other transportation modes.

To reduce car dependency, driving in dense areas should be less convenient. This includes measures such as road pricing, higher parking permit costs, or reducing the number of parking spaces, all initiatives that have proven effective elsewhere and target trips that could easily be replaced by other modes.

"In Copenhagen, there is a general expectation that if you own a car, it is the municipality's responsibility to provide a cheap place for you to park it."

Robert Martin, Beta Mobility

INTERVIEW WITH ROBERT MARTIN:
HOW MULTI-MODAL MOBILITY CAN FREE UP SPACE IN THE CITY

Q: What does the future of mobility in Copenhagen look like?

A: We need to rethink the perception of mobility as a set of separate modes, whether it's cars, bikes, walking, public transport, or futuristic options like robotaxis. The future lies in an integrated multi-modal system where people combine different forms of transport to match their journey's needs. Cities like Oslo and Paris are already linking shared bikes, public transit, and on-demand mobility with strategic urban re-design. In Copenhagen, cycling and public transport are increasingly competing for the same trips, rather than jointly reducing car use. Moving forward requires integration and sharing between modes, rather than competition.

Q: Then how do we reduce car ownership?

A: Only 30% of households in Copenhagen own a car, yet ownership has been rising for 20 years. In a dense city, a private car should be one mobility option among many, not a necessity or a right. Part of the problem is parking. There's still an expectation that if you own a car, the municipality should provide you with a cheap place to park it. That's a way of thinking we don't apply to anything else we own. In Tokyo, you cannot buy a car without proving you have a private parking space. In Copenhagen, many cars aren't used daily; a study shows that around 25% of cars remain unused on weekdays, from Monday to Friday. They're what we call "weekend cars" used for occasional trips. This can be a valid reason for owning a car, but it shouldn't dictate our city's politics on how we plan and allocate urban space. Pricing parking in line with what the space is worth would incline people to consider alternatives such as car-sharing. That way, residents can still access a car when needed, but without forcing the city to devote so much space to idle vehicles.

Q: What role does urban development play in this?

A: Urban development is crucial to shaping mobility habits. If we want people to rely less on private cars, we need to plan that from the beginning. Nordhavn is a good example of a transport-oriented development model with easy public transportation access, limited parking, and a layout that prioritises walking and cycling.
Fælledby is another interesting case, as it is located farther from the main transit network. A comprehensive mobility strategy was integrated into the development plan, encouraging residents to adopt car-light lifestyles and foster a shared mobility culture over time. The strategy also sets clear goals for sustainability and modal split, which created early alignment between the municipality, developer, operators, and residents. Just as importantly, the strategy serves as a tool to realise the architect's vision for the neighbourhood, freeing up space for nature, community areas, and high-quality public spaces rather than parking. This approach is still rare as it requires significant resources and strong coordination. However, it demonstrates how mobility infrastructure can be utilised not only to meet regulations, but also to realise an architectural vision and create a new way of life.

Q: What about the trips in the periphery of Copenhagen and from outside the city?

A: In low-density areas, fixed-line public transportation can be inefficient due to lower ridership. Here, shared and flexible transportation options, such as bikes, scooters, and shared cars, become essential. If these services are integrated into the same digital platform as trains and buses, they can form a much more connected network. Region Hovedstaden explores this, recognising that shared and integrated transport is the best alternative to private car ownership in lower-density areas.

Q: How would Copenhagen look if we managed to reduce car ownership and parking spaces?

A: Imagine walking out your front door and finding a tree, somewhere to sit with a friend, or a local cafe to buy a cup of coffee, instead of rows of cars. The city would feel more open, greener, and easier to move through. Today, cars occupy a disproportionate share of the space between buildings, as seen in Copenhagen, where they take up 58% of the space. Reclaiming some of this would allow us to create habitats for biodiversity, adapt to climate change, and design public areas for people to meet, play, and spend time. A city shaped around people rather than cars is more productive economically, supporting local businesses, as well as environmentally and socially. Pedestrians and cyclists are more likely to stop, shop, and engage locally, while cleaner air, safer streets, and stronger communities benefit everyone. Despite how the political debate is often framed, reducing the number of private cars is not about restriction. It is about creating a safer, healthier, and more enjoyable city for all.

Robert Martin
Partner, Beta Mobility

INTERVIEW WITH SOFIA LUNDEHOLM:

HUMANIZING CITIES THROUGH NEW MOBILITY

Q: How does mobility shape the urban fabric?

A: Since the earliest human settlements, the way we move has directly influenced the design of cities. Walking led to compact streets and densely populated neighbourhoods. Public transit created grid cities and spurred development along tram and bus corridors. The rise of the car widened streets, created sprawl and introduced extensive parking infrastructure. In cities like Copenhagen, bicycles transformed the urban landscape with dedicated lanes and bridges.

Each era of mobility has left a lasting imprint on urban space and accessibility. Mobility doesn't just shape cities physically; it also plays a vital role in their social fabric. Car-centric infrastructure tends to promote separation and isolation, while shared mobility and public transit foster integration by connecting people through common nodes and mobility hubs. This supports more vibrant neighbourhood centres and encourages daily social interaction. In an increasingly digital world, these real-life connections are more important than ever.

Q: Which opportunities of new mobility are relevant for Copenhagen?

A: The mobility industry has long used the acronym CASE to describe major trends: Connected, Autonomous, Shared, and Electric. But for Scandinavian cities, I believe another letter should be added: L for Light mobility. And the letters should be rearranged to form a more fitting acronym: SCALE. Light mobility, or micromobility, reduces the need for heavy, large-scale infrastructure. In turn, this frees up space for greener, more social, and more liveable public environments, helping to create cities designed at a human scale.

In a city like Copenhagen, for most trips within the city, an electric bike is more efficient than a car. Yet while mobility is evolving rapidly, infrastructure remains expensive and slow to change. To become more adaptable, we need to plan infrastructure based on speed and behaviour, as well as on the mode of transport. For example, my 6-year-old kid biking to school doesn't belong in the same bike lane as a 30 km/hr electric cargo bike. Infrastructure for micromobility needs to become more diversified and better tailored to a range of users.

Q: How do urban scenarios for future mobility in Copenhagen look?

A: There are so many uncertainties and variables when imagining the future city that we need to explore several possible scenarios. For example, will values and mobility patterns become more individual or collective? Will we adapt to more high-tech mobility or low-tech options? Along these two variables, we can imagine several different scenarios for how mobility might shape Copenhagen in the future. Daily life could be hyper-local, with walking, cycling, and short shared trips being the dominant modes of transportation. Or, in a growing city, we could become increasingly dependent on public transport, turning mobility hubs into the key focal points of the city where services and activity cluster. Elsewhere, digitalised and perhaps autonomous mobility networks might be effective at connecting more distant areas, reducing the need for privately owned cars while supporting low-density living. Which scenario becomes reality is impacted by the choices we, as planners and designers, make today.

Q: How can the development happening in mobility help improve the future of cities?

A: More mobility options could mean less heavy infrastructure and greener, more human-scale, and socially responsive cities. But it requires us to think beyond simply shifting our private cars to an electric or autonomous version of the same model. Shared and micromobility vehicles take up significantly less space than private cars. Together, these changes can free up valuable urban space for greenery and public life, thereby transforming how the city looks, sounds, and feels. Mobility hubs can serve as social gathering points, fostering interaction and community. At the same time, better access to public transit enhances equity, breaks down barriers, and strengthens connections between neighbourhoods.

Sofia Lundeholm
Associate Design Director, Henning Larsen

At the same time, alternative modes of transport should be easier and more attractive. Flexible and shared mobility options, such as bike-sharing, e-scooters, and car-sharing, can provide residents with practical alternatives to private cars, but only if the city actively supports them. This could include expanding designated parking bays and shared mobility hubs, making it effortless to start and end trips anywhere in the city. Longer-term contracts and performance-based fleet scaling would provide operators with the stability to invest in better services and coverage, while integrating bikes, scooters, and shared cars into a single digital platform alongside buses, metros, and trains would enable seamless multimodal journeys. Finally, reallocating more curbside space from private car parking to shared mobility and establishing a clear roadmap for how these services support climate and congestion goals would make walking, cycling, and transit more convenient, while freeing up valuable urban space.

> *"The future lies in an integrated multi-modal system where people combine different forms of transport to match the vehicle type to their journey's needs."*
>
> Robert Martin, Beta Mobility

However, reducing car dependency also requires looking beyond the city centre. Many of the cars driving into Copenhagen come from areas without easy metro or S-train access, where people rely on cars out of necessity. To reduce overall car dependency, these areas require special attention and dedicated investment. Without addressing these regional mobility gaps, efforts to reduce the inner city's car dependency will face ongoing resistance. Offering a flexible range and better options is key to giving these commuters viable choices and easing pressure on the city's scarce space.

WHAT DOES A CITY ACCESSIBLE FOR ALL ACTUALLY MEAN?

Mobility needs to offer a flexible range of options to serve all people

Mobility in Copenhagen cannot only be about efficiency. It must also be about access and inclusion, which in turn depend on how street space is allocated. Robert Martin emphasises that when cars dominate public space, they make the city more challenging to navigate, especially for those who already face barriers. He argues that reducing general parking would free up space for safer crossings, wider pavements, and more opportunities to provide well-placed disabled parking. This shift would make it easier and safer for everyone to move around in Copenhagen.

> *"There needs to be a range and combination of modes, and only one mode will not solve everything. Often, when you use the term 'the city needs to be for everyone,' it's used by car owners who are tired of not being able to find parking. If the city were actually for everyone, cars wouldn't take up such a huge amount of the space between the buildings."*
>
> Robert Martin, Beta Mobility

KEY ACTIONS FOR MOBILITY

Based on insights from the interviews and supporting research, the following actions within mobility must be implemented to secure Copenhagen's resilience and strengthen Europe's future:

1. Reduce private car use through road pricing, higher parking fees, and relocating parking to the perimeter of areas.
2. Integrate public transport, cycling, and shared mobility into a single digital platform for seamless multi-modal trips in the centre and outskirts of Copenhagen.
3. Plan all new development areas with a mobility vision that prioritises walking, cycling, and public transport, reducing car dependency from the start and enabling a car-free lifestyle.
4. Ensure transport investments encourage flexible, multimodal solutions rather than relying solely on the rail effect, so all areas can grow and remain accessible.
5. Apply political courage to implement long-term, consistent mobility policies that shift behaviour, reduce car dependency, and free up space for people.

3. FUTURE OF PLANNING

1. THE ORCHESTRATION OF CO-RESPONSIBILITY

Copenhagen's transformation has shown what planning can achieve when it is long-term, cross-sectoral, and rooted in co-responsibility. But the next phase demands more than evolution. It requires structural change in how planning is conceived, governed, and financed.

The future of planning depends on our ability to align direction, capability, and responsibility across a diverse set of actors. It must bring together contributions from public, private, civic, and institutional actors around shared goals, and enable different capabilities to take the lead when the task demands it. In this sense, planning begins to resemble a musical orchestra: structured, collaborative, and adaptive.

The municipality plays the role of conductor, holding long-term direction, ensuring overall coherence, and maintaining continuity across political cycles. But this does not mean leading alone. Visiting conductors will step in when the task demands it: private developers, the Almene housing sector, national authorities, agencies, and project organisations, each taking the lead where their specific capabilities are most relevant. The orchestra must be structured to allow for this kind of leadership rotation while keeping the overall composition intact.

Within this structure, a wide range of actors must be present: utilities, infrastructure providers, pension funds, social housing organisations, cultural institutions, civil society, and long-term investors. Depending on the challenge, whether housing delivery, energy transition, mobility reform, or climate adaptation, different first chairs will step forward. What matters is not hierarchy, but ensuring that the best-suited actors are enabled to lead at the right time in the right configuration.

The flexibility is intentional. The framework must allow capabilities to lead without disrupting alignment. This requires not just coordination but also co-responsibility and transparency: who is responsible for what, when leadership changes hands, and how different contributions connect to form a shared outcome.

Co-responsibility only works when it is transparent. Each actor must understand their role, when to lead, how to support, and how their actions relate to those of others. This clarity is not a bureaucratic formality. It is what enables trust, commitment, and long-term performance.

Planning in this way is not just a new governance model. It is a different way of solving problems, by structuring for alignment, designing for flexibility, and building the conditions for shared leadership. This is what makes it possible to meet complex urban challenges, not through control, but through collective capability. Based on the learnings throughout this report and the foresight work conducted with stakeholders, this chapter outlines a concrete way forward.

2. DEFINE PLANNING AS A STRATEGIC SYSTEM ALIGNMENT

Planning is no longer just about zoning and land use. It is about orchestrating the infrastructure, financing, regulations, and partnerships that shape how systems perform together over time. This means starting not from a site but from the structural challenges cities face: climate adaptation, affordability, space scarcity, and social cohesion and then defining what kinds of development are needed to address them.

This demands a proactive planning role where authorities don't just regulate but initiate: identifying the areas, systems, and alliances needed to solve shared problems. The success of the cloudburst plan shows how shifting from plot-based logic to systems-based framing can de-risk decisions and attract investment.

Similarly, from Nordhavn's five-minute city model to Tingbjerg's public-private regeneration without displacement, the Copenhagen experience shows that social outcomes depend on aligning housing, energy, water, and mobility from the outset. This requires moving from sectoral approval processes to integrated planning frameworks that mandate shared targets, data, and timelines. The Copenhagen experience demonstrates that spatial planning is not a technical afterthought, but a strategic instrument.

3. TREAT GOVERNANCE AS A STRUCTURE

The institutions that hold planning together are as critical as the plans themselves. By&Havn demonstrates how a single platform with a clear mandate can align land, capital, and infrastructure to deliver transformation. The Øresund Model shows how a governance structure can unlock cross-border labour mobility and create regional competitiveness. Brainport in the Netherlands proves that competitiveness depends on institutional structures that enable cities to pool knowledge, talent, and innovation into a critical mass that no single city could achieve on its own.

This demands a shift from project-based taskforces to enduring regional institutions that can manage co-investment, coordinate across municipalities, and buffer political cycles. For Northern Europe, this means creating a governance structure for the Y Region, encompassing Copenhagen, Malmö, Gothenburg, Oslo, Stockholm, and Hamburg, that treats planning as a shared strategy and infrastructure. Not another bureaucratic layer, but a platform for joint decision-making and execution that integrates capital, regulation, and systems across borders. Scaling this across Europe will require similar institutions: durable, mission-driven structures capable of holding direction when politics and markets shift.

4. FINANCE AS THE ENABLER, NOT THE CONSTRAINT

Planning is constrained not by ideas but by misaligned financing. Copenhagen's land value capture model (e.g. by & havn) has shown what's possible, but upcoming challenges, such as climate adaptation, circularity, and affordability, require new financial coalitions.

From climate-resilient public realms to affordable housing built within planetary boundaries, the path forward lies in blended finance and de-risking mechanisms, including public & corporate guarantees, conditional access to land, utility co-investment, and lifecycle-based ROI models. As interviews and research highlighted, there is capital ready to move. Still, the enabling frameworks must be structured through planning, which provides certainty rather than planning that is perceived as uncertain and a barrier to execution.

5. BRING STAKEHOLDERS IN EARLY AND ORGANISE HOW THEY STAY

The foresight work revealed a persistent problem: critical actors across the value chain all believe they are brought in too late to shape plans, contributing to reduced impact and increased costs. Future planning must institutionalise co-design from the beginning. This is not about everyone getting what they want or reaching consensus on every decision, but about orchestrating co-responsibility through collaborative leadership.

That requires formalised roles for civil society, long-term investor perspectives, and mission-driven actors from the outset. Copenhagen's housing-as-infrastructure scenario highlights this logic: housing providers, climate adaptation actors, and mobility planners are developing joint value cases rather than parallel projects. Only through such orchestration can planning align diverse interests into a shared outcome

Delivering this new way requires more than new tools or policy adjustments. It demands a shift in how roles, leadership, and responsibility are distributed across the planning ecosystem. The question is no longer only what needs to be done, but who must do it, when, and in what relation to others. To move from ambition to execution, planning must be structured in a way that allows actors to lead where they are strongest, while staying aligned toward a shared direction.

EUROPE FROM A CROSSROAD TO A FUTURE BUILT ON RESILIENT CITIES

Europe stands at a crossroads. From climate disruption to demographic shifts, from migration and inequality to political fragmentation, the continent faces crises that are interconnected and global in scale. No single European nation can address these alone. Yet history reminds us that progress often emerges from moments of disruption.

Over the past century, humanity has rebuilt from devastation, expanded education, extended life expectancy, and lifted millions from poverty to prosperity. The question is not whether Europe can adapt, but how.
The answer lies in Europe's cities, which are not merely clusters of infrastructure and local affairs, but rather, among the continent's most strategic yet underutilised assets. Cities generate over 70% of Europe's GDP and are home to more than three-quarters of its people. They are the spaces where vulnerability and opportunity converge, where innovation typically occurs first, and where systemic change can be scaled fastest. They are, quite simply, the places where Europe's future will be won or lost.

Cities are not static backdrops; they are living systems. Housing, health, energy, mobility, education, digital infrastructure, and public trust are not separate domains but interdependent networks. When one system is strengthened, it has ripple effects in others. When neglected, the impacts multiply. This is what makes cities both vulnerable and powerful. Their systemic complexity means they must be understood and governed as a holistic infrastructure. Investing in them is a matter of urgent strategic necessity.

Copenhagen shows what this means in practice. In one generation, it turned decline into prosperity, environmental pollution into green growth, and local investments into global influence. This was not achieved through isolated projects, but through long-term vision, integrated planning, and public-private partnerships that treated the city as a whole system. The lesson is clear: urban transformation can drive national renewal, and by extension, continental resilience.

Europe cannot afford to underplay its cities. They must become the primary engines of a resilient, competitive, and inclusive Europe. Places where new energy systems are deployed, and climate adaptation measures are accelerated; where skills and innovation cluster, and trust in democracy is rebuilt through tangible improvements to inhabitants' everyday lives. Europe's cities must be large enough to shape markets and policy, yet close enough to people to act with speed, precision, and legitimacy. Crucially, their impact must extend far beyond city limits: the cities of the future must drive inclusive growth that lifts surrounding towns, regions, and rural areas, creating a web of shared opportunity, resilience, and prosperity. Only when cities act as engines of both local vitality and national renewal can Europe compete and thrive on a global stage.

If Europe empowers its cities with the right frameworks, investment tools, and governance models, it will realise more liveable and resilient communities that benefit the continent as a whole. They will serve as buffers against crises, create growth ecosystems, and anchor Europe's autonomy in an era of global competition. Neglect them, and Europe risks drifting further behind.

By positioning cities as drivers of change, Europe can move from fragmentation to cohesion, from short-term fixes to long-term resilience. The aim is to move beyond urban development and help secure the continent's democratic values, economic prosperity and sustainable development in a changing world.

That future will have to be built across Europe city by city, street by street, system by system. But it can be done with the right vision and commitment.

BLOXHUB RAMBØLL Urban Partners