



GREATER COPENHAGEN GREEN

GREATER
CoPENHAGEN

NEW & GREEN SOLUTIONS ARE VITAL TO THE FUTURE OF THE WORLD

The climate crisis is the single biggest challenge the world is facing.

Climate change is picking up speed, temperatures are rising faster than ever before and resultant extreme weather events such as floods, drought and hurricanes have become part of daily life – globally and in Greater Copenhagen.

In spite of already tangible consequences and a growing awareness about the consequences of the greenhouse effect, global CO₂ emissions continue to rise.

If temperature rises are to be kept under the 2-degree limit agreed to at the 2015 Paris Climate Accord, action is needed now.

GREATER COPENHAGEN GREEN – A CHARTER FOR THE FUTURE

The Greater Copenhagen Committee will, in cooperation with its member organisations, act at the local level in response to these global challenges, to drive the green transition forward.

The Green Charter – Greater Copenhagen Green – sets a common political direction and enables Greater Copenhagen's 85 municipalities and 4 regions in Southern Sweden and Eastern Denmark to focus on common interests, contribute locally to the green transition, and to make the most of the billions of Euros of investments in green growth and job creation expected over the next few years.

Greater Copenhagen Green is therefore an important step on the road to a sustainable future.

VISION

Greater Copenhagen aims to be a global trailblazer amongst metropolitan areas when it comes to green transition and green growth.

The green transition requires coordinated action across sectors and industries. Hence, Greater Copenhagen and its member organisations want to take responsibility for driving the green transition forward. Greater Copenhagen has a unique capacity to both stimulate the market, to embrace green solutions as well as gather public and private businesses, institutions, universities and innovation hubs in green development and growth partnerships.

Using its critical mass, strong capabilities and green know-how, Greater Copenhagen will be the central node where investors, entrepreneurs, researchers and talents gather to develop new green technology and work together with innovative municipalities and regions to scale up their green businesses.

GREEN COMPETITIVENESS

The global green competition is growing and finding green solutions which can lower CO₂ emissions and alleviate the climate crisis holds huge potential for growth, job creation and welfare.

To strengthen and maintain Greater Copenhagen's front-runner position in being green, it is crucial that businesses, public institutions, universities and other green actors get access to capital, talent and skilled labour.

With the Green Charter, Greater Copenhagen has not only set a common political agenda, but also established

a starting point for branding the regions' strengths and unique growth and development potential.

Greater Copenhagen Green thus provides Greater Copenhagen a solid foundation on which to attract international investors, businesses, talents and delegations which can make Greater Copenhagen world-leading centre for green growth.

Greater Copenhagen can't do it alone. It is necessary for the governments in Sweden and Denmark to contribute to the work of municipalities and regions, and that this work is coordinated. Cooperation and coordination with European organisations, including the STRING initiative, must also be achieved. And of course, it must be mentioned that businesses and their employees are entirely essential to fulfilling these large ambitions and should not be forgotten.

STRENGTHS AND GROWTH POTENTIAL

Greater Copenhagen is already far ahead in the green transition. To ensure a solid foundation for the green transition, Greater Copenhagen is building on the metropolis' existing strengths within *renewable energy, energy efficiency, circular economics and climate adaptation*.¹

Greater Copenhagen is world-leading in the **renewable energy sector** – especially in solar and wind energy. The application of renewable energy in, for example, district heating systems, the development of new energy solutions and the production of green fuels, has big potential in terms of both green growth and CO₂ reduction.

For many years, the focus of **energy efficiency** has been in on new buildings. However, attention is now also being paid to energy-renovation of existing homes, where the reduction potential in energy and CO₂ is significant. Thus, there is also big potential in developing new, digitalized energy systems.

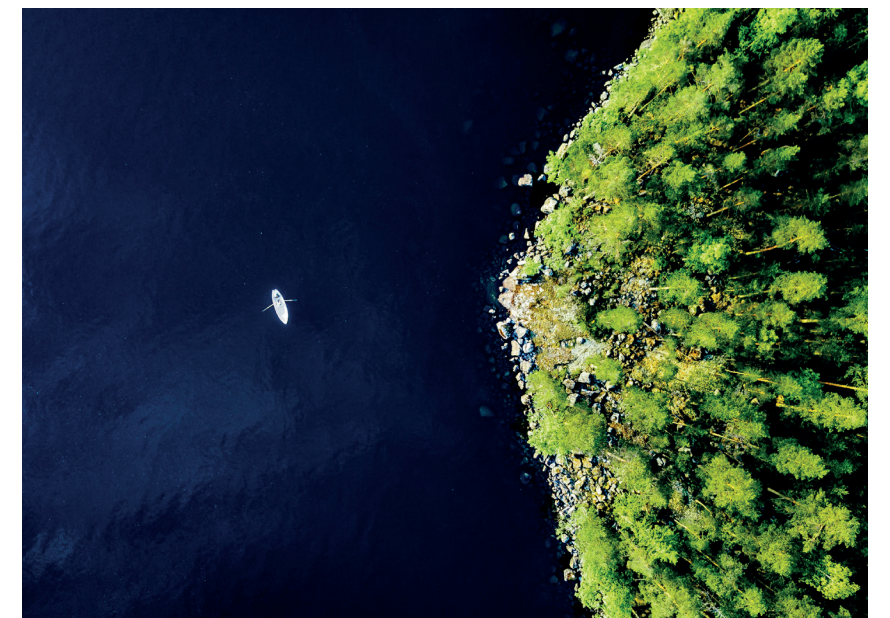
The expansion of energy-efficient and CO₂-neutral transportation options is well underway in Greater Copenhagen. Global trendsetting bicycle-cities like Copenhagen, Malmö and Lund are internationally renowned and there is a massive effort to spread fossil fuel-free transport to the entire geographic region.

Greater Copenhagen is especially known for its work with **circular economy**. Within biotechnology – for instance, the production of biodegradable packaging, enzymes and other inputs in the food sector – Greater Copenhagen boasts of leading, global businesses, a plethora of SMEs and research institutions without compare. There are enormous prospects for carbon reductions, resource efficiency and growth, which have not been taken advantage of yet. With a focused effort, the metropolis can position itself at the front of the pack within circular economy.

The whole world is seeing large investments in **climate adaptation** efforts. Greater Copenhagen is already a show-case for new solutions, and already has both strong capabilities and the political will to actively mitigate the consequences of climate change. Solutions that can both make water and waste-water systems more efficient and take into account quality of life in urban and rural areas, have big growth and export potential.

¹COWI report 2020 "Greater Copenhagen Green", wherein the metropolis' strengths are laid out.

"THE GREEN TRANSITION REQUIRES COORDINATED ACTION ACROSS SECTORS AND INDUSTRIES"



**"IN THE ENERGY SECTOR ALONE,
GREATER COPENHAGEN CAN
EXPECT TO CREATE CLOSE TO
42.000 NEW JOBS BY 2035"**

THIS IS HOW WE WORK

Greater Copenhagen's members stand behind Greater Copenhagen Green and will, utilizing their own capacities, skills and strengths, drive the green transition forward.

Greater Copenhagen Green balances efforts

That's why Greater Copenhagen Green focuses on innovation and development of solutions and green tech which will contribute to CO₂ reduction and growth in both the short-term and long-term.

Greater Copenhagen creates strong partnerships

National and international partnerships between businesses, the public sector, universities, innovation hubs and education institutions at all levels will guarantee that the Charter's goals are realised.

Greater Copenhagen paves the way

The Greater Copenhagen collaboration will drive the green transition and increase the demand for innovative, green solutions. Moreover, members will make innovation and test centres available for development and scaling of new technologies.

Greater Copenhagen Green attracts green investments

The development of green tech and solutions depends on investments. Greater Copenhagen will support finding investments for projects and initiatives that can grow the green economy.

Greater Copenhagen ensures a labour force with green economy skills

Accomplishing the green transition requires new skills. To access qualified labour, the labour market and education institutions must work together to create new education programmes.

NEW GREEN JOBS

The green transition can potentially create thousands of new jobs – especially in those sectors where Greater Copenhagen's businesses and knowledge institutions already stand strong. Global demand for green tech

solutions will only grow and is expected to reach approximately DKK 51.000 billion/SEK 71.000 billion by 2035.

A close, strong partnership with knowledge institutions and public authorities gives businesses in Greater Copenhagen's the chance to test and develop the green solutions and technology of the future. The metropolis' businesses will thereby have access to those experiences and new show-cases which future green exports will build on. In the energy sector alone, Greater Copenhagen can expect to create close to 42.000 new jobs by 2035.

THE GREEN METROPOLIS OF THE FUTURE

The UN's Sustainable Development Goals (SDG) have set a path for global sustainable development until 2030.

Greater Copenhagen Green will contribute to 5 of the 17 goals. The overlap between the SDGs and the Charter are described under each area below.

4 KEY AREAS

Greater Copenhagen's work with green transition and green growth can be divided into four key areas: CO₂-neutral Greater Copenhagen, Energy-efficient Greater Copenhagen, Circular Greater Copenhagen and Climate Robust Greater Copenhagen.

**7 AFFORDABLE AND
CLEAN ENERGY**



**8 DECENT WORK AND
ECONOMIC GROWTH**



**11 SUSTAINABLE CITIES
AND COMMUNITIES**



**12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION**



**13 CLIMATE
ACTION**





CO₂- NEUTRAL GREATER COPENHAGEN



Earth's temperature is rising. To break this trend and keep the average temperature rise below the 2 degrees agreed to in the Paris climate accord, renewable energy from wind, sun and green fuel must be integrated into general energy production.

Working with renewable energy is a strong hold in Greater Copenhagen. Therefore, Greater Copenhagen will support the green transition of the metropolis' production and supply of energy, as well as work towards the metropolis being CO₂-neutral in 2030.

INITIATIVES

GREATER COPENHAGEN CO₂-NEUTRAL HEATING BY 2030

If Greater Copenhagen is going to be CO₂-neutral by 2030, expansion and streamlining of district heating systems is necessary. Additionally, climate-friendly solutions for heating houses that aren't connected to the district heating system are needed.

In Greater Copenhagen, we can develop the next generation of a district heating system which better exploits renewable

energy, fossil fuel-free heating sources and excess heat from industry, buildings and research parks. Storing thermal energy will constitute a very significant contribution to Greater Copenhagen's CO₂ neutrality in 2030.

Call to action

This initiative makes room for collaborations between public and private stakeholders to develop products and test regulatory measures in the area.

By raising demand and working politically towards the goal of being CO₂-neutral by 2030, Greater Copenhagen's member organisations can drive development and scale the production of green energy, thus reducing the CO₂ emitted in the process of heat generation.

ESTABLISHING A PLANT FOR CARBON CAPTURE & STORAGE AND CARBON CAPTURE & UTILISATION

Storing and reusing CO₂ for new energy sources and applications is one step on the way to a CO₂-neutral future. Greater Copenhagen will be a strong international actor in the effort to develop and apply new methods to capture and reuse CO₂.

Already there are plans to establish various plants to capture, store and convert CO₂ to new green fuel. To develop new and efficient methods, and to build knowledge around Carbon Capture and Utilization, more testbeds need to be established in the metropolitan region of Greater Copenhagen.

Call to Action

Greater Copenhagen will strengthen collaboration and knowledge-sharing across the region and through political and strategic initiatives, it will support the framework and terms for investments in Carbon Capture plants and the reutilisation of CO₂.

GREEN FUEL FOR HEAVY TRANSPORT

Carbon emissions from the transport sector are significant. Simultaneously, heavy transport and air traffic are central to Greater Copenhagen's mobility, international accessibility and competitiveness. To balance green growth with this truth, air and ship traffic, machines and heavy transport will have to undergo a green transition too.

In Greater Copenhagen we have the preconditions needed for developing several new types of sustainable fuel – take for instance, liquid biogas and electro-fuels, which can be used in heavy transport and air transport. By targeting spending and setting standards for the supply chain, Greater Copenhagen's member organisations can increase demand and ensure a slice of the market for green fuels.

Moreover, in partnership with public and private actors, labour market stakeholders and knowledge hubs, Greater Copenhagen can work to establish a plant facility to turn wind energy into new hydrogen-based fuels.

Call to Action

Greater Copenhagen and its member organisations will be drivers in the development and application of green fuel for the heavy transport industry.

To support investment in the development of these green fuels and infrastructure, Greater Copenhagen's member organisations will continue to call for green, CO₂-neutral fuels in the heavy transport sector.

GREATER COPENHAGEN BIO SCIENCE HUBBIO SCIENCE HUB

New solutions in Bio Science can potentially reduce CO₂ by 800 million tons by 2030. Bio Science opportunities are manifold and can contribute to increased circularity and the production of green fuels, enzymes and food products, which all will reduce carbon emissions and climate change.

Thus, Bio Science can clearly contribute in a very significant way to the green transition, to Greater Copenhagen's carbon reduction goals and to strengthening the region's general green growth and competitiveness.

To attract international attention and world-leading biotech companies, talents and investors, a Bio Science Hub must be established in Greater Copenhagen, where universities and public and private companies can cooperate, share knowledge, build capacity and develop new and innovative climate solutions.

Call to action

Using its experience with existing Science Parks, Greater Copenhagen will support establishing a Bio Science Hub and partner with public and private actors to attract businesses, investors and talents in the Bio Science world.

Greater Copenhagen will also engage with policy makers on the national level and support the development of a framework for green Bio Science.

**"WORKING WITH
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ENERGY EFFICIENT GREATER COPENHAGEN

Energy savings in buildings and outdoor areas as well as carbon savings in the transport sector are essential to the green transition. Taken together, the general operation of buildings and the transportation sector account for around half of all carbon emissions. A green transition of the two sectors is therefore critically important in order to reach the CO₂-reduction goal for 2030.

In Greater Copenhagen, innovation and testing of intelligent and flexible energy systems is already underway. To strengthen this development and green growth, Greater Copenhagen will work to gather expertise and knowledge on the area, as well as support an upscaling of novel green energy solutions.

Greater Copenhagen's member organisations will also work to develop and spread green mobility across the metropolitan region.

INITIATIVES

INNOVATION HUBS FOR INTELLIGENT AND FLEXIBLE ENERGY SOLUTIONS

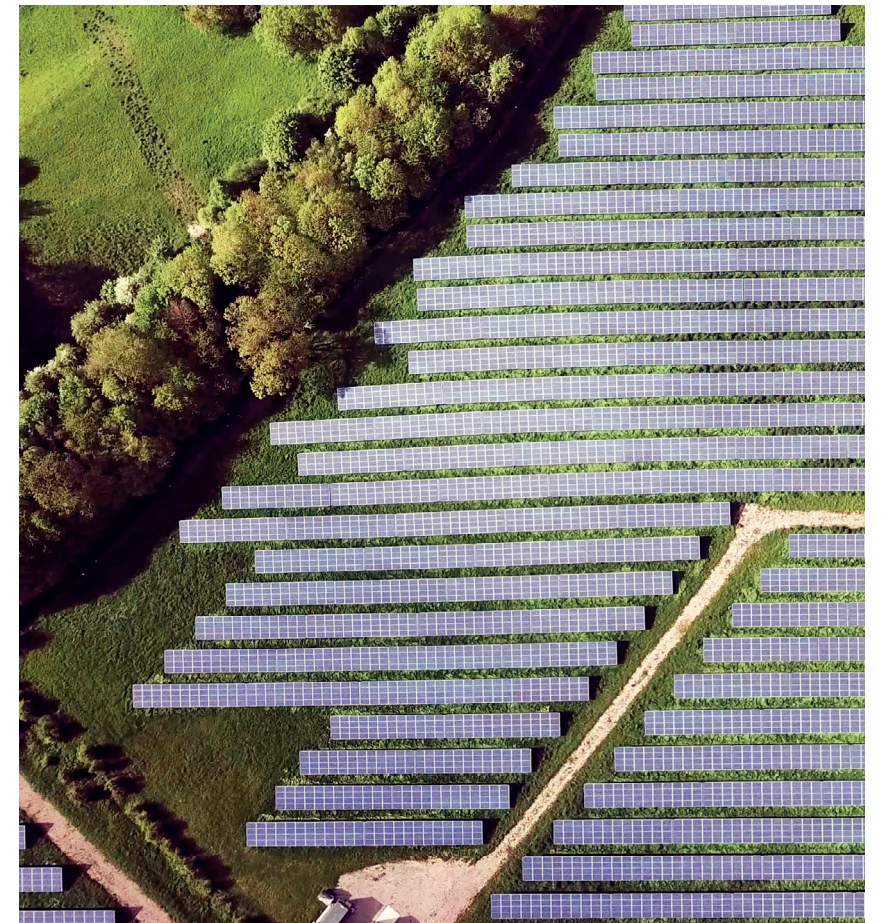
Creating an intelligent and flexible energy system is a vital element in the green transition. With an Innovation Hub and living labs for sustainable energy transition, Greater Copenhagen will naturally evolve into a place where public institutions, private companies, universities and citizens meet to mature and showcase new, data-driven, intelligent and flexible energy solutions.

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LIVING LAB (AN EXAMPLE)

Living Labs are partnerships between several actors who share common interests.

Living Labs create the opportunity to gain new insights by engaging actors in co-creative processes which can result in new, valuable solutions.



Call to Action

Greater Copenhagen's member organisations will support investments in intelligent and flexible energy systems, increase market demand for these solutions and open themselves to testing and innovation of new solutions.

ENERGY-EFFICIENT BUILDINGS AND LIGHTING

Buildings presently account for around one third of society's total energy use. The construction and building branches have already begun to focus on reducing the climate impact and energy usage in building, and across the Greater Copenhagen region, work is being carried out to make new and existing buildings climate neutral and energy efficient.

Within the construction sector, optimised operations and application of data and sensor-based technology (Internet of Things) for energy control can result in large savings in energy. Purely by using LED-technology for street lighting, municipalities and regional authorities can save up to 50% of the energy consumption currently spent on lighting.

Call to Action

Greater Copenhagen's member organisations will, using new data-based solutions as a springboard, cooperate to optimise energy consumption in buildings and street lighting.

GREEN MOBILITY

Consumption of fossil fuels for transportation must be reduced. Greater Copenhagen will therefore continue to develop green, sustainable mobility options, for example by promoting green public transportation, sustainable travel across Oresund, expanding electric, biofuel and hydrogen-fuelled cars, and encouraging pedestrianism and bicycle culture.

Greater Copenhagen will work to establish a wide-reaching and comprehensive infrastructure for charging and refuelling sustainable transportation vehicles. Moreover, common payment systems and more climate-friendly, alternative mobility options will contribute to cementing the metropolitan area as green, yet transportation efficient.

Call to Action

Greater Copenhagen's member organisations will target their spending toward climate-friendly transportation solutions and strengthen the conditions for further developing green mobility. Apart from that, Greater Copenhagen will also work to promote the green transition through lobby efforts.



CIRCULAR GREATER COPENHAGEN

Consumption of Earth's non-renewable resources is growing at an exponential rate and has long surpassed Earth's capacity. To reduce carbon emissions and create a balance between consumption and natural renewal, natural resources must be kept in the circular system for as long as possible.

The Greater Copenhagen metropolis already possesses strong skills and broad experiences in the area of circular economy and sustainable use of resources. Further development and scaling of circular solutions and green business models will require investments in innovation, developing new products, and deeper understanding of the market.

To support development, innovation and to promote private investments, Greater Copenhagen's member organisations aim to increase demand for circular solutions. Moreover, Greater Copenhagen will improve political collaboration around the development and innovation of circular solutions.

INITIATIVES

CLIMATE-FRIENDLY FOOD: FROM FARM TO TABLE AND FROM TABLE TO FARM

To reduce climate change impacts and carbon emissions, more food must be produced locally, consumed locally and recirculated locally. Waste products from food production and households in general should be reused in the production of new food and biofuel.

Much of Greater Copenhagen's food production is already anchored in sustainability and lowering carbon emissions.

Moreover, the Greater Copenhagen area also has experience in handling and turning food waste from the production cycle into biofuel, which can be used as fuel in the transportation sector and as biofertilizer in agriculture. Phosphorous, a non-renewable element, is used in conventional food production as well, and recycling that will also strengthen circularity.

Call to Action

Greater Copenhagen's stakeholders will work to promote local circularity and production of food and biofuels.

CIRCULAR CONSTRUCTION

The construction industry faces a sweeping green transition, where design, application and recycling of construction materials must contribute to reducing carbon emissions. In Greater Copenhagen, there is a large potential to make the construction industry climate neutral.

The carbon footprint must be reduced through the entire construction industry supply chain. By using research facilities at the European Spallation Source (ESS), the construction industry can gain new knowledge about the design of materials and about the prospects involved in improved use and recycling building materials.

The circular choice must become a better alternative to relying on new raw materials. Therefore, building a circular economy in the construction sector depends on entrepreneurs and builders having improved access to recyclable construction materials.

Call to Action

To improve circularity in the construction sector, Greater Copenhagen will work to establish an internal market for recyclable construction materials can circulate freely across the metropolitan area.

Greater Copenhagen will also work to improve the recycling opportunities and the circular economy in construction materials and waste.

ESTABLISHING CIRCULARITY IN PLASTIC USE

Plastic is an environmental problem and a problem for our ambition of a fossil fuel-free society. To minimise consumption of plastic, new and sustainable alternatives need to be phased in. Moreover, plastics that cannot be replaced by green alternatives must increasingly be reused.

Public institutions like municipalities and hospitals play an important role in this development and the circular economy of it. They can affect it by both holding themselves and their suppliers to set standards regarding handling, sorting and reusing plastic as well as stimulating the market and the demand for new, innovative and sustainable alternatives.

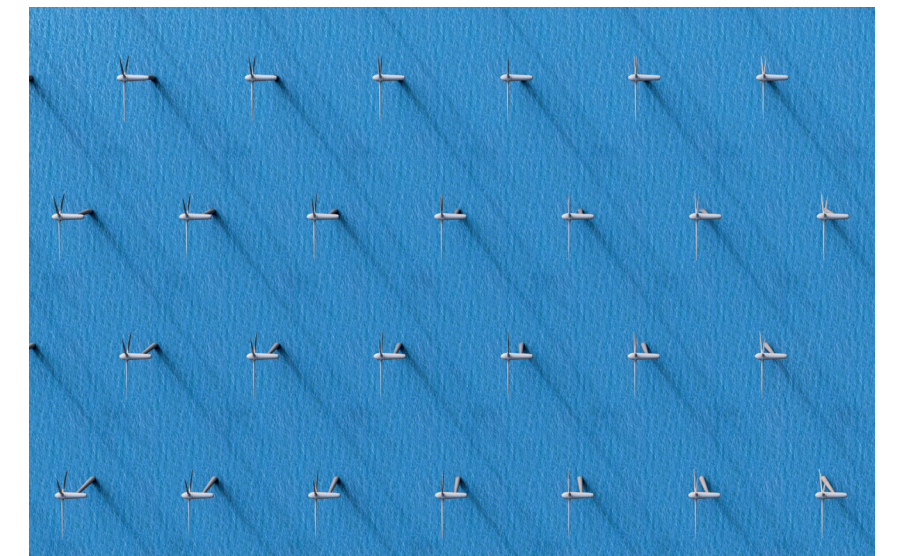
Call to action

Greater Copenhagen's public institutions will support both more recycling and phasing out of plastic.

To increase the recyclability of plastic, member organisations must raise their requirements for sorting and handling plastic – both when it comes to buying products and materials, and when it comes to the organisation's own handling and disposal of plastic waste.

Member organisations also commit to supporting phasing out plastic by providing testbeds for research and development and by growing demand for new and sustainable alternatives to plastic.

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CLIMATE ROBUST GREATER COPENHAGEN

The consequences of global warming have in recent years become evident for citizens, businesses and public institutions in Greater Copenhagen. That is why there is currently massive investment in climate adaptation solutions happening across Greater Copenhagen.

Every year, Greater Copenhagen welcomes foreign delegations who wish to learn more about the region's climate solutions. To further develop this area, it needs to be scaled up and requires more public investment.

Greater Copenhagen strives to be a leader in solutions for climate adaptation, which can contribute to the quality of life, attractiveness and growth of the region. To ensure knowledge-sharing, Greater Copenhagen aims to congregate stakeholders and experts to work to improve the terms and conditions under which the future's innovative climate adaptation solutions are being developed.

INITIATIVES

GREATER COPENHAGEN LIVING LAB FOR CLIMATE ADAPTATION

Greater Copenhagen will be the place where digital solutions in meteorological data and climate adaptation can be developed and applied to optimise public investments in water and environment.

Already, regional projects exist which data-based climate adaptation efforts can draw on. By also utilising Living

Labs, Greater Copenhagen's members and other actors can develop attractive climate adaptation solutions that can deal with both the effect of climate change and be applied to, for instance, recreational purposes.

Call to action

Greater Copenhagen will support establishing a Living Lab where meteorological and geographical data can be collected, and where member organisations and other actors can share knowledge, develop, test and showcase future data-based climate adaptation solutions.

SAFE ACCESS TO HIGH-QUALITY WATER

Climate change has in recent years caused droughts and shortages of drinking water. Access to good water is necessary for the quality of life of citizens and for the business community's growth and development.

Especially the process and medical industries are dependent on high water quality.

Call to action

Greater Copenhagen will support development in this area. In part by cooperating with municipalities, local water works, the business community and knowledge institutions in order to develop knowledge, data and tech, an improvement in use and reuse of water in Greater Copenhagen's homes can happen.

**"THAT IS WHY THERE IS
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"CENTRAL TO
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FROM POLITICS TO ACTION

Greater Copenhagen's vision to become a global leader in green transition and green growth is an ambition that builds on partnerships and concrete initiatives.

Greater Copenhagen's approach to this charter has been grounded in three principles:

- Partnerships and interest representation, with the goal of bringing others on board to contribute to Greater Copenhagen's green vision.
- Engaging regional and municipal authorities in fostering innovation and procuring green solutions, with the goal of leading by example and driving the green growth paradigm forward.
- Investing with the goal of beginning concrete green initiatives.

The efforts outlined in the Charter are developed in concert with a variety of actors and stakeholders – including public institutions, universities, private companies, supply businesses and organisations, labour market representatives and interest organisations. But the implementation of the Charter should not be limited to these actors.

Green development is fast paced. The Charter will thus be open to embracing future initiatives that adhere to the defined ambitions in the four key areas, and that contribute to realising Greater Copenhagen's overall goal for the climate and green transitioning.

Central to everything is the willpower to meet climate challenges head on, and to really desire the green transition.

It is Greater Copenhagen's impression that the suggested initiatives will have multiple stakeholders. It is not expected that all member organisations and interested parties will be actively involved in every single initiative nor be involved in the same way. However, it is considered likely that member organisations and other actors will easily be able to jump onto the individual initiatives, either as an independent organisation or through the Greater Copenhagen community or even through other special partnerships.

This charter designates four key areas and 12 concrete initiatives. The effect of some of these initiatives will materialise in

the short-term, while other will not appear until later. Additionally, the individual initiatives are at various levels of development. Greater Copenhagen will therefore clarify how each initiative will be initiated.

FUNDRAISING

To finance the initiatives laid out in Greater Copenhagen Green, Greater Copenhagen will begin a partnership with relevant actors with the aim of securing funds from, the EU.

From 2021-2027, the European Commission is distributing 30 billion euros from Horizon Europe to projects that relate to the EU's Green Deal. The Green Deal thus has potential to become a significant source of financing and realising the vision in Greater Copenhagen Green.

GREATER COPENHAGEN

Greater Copenhagen is a political partnership that works to promote growth and development in the metropolitan region of Eastern Denmark and Southern Sweden. Greater Copenhagen's constituent parts are the 4 regional authorities and 85 municipalities in Region Zealand, The Capital Region of Denmark, Region Skåne and Region Halland. It is governed by a political board – the Greater Copenhagen Committee – appointed by the 89 member organisations.

Greater Copenhagen's policies are articulated through Charters. There are approved Charters for the Labour Market, for Traffic & Infrastructure and for Digitalisation. The Greater Copenhagen Green Charter must therefore be read in the context of the other charters.

For example, Greater Copenhagen Green supports the Traffic Charter's ambition to phase in more fossil fuel-free transportation, the Labour Market Charter's demand for a more qualified workforce and the Digital Charter's focus on securing good digital infrastructure in the entire metropolitan region.

Greater Copenhagen's other charters can be found at www.greatercph.dk

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**GREATER COPENHAGEN HAS
A UNIQUE CAPACITY TO BOTH
STIMULATE THE MARKET, TO
EMBRACE GREEN SOLUTIONS
AS WELL AS GATHER PUBLIC
AND PRIVATE BUSINESSES,
INSTITUTIONS, UNIVERSITIES
AND INNOVATION HUBS IN GREEN
DEVELOPMENT AND GROWTH
PARTNERSHIPS"**

GREATER
CoPEnHAGEN

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