

Urban green transition

– transforming our cities for a new reality

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URBAN GREEN TRANSITION

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Urban planning for the future

MINISTER FOR RURAL AREAS, LOUISE SCHACK ELHOLM

Large cities and urban areas are important national hubs for business and commerce, housing and leisure, and human exchange and innovation. Yet, the future of our urban areas is fraught with considerable challenges.

Large urban areas around the world are facing issues of traffic congestion, air pollution, noise, social disintegration, water scarcity, and waste management. These demands and pressures will only increase as urbanisation increases. By 2050, two out of three people will live in urban areas — adding another 2.5 billion people to the global urban population.

To tackle the challenges of today, we need ambitious planners, innovative technologies, and inventive solutions. We need pioneers who can lead the way, and cooperation between public and private stakeholders. We need to plan for the future.

Looking back, Denmark has a history of ambitious and holistic planning. In the late 1940s, forward-looking urban planners envisioned a plan for the development of the Copenhagen metropolitan area. It was intended to guide the growth of the region in a way that would be sustainable and promote a high quality of life for residents.

The plan suggested development to be focused along five main transportation corridors, or "fingers," extending out from Copenhagen. It also included green wedges of open space between the fingers to preserve natural areas and provide recreational opportunities. Since its creation, the so-called "Fingerplan", has been a guiding principle for the many municipalities and stakeholders engaged in developing the Copenhagen region.

Inspired by examples like this, Danish planners and architects have a strong tradition for tackling contemporary challenges through planning and cross-disciplinary cooperation. On a national level, governments are busy setting targets and improving legislation to keep a strong focus on the green transition when planning cities, neighbourhoods, and buildings. This publication assembles a wide range of contemporary projects engaged in solving today's urban challenges.

I sincerely hope that these innovative projects will inspire other planners, architects, and cities around the world. Through their pioneering efforts, they point towards the future solutions; to a future where large cities and urban areas are not simply part of the problem due to the consequences of climate change, but also central to solving the challenges of the 21st century.



Louise Schack Elholm
Minister for Rural Areas

The Minister for Rural Areas handles the political responsibility for physical planning and development of urban and rural areas in Denmark.

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Challenges and opportunities

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The increase in global population and urbanisation puts enormous pressure on cities around the world. More and more people are sharing our urban spaces, buildings, resources, and infrastructure. Today, approximately 56% of the global population – 4.4 billion people – live in cities. By 2050, it is estimated that nearly 7 out of 10 people will reside in urban areas.

Cities are facing multiple challenges

Already today, cities account for the vast majority of global energy consumption and generate more than 70% of global greenhouse gas emissions. Traffic congestion, air pollution, frequent power outages, water scarcity, and poor waste management are common issues facing urban dwellers.

The adverse effects of climate change and the depletion of nature only make the situation more complex, with factors such as rising temperatures, sea level rise, extreme weather, and loss of biodiversity greatly affecting urban infrastructure and residents. Not to mention many people's failure to thrive in cities due to factors such as stress, loneliness, diminished access to nature, and more. All in all, our cities are facing immense challenges, and these will only worsen during the coming years and decades if we do not intensify our efforts to accelerate the urban green transition now.

With challenges come opportunities

With challenges, however, come opportunities. Cities are drivers of economic growth, contributing more than 80% of global GDP. Urban areas are hubs for ideas, commerce, culture, science, productivity, social development, and

much more. Cities can harness these strongholds and act as leaders in the green transition, allowing for the creation of more sustainable and resilient urban environments for human activity.

More than ever, it is time to explore how to promote the development of better cities – that are connected, that work, that are nice to live in. This will not only benefit the people that populate the world's urban centres, but our planet as a whole.

Sharing best practice within urban green transition

This white paper covers a variety of themes under the urban green transition umbrella. It showcases numerous examples of how Denmark has strived towards creating green, liveable, and connected cities to cope with the consequences related to population growth, urbanisation, and climate change. Danish cities hold a long tradition of holistic planning, where the concern of the environment, people, and businesses go hand in hand.

Join us on a journey, where we demonstrate why holistic and strategic city planning and development within mobility and infrastructure, climate adaptation, as well as environmentally conscious architecture and construction must take centre stage in the transformed cities of tomorrow. As the urban challenges line up, we insist on identifying and sharing inspirational solutions and insightful know-how for city stakeholders all over the world to evaluate in the search for effective means to fundamentally improve the cities we call home.

Urban planning and development the Danish way

STATE OF GREEN

Danish urban planning is witnessing a shift from a “people-centric” to “life-centric” approach, recognising planetary boundaries and life in all its diversity, rather than simply human wellbeing.

While a thorough analysis is well beyond the scope of this white paper, there is an evident red thread of principles underpinning the modern Danish city planning and design tradition that is recognisable in projects where Danish urban planners and architects are involved – domestically and internationally.

The liveable city

Fundamental to this tradition is a people-first approach which supersedes city space and the architecture of buildings themselves. Emphasising liveability, Danish cities and neighbourhoods are designed for people to thrive in. It's about the “life between buildings”, as renowned Danish architect and urban planner Jan Gehl put it back in 1971. This approach focuses on creating walkable, bikeable neighbourhoods with plenty of green spaces and public transportation options, making it easy for people to get around in a healthy, eco-friendly, and efficient manner.

Holistic and environmentally conscious

Danish urban planning also has a preference for the holistic view. Rather than looking at individual buildings or streets in isolation, Danish planners will usually take a strategic view of the urban area, considering multiple aspects of urban development, including social, economic, and environmental factors. Holistic and strategic urban planning is considered a key discipline in the ongoing transformation of our cities, a premise for taking informed decisions.

Acknowledging the need for accelerated green transition, today cities, neighbourhoods, and buildings are being de-

signed and retrofitted with a focus on resource and energy efficiency, clean energy, and decarbonisation while also factoring in the consequences of climate change, such as rising sea levels, extreme weather events, and loss of biodiversity. The refurbishment of buildings is increasingly conducted with material circularity in mind, and in urban mobility infrastructure low-carbon options, such as biking and public transportation, are prioritised over motorised vehicles.

Towards dialogue and insight exchange

By putting life first, striving for increased sustainability, and applying cross-disciplinary collaboration, the ecosystem of Danish city professionals has made great strides in transforming urban areas into attractive, vibrant places while minimising their impact on the environment.

Of course, Danish city experts do not have all the answers required for urban green transition. All the people, companies, and organisations mentioned in this white paper are very keen to learn from peers in other countries about the opportunities and barriers for scaling some of the concepts in a larger and more complex international setting.

With 50 cities around the world holding populations that exceed that of Denmark, Danes are in many ways worlds apart from the reality of the planet's true urban centres. Nonetheless, Denmark's approach to urban planning and development still holds valuable inspiration for other countries and cities around the world in the transformation of urban areas.

Location: Salling Rooftop, Aarhus, Denmark





Transforming a former airport into a thriving city

The development of the Downsview Framework Plan reimagines a former Toronto airport into a thriving new district, building on the rich legacy and natural features of the airfield site and its surroundings.

The plan turns an expansive, 520-acre airfield into a green-minded, human-scale, and people-first community. Championing a vision of 'City Nature', the challenge was to blend the built and natural world, balancing the site's wild and poetic ravine setting with its tamed, functional former runway.

The area is designed to be a resilient and high-density yet highly liveable, offering easy access to outdoor spaces in a comfortable microclimate. Neighbourhood identity and individual expression is especially celebrated together with biodiversity and offers the opportunity to create a community with a small carbon footprint that can be a beacon for future developments. Three elements are central to this vision: the runway reimagined as a sequence of public spaces, a series of local and district parks, and a network of connective greenways. Inspired by the '15-Minute City' concept, everything residents and workers need will be easily accessible with a short walk, roll, bike, or public transit ride.

CONTRIBUTORS

KPMB, SLA, Urban Strategies Inc., BA Group, Arup, Transsolar KlimaEngineering, Ramboll and Purpose Building, Third Party Public and Dept. of Words & Deeds, Nbsiing Consulting Inc., Monumental, Future Simple Studio, Henning Larsen

LOCATION

Downsview, Toronto, Canada



Image credit: Bjørn Larsen, Realdania

Driving ambitious, regional climate action plans

The DK2020 project supports Danish municipalities to develop ambitious climate action plans (CAP) that are aligned with the objectives of the Paris Agreement. In April 2023, the project was expanded into the Climate Alliance.

The project seeks to reduce GHG emissions and enhance climate resilience throughout Denmark. Participants develop a CAP with a target of emissions neutrality by 2050 at the latest, demonstrating how the city will adapt to and improve its resilience to future climate hazards, while engaging with their communities to identify potential social, environmental, and economic benefits.

The plans are developed through a facilitated peer learning process utilising C40's Climate Action Planning Framework (CAPF) adapted to a Danish context. The project is managed by the Danish independent green think tank CONCITO who alongside C40 provide tools and knowledge on climate action planning, and ensure a consistent level of quality. The combination of philanthropic support and local government backing has been key to the project's success.

An early 2023 review of 59 municipal CAPs reveals a combined targeted emissions reduction of 62% compared to their base year emissions (2016-2020) and 56% in their action plan-based trajectories, surpassing the requirements of the most recent IPCC report to honour the Paris Agreement.

CONTRIBUTORS

Realdania, KL, Danish Regions, C40 Cities, CONCITO

LOCATION

Denmark



A resilient city – the Copenhagen way

The project includes a masterplan for a new city district in Nordhavn, a former industrial harbour area in Copenhagen, providing an inspirational blueprint for resilient cities of the future based on environmental responsibility, social diversity, and the addition of value.

Nordhavn's transformation is conceived as a series of dense neighbourhoods on the water. Planning one island at a time, the masterplan is a flexible guideline intended to inspire future urban planners and address one of their greatest challenges: designing for today while predicting the major environmental challenges of tomorrow.

The masterplan is based on a development strategy including six themes key to future development of the former harbour area: islets and neighbourhoods; the harbour and cultural heritage; the five-minute city; the city of the water; the urban green; and the intelligent grid.

Today, more than 3,000 people live in Nordhavn. Offering roughly 50:50 housing and other programs, it is a mixed city district achieving a successful integration of old and new buildings. Soft mobility makes it easier to walk, cycle, or use public transport than to drive a car. A successful retail strategy for shops, cafés, and restaurants has created vibrancy and urban life.

CONTRIBUTORS

CPH City & Port Development,
Cobe, Sleth and Polyform,
Ramboll

LOCATION

Nordhavn, Copenhagen,
Denmark



Pursuing the vision of zero

ProjectZero is the common vision for creating a zero-carbon future in the municipality of Sonderborg, Denmark by 2029. This will be achieved through energy efficiency, sector coupling, and smart transition to green energy sources all while creating new green jobs.

Sonderborg city council sought to successfully implement a carbon-neutral energy system by 2029, without compromising on reliability and cost-effectiveness. Their vision strives to solve climate challenges in the region while inspiring other cities to chart their own sustainable transition to a zero-carbon future.

To reach such a goal, the entire area must be involved, which is why a public-private partnership between citizens, businesses, and organisations was forged. ProjectZero has developed several platforms to make it easy and attractive for homeowners, residents, tenants, businesses, and schools to join the project, save energy, and convert to renewable energy.

In 2021, the realized CO₂ reduction amounted to 55.4%, which corresponds to a reduction of 388,235 tons CO₂ since 2007. This also means that at this point of time, Sonderborg is halfway to CO₂ neutrality, expecting to reach a reduction of 75% by 2025 compared to 2007.

CONTRIBUTORS

Sonderborg Municipality, Bitten & Mads Clausen Foundation, Sonderborg Utility Company, University of Southern Denmark, heating companies, businesses, housing associations, banks and many more.

LOCATION

Sonderborg, Denmark

Moving together towards green mobility

JAKOB STEEN CHRISTENSEN, PARTNER AND ARCHITECT, JAJA ARCHITECTS

With CO₂ emissions from the EU's mobility sector still on the rise, we must look at new ways to change our cities and streets in order to turn the current mobility hierarchy upside down.

Europe is continuing to experience an increase in private car ownership, including Denmark even though as Danes, we consider ourselves people with a great bicycling culture. In Denmark, around 40% of all car trips are less than 10 kilometres, and even for trips as short as 2-5 kilometres, cars are often the go-to mode of transportation. Commuting trips hold around 1.08 people per car, creating poor utilisation of resources and inefficient transportation with delay and congestion.

With this challenging backdrop, Denmark was and still is a pioneer in the realm of bicycling. However, it is crucial that we continuously develop and nurture this culture, integrating walking and bicycling as the preferred modes of transportation for shorter journeys, thus fostering a broader urban culture.

Moving Together

Given that walking and biking are individual transportation forms, we also need to strengthen the culture of Moving Together. Together, because we need to get everyone onboard to move towards green mobility. Together, because moving together (car-pooling, car-sharing, public transport, etc.) is the most efficient way to move a lot of people. And, finally, together, because walking, bicycling, and public transport contribute more to urban life in streets and cities than private cars.

With the emergence of new mobility services and digital platforms that enable new ways of sharing, it is crucial to incorporate these advancements into a comprehensive transit-oriented development strategy. We need to build upon our robust public infrastructure and expand the concept of public transport into shared mobility. This entails facilitating a dense network of mobility points across all scales, from the train stations to the neighbourhoods and into the local streets, creating a seamless transition between modes of transport and at the same time creating attractive and social hubs across the city.

A multifaceted strategy

Changing our mobility patterns, and thereby our everyday routines, poses a challenge, given that homo sapiens is a species of habit. Therefore, we need to utilise the entire toolbox of change, including **cultural**, **structural**, and **behavioural** change.

The Mobility Pyramid is a tool for **cultural** change. Inspired by the food pyramid, the Mobility Pyramid communicates, beyond black and white terms, that occasional use of cars and planes is acceptable — just like having sweets or fast food in moderation — but that we must prioritise the healthiest options to keep our cities healthy. It encourages people to choose active modes of transportation at the bottom of the pyramid wherever possible, so people "move most from the bottom – least from the top".



Image credit: Rasmus Hjortshøj

Urban infrastructure driving social sustainability

The Bicycle Snake transit pathway in Copenhagen is a great example of a sustainable urban mobility project that recognises infrastructure as public space, showing how the experience of a piece of architecture can unlock urban space and increase commuter wellbeing.

The project sought to move a high volume of cyclists from Vesterbro into the harbour area while keeping both pedestrians and cyclists safe. Seeking to reimagine commuting into something rewarding, it needed to serve diverse user groups – including those not directly crossing it.

The elevated 230-meter two-way bike lane at first-floor level prioritises functionality in a way that both reduces and enhances visual impact. The decision to stretch it out, and curve it as it crosses the water makes it more joyful to ride on, with less steep gradients and better curvature.

The project creates social value by improving quality of life for the 20,700 cyclists that cross it daily, as well as through uplifting urban space. It promotes physical wellbeing, resulting in 40% more cyclists around the route. It has also enriched an area previously seen to be ‘uninviting’ and has enabled urban planners to create differentiated user experiences on the quay.

CONTRIBUTORS

The City of Copenhagen, Ramboll, Marianne Levinsen Landskab, Dissing+Weitling

LOCATION

Copenhagen, Denmark



The path to sustainable and healthy urban commuting

The Cycle Superhighway Collaboration between the Capital Region of Denmark and 29 municipalities provides a coherent network of cycle superhighways for safe, healthy, and sustainable commuting.

The project tackles increasing transport emissions, road traffic and congestion, air and noise pollution, and physical inactivity across the capital region.

By connecting work, study, and residential areas with 850 kilometres of cycle superhighways by 2045, the project provides the region's commuters with the infrastructure necessary to bike to work across municipal borders and longer distances. They are safe and easy to use, with fewer stops for a better flow – offering all the benefits of regional infrastructure combined with the physical and mental health benefits of cycling.

Evaluations of the first ten cycle superhighways have shown that upgrading routes to cycle superhighways has led to a 59% long-term increase in bicycle traffic in 2022. Of all new cyclists, 13% used to commute by car, which will reduce CO₂ emissions by an estimated 1,500 tonnes a year. A socio-economic analysis by the Technical University of Denmark found the project to be one of the most profitable infrastructure investments in Denmark, with a 23% return on investment.

CONTRIBUTORS

The Cycle Superhighway Collaboration consists of the Capital Region of Denmark and 29 municipalities.

The Capital Region of Denmark and the municipalities of Albertslund, Allerød, Ballerup, Brøndby, Egedal, Fredensborg, Frederiksberg, Frederiksund, Furesø, Gentofte, Gladsaxe, Glostrup, Gribskov, Halsnæs, Helsingør, Herlev, Hillerød, Hvidovre, Høje-Taastrup, Hørsholm, Ishøj, Copenhagen, Lyngby-Taarbæk, Roskilde, Rudersdal, Rødovre, Solrød, Tårnby and Vallensbæk.

LOCATION

The Capital Region of Denmark



The zero-emission public transport of the future

The City of Copenhagen has an ambitious goal to become the world's first carbon-neutral capital by 2025. Efficient and green public transport plays an essential role in achieving this.

Road traffic is responsible for the vast majority of Copenhagen's public transport carbon emissions. Reducing CO₂ from road traffic, as well as reducing air and noise pollution, are among the largest challenges Copenhagen is currently facing.

To eliminate CO₂ emissions and other harmful substances, the City Council of Copenhagen has mandated that all bus lines be converted to zero-emission buses by 2025. In collaboration with Movia, Denmark's largest public transit agency, new solutions within the transportation services which are efficient, green, and zero-emission have been created.

In 2022, 43% of bus operations ran on electricity; by 2023, the number is expected to rise to 57%. In 2025, zero-emission bus travel in Copenhagen will save the climate approximately 17,000 tons of CO₂ per year, all while ensuring cleaner air for Copenhagen's citizens, marking an important step towards a healthier, greener, and carbon-neutral city.

CONTRIBUTORS

City of Copenhagen, Movia

LOCATION

Copenhagen, Denmark



Public transport catalysing urban rejuvenation

The fallout from the 2008 financial crisis pressed Odense to transform from being a big town to a great city. The Odense Tramway project was prioritised as a catalyst for this change, providing the backbone for green mobility while securing further urban investment.

The project addressed the immense loss of industrial jobs, investment, and identity, and sought to rejuvenate the city. It was designed as part of a transformation that strived to combine the best from big city life with Odense's existing urban nature and strong neighbourhood communities.

Following the broader transformation drive, the project was designed to be holistic, sustainable, and focused on liveability. Running 14 kilometres with 26 stations, it ties together the most important urban development projects and destinations in Odense, including stadiums, museums, malls, park and ride stations, an expanding university, and a newly built hospital.

The project has helped to deliver 3.6 billion EUR in planned or realised strategic urban investment between 2012 and 2024 in the tramway corridor. Aside from providing reliable, electrified public transportation, it has also delivered new high-quality urban spaces around stations, green roofs, and 1,400 new trees.

CONTRIBUTORS

City of Odense, Odense
Tramway

LOCATION

Odense, Denmark

Climate adaptation can promote liveability

IDA MARIE KNUDSEN, SENIOR CLIMATE ADAPTATION SPECIALIST, RAMBOLL

Adapting to a changing climate with more frequent and intense rain events, sea level rise, drought, and temperature increases presents an opportunity to rethink urban development and gain greater value from investments.

Crises represent an opportunity to start doing things differently

We are living in a time of sustainability crisis marked by multiple crises in biodiversity, energy, food, and climate. All of these issues are interlinked, making it both complex and difficult to comprehend and solve, yet one element above all deserves our attention for finding new balance: water.

Impactful water and wastewater management holds the potential to mitigate and help us through the sustainability crisis. It has a central role in building sustainable and resilient cities, and with innovative urban water management we can cope with the extremes, namely floods, droughts and heatwaves. We can also gain multiple co-benefits to make our cities greener and less polluted, and provide other sectors with opportunities for regenerative food systems and circular energy production, such as PtX supplied by reused stormwater runoff and treated wastewater.

Integrated planning delivers multiple benefits

Creating liveable urban environments is a key element of resilience planning. It encompasses a wide range of inter-related aspects of city life from governance, economy, and planning to physical infrastructure, sustainable buildings, climate adaptation, and environment. An integrated and balanced approach to these elements enables cities to develop and prosper sustainably.

While there is no global definition of what makes a city 'liveable', international rankings of the world's most liveable cities typically consider factors related to safety, healthcare, economic and educational resources, infrastructure, culture,

and environment. The best cities manage to create synergies between these dimensions.

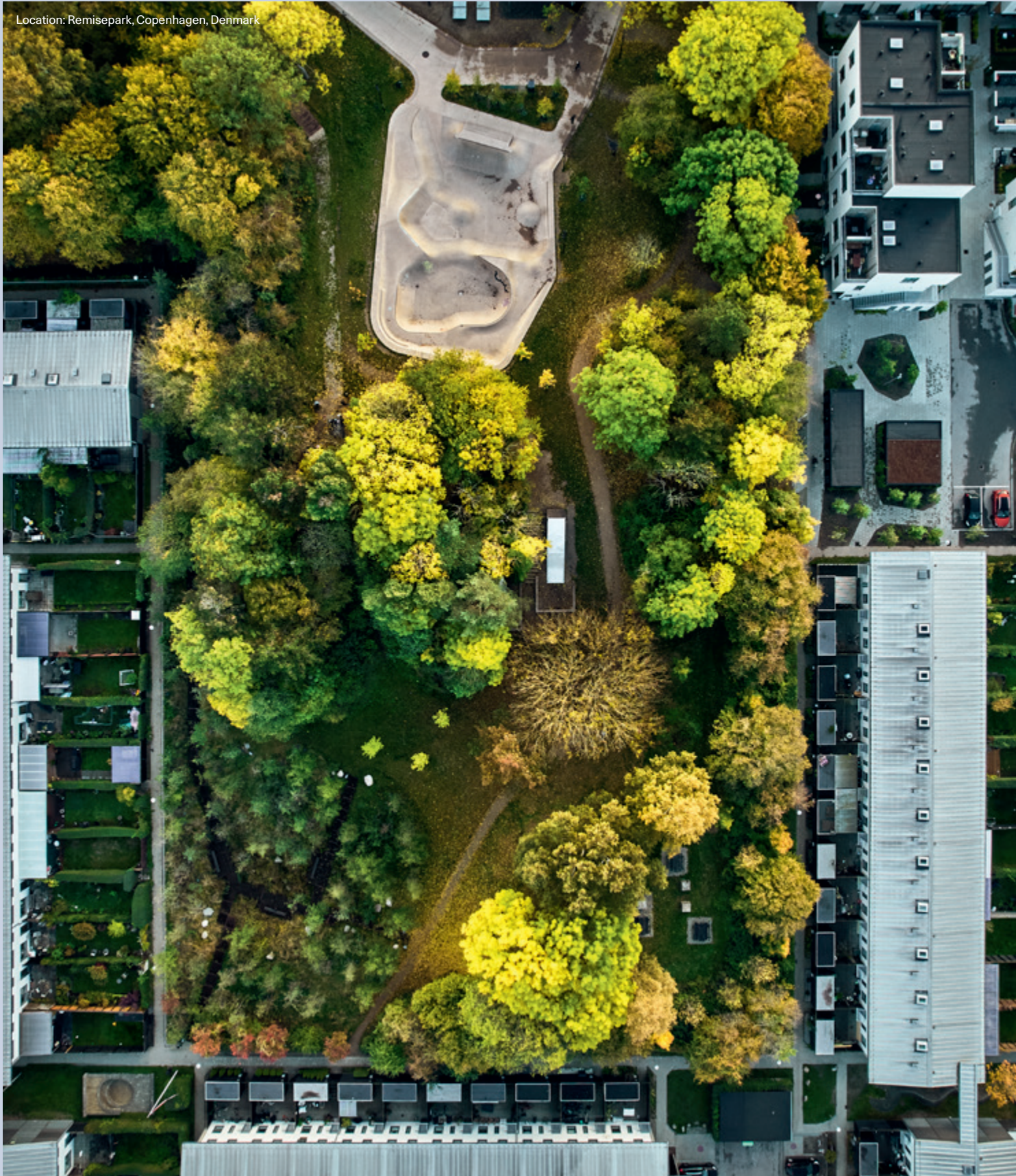
Accelerating climate resilience: Going beyond business as usual

Taking action on a climate positive future, where more greenhouse gases are offset than emitted, requires significant changes to the way we plan and construct our cities and infrastructure. We need to challenge the carbon footprint and single-purpose model of traditional grey solutions, which yields little additional value to communities. Nature-based solutions generate social and environmental value for the local area and often reduce the need for grey infrastructure. If done right, they can improve climate justice, support human health, and include regenerative features that help us mitigate the climate and biodiversity crises.

Nature-based solutions means working with nature to prevent the worst impacts of climate change, biodiversity and ecosystem loss by protection and restoration of eco-systems or by compensating with the creation of new ecosystems, such as green-blue infrastructure in our cities.

We just need to prioritise them. For this to happen, the market needs a mindset change. We all need to better understand the potential impact of the co-benefits linked to nature-based approaches when evaluating and comparing urban and coastal water management solutions. We need to prioritise long-term benefits over short-term costs, and ensure regulations recognise nature-based solutions as equals to traditional infrastructure.

Location: Remisepark, Copenhagen, Denmark



Co-benefits related to climate risk reduction are beneficial outcomes from actions that are not directly related to climate change mitigation, such as cleaner air, green job creation, public health benefits, and biodiversity improvement through the expansion of green space. Investments in city infrastructure can become value drivers rather than cost drivers if we take a holistic approach and base investment decisions on thorough analyses of the social and economic impacts.

Image credit: SLA/Mikkel Eye



Climate change adaptation with myriad co-benefits

The climate quarter at Østerbro, Copenhagen illustrates the vision of the Copenhagen Cloudburst Management Plan. Here, solutions to reduce flooding during extreme rainfall work to increase biodiversity, green the city, and create new recreational spaces for citizens.

In July 2011, Copenhagen experienced a massive cloudburst which flooded homes, businesses, and streets. It revealed the city's vulnerability, with hospitals losing power and critical infrastructure suffering damages. Seen as a harbinger of future climate impacts, it pressed the need for action.

The event birthed the Cloudburst Management Plan, which works to establish a new storm water infrastructure to supplement the existing combined sewer system for the whole city. It works mainly on the surface, providing the opportunity to improve urban space along with storm water management features.

Projects have significantly reduced the risk of flooding in the neighbourhood; water can be managed in the green areas and excess is transported away from buildings. Several projects have transformed areas with very little recreational value into green urban spaces able to support urban community life and with the future potential to reduce urban heat island effect.

CONTRIBUTORS

City of Copenhagen, Tredje Natur

Tåsinge Square: GHB Arkitekter, Orbicon

Skt Kjelds Square: SLA, Niras, Via-trafik

LOCATION

Climate Quarter – Østerbro Copenhagen, Denmark

Skt. Kjelds Square

Tåsinge Square

Image credit: LYTT Architecture



Creating Denmark's first climate city

Middelbart has undergone one of the most comprehensive climate adaptation projects in Denmark, which protects the city from flooding while inviting in nature and activities to increase liveability.

Increasingly intense rain patterns have overwhelmed Middelbart's old sewer system, causing basements and outside areas to flood, and sewage overflow to damage the water quality of Lillebælt. The project sought to prevent flooding from both rainwater and the sewage system.

The project tackled excessive rainfall on the surface, rather than underground, while fostering urban development. Water ways take advantage of the area's naturally sloping terrain to divert rainwater through the town's streets and out to Lillebælt, and several amass into small lakes for water to seep down during larger cloudbursts. Recreational areas thread between lakes and streams, and diverse new flora in residential areas absorbs rainwater.

The project has secured efficient rainwater management while adding value through unique urban spaces and additional recreative options. With its emphasis on citizen involvement and co-creation, it has strengthened social cohesion and forged a new identity for Middelbart as Denmark's first climate city. There has been no sewage flooding since.

CONTRIBUTORS

LYTT Architecture, Realdania, Adept, Middelbart Spildevand, Middelbart Kommune, WSP

LOCATION

Middelbart, Denmark



Image credit: Rasmus Hjortshøj

Transforming social housing with nature

A new park in Aarhus, Gellerup New Nature Park, has provided the green backbone for transforming a deprived area of 1960's public housing estates into a socially and environmentally sustainable neighbourhood.

As Denmark's largest social housing area, Gellerupparken is formed of large-scale building blocks, and had empty, unprogrammed areas between houses. The park project's overall goal is to increase the quality of life for the residents by making the area safer, increasing connectivity to the rest of the city, and creating better social opportunities and activities for users and residents.

The project incorporated the area's many existing elements while introducing new architectural ones to provide activities and functions for all – from playgrounds, football fields, and outdoor fitness, to fruit groves and greenhouses. The park design was conceived through an extensive citizen engagement process, supplemented by expert knowledge in safety and marginalised groups.

The project has transformed a solitary and uniform residential area into a vibrant, climate-adapted green neighbourhood. The result is a new form of 'social nature' that has measurably improved the safety, climate resiliency, biodiversity, and life quality of the area.

CONTRIBUTORS

COWI, EFFEKT, Gadeidræt, Social Action, SLA

LOCATION

Gellerup Bypark, Brabrand, Denmark

Image credit: COAST STUDIO



Climate adaptation and social sustainability

CONTRIBUTORS

Ramboll, SNE Architects, Victor Ash, Beatrice Hansson, BOGL

LOCATION

Copenhagen, Denmark

A radical renewal by BOGL has transformed community park Remisepark from an anti-social area to a destination. The project was part of a larger local transformation to improve safety for the surrounding social housing complex and protect the area against flooding.

Remisepark solves social and climactic challenges through landscape architecture. The transformation addressed local residents' sense of security, while adapting the space to withstand the increasing pressures of flooding and improve local biodiversity.

The project ties together different park areas and activities, while enhancing its existing qualities. A snaking path connects different sections while respecting the footprint of existing trees. The path's outer edges provide a guide for the visually impaired, and improved lighting has made the park feel safer. A newly planted Alder forest and wadi collect and lead rainwater, and raised footbridges make the area accessible even when flooded.

Remisepark has successfully combined a huge number of functions without removing much-loved existing spaces. The park has created a new narrative and sense of local pride, as a space for community-building, physical activity, and nature experiences in an otherwise densely built-up area.



How to develop a climate adaptation action plan

The Resilient Long Beach Island (LBI) project aims to help vulnerable coastal communities in the municipalities of Long Beach Island, New Jersey plan for the potential impacts of climate change by providing assessment, planning, and engineering services for climate resilience.

The project addresses the challenges of climate change and its potential impact on local communities — including flooding from sea-level rise, coastal storms, and extreme precipitation events. Each community's experience of these impacts is distinct and requires a unique response.

The project incorporates the municipality's unique identities and interests to create a shared vision for a resilient barrier island, preparing a detailed action plan for moving forward as a region, and implementing designed projects and regulatory changes that will address current and future climate impacts.

The project has provided an action plan for near-, mid-, and long-term resilience measures prioritised for municipal implementation. By increasing the use of nature-based solutions, these measures are expected to create healthier and more sustainable coastal communities, while enhancing economic value through increased tourism opportunities.

CONTRIBUTORS

Kleinfelder, Zetlin Communications, DLand Design Studios, Pennoni Planning, and Rowbear Consulting, Ramboll

LOCATION

Long Beach Island, New Jersey, USA

Reducing the climate footprint of buildings

HARPA BIRGISDÓTTIR, PROFESSOR, DEPARTMENT OF THE BUILT ENVIRONMENT, AALBORG UNIVERSITY

By preserving and optimising our existing buildings and other structures in the built environment and introducing ambitious whole life carbon goals for the new ones we build, there is massive potential to reduce the climate impacts of architecture and construction.

It is crucial that we always ask if a new construction is needed. Preserving materials already invested in the built environment is paramount.

Buildings are responsible for approximately 38% of global greenhouse gas emissions, with 28% stemming from operational energy use of existing building stock, and the remaining 10% coming from embodied carbon in materials for new construction and refurbishment. New annual construction only adds to a few percentage points of the existing building stock's total area. However, their share (and that of building refurbishments) of the embodied impacts related to construction of building materials is significant.

Recent Danish studies show that emissions can be halved or even reduced by about 75% compared to current Danish legislation simply by following the best practice design strategies and materials available today. For new buildings,

climate impact evaluation with LCA tools combined with ambitious commitments is of critical importance.

Creating global requirements for embodied carbon

Regulating carbon emissions through operational energy regulation alone is not sufficient to decarbonise the built environment. Evidence from whole life cycle carbon assessments of buildings reveals the increased importance of embodied carbon in building materials and components. To reduce it, new requirements need to be introduced with limit values. Those which have already been implemented or agreed in the Netherlands, France, Finland, Sweden, and Denmark for new construction should be encouraged worldwide.

Following design and materials best practices

Several studies on the carbon budgets of buildings in relation to planetary boundaries and Paris Agreement goals



show that the carbon footprint of new construction far exceeds their limits. To meet our national and international commitments, much more ambitious commitments are needed, and architecture holds huge potential to make a difference.

To translate the Paris Agreement and the Planetary Boundary for Climate Change into industry-specific reduction targets for new Danish housing projects, the “Reduction Roadmap” was developed by Danish consultants with research support from Danish Universities (see case in this chapter).

Furthermore, to enhance the development of low-carbon solutions for housing projects, philanthropic foundations have put focus on exploring and documenting 25 best practice cases with up to 75% lower climate impact than the current limit value in the new building regulation. These

building projects have explored the use of different design strategies and new solutions, most often with increased use of biobased materials, but also with optimisation of the number of materials and careful choice of low carbon materials.

Optimising what already exists

Finally, focus should be on preventing demolition and prolonging the lifetime of existing buildings by renovation. This keeps valuable resources in the loop and provides substantial environmental benefits. When done cleverly, renovation can also contribute to important reductions of the operational climate impact of existing building stock. Recent Danish analysis shows a large variation in the environmental benefits of renovation and points out that solutions and materials must be chosen carefully.

Image credit: Rasmus Hjortshøj



Circular materials: Building for disassembly

The Braunstein Taphouse provides a great example of the 'design for disassembly' philosophy and how we can move towards more circular thinking in the building industry.

Located on the historic Køge Harbour, the Braunstein Breweries project sought to create a locally anchored visitor centre whose components could easily be reused — whether to rebuild the centre elsewhere or to provide materials for other projects — providing an identity-rich architecture underlining sustainable production and local pride.

The building is based on simple tectonic principles and is finished entirely with mechanical joints. An optimised strategy for construction waste reduction and building with pre-fabricated elements minimises the overall material impact. Wooden floors are laid with waste products from a nearby flooring manufacturer and the architecture is inspired by the historic buildings of the harbour, emphasising the identity of the port.

By only using a few sustainable materials — which are not mixed — the project has significantly reduced waste compared to similar construction projects, while achieving the local pivot the client dreamed about.

CONTRIBUTORS

HPH Totalbyg, Braunstein Breweries, ADEPT

LOCATION

Køge, Denmark



Image credit: Rasmus Hjortshøj

A swan takes shape

A kindergarten in Gladsaxe known as 'The Swan' is the first building of its kind in the world constructed according to circular principles to be Nordic Swan Ecolabel certified. The project provides valuable learnings and inspiration for the Danish building sector on how to build more circular, sustainable, and resource efficiently.

Transforming the building sector and the built environment to operate according to circular economic principles is imperative. Yet, very few large-scale circular buildings exist, and there is a lack of knowledge and experience regarding the design process for circular buildings.

The kindergarten reuses many of the materials from the old primary school — including bricks, roof tiles, wooden rafters, steel bike racks, concrete, lamps, and even the school's old clock, which drastically reduces the building's waste and CO₂ footprint.

The combined demolition and construction of The Swan has created valuable new knowledge, insights, and experience regarding how to design and construct in a circular manner. In addition to lowered greenhouse gas emissions, the Nordic Swan Eco Label's criteria create a space that strives to ensure the health and wellbeing for the centre's children.

CONTRIBUTORS

Gladsaxe Municipality, Niras, ASON, Sweco Architects, Lendager Group

LOCATION

Gladsaxe, Denmark

Image credit: Rasmus Hjortshøj



A modular housing development that promotes wellbeing

The Sneglehusene Residences in Nye, Aarhus, Denmark are the most recent development using a BIG-designed modular housing concept, which utilises modest materials to create generous living spaces. BIG's modular housing concept was initially designed for the Dortheavej Residences in the northwestern part of Copenhagen in 2018 for Danish non-profit affordable housing association Lejerbo. The Sneglehusene Residences offered the opportunity to further develop and refine the modular concept, and BIG continues this work, hoping to realise its third iteration in the near future.

The development is built with prefabricated elements that are stacked in a way that allows every second module an extra metre of room height. By gently adjusting the modules according to the respective sites, the living areas open towards the exterior while curving to create a public square. The resulting checkered pattern becomes the trademark of the final building. Budget constraints in architectural projects often lead to scarcity — with this concept, however, BIG approached them as an advantage and created added value for the individual and the community.

The project is based on a singular prefab structure with housing modules repeating along a curve and stacked to the height of the surrounding buildings. The stacking creates additional space for each apartment to have a small terrace. The building considers space for a public plaza.

The simple prefab structure can easily be scaled up or down and implemented around the world. All materials are kept simple with wood and concrete in light colors inside and out. Long wooden planks cover the façade on all sides, highlighting the modules and accentuating the checkered pattern by alternating the direction of the planks.

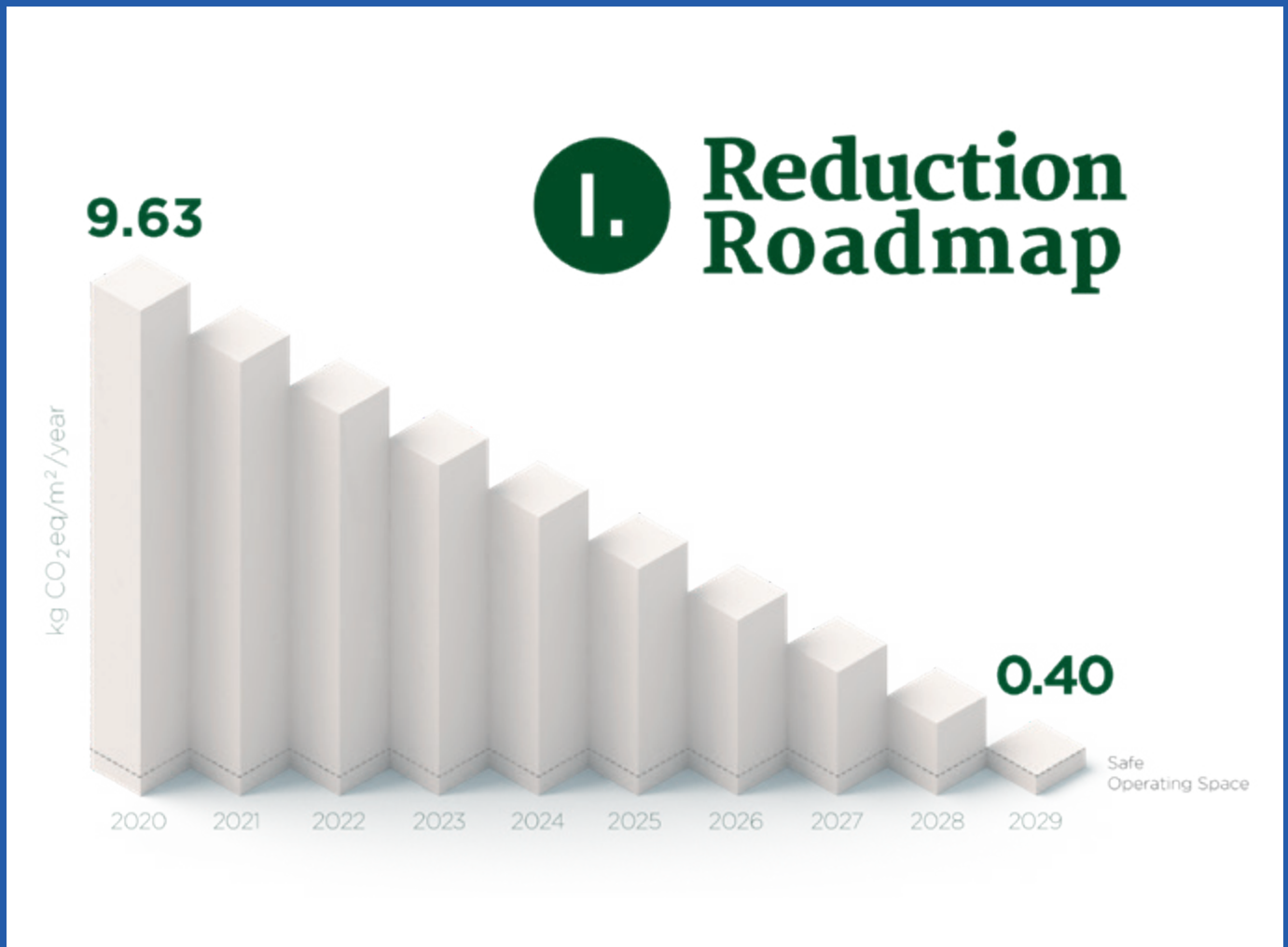
In 2022, the year of the Sneglehusene Residences' completion, the project received the City of Aarhus' highest honour for its contribution to the built environment.

CONTRIBUTORS

Ramboll, SNE Architects, Victor Ash, Beatrice Hansson, BIG

LOCATION

Nye, Aarhus, Denmark



Decarbonising Danish construction

Reduction Roadmap is an Earthshot project which works to translate the Paris Agreement into industry-specific reduction targets for new Danish housing projects. The result is a science-based transformation tool and call to action for the Danish building sector.

The construction industry is one of the major contributors to global carbon emissions, and in Denmark construction-related activities account for 30% of total GHG emissions. To align with a 1.5°C pathway, the industry must deliver buildings with a drastically reduced environmental impact.

Reduction Roadmap works to develop an operational tool for the construction industry to translate the planetary boundary for climate change into a tangible reduction target for new Danish residential construction. It identifies where we are today, where we need to go, and the speed at which we must reduce our carbon emissions.

Several large players such as Pension Danmark and Home.Earth have already implemented the reduction targets as part of their sustainability strategies. Rådet for Bæredygtigt Byggeri has also implemented the reduction targets as part of the DGNB certification, and their new distinction 'DGNB Planet' confirms the need for this tool.

CONTRIBUTORS

EFFEKT, CEBRA, Realdania, Villumfonden, Artelia

LOCATION

Denmark

Image credit: Adam Mørk



Building low-carbon and more sustainable buildings now

Living Places Copenhagen is an experimental living environment that proves that we can build affordable, healthy homes with an ultra-low carbon footprint today.

The project sought to create a housing typology that is affordable to build at scale and healthy to live in, with an ultra-low carbon footprint — using only current technology and materials. It aims to lead the way within the building industry and show how rethinking buildings can help solve some global climate and health challenges.

The project produced The Compass Model — a strategic tool for designing sustainable buildings that benefit people and planet — and a complete life cycle assessment of emissions from each material, design, and building technique. Using these, it produced seven building prototypes which hold the lowest CO₂ emissions in Denmark.

Living Places Copenhagen has a CO₂ footprint that is three times smaller than the average Danish one-family house. In fact, Living Places Copenhagen as a single family house has a CO₂ footprint of 3.8 kg/CO₂/m²/year and as row house 2.9 kg/CO₂/m²/year compared to 11,1 kg/CO₂/m²/year for an average new build, Danish single-family house. The project has been awarded a best-in-class indoor climate for its use of daylight and fresh air, and demonstrates that we do not have to wait for future technology to build more sustainably now.

CONTRIBUTORS

EFFEKT, Artelia, Enemærke & Petersen, DSB, The VELUX Group

LOCATION

Copenhagen, Denmark

City makers of tomorrow

ANNE METTE BOYE, CITY ARCHITECT, AARHUS, DENMARK & TINA SAABY, CEO, DANISH TOWN PLANNING INSTITUTE

A peek into the crystal ball of urban planning and development reveals a complex set of demands for people engaged in preparing and transforming our cities for the future reality. City makers of tomorrow must balance considerations for urban liveability with care for our planet, nature, resources, and human well-being.

Building less and transforming more

Attention to resource consumption and CO₂ emissions means that the city makers of tomorrow must build using the raw materials of a place's existing structures and stories. They will read, decode, analyse, and understand places with deeper knowledge. They will preserve, transform, and reuse as much as possible before tearing down and removing. In this way, a city's deep history will be visible, retold, and passed on generation to generation, story to story — with new chapters added along the way.

This means that places in the future will appear different; that the world will be experienced with the variety, diversity, and changeability that is the foundation of joy in life. The consequence of this trend means that city makers of tomorrow will carefully reuse buildings, landscapes, infrastructure, and facilities. They will appreciate that urban development is complex and navigate it to create more sustainable cities.

Working with materials and methods to minimise pressure on our planet

City makers of tomorrow will be driven by the wellbeing of our planet and the climate goal of CO₂ neutrality. Cities and buildings will look completely different simply because the materials and methods used today are not sustainable. Today's concrete will be out of production and almost everything will be recycled. The areas between cities will be more varied, our homes will be smaller, and traffic speeds will be reduced. Tomorrow's city makers will learn from nature's processes, understand its living conditions, and use that knowledge to shape and build our cities, houses, landscapes, and urban spaces.

Creating urban spaces that care for people

Human well-being is under pressure all over the globe. The physical framework and layout of our cities and homes directly affect our quality of life, and provide frameworks for joy, relationships, coexistence, communities, and physical wellbeing. City makers of tomorrow know that daylight releases endorphins, that fresh air makes us think more clearly, that high ceilings increase creativity, that relationships trigger dopamine, and that eye contact, touch, and smiles spark happiness and connection.

This knowledge will be translated into urban spaces through the creation of a good microclimate and an indoor climate that lets you breathe. It will cultivate neighbourhoods where you can meet each other and feel safe, and produce quality learning spaces and communities which increase knowledge and cohesion in local areas.

Resources will be set aside for tomorrow's city makers to become even more skilled at understanding human needs and the consequences that physical frameworks can have on quality of life. They will be holistically oriented, and politicians will place high demands on them to find human-centred solutions for every income.

Transformation that supports diversity and plurality

Urban development in recent years has taught tomorrow's city makers to mix functions. They know that people cannot be put in uniform boxes; they live different lives with many different phases, and experience changing needs throughout them.

The cities of the future will be able to accommodate this diversity to a much greater extent. A school or a company, for example, will become a cultural centre or other facility for getting together. Daily chores and the workplace will live in closer proximity. Investments in cycling infrastructure will pay society back through health, education, and employment sectors. The same investment in infrastructure for cars means increased investment in the same areas.

City makers of tomorrow know that our cities must be planned together with water management in mind, making securing drinking water and preventing flooding critical priorities. The same applies to holistic planning of recreational areas to make space for biodiversity and a good food supply.

Designing for multiple agendas builds cohesive cities

The human-centric Danish approach to urban development started in the 1970s as a backlash against the rational part of functionalism. City makers of tomorrow pay tribute to this approach by investing more and more in the communities,

public spaces, and common networks which bind cities together. It is in our urban and street spaces that we can develop the framework for city life.

With this focus, tomorrow's city makers can support local identities, create more urban nature, establish a sense of community, build connection with fellow citizens, and help produce healthier and happier people. They will understand that each individual house, and each individual urban space can always give something back to the city.

Cohesive cities require collaborative development

Holistic urban development requires city makers to collaborate across professional disciplines, sectors, and city administrations in partnership with citizens, businesses, artists, researchers, and politicians. The Danish way is about succeeding at the city's many levels of scale, with ownership and innovative power stemming from many actors, forms of knowledge and action, and firm trust in cooperation for common good.



Image credit: Rasmus Hjortshøj
Location: Nordhavn, Copenhagen, Denmark



Copenhagen Islands – a vision for a climate-proof Copenhagen

UN's latest climate report predicts that the global temperature will increase by 1.5°C as early as the beginning of the 2030s. Climate change leads to rising sea levels, more storm surges and more frequent extreme rain. Three factors that all contribute to more flooding and accelerate the degradation of our coastlines and urban landscapes by water masses.

With Denmark's 8,000 km of coastline many places are at risk of getting flooded. The increased amounts of water will affect us all, and we can no longer use traditional solutions. There is no alternative; we need to ally with the forces of nature.

Even though Copenhagen is often referred to as one of the world's best cities to live in, it is also at risk and has to find new ways to adapt to the effects of climate change – and like other big cities, Copenhagen has lost its connection with the underlying landscape and the natural paths of the water.

A vision for climate protection of Copenhagen

So how do we learn to live with the increased water volumes in the future? This is the focal point for the Danish contribution to the Architecture Biennale in Venice 2023, "Coastal Imaginaries". As part of the exhibition, Schönherr, in collaboration with a group of researchers, has developed "Copenhagen Islands" as a vision for a climate-proof Copenhagen.

The plan is a nature-based alternative to the Finger Plan from 1947, which has been the blueprint for Copenhagen's urban development for decades. Copenhagen Islands is vision for an urban development based on islets that arise in the delta between the rising seawater and the increased amounts of rainwater that threaten Copenhagen.

Nature-based design rethinks the city's relationship with nature

We must change Copenhagen's relationship to nature. And we need to transform our coastlines from physical and administrative boundaries to become a network of spongy zones that can absorb rainwater, seawater and groundwater when there is too much – and release it when we have too little. Copenhagen Islands is based on seven methods that can be combined: Retreat, Wetlands, Land Elevations, Aqua Urbanism, Dune Landscapes, Barrier Islands and Delta Landscapes. The vision presents a paradigm shift in urban planning, where nature plays a central role, and the city needs to retreat to provide space for the water.

This would be the natural solution...

CONTRIBUTORS

Realdania, The Ministry of Culture and the Danish Art Foundation's Architecture Committee, Schönherr

LOCATION

Copenhagen, Denmark

Image credit: Kalundborg Symbiosis



Transformation through symbiotic relationships

As part of the ‘DESIRE’ project (Designing the Irresistible Circular Society), Kalundborg has been selected as one of eight sites across Europe to test different design principles for green transition — helping to inform a broader toolkit for building sustainable, circular societies.

The project seeks to identify what to do to create ongoing potential for life, vitality, and viability for the whole of Kalundborg and its surroundings. This perspective will help to shape a broader learning kit and environment based on principles of sustainability, inclusion, and aesthetics.

Partners will use participatory methods in a regenerative process to figure out the most meaningful design principles specific to Kalundborg as a whole. The sustainability of solutions will be examined based on parameters such as study environment, urban development, economy, resources, accessibility, and energy consumption. Architecture students will address how to optimise the use of materials flow when rethinking urban landscapes in cities. The project will also explore how Desire can contribute to the development of an education that gives architects knowledge on how to create circular cities and landscapes, as well as how the arrival of the Royal Danish Academy can create nodes and centres of energy towards new potential in Kalundborg.

CONTRIBUTORS

Knowledge Hub Zealand Home, Royal Danish Academy – Architecture, Design, Conservation

DESIRE partners: BLOXHUB, Confederation of Danish Industry, Design Society Fund – DDC, Danish Architecture Centre, Aalborg University, DTU, Politecnico Di Milano, Knowledge Hub Zealand, Domea.dk, Danish Association of Architectural Firms, CER Partnerstvo (CER Sustainable Business Network), GXN AS, Riga City Council, NXT Aps, Fonden Chart, Kairos Consorzio Di Cooperative Sociali - Societa Cooperativa Sociale O.N.L.U.S, Comune Di Torino, Plusvalue Italy Srl Societa Benefit, Stichting Samenwonen-Samenleven, Stichting The Beach, Royal Danish Academy – Architecture, Design, Conservation, BTC d.d., The Really Regenerative Centre CiC, Dark Matter Laboratories Limited

LOCATION

Kalundborg, Denmark

Image credit: Tækker Group



Realising urban development for people and planet

The development of the new Danish town Nye has provided a unique opportunity for holistic and human-centred urban planning — integrating urban nature, intelligent water management, climate adaption, and social sustainability to create a thriving, climate resilient city.

The masterplan sought to address regional consequences of climate change — including increasing cloudburst events, depleting clean groundwater resources, and the reduction of biodiversity — as well as health impacts related to increasing urbanisation.

Every stage of Nye's design focused on the social potential of solutions. A blue-green water management system was chosen to create recreational areas where residents can gather. A thorough investigation of local terrain has enabled a vegetation strategy championing native plants and animals. The decision to prioritise green mobility has made cycling and walking the easiest choice.

In 2022, Nye won Denmark's most prestigious urban development prize, Byplanprisen, for setting new standards in sustainability and implementing visionary solutions for urban nature, community, and biodiversity. The reuse of rainwater in toilets and laundry alone has reduced groundwater consumption by 40% compared to similar urban areas.

CONTRIBUTORS

COWI, CEBRA, TERRITORIUM, LABLAND, Aarhus Vand, Interreg North Sea Programme, Tækker Group

LOCATION

Nye, Aarhus, Denmark



Render by CCO Architects and Urban Power.

Stejlepladsen masterplan: spaces for diversity

The Stejlepladsen masterplan seeks to further develop a unique, densely arranged, and organically developed Copenhagen community into an inclusive and multi-generational neighbourhood supporting active community at all times of the day.

The masterplan seeks to deliver 900 new homes promoting residents' inter-relationships, sense of security, and common goals for sustainable living. It champions diversity, healthy and carbon-reduced materials, biodiversity, affordability, and community to serve families, seniors, and students alike.

The project is designed specifically to support diversity. The vision is to integrate both the mindset, processes, and community from the existing site.

Existing clusters of dwellings in various shapes and sizes have defined the scale and structure of the masterplan, which is centred around eight guiding principles: build low and compact; support diversity with green buildings and sustainable urban drainage systems; integrate mixed forms of housing; make space for DIY projects and structures; create a car-free urban space; build smart, sustainable, and affordable; and optimise design in accordance with 3D simulation of local wind and daylight conditions.

CONTRIBUTORS

Urban Power, Kragh & Berglund, Artelia / Urban Creators, CCO Architects

LOCATION

Stejlepladsen, Copenhagen
The project is not built yet.



Illustration: Sweco Architects

A balanced approach to sustainable development

The UN17 Village is the first large-scale urban development project of its kind to incorporate all 17 SDGs. It provides a new model for urban development that prioritises the needs of inhabitants, and creates thriving communities in greater balance with their environment.

Accelerating urban construction is fraught with negative climate impacts, resource demands, logistical challenges, and health issues. This project seeks ambitious new standards and partnerships in urban development to increase social, environmental, and economic sustainability.

The project aims to reduce the development's climate footprint and create quality homes without over-using Earth's scarce resources. It is organised around six key sustainability themes: building materials, community, physical and mental health, biodiversity, utilisation of water, and renewable energy sources.

The project will be DGNB-certified to Gold/Platinum level, DGNB Heart, and WELL, setting new standards for Danish residential buildings. It will deliver 1,700m² of solar panels, and collect over 1 million litres of rainwater per year for recycling and recreational use. The project's CO₂ reduction is expected to exceed 2023 Danish Building Regulations by 30%.

CONTRIBUTORS

Lendager, Sweco Architects Denmark, Artelia, SLA, and CG Jensen A/S, NREP

LOCATION

Ørestad, Copenhagen, Denmark

The organisations behind this white paper

STATE OF GREEN

State of Green is a not-for-profit, public-private partnership from Denmark. We facilitate relations with international stakeholders and are your one-point entry to all leading Danish players working to drive the global transition to a more sustainable, low-carbon, resource-efficient society. State of Green is funded by the Danish state and three leading Danish business organisations: Confederation of Danish Industry, Green Power Denmark, and Danish Agriculture and Food Council.

Learn more at: stateofgreen.com

MINISTRY OF ENVIRONMENT OF DENMARK

Taking care of Nature and the environment, consumer protection and information are core concerns of the Ministry of Environment.

The Ministry facilitates the development of sustainable and resource-efficient solutions and contributes to the development of the Danish society, while simultaneously minding nature, the environment, and our drinking water.

The Ministry of Environment of Denmark includes the Department, the Environmental Protection Agency and the Danish Nature Agency which includes the Danish Coastal Authority.

Learn more at: en.mim.dk

MINISTRY OF INDUSTRY, BUSINESS AND FINANCIAL AFFAIRS

Ministry of Industry, Business and Financial Affairs seeks to improve the conditions for business in Denmark. The Ministry conducts thorough economic analyses and suggests policy initiatives in areas imperative to economic growth.

The Ministry is responsible for a number of policy areas, which are important for the general business environment, including business regulation, Intellectual Property Rights, competition and consumer policy, the financial sector and shipping.

Learn more at eng.em.dk

CITY OF AARHUS

City of Aarhus is the local government in Aarhus - the second largest city in Denmark. The city of Aarhus primarily works with 'citizen-oriented tasks', all of which consist of welfare management. When it comes to the green transition, the City of Aarhus aims at reducing its CO₂ emissions by creating intelligent solutions and green growth in close collaboration with the business community and the city's many knowledge institutions.

Learn more at: aarhus.dk/english

HENNING LARSEN

Founded in Copenhagen with offices worldwide, Henning Larsen is an architecture, landscape, urbanism and interior, graphic, and lighting design studio. Henning Larsen works holistically and creates the setting for transformative ideas to flourish.

At the heart of Henning Larsen's design philosophy is the play of light and nature. The studio works at the nexus of creativity and experimentation, always aiming for lasting impact on communities and their environments.

Learn more at: henninglarsen.com

THE DANISH TOWN PLANNING INSTITUTE

The Danish Town Planning Institute is a private, independent institution that aims to showcase urban and regional planning in Denmark. The Institute addresses town planners, students, public authorities and interested citizens who wish to know more about town planning.

The Institute puts considerable effort into both ensuring that current town planning issues and questions attract interest and promoting new knowledge and ideas within town planning. The Institute achieves this through various channels: the library, publishing activities, participating in development projects, arranging courses, seminars, conferences, and study tours and taking part in the debate on town planning on an active and ongoing basis.

Learn more at: byplanlab.dk

Learn more about Danish urban green transition solutions, find more cases from around the world and connect with Danish experts at:

stateofgreen.com

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Ministry of Environment
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MINISTRY OF FOREIGN AFFAIRS
OF DENMARK