

# SUSTAINABILITY IN COWI

# 2021

COMMUNICATION ON PROGRESS  
2021 UN GLOBAL COMPACT



**COWI**

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## COMMITMENT FROM OUR CEO

# TOGETHER FOR A SUSTAINABLE AND LIVEABLE FUTURE

In 2021, the need for engineers and architects as levers for the green transition was more apparent than ever before. We already feel the impacts of climate change, and confronting this challenge can no longer be postponed. It is time to do the right thing, and COWI is ready to take a leading role on this journey.

In late 2021, a new strategy for COWI was approved. While delivering sustainable solutions has always been at the core of our business and operations, the ambition is now that 100 per cent of COWI's revenue must come from projects which advance a sustainable world.

This means that we will focus on supporting our customers in their green transition, build new green fuel production facilities based on green hydrogen technologies, establish carbon capture and storage facilities, as well as accelerate the direct electrification of industries and societies. Within the next three to five years, we expect to have transitioned into reaching 100 per cent revenue within sustainability-related projects.

This is described as a bold move, but in my opinion, it is the only right thing to do. In the light of the current climate crisis, the world calls for real action in order to hand over a sustainable and liveable world to future generations.

Recognising that the world and the people inhabiting it will still need roads and airports, modern urban areas, and improved livelihoods we will help our customers in these areas, but we must and will deliver solutions that make the world more sustainable, regardless of segments. We will still work with energy majors on their green transition, but not on projects exploring or producing fossil fuels. Phasing out fossil

fuels will make a real difference to liveability of the world and the next generation.

## BRINGING EXPERTISE INTO PLAY

It is encouraging to see that we are not alone in this. Our customers within both the private and public sector are also increasingly stepping up the commitment to influence and shape a more sustainable world.

As partners who are recognised for being capable of delivering crucial CO<sub>2</sub> emissions reductions, via specific projects and technologies, we are ready to co-create and assist our customer in the necessary, but not necessarily easy transition towards a greener society.

Our planet is already facing the distressing effects of the global climate crises. In 2021, we saw many parts of the world hit with flooding and heat waves, and we saw how necessary climate adaptations are becoming within infrastructure, urban development, housing, and energy supply.

Given our expertise within sustainability, it is our responsibility to accelerate the implementation of climate change adaptation solutions in collaboration with our costumers.

COWI is focused on joining forces with our customers and partners on the next chapter of sustainability, and we are especially dedicated within the areas of

green fuels, green mobility, sustainable cities, and climate adaptation, looking at sustainability in both the short-term and long-term perspective. In 2021, this meant that strengthening capabilities within this area were a high priority, both in terms of new recruitments and for our internal training programmes.

## SUSTAINABILITY BEYOND CO<sub>2</sub> REDUCTIONS

At the same time, we are noticing that our customers are increasingly looking at sustainability beyond the matter of CO<sub>2</sub> emissions reductions. This tendency is further encouraged by the EU's new requirements for taxonomy, and new standards for corporate accountability in relation to transparency and accountability in our own value chains.

In that context, we have improved our internal screening processes, risk management and due diligence systems, and introduced a new code of conduct, which is now applicable to our procurement and subcontractors.

## EMPOWERING OUR EMPLOYEES

Internally, we have continued our dedicated work to ensure that COWI is a preferred workplace, with high standards for employee engagement, diversity, and development opportunities. Throughout the past year, we worked systematically to

improve diversity and well-being. Keeping engagement high by ensuring COWI is an attractive workplace where talents can extend their potential and take part in designing the future, will remain a key priority. Increased hybrid work has also posed new challenges for ensuring a sound, healthy working culture, one that continuously inspires people to deliver their best, and nurtures curiosity and co-creation, regardless of if we meet virtually or physically.

Going forward, we will build on our experiences to ensure that we maintain this agility and continue to improve the way in which we organise our operations – to the benefit of both humans and the environment.

## REDUCED BUSINESS TRAVEL

In 2021, the ongoing Covid-19 pandemic significantly reduced commuting and travelling which reduced our carbon footprint related to business travel by 16 per cent compared to last year.

While this is positive and in line with our ambition of cutting our CO<sub>2</sub> emissions by 70 per cent (compared to 2008-levels) by 2030 and becoming carbon neutral by 2050, we must maintain momentum and keep reducing business travel and energy consumption in relation to our operations and services.

The mitigation initiatives in 2021 range from limiting business travel and changing the company car fleet to electric cars to developing even more accessible online training schemes. By default, all meetings are now online, the new hybrid work model aims to create a more flexible workplace environment and contribute positively to the ambition to reduce our carbon footprint by reducing, for example, the need for office space and furniture.

All options are worth considering if they contribute to increased sustainability and, at the same time, support well-being and productivity. That said, in COWI, our biggest contribution to tackling the climate crisis is undoubtedly through our collaborations with customers on their projects.

## LESS CONVERSATION – MORE ACTION

We are at a crossroads for action on climate change. Not doing anything is simply not an option anymore. Fortunately, the future looks promising, as many of the solutions, needed for the implementation, are at hand. At COWI, we will do our utmost to ensure that, together with our customers, we shape a sustainable and liveable world. This will require collaboration, commitment, and courage from all of us. In other words, it is time for a little less conversation, and a lot more action.



Lars-Peter Soby, Chief Executive Officer



# SUSTAINABILITY AND CSR IN COWI

The UN Global Compact calls for businesses to help build social and environmental frameworks that ensure open and free markets and provide people everywhere with a chance to share the benefits of the new global economy.

COWI's chief potential to deliver on the ten principles in the Global Compact about Human Rights, Labour Rights, Environment and Anti-corruption lies within our service delivery and the solutions that we develop with and for our customers.

Throughout our 90-year history, we have worked with our customers to deliver solutions with long-term societal, environmental, and human interests in mind, because sustainability is part of our identity and incorporated into our business model.

By combining our in-depth knowledge of engineering consulting with innovation, a holistic outlook, and an understanding of the bigger perspective, we help our customers achieve the best solutions to the benefit of today's and tomorrow's society.

## TAKING RESPONSIBILITY

In a world where urbanisation and climate change are a reality, societies and customers need solutions that are effective and sustainable, and that enable quality

of life for the entire community, both in the short term and long term.

The consequences of climate change remain an overarching challenge, and the green transition is both influencing the demand for our current solutions and providing new growth opportunities. At any given time, we are involved in more than 10,000 projects across the world. Each project has an impact and can contribute to achieving the UN sustainable development goals (SDGs), if designed and realised in an innovative way.

## OUR IMPACT

To enable our business strategy and our vision of a sustainable and liveable world, we continuously develop and strengthen our organisation, and the way we work. During 2021, we further intensified our strategic focus on future energy systems, resource efficiency, and green mobility, and continued consolidating our energy resources in one business unit, focusing on renewables and thereby positioning COWI as an attractive partner in the green transition.

Simultaneously, a range of new sustainability and carbon reduction tools were mainstreamed into our project cycles to proactively integrate sustainability and

## SUSTAINABLE DEVELOPMENT GOALS

COWI's services within infrastructure energy, water and buildings contribute to several of the UN Sustainable Development Goals.

We categorise project outcomes according to the SDGs. Approximately 45 % of all active project were classified by 2021.

2020	PERCENTAGE OF SDG-CLASSIFIED PROJECTS (2020)	NUMBER OF ACTIVE PROJECTS
No. 6: Clean water and sanitation	12.1 (10.1)	309
No. 7: Affordable and clean energy	15.8 (7.9)	400
No. 9: Industry innovation and infrastructure	20.5 (22.9)	519
No. 11: Sustainable cities and communities	26.8 (24.9)	684
No. 13: Climate action	6.8 (7.1)	172
Classified to other SDGs	18	
<b>All</b>	<b>100</b>	<b>2084 *</b>

\*Total number of active projects: 5,625 (2020: 5,691).  
2021: Not classified: 3075; Classified: 2550; SDG-classified: 1560

carbon reduction into all major projects and help our customers identify their sustainability ambitions and meet formal sustainability requirements.

While carbon reduction is a vital part of many major projects, we also draw on COWI's many different types of expertise and combine in-depth knowledge with innovation and an understanding of the bigger perspective, thereby benefitting biodiversity enhancement, air quality, reduced water consumption, stakeholder engagement, and responsible sourcing.

Moreover, a new strategy lays out how we will accelerate our growth based on sustainability and the green transition. A key target in the strategy is that 100 per cent of COWI's revenue must come from projects which support the drive towards sustainability.

## REDUCING RISKS AND TAKING RESPONSIBILITY

Another cornerstone in our approach to sustainability and corporate responsibility is to maintain our focus on with whom and where we do business. This ongoing and systematic due diligence and risk

screening of locations and partners has led to important choices and opt-outs of certain markets and projects.

For instance, we have seen the positive financial impact of building closer relations with our key customers and closing or scaling down our activities in the Middle East and Africa where the risk of doing business is higher. However, doing the right thing requires constant willingness to reflect and learn.

We only work for customers and with partners who respect human rights, to the extent that we can ascertain. When we work in countries with uncertain practices, we carefully consider, on a case-by-case basis, whether we can and want to participate in a project.

In 2021, we launched a third-party due diligence tool, paving the road for a mandatory screening and evaluation of all new customers and partners. This is to ensure fact-based, independent, and thorough assessments of customers and partners.

The screening parameters range over violations of a broad variety of business integrity related matters and provide COWI with an effective basis for choosing with whom to engage in collaboration. It is based on a recognised method that covers a period three years back in time and on data that is researched and provided by a recognised external supplier (RDC).

2021 was also the year when the EU Whistle-blower Protection Directive became effective to adjustments to COWI's already implemented whistle-blower scheme.

## OUR OPERATIONS

Our approach to corporate social responsibility (CSR) and sustainability is embedded in our vision, mission, and strategy. What we do, and who we are, as a company, are naturally linked.

We want to create value for our customers, key stakeholders, COWI, and the society. We do this by enabling our customers to meet their ambitions in a sustainable manner, and thus make the societies in which we operate more sustainable and more liveable.



In 2021 almost 50% of COWI's turnover came from projects with outcome directly related to sustainable development.

### CASCADING REQUIREMENTS

#### Extracts from our supplier terms and conditions:

We demand from our suppliers that they comply with COWI's Code of Conduct for Suppliers, and that they cascade all applicable requirements down the supply chain too.

Suppliers must comply with all applicable local and national environmental laws as well as international standards and must obtain and maintain all the necessary environmental permits, approvals, and registrations. We expect them to conduct their business and manufacturing of materials and goods with a minimum consumption of raw materials, energy and water, the fewest possible undesirable health, safety and environmental effects, and the most effective utilisation of natural resources.

Suppliers must develop and implement effective environmental management systems to mitigate or minimise environmental impacts, emanating from its operations and avoid manufacturing, use, or trade chemicals and hazardous substances subject to international bans due to their high toxicity, environmental persistence, or potential for depletion of the ozone layer.

Furthermore, our suppliers and partners must comply with all relevant health and safety legislation and codes of practice and must not compromise a healthy and safe working environment for economic or productivity reasons. This covers the physical, psychological, and social factors that affect employees at the workplace, i.e., the relations and conditions that apply at work. These include, for example layout of workstations, evacuation of buildings, employee satisfaction, and health and accident prevention.

### CSR POLICIES 2021



We have a three-pronged approach, which integrates CSR and sustainability:

- › **Business conduct:** the way we carry out our own activities
- › **Employee behaviour:** the way we behave at the workplace and our obligation to act
- › **Business deliverables:** the way we ensure that the solutions we design for customers take environmental and societal impacts into consideration.

#### CATALYSING RESPONSIBILITY

The attention to measuring and controlling external impacts is already expressed in some tender processes, where customers ask about mitigation strategies in relation to the subcontractors' employees. It is a new type of requirement that we are facing, and one which we are committed to be able to handle.

In 2021, we introduced a new code of conduct which is now applicable to our procurement and subcontractors. See the box about "Cascading requirements" on page 8.

Every year, COWI spend DKK 1.9 billion on third parties, such as suppliers within IT, travel, office equipment, canteen etc. Our collaboration partners and suppliers are an important part of our deliverables, and COWI therefore requires all collaboration partners and suppliers to adhere to the same principles as COWI. To ensure COWI gets the best price, terms of delivery, and quality, a new Group Procurement policy has been launched.

#### THE FOOTPRINT

Past analyses of COWI's carbon footprint have pointed to business travel as the single biggest contributor to CO<sub>2</sub>

emissions. In 2020, emissions related to business travel were reduced by a significant 68 per cent compared to the year before. In 2021, the COVID-19 pandemic lockdown and restrictions continued to impact commuting patterns and facility management. Across the world, many employees have been asked to work from home – thus reducing the need for commuting to and from the office (dropped 28 per cent compared to baseline), and for facility management (45 per cent), which includes emissions from purchased food and beverages, office equipment, generated waste, and consumption of electricity at COWI premises.

Cutting down the carbon emissions caused by COWI's own activities remains a key priority. Our target is to become 100 per cent carbon neutral by 2050 (without the current use of off setting) and to lower the emissions by 70 per cent by 2030. The annual carbon report calculates emissions related to energy consumption, business travel, purchasing of goods, employee commuting and, waste management and shows a good progress towards the goal. Especially the decision to limit business travel is significantly impacting the carbon result in a positive way with a 16 per cent drop in emissions related to business travel compared to 2020.

In 2021, our CO<sub>2</sub> emissions were lowered to 11,130 tonnes of CO<sub>2</sub>e, covering all scopes. In 2020, they amounted to 10,558 tonnes and in 2008 (baseline year) they were estimated at 61,240 tonnes CO<sub>2</sub>-eq. per year.

The 5 per cent increase from 2020 to 2021 can be explained by improved data collection for emissions related to purchasing of goods, including IT equipment for employee home offices.

#### THE HUMAN CAPITAL

It is essential to COWI, and to the realisation of our strategy, that we are among the most attractive employers for professionals that are looking for a career within engineering consultancy and architectural industries. To this end, we promote diversity and cultivate a work culture with clear and high ethical standards. Both are critical to our efforts to attract talented candidates and retain outstanding professionals.

Humans are and will be our most important raw material. Therefore, well-being, good working relationships, and the employees' opportunity for professional learning and development – also in new hybrid and digital work environments – have been topping our internal priorities.

In COWI, we believe that offering our in-depth specialist competencies and the ability to engage in societal challenges, in an innovative and co-creative manner that cares for both people and the planet, is the best way to meet these global challenges. This is the core of our services and our business model.

Our commitment is reflected in our endorsement of the UN Global Compact as well as our support to the Code of Ethics of the International Federation of Consulting Engineers (FIDIC) and is continuously expressed in updated policies and new internal values and strategies. Together, these are guiding the way in which we conduct business and collaborate in our daily work, and they are crucial for our ability to develop a liveable and sustainable future together with our customers.

## THE GLOBAL GOALS

For Sustainable Development

- 1 NO POVERTY
- 2 ZERO HUNGER
- 3 GOOD HEALTH AND WELL-BEING
- 4 QUALITY EDUCATION
- 5 GENDER EQUALITY
- 6 CLEAN WATER AND SANITATION
- 7 AFFORDABLE AND CLEAN ENERGY
- 8 DECENT WORK AND ECONOMIC GROWTH
- 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
- 10 REDUCED INEQUALITIES
- 11 SUSTAINABLE CITIES AND COMMUNITIES
- 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
- 13 CLIMATE ACTION
- 14 LIFE BELOW WATER
- 15 LIFE ON LAND
- 16 PEACE, JUSTICE AND STRONG INSTITUTIONS
- 17 PARTNERSHIPS FOR THE GOALS

**THE GLOBAL GOALS**  
For Sustainable Development

# PROJECTS AND CUSTOMERS



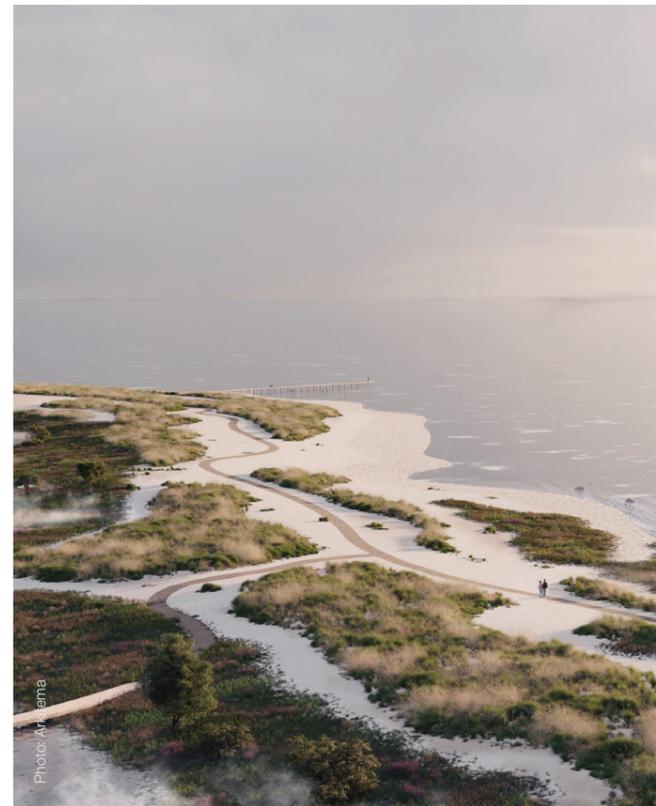
## COIRE GLAS – A PUMPED STORAGE REVIVAL

Electricity generation patterns are evolving as the UK progresses along its journey to net-zero. Pumped storage now needs to play a slightly different role to what it did in the past – one where it bridges the gap at transmission level during periods of low offshore wind output instead, and where it absorbs excess wind energy during high-wind periods. While fast response times will still be important, new pump storage projects need to provide greater capacity for longer durations. With that in mind, pumped storage is about to witness an exciting revival in the UK. Scotland's Coire Glas project – a collaboration between **SSE Renewables**, **Stantec**, and **COWI** – will be the first large-scale pumped storage scheme to be developed in the UK in more than three decades.



## DUKES MEADOW WALKWAY: LOW-CARBON CHAMPION

As a result of the design refinements, the new walkway at **Barnes Bridge in London** will be one of the lowest carbon emitting and most environmentally conscious bridges ever constructed by COWI in the UK, helping London to achieve its vision of being greener, cleaner, and ready for the future. An in-depth review of the project to find the best use and specification of materials will see the walkway's carbon footprint decrease by approximately 20 per cent – assuming a consistent material specification – and up to 30 per cent with the proposed lower carbon material specification compared to the preliminary scheme design from the scheme design. These numbers were estimated using a CO<sub>2</sub>e tool developed by COWI. To mitigate the risk of environmental damage, the team also altered the design of the foundations to minimise the risk of concrete fines leeching into the Thames and causing damage to the local ecosystem by integrating temporary foundation elements into the permanent works.



## TRANSMITTING GREEN ELECTRICITY

If Denmark is to meet the climate target by 2030, a new physical infrastructure to connect and distribute green energy is needed. The ambition is that all parts of society run on green electricity in the future, either through direct electrification as oil, coal, and natural gasses are replaced by renewable alternatives – such as solar power and wind – or through indirect electrification, where green electricity is converted into sustainable fuels for trucks, airplanes, and ships by using green hydrogen technology.

**Energinet** owns, operates, and develops the transmission systems for electricity and natural gas in Denmark. In the years to come, COWI and partners will assist Energinet in adjusting and developing the capability of the system to handle large amounts of green electricity and meet the requirements in the green transition. At the same time, this will result in a significant need for construction of new piping systems that can transport green gasses and CO<sub>2</sub> across the country.

## CREATING A CLIMATE-ROBUST COASTAL LANDSCAPE

**Dragør Municipality** south of Copenhagen is known for its old beautiful fishing port and long coastline. The municipality wants to be prepared for the unavoidable climate changes which will bring rising sea levels, heavy rainfall, and storm surges. Part of the answer to modern and holistic climate protection is a new robust coastal landscape, which takes care of Dragør's unique cultural heritage and serves as an example for similar coastal towns.

For this complicated task, our architects have opted for a nature-based coastal defense with absorbent borders that does not reject the water, but rather recognises it as an asset and a force of nature. In essence, it softens the force with which the water washes in and mediates the transition from land to sea. This approach includes, among other things, creating dikes imagined in a new way. In the inland areas, temporary and permanent waterscapes will collect rainwater and, from here, excess rainwater is fed into lagoons, harbors and green areas out by the coast. The efforts in Dragør are supported by **Dragør Municipality**, **Realdania**, and the **Ministry of the Environment, Coastal Directorate – Danish Coastal Authority**.



Photo: European Commission

### SHAPING A GREEN AND JUST TRANSITION IN EUROPE UNDER THE EU GREEN DEAL

The EU has the ambition to reduce its greenhouse gas emissions by 55 per cent by 2030 and to become the first climate neutral economy by 2050. The EU budget makes a vital contribution to the achievement of these objectives, supporting technological and economic transformations with a view to address climate change mitigation and adaptation, while also ensuring that the transition to climate-neutrality takes place in a fair way, leaving no one behind. COWI has a pivotal role in advising the **European Commission** on increasing climate action in the planning, programming, and use of the EU Structural and Investment Funds and Just Transition Fund in the EU27. COWI assesses climate action and just transition in over 400 plans and programmes which set the basis for the use of EU funds by Member States in the coming 2021-2027 programming period. The project runs over 2 years when Member States programme their use of funds, but the results will have a long-lasting impact on the achievement of the EU and the national climate goals.



Photo: Jackie Nilsen og Rune Barre Nilsen for Region Midt

### SUSTAINABLE CLEAN-UP OF MASSIVE SOIL POLLUTION

Years of contamination on the west coast of Denmark will now come to an end. The severe contamination dates back to the 1950s and 60s when chemical company Cheminova released wastewater and deposited solid waste in the sand dunes by the sea. The chemical depot contains over 100 tonnes of pollutants, including 7 tonnes of mercury. Most of the pollution consists of the substance parathion, which was used for insect control in agriculture. The massive pollution must either be steamed or washed away so that the beach can once again be used for fishing, diving, and swimming. COWI is assisting **Central Denmark Region** with the remediation and restoration of the beach area. Groyne 42 is one of ten sites that have been identified as multi-generational contamination sites in Denmark. This will be a leading example of how to implement a sustainable clean-up of generational contamination in Denmark and similar major contaminations abroad.



Photo: Aarhus Vand

### INNOVATIVE WATER TREATMENT PLANT

The new wastewater plant in Denmark's second largest city, Aarhus, will be much more than a purification plant. It will handle large volumes of rain and wastewater and develop into a world-class treatment plant, setting new standards for sustainable wastewater management and re-use of resources. COWI's role covers client consultancy for **Aarhus Vand A/S** on the innovative **Aarhus ReWater** partnership project, including: advice on wastewater treatment; land reclamation; coastal defenses; drainage pipes; geotechnical and geophysical assessments; dumping permits; and navigation surveys. The Sustainable Development Goals (SDGs) are actively used as a common framework for decisions within the project to support the ambition to go beyond the current and future requirements within purifying of water, and to secure an optimal aquatic environment in Aarhus Bay, benefitting both humans and nature. The goal for Aarhus ReWater is to deliver an energy neutral drinking water supply and wastewater treatment by extracting and utilising valuable resources from the wastewater, that can be used for green energy, heating, and fertiliser.

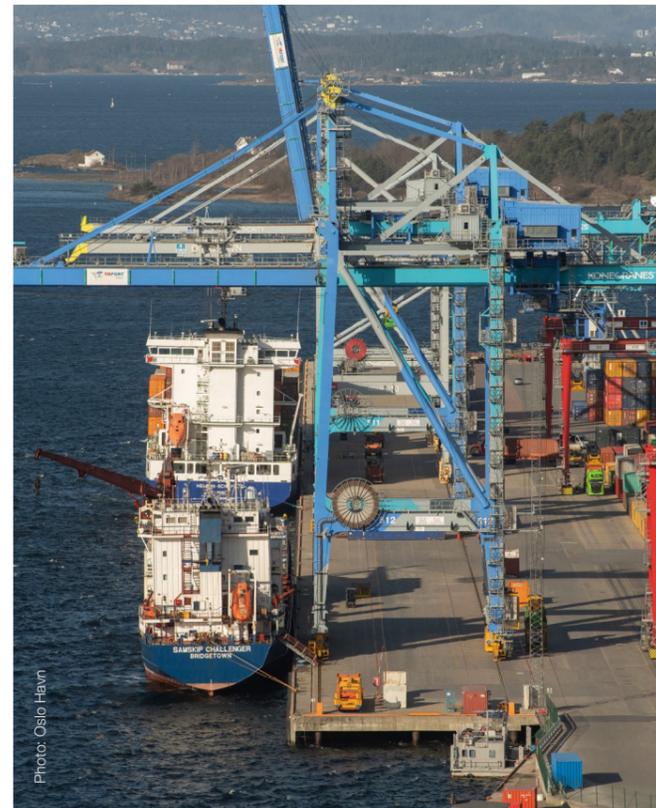
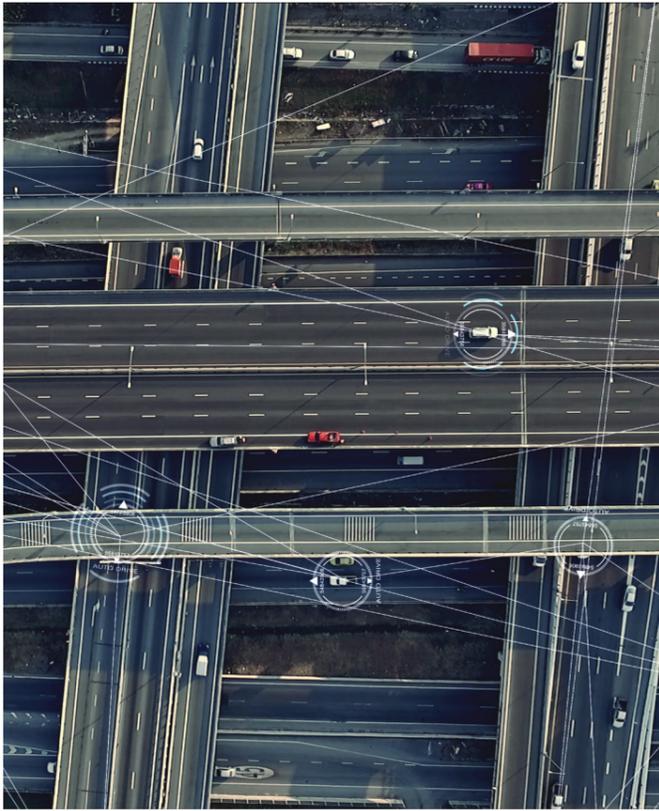


Photo: Oslo Havn

### ELECTRIFICATION OF OSLO HARBOUR

**Oslo Harbour** is Norway's biggest harbour for passengers and cargo. Together with COWI, they are planning an electrification of the cargo harbour by installing onshore power supply for the cargo ships. To take climate action, Oslo Harbour's ambition is to lower their CO<sub>2</sub> emissions by 85 per cent by 2030, and electrification is an important step toward this goal. The system will annually cut CO<sub>2</sub> emissions by 2400 tons and NOX emissions by 33 tons. The two planned onshore power supply connections will have an effect of 1600 kVa with the opportunity for extension to two further charging points with the same effect. One of the suggested solutions is a mobile reel for transferring onto the different vessels, thus supplying them with the necessary power while at bay. The innovative shipping industry power system is planned to be ready in 2023 and is part of the creation of a more sustainable Oslo.



### DATA FROM PASSENGER CARS STRENGTHEN GREEN MOBILITY

Congestion and waiting time in traffic jams is estimated to cost the Danish society more than DKK 20 billion every year. COWI helps **Gladsaxe Municipality** analyse anonymous data on the driving patterns and distances of 100,000 cars to gain insight into where investments should be targeted to unleash the biggest estimated potential. One example is new super bicycle trails, that could make bicycling a viable alternative to the short car journeys of less than 5 km. The technology is another concrete example of how data and digitalisation can strengthen mobility and the green transition.



### WASTEWATER PURIFICATION CREATES A GREENER WATER CIRCUIT

**EasyMining**, an innovation company in the **Ragn-Sells Group**, is part of an **EU LIFE-funded** project aiming to develop a new, innovative purification and recovery process that removes ammonium nitrogen from wastewater. Following purification, the ammonium nitrogen is recovered and used as fertiliser.

The advantages of this method are that it can prevent overfertilisation while offering a circular process.

The project will result in a pilot plant that is energy-efficient, resource-efficient, and climate-friendly. It will be put to work outside Stockholm, Sweden, and Copenhagen, Denmark.

The technology targets water treatment plants among others. As technical consultant, COWI provides detailed design in all disciplines such as process, piping, electrical, and instruments as well as construction. The technology is expected to be ready for commercial use in the autumn of 2022, following assessment of the pilot runs and any improvement of the process.



### EXTREME TEMPERATURE RISES ARE THREATENING NORTHERN ANIMALS AND NATURE

Climate change is affecting the entire Earth, but the further the north you go, the relatively larger the rise in temperature is expected to be. Animals and plants that have adapted to the northern winter climate are at risk of extinction.

**Västernorrland County** in the north of Sweden has been predicted to become 2.5 degrees warmer on average in 2040, and a full 5 degrees warmer by the end of the century compared to 1961–1990. On behalf of the County Administrative Board of Västernorrland, and based on a corresponding report produced in **Norrbotten County**, COWI has compiled current knowledge on how a changed climate is expected to affect Västernorrland's nature. The report also describes current and future initiatives to mitigate or prevent the severe effects of climate change on nature in the area.



### THE ENERGY ISLAND

Located in the North Sea, 80 km from the shore of Jutland, an artificial Energy Island is becoming an important stepping stone on the road to greener energy supply. The energy island will be the first of its kind, in the world, and Denmark's largest construction project ever. It will serve as an offshore power hub collecting, storing, converting, and distributing green electricity from hundreds of offshore wind turbines. When fully implemented, the capacity can be scaled to 10 GW, powering 10 million European households with green energy. COWI has been assisting the **Danish Energy Agency** and **Energinet** on qualifying the knowledge base through screening and a cost-benefit analysis. Going forward, we will assist **Copenhagen Infrastructure Partners** and the Vindø consortium (**PensionDanmark, PFA, and Andel**) with all aspects of engineering and construction from the artificial island and harbour facilities to electrical transmission and storage systems including green hydrogen technology.



Photo: Niels Nygaard

### A SCHOOL MADE OF TIMBER

Erlev school is unique in its appearance. **The City of Haderslev** had a clear ambition to push the boundaries of traditional school architecture. This inspired the **Arkitema** architects to create a project where design, construction, and materials were experimented with in new ways. From the start, the project focused on achieving a high level of social, economic, and environmental sustainability.

The load-bearing structure of the school is made of cross laminated timber and both facades and walls are made of timber, a material that creates a visually attractive building and emphasises environmental and health values. Through timber, the sensory experience becomes stronger. The scent, feeling, and sound of this material creates an environment that comes alive through warm and visually interesting surfaces.



Photo: S. Ulvund

### NORWAY'S FIRST ENERGY-PLUS COMMUNITY

Bømøen near Voss in Norway is a unique area in both location and landscape, and also by virtue of its great natural resources, both above and below ground. The "Bømøen energy-plus community" project is using geological resources, including the groundwater, as a source of both drinking water and energy, and contributing to affordable and clean energy in the region.

Together with project partners **Bømøen AS, Voss Energi**, and **the Municipality of Voss**, COWI is studying the geological resources in the area to develop a plan for an energy-plus community that produces more energy than it consumes. One part of the technology to be used to realise the energy-plus community is "ATES" (aquifer thermal energy storage). This involves storing and extracting thermal energy in the ground in a way that uses the groundwater aquifer as a thermal battery.



### MAKING BIODIVERSITY A PRIORITY

**Tønder Municipality** in Southern Denmark has engaged COWI to develop and implement a biodiversity policy, -strategy and -action plan for the protection of the municipality's most valuable nature areas. The approach has a multifaceted focus: the biodiversity policy will help politicians and management prioritise nature and biodiversity, plan nature efforts in the open country and cities, and to select and target the specific focus areas in the coming years.

The biodiversity strategy is for a broader group of stakeholders like citizens, organisations, and companies, and addresses the challenges and opportunities for nature in the cities and the open land. It also describes what tools can be used to help nature, climate, and biodiversity in the municipality. The Action Plan maps the most valuable nature areas and the various threats to rare species and habitat types, and what should happen to ensure the unique natural values in the areas.



Photo: Svein Ulvund

### ENVIRONMENTAL TOXINS IN HOUSEHOLD DUST

Every year, a lot of new chemical substances are added to products and materials. On behalf of **The Norwegian Environment Agency**, COWI's environmental advisers have examined 200 substances found in ordinary household dust to examine if they are harmful to humans and the environment. The dust samples were collected from private homes, office buildings, and retail stores. In addition to collecting dust samples, COWI's advisers also collected samples to examine the same environmental toxins in waste and wastewater facilities, freshwater sediments, and marine and freshwater fish to investigate water resources and sanitation.

Many of the identified substances are typically found in products we surround ourselves with daily, like detergent, plastic, hygiene products, and pharmaceuticals. Every year, a lot of new chemical substances appear on the market, and the report documented if potentially harmful substances could be detected in our environment. The findings can be used to form future research and legislation on the substances on both a European (REACH) and global (UNEP) level.

REPORTING ON THE TEN UNGC PRINCIPLES

# HUMAN RIGHTS

01

**PRINCIPLE:**  
Businesses should support and respect the protection of internationally proclaimed human rights.

02

**PRINCIPLE:**  
Businesses should make sure that they are not complicit in human rights abuses.

**WORKING WITH HUMAN RIGHTS**

The support of human rights is rooted in COWI's culture. We are a company based on vision and values, and we want to attract, develop, and retain the best people in our industries. Thus, ensuring safe and healthy working environments for all employees has high priority, with our health and safety policy as the overall guide.

To ensure that we detect any human rights violations on projects in which we are directly involved, we operate according to procedures, which are included in our risk assessment and project management training.

- › **Health and safety supervision:** in COWI, we seek to increase our influence on project sites by offering supervision of safety and health conditions. This allows us to ensure that internationally accepted standards are enforced on a project.
- › **Obligation to act:** employees at COWI have the so-called obligation to act, meaning that everyone is obligated to act if they see human rights violated internally or on a project.
- › The COWI Whistle-blower scheme is available for reporting observations or suspicion of discrimination.

**DEALING WITH HUMAN RIGHTS ON PROJECTS**

We continue to raise awareness among our employees about the importance of COWI not negatively affecting human rights in our external activities, including the work we do for customers, our procurement practices, and our partners. To ensure that we do not have any adverse impacts on human rights through projects in which we are involved, we operate according to three procedures: due diligence, supervision and obligation to act. Employees are introduced to these procedures as part of COWI's training programmes.

Looking ahead, we expect project complexity to increase further and our workforce to become even more diverse. At the same time, business ethics are becoming an even higher priority. We commit ourselves to taking social aspects into account when carrying out projects, and to enhancing our employees, partners and sub contractors knowledge of social conditions.

Through COWI's procurement system, we assess suppliers in terms of human and labour rights, ethical standards, social and environmental policies, health and safety, diversity, and anti-corruption.



**KEY ACTIVITIES AND OUTCOMES 2021**



**HEALTH AND SAFETY AT WORK**

In general, the risk of work injuries is low in COWI's operations as most work happens in a controlled office environment and all tasks are systematically risk assessed and mitigated. In 2021, COWI in Denmark registered 13 injuries causing absence compared to 14 in 2020.

YEAR	INJURIES REPORTED
2018	24
2019	16
2020	14
2021	13

In 2021, insurance covered psychologist sessions for COWI A/S employees in Denmark or their children were 482 and 99, respectively.



**In 2021, COWI in Denmark, Sweden and UK were successfully audited according to ISO 45001 by DNV.**

During the global pandemic, most employees worked from home, strengthening COWI's position as a flexible place to work. Many employees continue to make use of the option to work from home, and COWI provides support for establishment of home office facilities in the form of IT-equipment.

In 2021, COWI in Denmark, Sweden and UK were successfully audited according to ISO 45001 by DNV. Preparations for ISO 45001 certification in COWI Norway and COWI India during 2022 are ongoing.

Being certified in occupational health and safety management has proved to be a powerful way to ensure and develop a good working environment, among other things because the ongoing focus on health and safety has increased awareness among COWI employees and managers.

COWI continues to prioritise health and safety and ensures to integrate health and safety processes into existing business processes, for example by systematically assessing both physical and psychosocial health and safety risks in all projects in line with other types of project risk screenings.

Further, in 2021:

- › a Group wide health and safety incident reporting system was launched, providing a sound basis for learning and improving. The system is being rolled out globally.
- › the health and safety organisation has been strengthened as more health and safety groups have been established with representation from both employees and managers.
- › training for line managers in occupational health and safety roles and responsibilities as well as stress management is being enhanced.

# LABOUR RIGHTS

03

**PRINCIPLE:**  
Businesses should uphold the freedom of association and effective recognition of the right to collective bargaining.

**LABOUR RIGHTS ON PROJECTS**  
The 6,682 people working for COWI enjoy working conditions in line with international labour rights. We support and practise diversity and equal opportunities. Our employees are free to organise themselves and bargain collectively as they wish, and they are all paid a fair salary.

COWI dissociates itself from all kinds of child labour. The main challenge for COWI in terms of labour rights is that potential violations of these often take place outside our sphere of influence.

They frequently concern migrant labour in the construction industry. We attempt to meet this challenge by working according to the following guidelines.

When COWI has the management responsibility of the construction phase of a project, we can influence labour rights conditions at the construction site, and act if they are not aligned with national and international ratified legislation.

If we are not in charge of the supervision of the project, we do not necessarily have access to the construction site and are therefore unaware of the human rights and/or labour rights standards practised. The

obligation to act described in the human rights section also applies here.



## KEY ACTIVITIES AND OUTCOMES 2021

### DEVELOPING LEADERS AND EMPLOYEES

During 2021, we continued our activities to ensure that COWI employees have state-of-the-art skills and competencies, securing not only their performance on COWI projects, but also their marketability outside COWI.

In 2021, most of our training sessions were changed due to the pandemic, which forced us to turn classroom courses into online training sessions. The transition showed that many courses can be conducted online, but also that some training must remain physical to achieve the needed outcome.

COWI Academy provides training in a wide range of subjects, among other things Customer Centricity, Leadership, Project Management (PM), Digitalisation, Green transition, Diversity, and Inclusion. In 2021, 468 (160 in 2020) employees completed the academy's PM courses.

04

**PRINCIPLE:**  
Businesses should uphold the effective abolition of child labour.



## POLICY: DIVERSITY AND INCLUSION

COWI views diversity as a competitive advantage that helps us achieve the best results for our customers. To meet our objectives, we:

- › aim to have a diverse workforce that mirrors the diversity of our business and markets
- › give equal opportunities to everyone, regardless of gender, age, race, religion, nationality, ethnic and social origin, disability, political and sexual orientation
- › ensure that our employment and recruitment practices adhere to local legislation, wherever we work in the world
- › continuously improve equal opportunities in our employment and recruitment practices
- › work towards creating a culture of tolerance, inclusion and appreciation.

## MEANS AND ACTIONS:

- › Ensure structured risk assessments within the areas where employees are exposed to hazards.
- › Encourage all employees to contact their manager if they have work-related health and safety concerns.
- › Ensure that health and safety are an integral part of management meetings, department/section meetings and other relevant forums.
- › Actively involve employee representatives in health and safety matters.
- › Provide continuous health and safety leadership training for managers and specific training for employees.
- › Monitor health and safety procedures to ensure compliance and continuous improvements of the health and safety management system.

To reduce our carbon footprint and due to limited geographical accessibility, most of the courses are now being delivered as online classes combined with social learning through various applications and virtual learning videos.

Our courses are attended by participants from all parts of COWI. We firmly believe that networking across our business is a cornerstone in building the ONE COWI mindset which is a prerequisite to be able to understand and meet customer needs.

### AN AGILE LEARNING ENVIRONMENT

Having a relatively diverse and young workforce (49 per cent below 40), we attach great importance to creating learning environments where employees from across the Group, regardless of the pandemic, can meet, learn and socialise virtually. In total, 2,184 (1,650 in 2020) employees completed one or more instructor-led courses arranged by COWI Academy during 2021.

During 2021, we offered more than 20 new or updated courses to the overall portfolio of training. The focus has been on expanding the options for individuals to take

the training when relevant. This supports the culture of development being something that happens all the time and not only when participating in a traditional course.

### DIVERSITY STEADILY IMPROVING

It is COWI's aspiration to have a truly diverse workforce where all employees have equal opportunities regardless of gender, age, race, religion, nationality, ethnic and social origin, disability, political or sexual orientation.

COWI views diversity as a competitive advantage. A breadth in employees adds more perspectives to our business and organisation and leads to a better contribution to the development of services and solutions valued by customers and society. Today, we number 82 different nationalities across all career levels.

It is COWI's ambition that the composition of management reflects the diversity of our business and markets. Specifically, regarding gender diversity, we continued our efforts to have more women in senior positions. For instance, as regards COWI's Board of Directors – excluding employee-elected board members – three out of six members were female.

05

**PRINCIPLE:**  
Businesses should uphold the elimination of all forms of forced and compulsory labour.

06

**PRINCIPLE:**  
Businesses should uphold the elimination of discrimination in respect of employment and occupation.

 25

In 2021, we achieved the target, with a share of female managers of 25 per cent.

FEMALE LEADERSHIP

25% COWI Group

31% Business Line Denmark

13% Business Line International

HARRASSMENT AT THE WORKPLACE. SOURCE: WPA COWI A/S 2021			
WITHIN THE LAST 12 MONTHS HAVE YOU BEEN SUBJECTED TO	YES %	NO %	RATHER NOT ANSWER %
Unwanted sexual attention	0*	99	1
Hostile/intimidating behaviour	3	96	1
Physical violence	0	100	0
Bullying	1	97	2

\*nb National benchmark 2.0%

COWI has the overall target that the share of female managers should reflect the share of female employees.

In 2021, we achieved the target, with a share of female managers of 25 per cent (24 per cent in 2020). However, the number varies greatly across business lines. So, there is still room for improvement, and we will continue investing in and prioritising the development of more female managers globally.

In 2021, COWI signed and took active part in the drafting of The Gender Diversity Pledge, a strategy from the Confederation of Danish Industry for greater gender diversity. It was launched in June and signed by COWI and many other companies.

In 2021, we were confronted with criticism in the media because of our involvement in some infrastructure and buildings projects of which some were linked to the World Cup in Qatar as part of logistics preparation.

Loss of human lives during construction works is terrible. COWI has not contributed to any of the stadium projects.

As to date, we are aware of one fatality related to our work on the Doha Metro where we acted as design lead on the metro system itself. The metro is part of a 2030 vision plan that was adopted back in 2008 and, to our knowledge, the work-related fatality was not caused by poor safety standards on the project.

 NO ROOM FOR HARRASSMENT

COWI is a workplace where many employees enjoy having an informal, open and direct dialogue. Since the #metoo debate re-emerged in 2020, it has been emphasised that sexual harassment is a violation of COWI's core values, and that there is no room for disrespectful or sexually charged dialogues. The Staff Manual was updated in June 2019 with a sharpened policy on the matter, and procedures for detecting and handling harassment have intensified.

In the past 13 years, less than a handful of sexual assault cases have been reported to Group HR, and the group-wide engagement survey does not indicate that sexual harassment is an issue at the workplace.

We decided already in 2020 to commence the closing of our offices in the region, due to the difficult business environment in the Middle East, and to only work for international customers whom we already know in the area. We have very few projects left in Qatar, which we are obligated to complete, and we expect to do so within 2022.

However, having signed the UN Global Compact, the attention brought to human rights violations and poor conditions for workers in Qatar has led us to look into the reports that have emerged, and take it up with our customers if the circumstances documented in the reports are reasonably substantiated.

# ANTI-CORRUPTION

AGAINST ALL FORMS OF CORRUPTION

We strongly believe and prove every day that it is possible to achieve success without accepting or engaging in any form of corruption. We have a business integrity policy to support this belief, which states: "We will not in our services or in any other activity, directly or indirectly, accept bribery, extortion, fraud, collusion or any other undue business activity."

Each entity in the COWI Group is required to implement business integrity management. This should be done in accordance with the FIDIC Code of Ethics, COWI's business integrity Policies and guidelines, and the laws applicable in the company's home country and the countries of operation.

In COWI, we believe that the adoption of good governance, transparency and accountability into day-to-day business is the best prevention against corruption.

COWI's Whistle-blower scheme invites employees and other stakeholders to report anonymously of several different matters, including violations of law and breach of our Business Integrity Policy, Code of Ethics and internal policies.

It is important that our employees have a joint understanding of our Business Integrity Policy and are familiar with the COWI Whistle-blower scheme, which can help the business and prevent future offences and unethical behaviour.

10

PRINCIPLE: Businesses should work against corruption in all its forms, including extortion and bribery.



POLICY: BUSINESS INTEGRITY

COWI wishes to maintain its impartiality and independence, and contribute globally to a fair conduct of business, avoiding extraneous influence on selection, execution, or compensation procedures. We will not in our services or in any other activities, directly or indirectly, accept bribery, extortion, fraud, collusion, or any other undue business activity.

To meet our objectives, we will:

- continuously train our employees in the area of business integrity
- continuously develop and maintain proper tools to help and guide our employees.



### COWI WHISTLEBLOWER

COWI wishes to maintain a high standard of business ethics and encourages anyone to talk to their line manager about concerns regarding business ethics. If they feel uncomfortable doing so, they can use the COWI Whistle-blower system.

To meet our objectives, we will:

- › ensure that any concerns raised through the COWI Whistle-blower are investigated, and appropriate action taken
- › allow everyone, including employees, former employees, sub-contractors, agency staff and business partners, to use the COWI Whistle-blower
- › allow whistle-blower notifications within:
  - › violation of law, regulations and internal policies
  - › misbehaviour with regard to accounting and auditing
  - › fraud, theft and conflicts of interest
  - › improper giving or receiving of gifts
  - › discrimination and harassment
  - › violation of environmental protection, health and safety legislation
  - › unfair bidding procedures and scientific misconduct
- › make the COWI Whistle-blower publicly available via [www.cowi.com](http://www.cowi.com)
- › continuously train our employees to maintain our culture of integrity and honesty and inform them of the COWI Whistle-blower scheme.



### KEY ACTIVITIES AND OUTCOMES 2021

#### Due diligence screening

In 2021, COWI launched its third-party due diligence tool, paving the road for a mandatory screening and evaluation of all new customers and partners. The screening parameters range over violations of a broad variety of business integrity related matters and provides COWI with an effective basis for choosing with whom to engage in collaboration.

#### Whistleblower use

2021 was also the year when the EU Whistleblower Protection Directive became effective, leading to adjustments to COWI's already implemented whistle blower scheme.

The COWI's Whistle-blower system functions as it should, because it is used. These were all reported to the Board of Directors, investigated at corporate level or passed on to local management for follow-up.



**5 cases were reported via our whistle-blower hotline in 2021 as opposed to 8 cases in 2020.**

#### Risk management and transparency

As part of our risk management system, twice a year, COWI reviews an internal list of countries that our business lines define as high-risk areas in terms of concerns related to personal security or business climate, the latter taking point of departure in the Transparency International Corruption Perceptions Index. We apply enhanced risk management if, exceptionally, a project is carried out in one of those places. In 2020, 95 countries were on the list, a minor decrease from 101 in 2019.

## ENVIRONMENT

**We seek to reduce our own impacts through carbon-neutral policies and initiatives related to the efficiency needs of our customers and our organisation. The most significant environmental impact directly related to COWI's activities is the footprint caused by purchasing goods and services needed to run the offices and from the business travels related to consulting. Next comes energy consumption at our premises. Our efforts to lower the CO<sub>2</sub>e emissions form these activities are described in detail in the green accounts on the following pages.**

Environmental protection is the area where COWI has the greatest potential to make a difference, and not only promote sustainable solutions to our customers, but also enable them to choose sustainable solutions.

COWI's focus is on all environmental issues, ranging from environmental legislation analyses and identifying areas for improvement, to climate change mitigation measures, solid waste management, water supply and hands-on solutions for saving species and enhancing ecological restoration, including rewilding projects, biodiversity strategies, and nature mapping activities.

Faced with the challenges of the climate and biodiversity crises, we are joining forces on the next chapter of the green transition. We use innovative technological drivers, urban design services, and data to engineer green solutions within future energy systems, green mobility, sustainable cities, and not least climate adaptation and coastal protection.

#### LIFE-CYCLE PERSPECTIVES

Several new projects include significant carbon management aspects and advice for clients. Here, the use of life-cycle assessments (LCA) has the potential to greatly strengthen the sustainability of major construction projects. Slight adjustments to the gradient of highways and railways can create significant carbon savings over time. Equipping bridges or tunnels with space for future cabling or services can extend the service life.

Digitalisation is also increasingly proving its worth as an enabler for sustainable innovation. With the aid of technological drivers, urban designs, systems, services, and real-time data, we offer tailored, smart, and sustainable engineering solutions designed to make a positive impact on societies around the globe. Our thinking stretches beyond the immediate remit to

# 07

**PRINCIPLE:** Businesses should support a precautionary approach to environmental challenges.

# 08

**PRINCIPLE:** Businesses should undertake initiatives to promote greater environmental responsibility.

## 09

**PRINCIPLE:**  
Businesses should encourage the development and diffusion of environmentally friendly technologies.

consider a project's future use and lifecycle. For transportation infrastructure, we must consider how people travel and goods move now, and how this will evolve in the future. We combine different areas of expertise to engineer our towns and cities in a way that integrates diverse door-to-door options, to accommodate future changes and challenges such as climate change or a pandemic.

#### GROWING GREEN

The fundamental ambition to improve sustainability and power the green transition is reflected in COWI's internal training and capacity building. We strive to incorporate environmental considerations, and upgrade and develop our skills in this area, to enable us to propose the most cutting-edge and environmentally friendly solutions possible for our customers.

In 2021, this included more than 20+ internal webinars, talks, and skill shares about the green transition and sustainability, as well as the formation of new sustainability networks, online discussion forums, and clubs across geographies and business lines. Some offices have established Carbon Champions to help drive initiatives and promote the carbon agenda at grassroots level. For example, COWI in the UK has established an Environmental & Sustainability Steering Group, which

focuses on providing leadership and support to their Environmental Management System and driving progress through on a range of issues.

#### THOUGHT LEADERSHIP AND COP26

In 2021, sustainable urban development and the green transition continued to take priority in our internal and external communication. We participated in public debates and held several seminars and events with customers and other stakeholders to discuss the challenges facing societies, as well as possible solutions. Among the topics were the new infrastructure plan for Denmark, climate adaptation, biodiversity, and sustainable water management. More than 200 customers and stakeholders joined in virtually for a Green Hour webinar about how a potential new CO<sub>2</sub> tax could help achieving the goal of reducing CO<sub>2</sub> emissions by 70 per cent before 2030, without distorting the competitor market and sending both CO<sub>2</sub> emissions and jobs out of the country.

COWI was also represented at the UN COP26 climate meeting in Glasgow, where we hosted several debates and side events about green fuels, as well as a high-level round table meeting about the challenge of decarbonising the transport sector.

#### ENGINEERING A DECARBONISED FUTURE

Energy use is the largest contributor to climate change globally, responsible for 75 per cent of greenhouse gas emissions.

Construction, Industry, Transport, Agriculture, and domestic consumption are by far the largest emitters, and energy demand is predicted to rise 30 per cent by 2040 as global demand increases. Decarbonising these sectors and finding renewable alternatives to fossil energy is therefore a matter of urgency if we are to meet future energy demands and the commitments of the Paris Agreement on climate change, limiting global warming to 1.5 °C. Therefore, interest in developing new types of green fuels is booming, and green hydrogen in particular is increasingly viewed as critical for decarbonisation.

In contrast to the blue, grey, and brown variants, green hydrogen is produced by renewable energy powered electrolysis, which splits water molecules into hydrogen and oxygen. This process results in zero emissions, and the hydrogen produced is very pure. It can be transported and stored, helping to overcome the challenges of intermittency and demand fluctuations by acting as a battery for renewable energy.

The versatility of green hydrogen means it can be harnessed by a huge range of technologies and industries and presents an opportunity for sectors struggling to decarbonise solely with renewable electricity. As well as being a solution for decarbonisation, green hydrogen is a linchpin in the concept of sector coupling. Sector coupling views all constituent parts of the energy system as fundamentally linked, allowing for the flexible usage, sharing, and storing of clean energy across sectors.

#### WORKING IN PARTNERSHIPS TO COUPLE SECTORS

In COWI, we are highly focused on developing our green hydrogen expertise in line with the national strategies in a number of our core markets.

- › One example of this is **the Green Fuels for Denmark project**. COWI is a knowledge partner to Copenhagen Airports, A.P. Møller-Mærsk, DSV Panalpina, DFDS, SAS, and Ørsted, developing ground-breaking new hydrogen and green fuel production facilities. The project will produce green hydrogen for busses and trucks, e-methanol for shipping, and e-kerosene for aviation. By 2030, it is expected that the project will have an electrolysis capacity of 1.3 GW, producing more than 250,000 tons of green fuels per year and reducing annual emissions by 850,000 tons of CO<sub>2</sub>.
- › **H2RES**, is a project led by Danish energy company Ørsted to refine wind-powered electrolysis and hydrogen production with COWI as the sole consultant and advisor. The demonstration plant will be powered by 2 offshore wind turbines and, with a capacity of 2 MW, is expected to produce around 1000 kg of green hydrogen per day from late 2021. The hydrogen from H2RES will be used for zero-emission transport fuels in Greater Copenhagen and Zealand.
- › **Copenhagen Infrastructure Partners (CIP)**, a Danish investment company and close partner to COWI, are also developing a number of important green hydrogen projects. In 2021, COWI was awarded the contract for supporting CIP in the development of the first gigawatt-scale Power-to-X facilities in Europe in Esbjerg, Denmark. The facility will use offshore wind to produce up to 600,000 tonnes of green ammonia that can be used as feedstock for fertiliser production and as green fuel in shipping. CIP estimate that the facility could ultimately save 1.5 million tons of CO<sub>2</sub> emissions per year.

# CARBON FOOTPRINT REPORT 2021

## INTRODUCTION

COWI wants to be a frontrunner by assisting our customers in becoming more sustainable and by looking into how our own daily operations can be improved to benefit the green transition.

Caring about our customers, our employees, and the planet is a cornerstone in COWI's values. Since joining the UN Global Compact in 2006, we have reported on the carbon footprint caused by our day-to-day operations as a company.

In late 2019, it was decided that COWI should become carbon neutral. This goal was achieved in 2020 thanks to reduction efforts that were already initiated and by acquiring CO<sub>2</sub> credits for the remainder of our emissions that year.

Moving forward, the goal is to reduce the company's direct and indirect CO<sub>2</sub> emissions by more than 70 per cent in 2030 based on a 2008 baseline. An action plan launched in 2020 focused on reducing business travel to become CO<sub>2</sub> neutral. Even though 2020 and 2021 were both remarkable years with significant reductions in business travel by air due to COVID-19 restrictions, we are now beginning to see the impact of this.

The ambition is to maintain this significant reduction in emissions related to business travel in the years to come as a consequence of significantly changed habits. Compared to our baseline, this is the most effective way of reducing CO<sub>2</sub> emissions caused by COWI's day-to-day activities.

## RESULT 2021

The overall result of the carbon footprint report for 2021 shows that the COWI Group emitted 11,130 tonnes of CO<sub>2</sub>e, covering all scopes. This is a slight increase compared to the 2020 level at 10,560 tonnes of CO<sub>2</sub> e. The minor increase is due to increased purchased goods and services, whereas travel-related emissions remained at a low level compared to the years before the pandemic.

The total carbon footprint in 2021 equals an emission of 1.7 tonnes of CO<sub>2</sub> e per full-time employee compared to 1.6 tonnes of CO<sub>2</sub> e in 2020. This minor increase of 5 per cent compared to 2020 can be explained by numerous factors in relation to scope 3 emissions.

In 2021, we bought and compensated 15,000 tonnes of CO<sub>2</sub> for DKK 670,000. In 2020, we bought and compensated 25,000 tonnes of CO<sub>2</sub> for DKK 750,000.

CO<sub>2</sub> 1.7

The total carbon footprint in 2021 equals an emission of 1.7 tonnes of CO<sub>2</sub> e per full-time employee

15,000

In 2021, we bought and compensated 15,000 tonnes of CO<sub>2</sub>

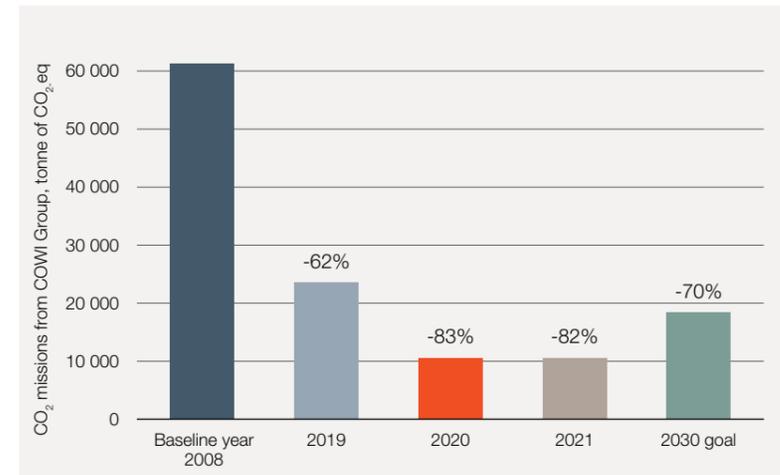


FIGURE 1  
The percentages are the reduction compared to 2008. Note that 2008 is an estimate.

## WORKING FROM HOME IMPACTS RESULTS

Across the world, many employees have been asked to work from home – thus reducing the need for commuting to and from the office, business travel, printing, etc. However, an increase in the number of purchased computer screens and other IT devices has followed. Furthermore, an increase in emissions related to purchased food – due to a more detailed dataset and improved data – has impacted the total carbon footprint.

The additional electricity consumption caused by employees working remotely and needing, for example, lighting; to charge their PC and phones; or simply by them having to prepare lunch at home instead of getting lunch from the canteen is not included in this report.

The carbon emissions vary from offices in different countries due to significant differences in the number of employees, different energy sources, and differences in consumption. The graph in Figure 8 shows the CO<sub>2</sub> e per full-time employee in different countries, and the source of CO<sub>2</sub> emissions.

## METHODOLOGY AND SCOPE

The GHG protocol was developed in collaboration between World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD). The methodology requires the emissions mapped to cover Scopes 1, 2 and 3, as defined by the GHG protocol. Some

emissions, especially downstream and capital goods emissions, were excluded from the accounts.

## METHODOLOGY

As part of our reporting on the Communication on Progress, we have published our carbon footprint for Denmark for the past 14 years. Starting in 2018, we published our carbon footprint for the entire organisation, and has since been expanded to include the carbon emissions from our offices around the world. In 2019, we changed the methodology and compiled our inventory in line with the GHG Protocol Corporate Standard requirements of covering all material within Scope 1, Scope 2, and Scope 3 GHG emission sources:

- › **CO<sub>2</sub> Emissions, Scope 1:** supervision of cars and company cars
- › **CO<sub>2</sub> Emissions, Scope 2:** electricity, cooling, and heating consumption (from purchased sources)
- › **CO<sub>2</sub> Emissions, Scope 3:** work-related driving in private cars, taxis, trains and buses, air transport, and hotel stays. Additionally, we account for purchased goods and services, for example, IT products, office supplies, and canteens.

Data is gathered on energy consumption, transportation, waste management, and water consumption for permanent COWI offices with a headcount of more than 30 employees. Smaller offices are estimated based on average data per employee from offices we do collect data from. Most data on purchased goods and services

is retrieved. In some cases, we estimate consumption based on Nordic data. Emissions of CO<sub>2</sub> are calculated centrally by our CO<sub>2</sub> data analyses by multiplying energy consumption data with country-specific conversion factors (electricity, oil, and gas heating).

## ENERGY

To account for energy consumption, we gather data from our offices globally. Energy consumption data is collected by local Facility Managers based on invoices, meter readings, and/or estimates (estimates based on square meters and/or headcounts). We collect energy usage data directly through the invoices when the property owner supplies energy utilities. When we cannot obtain this data, we use industry benchmarks to estimate energy consumption.

District heating emissions are calculated by multiplying the energy consumption data by the conversion factor supplied by the specific provider of district heating.

Emissions from energy consumption (electricity, district heating, oil, and gas) were measured in all three scopes and amounted to 2,350 tonnes of CO<sub>2</sub> e, totalling 24 per cent of our CO<sub>2</sub> emissions.

This indicates a reduction in more than 50 per cent of the countries due to a decrease in energy consumption. Heating/cooling was not regulated according to mean heat temperatures in the individual countries, so

the results may fluctuate from year to year, depending on the weather.

**BUSINESS TRAVEL**

In Scope 3, emissions from business travel are our most material emission source and makes up most of our carbon footprint. Emissions from flights, hotel nights, rail, rental cars, and taxis amounted to 3,139 tonnes of CO<sub>2</sub> e, accounting for 28 per cent of COWI's emissions in 2021. This is a reduction of 16 per cent since 2020.

To calculate figures for flight, hotels, and train usage, we rely on our travel agency Egencia. Egencia delivers up-to-date reports on use – including kilometres flown – based on information from all airlines and the average CO<sub>2</sub> figures calculated by use of the DEFRA standard. Furthermore, we can distinguish between trip purposes to display emission figures deriving from reasons such as: internal meetings, annual leave, flights, etc.

We have a solid count of hotel nights and train use booked through Egencia, including CO<sub>2</sub> figures based on the DEFRA standard.

For car rental, coach services, and taxis, we are dependent on data delivered by the rental companies giving us their average g/km CO<sub>2</sub> figures.

CO<sub>2</sub> emissions from air travel are calculated as the total flight distance multiplied by the relevant DEFRA emission factor or have been estimated.

Emissions from fuel for company cars are calculated based on mileage data multiplied by relevant DEFRA emissions factors. CO<sub>2</sub> emissions from public transport have been estimated by Egencia or is based on financial costs in the reporting year and multiplied by the relevant DEFRA emission factor.

In 2021, we accounted for further reduction of our flight and hotel-related emissions. The largest share of emissions were related

to activities involving customer meetings whereas the more extended use of hybrid working and online meetings as well as an enforced travel policy could explain the reductions. All hotel stays booked by COWI worldwide through the travel agency Egencia have been included in the figures.

The Arkitema figures have recently been added and need to be aligned with the methodology.

We accounted an additional 15 per cent for hotel stays to cover the bookings made outside the COWI booking system (customers/partners), as well as conference facilities, meetings/events.

When calculating our hotel footprint per hotel night, our travel agency Egencia relies on the DEFRA standard. For the countries not covered by DEFRA, the figures are based on the calculation at [www.hotelfootprints.org](http://www.hotelfootprints.org), using the most conservative figure.

**OTHER SUPPLY CHAIN EMISSIONS**

The category covers consumption of food and beverages, IT products, office equipment and supplies, and water, as well as the transportation of these.

Data is constructed based on economic values and actual purchase data primarily from our largest offices. Data is then scaled based on the number of employees, or estimations. Furthermore, CO<sub>2</sub> emissions in relation to outsourced data servers (e.g. Microsoft, NNIT, SAP etc.) are also found in Scope 3. It is not possible to specify the amount due to missing information from the suppliers. However, since the outsourced data servers are important for our daily work, COWI will continue the dialogue with suppliers.

To calculate our Scope 3 emissions, we collect data and multiply those figures by emission factors to estimate the full life-cycle emissions.



In 2021 the energy consumption was 2,570 tonnes of CO<sub>2</sub> e. In other words, we saw a reduction of 8 per cent compared to 2020.

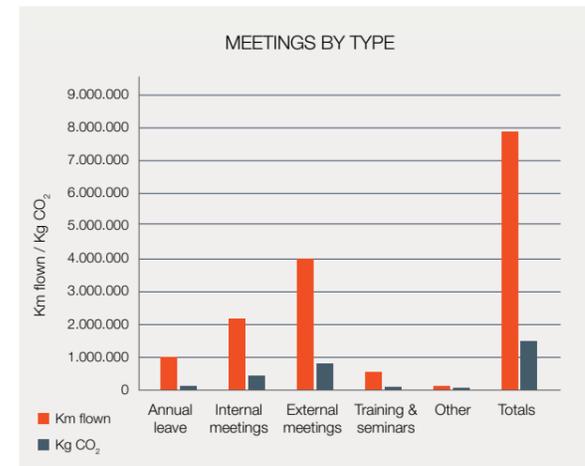


FIGURE 2 Meetings by type

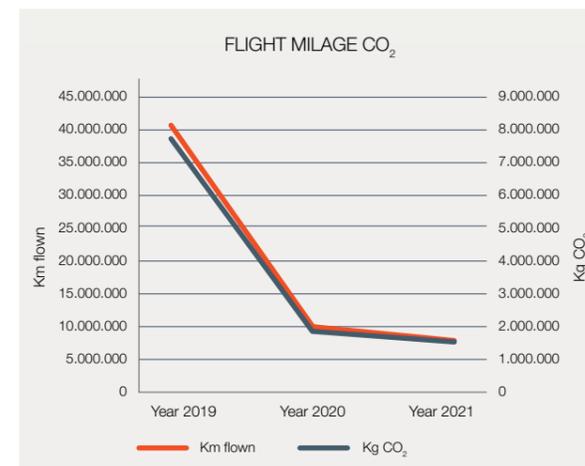


FIGURE 3 Flight Mileage CO<sub>2</sub>

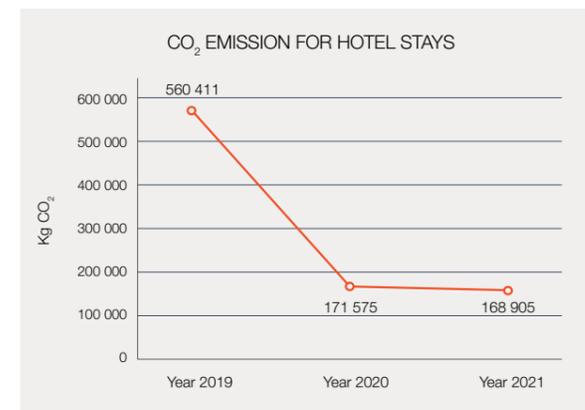


FIGURE 4 CO<sub>2</sub> Emission for Hotel Stays

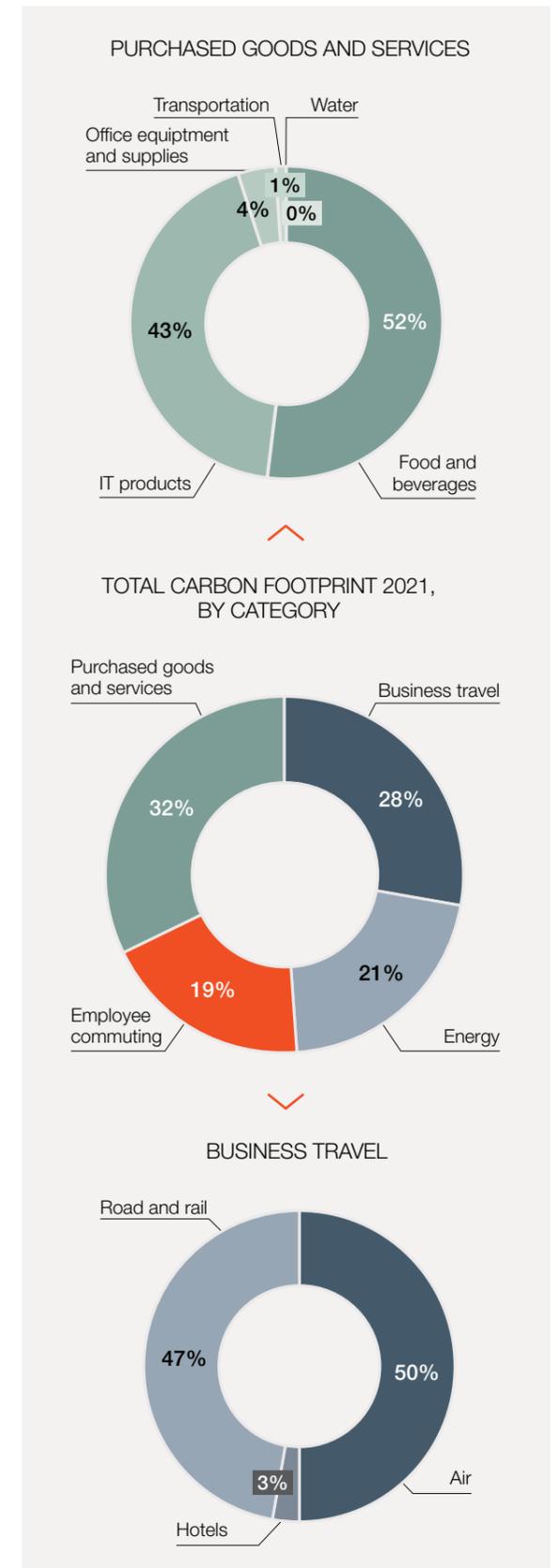
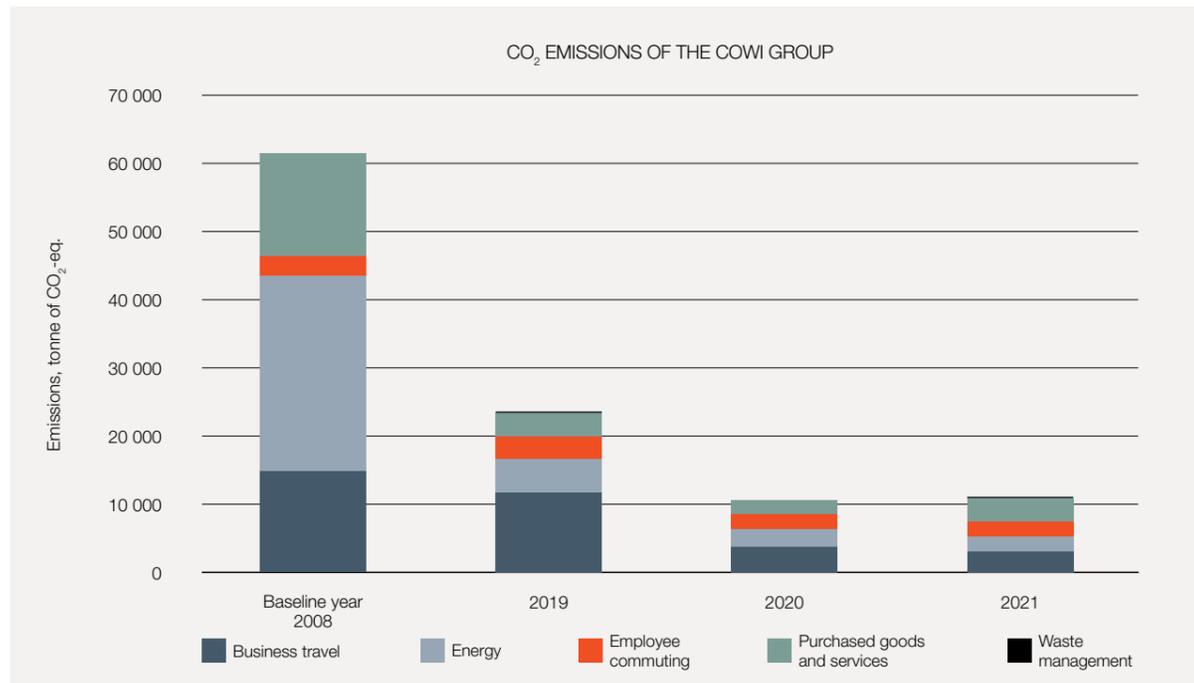
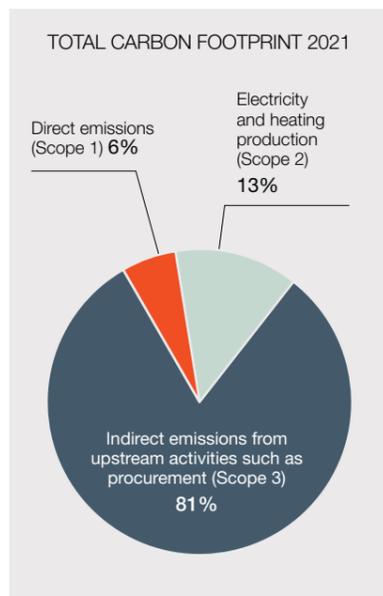


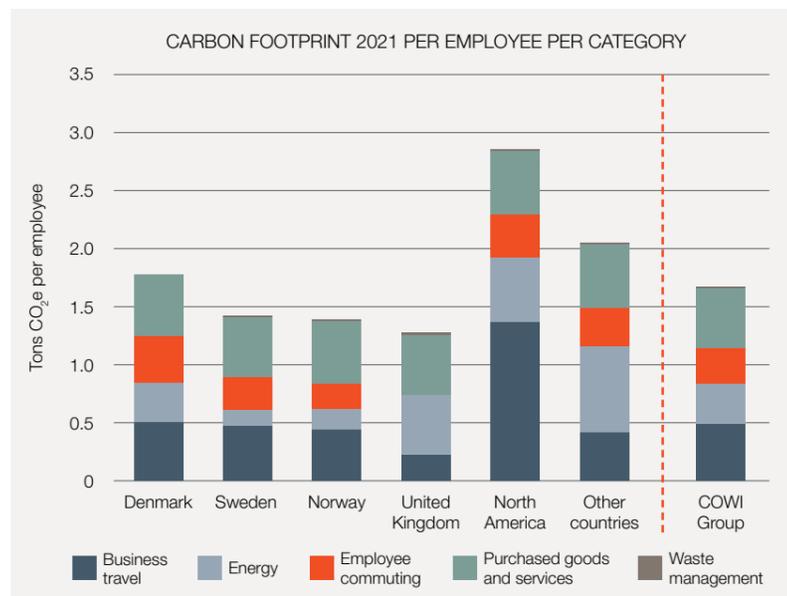
FIGURE 5 Reduced travel due to COVID-19 has significantly impacted CO<sub>2</sub>e emissions in 2020 and 2021. However, emissions related to purchased goods have increased in 2021.



**FIGURE 6** Since 2008, our emissions from business travel have decreased by 79 per cent; our emissions from energy consumption have decreased by 82 per cent; our emissions from employee commuting have decreased by 28 per cent; and emissions from purchased goods and services have decreased by 76 per cent. The emissions from waste management have increased from 4-ton CO<sub>2</sub>e to 21 CO<sub>2</sub>e in 2021.



**FIGURE 7**



**FIGURE 8** CO<sub>2</sub> emission per full-time employee, by category, by country in 2021.

**BUSINESS TRAVEL IN THE SPOTLIGHT**

Analyses of our own green footprint show that business travel is the single biggest source of COWI's greenhouse gas emissions. Before Covid-19, emissions from business travel by aeroplane used to account for 35 per cent of COWI's total CO<sub>2</sub> emissions, while all business travel, including air travel, contributed 47 per cent of COWI's total emissions.

Thus, cutting down on business travel and converting more meetings with project teams and customers to online platforms are the most efficient and evident ways to fulfil our ambition of becoming carbon neutral.

Air travel for internal and external meetings was significantly reduced in 2020, partly due to the COVID-19 lockdown.

2020 showed us that we can maintain strong relations with our customers with less travel activity, and we are seizing the opportunity to implement new climate conscious ways of working. For example, all internal meetings are online, per default, and only the most business critical travels are

accepted. In North America, the carbon footprint related to business travel is substantially above average due to the huge geographical spread of the organisation and the projects.

Going forward, we aim to maintain the reduced use of air travel for internal as well as external meetings (reduction target remains 50 per cent and air travel on projects by 25 per cent, compared to previous years).

Inspection cars are being converted into electric cars, where possible. COWI-owned cars will be converted to electric cars, where possible.

The next step in 2022 is to analyse the potential CO<sub>2</sub> reduction from buildings and commuting to explore the possibilities of reducing the carbon footprint even further.

These measures are expected to drive the company towards its ambitious goal of a 70 per cent carbon footprint reduction by 2030, and total carbon neutrality by 2050, without the use of carbon offset credits.

In situations where supplier-specific information is not available, we use averages from the supplier-specific data.

To calculate fuel- and energy-related activities that are not included in Scope 1 or Scope 2, we measure our electricity, fuel consumption, and apply the relevant emission factors.

Furthermore, we also obtain actual data for smaller emission sources—such as food in the canteen and food waste, based on the best available data.

In 2021, the CO<sub>2</sub> emission from the purchase of goods and services was estimated at 3,540 tonnes of CO<sub>2</sub> e, totalling 32 per cent of emissions. The largest share came from the purchase of food and beverages followed by IT products. This equals an emission of 530 kg CO<sub>2</sub> e per full-time employee. This represents an increase of 78 per cent compared to 2020, when this emission amounted to 1,990 tonnes of CO<sub>2</sub>.

In 2021, data on food and beverages were of a higher quality which makes it possible to include more indicators and more precise

data. Furthermore, the used CO<sub>2</sub> emission factors have changed and become more accurate, which naturally increases the CO<sub>2</sub> emissions. Because working from home is the new normal, COWI has purchased more computer screens by approx. 60 per cent. However, business travel has decreased by approx. 15 per cent because of more online meetings.

**COMPARISON WITH PREVIOUS YEARS**

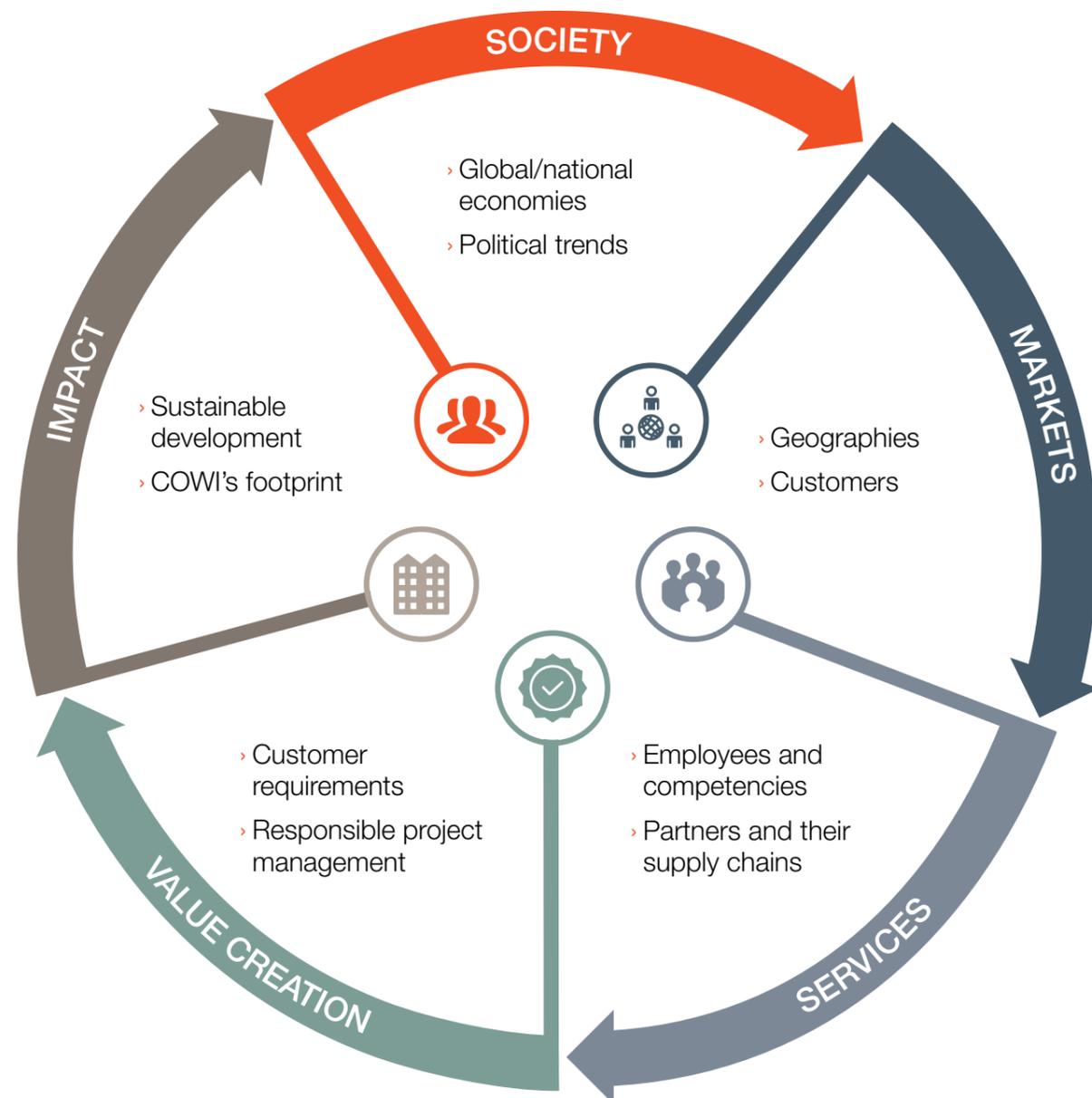
With the data collected in 2008 and the missing data being upscaled, a baseline year for tracking the emissions over time has been established. By collecting the data and calculating the emissions based on GHG protocol methodology in 2008, a comparison with calculations based on the same methodology is possible, allowing COWI to track emissions over time.

Figure 6 shows the emissions from 2008 compared to the emissions from 2019, 2020 and 2021. In 2008, we estimated that COWI emitted 61,240 tonnes of CO<sub>2</sub> e. We emitted 10,560 tonnes of CO<sub>2</sub> e in 2020, and 11,130 tonnes of CO<sub>2</sub> in 2021. This is a reduction of almost 82 per cent compared

to 2008, which is perfectly in line with COWI's ambition and target to reduce its CO<sub>2</sub> emissions by 70 per cent in 2030.

Since 2008, our emissions from business travel have decreased by 79 per cent; our emissions from energy consumption have decreased by 82 per cent; our emissions from employee commuting have decreased by 28 per cent; and emissions from purchased goods and services have decreased by 76 per cent. The emissions from waste management have increased from 4-ton CO<sub>2</sub>e to 21 CO<sub>2</sub>e in 2021.

# COWI'S BUSINESS MODEL AND CSR RISK ASSESSMENT



\* 2018 was the first year where we reported on our business model and discussed the CSR risks involved. Therefore, 2018 is the baseline year, except in some cases where we did not have numbers from 2017 or 2018. In those cases, 2019 indicators are used as baseline.



## SOCIETY

GLOBAL/NATIONAL ECONOMIES and POLITICAL ENVIRONMENTS constitute the framework conditions for all aspects of COWI's market presence. The CSR risks presented by the framework are MITIGATED by living COWI's vision and practising our values. This is key to navigating in a constantly changing political environment and ensure a flexible and digitalised organisation which can adapt quickly to new project conditions.

### HOW WE FOLLOW UP

- › Since the beginning of 2020, we have initiated a process of updating our company values. They now emphasise co-creation, curiosity, courage, commitment and not least, caring for people and the planet. In 2021, the updated values were launched. Managers were supported to 'walk the talk', and values were implemented in processes related to employee development, recruitment, and onboarding.
- › Management and employee knowledge of vision and values are scored in COWI's annual engagement survey. Since 2020, our colleagues in Arkitema have been included in the annual survey.
- › The response rate in 2021 was 90 per cent.
- › A sample survey indicated a high degree of internal understanding of the new values that were introduced in 2021.
- › In 2021, the global markets and the political environments, exemplified by, among other things, US President Biden's infrastructure programme, Europe's green deal, and the new German government's agenda were pointing towards a boom in investments in a green transition. COWI was ready to support public and private stakeholders in this transition – with our knowhow, solutions, and innovation.
- › Through our project work, we can make a real positive impact on the climate. Throughout 2021, adjusting our business strategy and strengthening our competencies to support the green transition have been major priorities.



## MARKETS

As a global player in diverse GEOGRAPHIES and with diverse CUSTOMERS, COWI's employees face a number of CSR risks, ranging from their personal security to the customers' business environment and CSR approach. These risks are MITIGATED by the Executive Board's approval of the geographical location of the projects and COWI's safety organisation. COWI is a signatory of the UN Global Compact, thus a responsible business environment, including anti-corruption, is a key focal point vis-à-vis customers.

### HOW WE FOLLOW UP

- › COWI's Executive Board applies the Transparency International Corruption Perception Index (CPI) to decision-making on geographic presence.
- › Countries with a CPI below 40 require intervention of the Executive Board.
- › All COWI employees undergo business integrity training every third year. The target for completion remained 75 per cent in 2021.
- › In 2021, COWI launched an updated Code of conduct for Suppliers in alignment with the UN Global compact principles.
- › In 2021, cooperation and sharing of competencies and resources across business lines and borders in COWI were further strengthened in our sector boards. Strategic and practical coordination of joint market activities took place in these boards.

## MANAGING BUSINESS RISKS

- › COWI's Group Management Board (GMB) has decided on a list of countries where the business environment requires extraordinary attention. GMB updates the list twice a year based on data from Transparency International and institutions monitoring governance issues.
- › The project is, as a minimum, a high-risk project, requiring EVP approval, if either:
  - › (i) the services will be delivered/used/built/utilised; or
  - › (ii) the customer is based/incorporated
- › in a country listed in the table below.
- › Projects contracted directly with international finance institutions or donor agencies are exemptions. For those, the above does not trigger a higher risk category.



## SERVICES

To supply our customers with state-of-the-art sustainable solutions, we need to be able to recruit and retain highly **COMPETENT EMPLOYEES** and attract strong and responsible **PARTNERS**. We **MITIGATE** the risk of losing such employees through leadership and by creating a great place to work. We **MITIGATE** the risk of attracting inappropriate partners through our screening process and by making sure that our code of conduct is upheld.

### HOW WE FOLLOW UP

- › It is COWI's aspiration to have a truly diverse workforce where all employees have equal opportunities regardless of gender, age, race, religion, nationality, ethnic and social origin, disability, political, or sexual orientation. COWI views diversity as a competitive advantage. A breadth in employees adds more perspectives to our business and organisation and leads to a better contribution to the development of services and solutions valued by customers and society.
- › Today, we number 82 different nationalities across all career levels.
- › All training activities in COWI Academy are monitored regarding content and participants.
- › Ongoing efforts are made to ensure an inclusive working environment where the composition of management reflects the diversity of our business and markets.
- › In 2021, 2,184 unique participants took part in COWI's instructor-led activities via COWI Academy. In 2020, the number was 1,650. Aiming for a best geographical accessibility despite Covid-19 lockdown and ambition of reducing business travel, most of the courses were delivered as online live classes in combination with social learning by using applications and virtual learning bites-short videos. Regardless of the pandemic, our employees can still meet, learn, and socialise virtually, though some courses will remain physical in order to nurture the informal networks across the organisation and a ONE COWI culture based on knowledge-sharing and innovation.



## VALUE CREATION

COWI's success in the market depends on understanding and meeting our customers' needs and providing sustainable solutions through **RESPONSIBLE PROJECT MANAGEMENT**. The risks associated with this are **MITIGATED** by ensuring that COWI has a vibrant and strong professional environment, which always provides high-quality, innovative, and sustainable solutions. Responsible project management entails that quality management is integrated in every phase of project execution and is therefore a strong mitigating factor.

### HOW WE FOLLOW UP

- › The Project Checklist and COWI Risk Management Tool support project managers in mitigating risks regarding projects, OHS, and HSES throughout the entire life cycle of the project.
- › Quality management is ensured through ISO certification, recertification, and regular audits.
- › The Project Checklist, a project-specific overview of project management activities and standard tools, was launched and implemented in the second half of 2021 – marking a quantum leap in how project managers are supported.
- › The COWI Risk Management Tool enjoys wide adoption throughout the group, supporting project managers in mitigating risks in relation to projects, OHS (Occupational Health and Safety), and HSES (Health, Safety and Environment) throughout the entire life cycle of the project.
- › Quality management is ensured through ISO certification, recertification, and regular audits.
- › The audit function was centralised during 2021, which meant that a dedicated team of lead auditors conducted audits across the business, facilitating knowledge-sharing and improved pattern recognition regarding areas of improvements.
- › In another year, marked by the COVID-19 pandemic, OHS activities continued to ensure a working environment that both supports and reflects the employees' needs and ensures optimal service to our customers. The aim to have the entire COWI Group ISO 45001 certified progressed as planned.
- › Several internal surveys and initiatives were conducted in 2021 to monitor the working environment, employee satisfaction, and mitigate negative effects of increased hybrid working.
- › Customer satisfaction is followed closely through the Net Promoter Score for the entire business on a quarterly basis.



## IMPACT

COWI's core business is to deliver projects based on the requirements of customers and society at large. As a business, COWI also makes a **FOOTPRINT** in the societies we operate in. In 2006, COWI signed the Global Compact. Since then, we have strived to **MITIGATE** our impact on society by reducing our footprint and contributing to the SDGs through actively working with and implementing the UN guiding principles and policies.

### HOW WE FOLLOW UP

- › Since 2019, COWI projects have been classified according to their relevance and contribution to achieving the SDGs.
- › In 2021, a new business strategy was developed and approved by the Board of Directors in December 2021. It underpins the intent to have a holistic view of value creation, and integrate the sustainability agenda in the way we operate in COWI.
- › Sustainability targets and tools are now systematically being integrated into projects.
- › To speed up the development of carbon neutrality tools and building specialist capabilities we have initiated various networks across our entire organisation.
- › The SDG framework is widely used as a framework for our customer dialogue.
- › Our own carbon target is to reduce our carbon footprint by more than 70 per cent by 2030, compared to baseline year 2008, and to reaching carbon neutrality in 2050.
- › The target remains, and it is decided to reduce our business travel to reduce the corporate carbon footprint. In 2021, this target has been achieved, substantially aided by the COVID-19 lock down, but we expect to maintain the substantially reduced used of air flights.
- › In 2021, we further consolidated new ways of working online with colleagues and customers, which have proved to be efficient.
- › We closely follow up on the KPIs to which our external suppliers for catering, facilities and transportation have committed themselves regarding, e.g., reduced carbon emissions, less waste, increasing recycling and more organic food. In 2021, the heightened demand for hygiene and preventing of virus negatively impacted the target of reducing food waste and waste related to catering and housekeeping.

# ABOUT COWI

COWI is a leading consulting group that creates value for customers, people, and society through our unique 360° approach. We supply services to customers within infrastructure, buildings, energy, and the environment and water. We aim to create innovative and sustainable solutions for our customers through world-class competencies and close relations.

Our stronghold is Scandinavia, but with offices all over the world, we combine global presence with local knowledge, which enables us to take on projects wherever our customers are. At any given moment, we are involved in more than 10,000 projects.

With our almost 90 years of experience in the business, we have created landmarks in many of the countries in which we operate. We are a leader within our fields of work, because our more than 6500 employees are leaders within theirs.

Together, we shape a sustainable and liveable world.



## ABOUT THE UNITED NATIONS GLOBAL COMPACT

Global Compact is an initiative launched in January 1999 by former UN Secretary-General Kofi Annan. It is a call to businesses worldwide to help build social and environmental frameworks that ensure open and free markets and help people everywhere secure a chance to share the benefits of the new global economy.

Launched in 2000, it is the largest corporate sustainability initiative in the world, with over 12,000 signatories based in 145 countries. Adhering to the UN The Global Compact means aligning operations and strategies with ten universally accepted principles in the areas of human rights, labour, environment and anti-corruption, and to take action in support of UN goals and issues.

COWI signed the UN Global Compact principles in 2006 and progress is reported annually in our Sustainability Report. The report includes our corporate carbon footprint report. We have set targets to mitigate our own climate footprint. By 2030, we will cut CO<sub>2</sub> emissions by 70 per cent (compared to 2008-levels), and by 2050 we will become carbon neutral.

The publication also includes selected examples of how we improve sustainability and contribute to reduced GHG emissions together with our customers and partners around the world.

## Together, we shape a sustainable and liveable world

