

# BUILDINGLIFE PROGRAMME FOR CARBON NEUTRALITY IN THE BUILT ENVIRONMENT

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Laudes ———  
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# PREFACE

With IPCC's Sixth Assessment Report, the need for immediate climate action has become more apparent than ever. All we have is this decade to turn the direction of the world. The real estate and construction sector produces approximately one third of emissions in Finland, which means that the sector has a decisive role in combating climate change. It is absolutely necessary that each organization and individual recognizes their opportunities to influence the situation and takes action to reduce emissions. You do not have to do this alone or invent solutions by yourself. Everything you need is already available. Take action.

## #BuildingLife

#BuildingLife is a joint project by ten European Green Building Councils, which highlights the built environment as a decisive part of the fight against climate change. With the project, companies in the built environment sector have considered the emissions produced by their activities in depth and shared information about solutions that could be used to reduce emissions in a sustainable manner. Each country produces an action program presenting the direction and processes that can be used by companies to reduce both the emissions from their own activities and those within their value chains on a larger scale. In Finland, the project includes dozens of companies that have a genuine need and desire to make the world a safer place to live in. During the project, we have heard innovative and well-informed views on the emission reduction potential, ranging from manufacturing plants in the building products industry to housing solutions and the infrastructure. Companies that support the programme commit themselves to the objectives of the plan and the implementation of the proposed measures such that the emissions produced by the real estate and construction sector in Finland reach carbon neutrality by the year 2035. A review of the current situation of the real estate and construction sector was published as part of the project, which included the best concrete examples of how environmental and climate work has already been put into action. The review is intended to motivate companies that have not begun their climate activities to think in concrete terms and realize that getting started is not actually as challenging as we might have thought. The publication looks further toward more ambitious targets. Toward concrete action.

# SETTING THE DIRECTION, HELPING ALONG THE WAY.

Emissions are being reduced at an astonishing rate in the real estate and construction sector. New low-carbon solutions and operations models are being developed everywhere and new innovations are rapidly adopted by the masses. The real estate and construction sector is claiming a key role in the fight against climate change, and no one can afford to remain on the sidelines as the sector moves forward.

Remaining involved in the development of the sector and avoiding missteps will require an increasingly systematic approach and comprehensive utilization of existing information. Luckily, we do not have to invent all the tools ourselves.

## **At different stages, but heading toward the same goal**

Each operator in the real estate and construction sector is at a different stage of their race toward carbon neutrality. Pioneers in the field are already thinking of ways to abandon compensation and to engage the entire value chain in the work toward carbon neutrality. At the same time however, some operators are losing resources due to tightening obligations and the evolving market situation, and thus the development of their own carbon neutrality activities still remains at the early stage. The development of the entire sector and the possibility to bring about actual change require that everyone is able to participate in the work and can find solutions for reducing emissions that work for them. The same tools will not work for everyone. We need a clear roadmap enabling sustained progress, which operators in the sector can follow together, supporting each other along the way.

Green Building Council Finland and #BuildingLife offer operators in the sector the opportunity to engage and influence, regardless of their starting point. We welcome everyone to expand their skill set and share their solutions.

## **Commit to carbon neutrality by 2035**

We are inviting all organizations operating in the real estate and construction sector to support the #BuildingLife Programme for Carbon Neutrality in the Built Environment. Supporters of the programme commit to working toward a carbon neutral built environment by the year 2035 in accordance with the common goals of the real estate and construction sector. Supporters are committed to drawing up an action plan that they can use to develop their activities toward carbon neutrality.

## **Tell us about your work for carbon neutrality**

We are inviting everyone to share their action plans with us, which we will publish under the #BuildingLife Programme for Carbon Neutrality in the Built Environment. The actual organization-specific action plans and road maps will provide examples for the application of the broader programme and encourage the entire sector to come up with their plans.

## **Components of a high-quality action plan for carbon neutrality:**

- All emissions in Scopes 1, 2, and 3 as defined by the GHG protocol.
- Clear emission reduction goals and intermediate targets for different business units / functions.
- Targets and measures for transition toward a circular economy.
- Targets and measures for phasing-out fossil fuels.
- Clear-cut, measurable, and achievable targets for the next five years.
- Subsequent measures can be specified further in the future.

## Pick up the pace

We are inviting private operators to set carbon neutral construction projects and the use of carbon neutral energy by the year 2030 as their objective. Join the international Net Zero Carbon Buildings Commitment. We are encouraging public operators to sign the LIFE Level(s) pledge and to begin using the following indicators included in the Level(s) framework as procurement criteria: Life-Cycle Assessment (LCA), Life-Cycle Costing (LCC), and Indoor Air Quality (IAQ).

## Where to next?

### 1. Specify objectives that are in line with your activities and values.

- **Sign up as a supporter of the #BuildingLife Programme for Carbon Neutrality in the Built Environment.**
- Supporters of the programme commit to working toward a carbon neutral built environment by the year 2035 in accordance with the common goals of the real estate and construction sector. Supporters are committed to drawing up an action plan that they can use to develop their activities toward carbon neutrality.

### 2. Choose the pledges and frameworks you wish to commit to.

#### Private operators

- Sign the Net Zero Carbon Buildings Commitment – carbon neutral buildings by 2030.
- Make a commitment to a general accepted emissions reporting system, such as Science Based Targets.
- Sign the Sustainable Demolition Green Deal commitment to promote material efficiency in demolition work.

#### Public operators

- Sign the LIFE Level(s) pledge, use the Level(s) framework as procurement criteria.
- Sign the Emission-Free Worksites – Sustainable Procurement Green Deal for fossil-fuel-free worksites by the end of 2025.

### 3. Draw up your own action plan for carbon neutrality.

You can use the #BuildingLife Programme to help you identify the right measures.

### 4. Share examples of your work and encourage the entire sector to make genuine progress toward carbon neutrality.

### 5. Track and measure the emission trends of your activities and specify your objectives and action plan further where necessary.

## Structure of the programme

**THE FIRST SECTION PRESENTS A TARGET FOR THE ENTIRE SECTOR: CARBON NEUTRAL BUILT ENVIRONMENT BY 2035.** This section also describes the sub-objectives for concerning the emissions related to energy consumption, building materials, and worksite activities. As has often been said: “If it cannot be measured, it cannot be managed.” The same goes for greenhouse gas emissions. Common goals motivate the entire sector to work together. In the context of climate work, even competitors can find themselves on the same side.

**THE SECOND SECTION PRESENTS THE OPERATOR-SPECIFIC TABLES OF MEASURES.** As each company engages in different activities, the emission reduction measures must also be different. In this publication, we present measures for eight different operator groups in the real estate and construction sector:

- Building products industry
- Construction companies
- Developers
- Infrastructure project clients
- Planners and other specialists
- Real estate investors
- Municipalities, cities, and other public operators
- Organizations

The tables of measures offer guidelines for the development of the operators' processes, but they do not provide strict instructions on how to adjust their business activities. This is a decision only the companies themselves can do. The tables of measures present years for the commencement and completion of each activity. However, the operators can adapt the provided timeframes in their own action plans to fit their specific needs and specify more ambitious targets as well. In the interest of the functionality of the business environment, it is essential to ensure that low-carbon services are available in the subcontractor and supplier chains and that the scheduling of the measures allows for this.

# THE TIME HAS PASSED FOR GREENWASHING AND EMPTY WORDS

Better progress is required from the real estate and construction sector. Clients, investors, and end users demand that the built environment conforms to the principles of sustainable development, and the ever-tightening legislation in Finland and the European Union is pointing in the same direction. Our operating environment is ready for change. This change is not a threat but instead an opportunity for good, growing, and increasingly international business activities. A carbon neutral built environment is a complex and challenging objective that constantly requires new research data. But it is also the only direction we have, as this is the decisive decade. The objective must be divided into smaller components that can be implemented by each operator in the sector. These components can be found in the Programme for Carbon Neutrality in the Built Environment. The programme helps real estate and construction sector operators of all sizes to identify their own roles in bringing about a change in the sector. The programme provides guidelines for the development of the operators' activities, but the desire to change must be found within the organizations. They have to take the first steps and commit to a target. The first thing each company should do is to find out the sources of emissions for your activities.

## We can do this

The real estate and construction sector has shown that it is capable of major change. Occupational safety and improved energy-efficiency became routine elements of construction projects in the 2000s. Now, we need an even more radical and faster change in terms of both attitudes and actions to achieve our objective of a carbon neutral built environment by the year 2035. All of us owners, decision-makers, specialists, and employees in the real estate and construction sector can make decisions within our own work that bring us closer to lower emissions without compromising on quality. No company can change the industry alone. A carbon neutral built environment means increased and improved cooperation between different operators. We must ask a lot from ourselves but also from our partners.

The time has passed for greenwashing and empty words. Now, it is time for practical action toward a carbon neutral built environment.

As signatories, we have already taken action and we want you to join our trailblazing team. The future is in our hands.

18 September 2021

#BuildingLife Ambassadors

Jan Herranen,  
*Maajohtaja, Rototec Oy*  
Kaisa-Reeta Koskinen,  
*Projektijohtaja, Hiilineutraali Helsinki*  
Panu Pasanen,  
*Toimitusjohtaja, One Click LCA Ltd*  
Jyrki Keinänen,  
*Toimitusjohtaja, A-Insinöörit Oy*  
Olli Nikula,  
*Toimitusjohtaja, Saint-Gobain Finland Oy*  
Juha Kostiainen,  
*Johtaja, Kaupunkikehitys, YIT Oyj*  
Tuomas Särkilähti,  
*Toimitusjohtaja, Skanska Oy*  
Ilkka Tomperi,  
*Johtaja, Kiinteistöt, YIT Oyj*  
Ville Reinikainen,  
*Liiketoiminnan kehitysjohtaja, Granlund Oy*

Saara Vauramo,  
*Ohjelmajohtaja, Lahti - Euroopan ympäristöpääkaupunki 2021*  
Karla Lindahl,  
*Toimitusjohtaja, KONE Oy Suomi ja Baltia*  
Minna Toivainen,  
*Liiketoimintajohtaja, Realia Management Oy*  
Laura Inha,  
*Kehityspäällikkö, Kestävä Tampere 2030*  
Juha Rämö,  
*Teknologiajohtaja, Consolis Parma*  
Riku Patokoski,  
*Toimitusjohtaja, Bonava Suomi Oy*  
Topi Paananen,  
*Toimitusjohtaja, Peikko Group Oy*  
Niina Nurminen,  
*Rakennuttajapäällikkö, Keskinäinen Eläkevakuutusyhtiö Ilmarinen*  
Pasi Suutari, *Kiinteistöjohtaja, SOK*

# SUPPORTERS

As supporters of the programme of the **#BuildingLife** project, we commit ourselves to working toward a carbon neutral built environment by the year 2035 in accordance with the common goals of the real estate and construction sector.

We also commit ourselves to drawing up our own action plan, which we will use to develop our business activities toward carbon neutrality.

Our group of supporters continues to grow - you can see all supporters and their roadmaps on our site [figbc.fi/buildinglife..](https://figbc.fi/buildinglife..)







# CHANGE REQUIRED IN THE SECTOR

For carbon neutrality to become a reality, the real estate and construction sector requires deep, systemic change. Business models and approaches must be thoroughly transformed. To allow companies to adjust their activities, we need a favorable operating environment. In this chart, we will present the steps toward carbon neutrality divided into subject areas. Key operators for bringing about change are also presented for each subject area. We can only change the future together.

	-2023	-2025	-2030	-2035
Emission control for organizations (Applies to all operators.)	<p>Emission control must start with an assessment of the emissions of your value chain. Organizations assess the emissions of their value chain in accordance with the GHG protocol including all three Scopes.</p> <p>Emission reduction targets and measures are specific to each organization. Each organization must prepare their own concrete steps for reducing emissions.</p>	<p>It is essential for the credibility of the objectives to ensure that emissions are reported through a process overseen by a third party. Organizations commit to reporting their emissions on an annual basis.</p> <p>Organization-specific benchmarks are determined for construction projects, which can be used to set project-specific objectives.</p>	<p>The realization of emission reduction targets is monitored annually, and planned measures are specified further where necessary.</p> <p>Organizations require their stakeholder groups to commit to the same objectives, as the emission reduction targets for a value chain cannot be achieved alone.</p>	<p>Toward the midpoint of the 2030s, organizations have eliminated the majority of their emissions and identified areas where the reduction of emissions is difficult. Organizations utilize emission compensation systems to achieve carbon neutrality.</p> <p>The vision for the future includes achieving carbon positivity. How could business activities be developed toward an increasingly ecological direction?</p>
Training and communications (Applies to all operators.)	<p>Competence must be increased extensively throughout the sector. Occupational safety programs can be used as an example. Organizations draw up competence requirements for different roles and prepare training programs that allow those requirements to be fulfilled.</p> <p>Organizations are comprehensively included in climate work. Motivated personnel are identified in each business unit, and the activities are mobilized through the identified personnel in the business units.</p> <p>Organizations communicate on their emission reduction targets and measures. Operators exchange information freely and participate in joint development projects, such as the #BuildingLife project.</p>	<p>For the projects, it is important to ensure that key stakeholders are able to interpret carbon footprint calculations and environmental product declarations.</p> <p>Climate objectives are reflected in performance bonus systems and development targets. Development of emission reduction solutions is rewarded by organizations.</p> <p>Challenges are also discussed. Other operators in the sector are also included in finding solutions to challenges.</p>	<p>Organizations engage their stakeholder groups to participate in the emission reduction work. Training opportunities are also offered to the subcontracting chain and suppliers.</p> <p>International cooperation is increased. Larger organizations introduce best practices from other countries.</p>	<p>Organizations determine whether they need compensation to achieve carbon neutrality and communicate openly on the subject.</p> <p>The carbon footprint of products is communicated to the customers in the context of letting or real estate transactions.</p>
Zoning and urban planning (Cities and municipalities)	<p>Cities and municipalities can keep emissions from construction in check by directing construction toward areas with existing infrastructure and suitable ground conditions for construction.</p> <p>In zoning, particularly low-carbon solutions are required for plots that are in higher demand. Particularly low-carbon solutions are required in the conveyance of plots and design competitions.</p>	<p>Cities and municipalities aim to minimize construction on undeveloped land and increase green infrastructure.</p> <p>In design competitions, cities require the utilization of circular economy and adapting to climate change.</p>	<p>In zoning, the requirements of energy transition are taken into account by ensuring sufficient space for the storage of energy.</p> <p>Cities only grow larger through stacking and changes in land use have been brought to equilibrium.</p>	<p>Simulation is introduced to support zoning. The best typology is determined for each plot, taking into account the existing infrastructure, green areas, and ground conditions.</p>

	-2023	-2025	-2030	-2035
<b>Emission control for projects (Developers, construction companies, and consultants)</b>	<p>Carbon footprint management is made part of all housing construction projects. Benchmarks are specified for projects to allow for the assessment of emission reduction measures.</p> <p>Carbon footprint assessment is becoming more common in the sector and more specialists are required each year.</p> <p>The assessment of the carbon footprint of structures begins in infrastructure projects. Common rules for the emission control of projects are outlined.</p>	<p>Companies set their own limit values for different project types and the life-cycle emissions of housing construction projects have been reduced by 15 percent.</p> <p>As legislation enters into force, carbon footprint assessments become increasingly common, and the number of specialists continues to grow.</p> <p>First infrastructure projects are being assessed using the common method in the project planning stage. Emission reduction method are outlined, and benchmarks set for project types.</p>	<p>The life-cycle carbon footprint of housing construction projects has been significantly reduced. Pioneers are planning the first carbon neutral projects.</p> <p>Emission control of infrastructure projects has become an established practice in both the project planning stage and further planning. Emissions of infrastructure projects have begun to fall.</p>	<p>First carbon neutral housing construction projects are being built. The life-cycle emissions of housing construction projects have been reduced by 70 percent.</p> <p>Emissions of infrastructure projects are reduced strategically. Green infrastructure and other forms of carbon sequestration are implemented in projects.</p>
<b>Materials and building products (Suppliers of materials)</b>	<p>Manufacturing plants draw up their own emission reduction plans that take into account energy-efficiency, environmental material flows, and production processes.</p> <p>Environmental Product Declarations (EPD) are prepared for high emission products in particular.</p> <p>The recycling potential of products is investigated. Recycling instructions are prepared for products that can be recycled. Circular economy is introduced as a principle of product development.</p>	<p>The use of fossil energy at manufacturing plants is reduced.</p> <p>EPDs are prepared for 40 percent of the product portfolio.</p> <p>Make sure that 20 percent of products can be recycled. Prepare recycling instructions for the products.</p>	<p>Supply of renewable energy for manufacturing plants is ensured through Power Purchase Agreements (PPA).</p> <p>EPDs are prepared for 70 percent of the product portfolio.</p> <p>Make sure that 50 percent of products can be recycled. Prepare recycling instructions for the products.</p>	<p>No fossil energy is used at manufacturing plants.</p> <p>EPDs are prepared for 100 percent of the product portfolio.</p> <p>Make sure that 75 percent of products can be recycled. Prepare recycling instructions for the products.</p>
<b>Emission control for worksites (Construction companies, developers)</b>	<p>Operators commit to the Green Deal for Emission-Free Worksites.</p> <p>The calculation of the worksite carbon footprint is assessed to ensure that it also includes any demolition and excavation work carried out at the site.</p> <p>Only renewable electricity is used at worksites and possible sources of renewable thermal energy are investigated.</p>	<p>Worksite generators use renewable fuels wherever possible.</p> <p>Modernization of equipment and the development of existing equipment is discussed with equipment rental partners.</p>	<p>Make sure that the charging infrastructure of worksites also supports the needs of subcontractors.</p> <p>Generators powered by fossil fuels are phased out at worksites.</p>	<p>Use only renewable delivered energy in production.</p> <p>Support the modernization of equipment by your partners and the product development of equipment manufacturers by proposing pilot projects and partnership models.</p>
<b>Energy efficiency (Real estate investors, developers)</b>	<p>Emissions from the energy consumption of existing property stock are well known. Energy audits are carried out and plans prepared at properties to improve efficiency.</p> <p>Organizations set objectives for the energy-efficiency and emissions of their property stock.</p>	<p>Energy-efficiency is improved systematically in all property types. Local production of renewable energy for properties is investigated.</p> <p>Electricity purchase agreements largely pertain to fossil-free sources. Property owners negotiate advantageous agreements for the tenants as well.</p> <p>The option to purchase renewable district heat becomes available in the first municipalities.</p>	<p>Energy-efficiency has reached its highest level. Renewable energy is widely produced at properties. The largest sites also include options for energy storage.</p> <p>The quantity of purchased renewable electricity is increased through PPAs.</p> <p>Fossil-free district heat can be purchased in most municipalities.</p>	<p>The properties use fossil-free and mainly renewable energy.</p> <p>A significant amount of energy is produced within the property stock, which is recycled effectively.</p> <p>District heat is fossil-free throughout the country.</p>

# CARBON NEUTRAL BUILT ENVIRONMENT BY 2035

The objective of this programme is to determine steps for each operator in the sector, which would combine to ensure that the real estate and construction sector in Finland becomes carbon neutral by the year 2035.

In expert groups open to all operators, we have come to the following conclusion: the amount of energy required and the related emissions must be reduced further to almost nothing. But this alone will not suffice. Determined action to reduce the emissions related to building materials and worksites by at least one half is also needed.

## The real estate and construction sector has a decisive role in fighting climate change

With the recent report from IPCC, the need for immediate climate action has become more apparent than ever. All we have is this decade to turn the direction of the world.

The European Union is seeking to reduce emissions by 55 percent by the year 2030 and carbon neutrality by 2050. The recommendations of the Finnish Climate Change Panel for emission reduction are 60 percent by 2030 and 70 percent by 2035, by which point the entire country should also be carbon neutral. The emissions from 1990 are used as the reference level for emission reduction. The remaining 30 percent is expected to be equal to the carbon sink comprised by forests at that time, which would mean that we had reach equilibrium or neutrality.

As operators in the real estate and construction sector, we produce approximately one third of the emissions in Finland, so the objectives we set ourselves are not insignificant. We are reaching the final moments to ask ourselves whether we are going to be part of the solution or the problem?

The Finnish real estate and construction sector must become carbon neutral at the same pace as the State by 2035. The measures presented in this programme allow us to reach that goal.

## What emissions should be reduced and by how much?

The objectives described below have been discussed with specialists in the field during different stages of the #BuildingLife project. They have been commented on by more than ninety specialists in workshops and dozens more through a survey.

After the workshops and surveys, we have interviewed top scientist in the field in assessing the achievement of the objectives. The opinion of the sector is unanimous: The Finnish real estate and construction sector wants to be at least as ambitious as the Finnish Government. It only remains for us to identify the best measures to realize this ambition.

According to the low-carbon roadmap for the construction industry produced by the Confederation of Finnish Construction Industries RT, three quarters of the emissions related to the built environment are produced by the consumption of energy by existing buildings, and the remaining fourth by building materials,

worksite activities, and transportation. In the pursuit of carbon neutrality, all three require investment. The emission trends related to energy consumption are largely dependent on the action taken by energy companies. According to the updated estimate of Finnish Energy from 2021, emissions related to district heat will be reduced by 80–90 percent by 2035. Thus, the role of the real estate and construction sector will consist of improving the energy-efficiency of existing properties by optimizing their use and carrying out energy renovations. Various PPA schemes where commitments are made to purchase clean energy in the longer term are also an effective way for operators in the real estate industry to support the increase in clean energy sources. While the consumption of energy by each property or the production of each power plant may not be carbon neutral by 2035, it would seem at this point that we are getting close. **EMISSIONS FROM ENERGY CONSUMPTION MUST BE REDUCED AT THE SAME PACE WITH THE ENERGY INDUSTRY BY AT LEAST 90 PERCENT BY THE YEAR 2035.**

The methods and materials used for construction comprise the core issue under the responsibility and authority of the real estate and construction sector. The amount and type of the cement and steel products we use in the future will be decisive in the reduction of emissions from building products. Although hydrogen-reduced steel is already available and various carbon capture methods are developing further, we cannot wait for the wider commercialization of these solutions if we want to achieve carbon neutrality by 2035.

Pioneers in the field are already showing us that the halving of emissions from building products is not only possible but also seen as a good business opportunity. **EMISSIONS FROM THE MANUFACTURING OF BUILDING PRODUCTS MUST BE REDUCED BY 50 PERCENT BY THE YEAR 2035.**

A third part of the equation consists of the emissions from worksites and transportation, where the development goes hand in hand with electrification and renewable fuels. Transitioning to low-emission fuels will most likely be the most significant act of the coming years, but it is only an intermediate step on our way toward an electric society. The necessary changes will be easier to implement on smaller housing construction sites and in light transport, whereas doing the same will take more time with heavier transport and larger worksites. **EMISSIONS FROM WORKSITES AND TRANSPORTATION MUST BE REDUCED BY 50 PERCENT BY THE YEAR 2035.**

### Formula for carbon neutral built environment

A carbon neutral built environment refers to a situation where the annual emissions and positive climate effect of the built environment are in balance.



*The total reduction in emissions from the built environment in accordance with the targets described above amounts to 80% by the 2035.*

By using the emission breakdown presented in the RT roadmap (energy consumption 75%, materials, worksites, and transportation 25%) and the emission reduction targets provided in the previous chapter, we can easily calculate the total impact of the emissions reductions with the following formula:  $75\% * 90\% + 25\% * 50\% = 80\%$   $75\% * 90\% + 25\% * 50\% = 80\%$

As the year 2035 is, however, in the distant future, we need clear intermediate targets for the reduction of emissions. The activities specified for different organization types in this programme are used to pursue the emission reduction path presented in the below chart.

It is assumed that the easiest and most significant emission reduction measures will be carried out in this decade, which is why the most significant emission reduction targets are also scheduled for the 2030s. After the initial surge in emission reductions, the pace will slow down slightly at first, picking up with technological advancements later on in the 2030s.

*Intermediate targets for reducing the emissions of the built environment described for target years 2025, 2030, and 2035.*

Year	2025	2030	2035
<b>Emission reductions</b>	Material-related emissions reduced by 25 percent. Worksite emissions reduced by 25 percent. Emissions from the energy consumption of existing building stock reduced by 40 percent.	Material-related emissions reduced by 40 percent. Worksite emissions reduced by 40 percent. Emissions from the energy consumption of existing building stock reduced by 70 percent.	Material-related emissions reduced by 50 percent. Worksite emissions reduced by 50 percent. Emissions related to energy consumption reduced by 90 percent.
<b>Reaching equilibrium</b>	The first projects that are carbon neutral throughout their life-cycle.	The energy consumed by properties of professional owners of real estate is carbon neutral.	New building projects are carbon neutral.

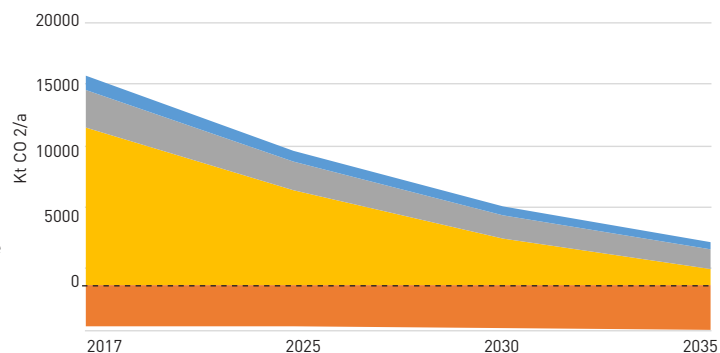
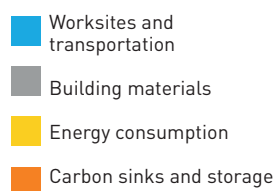
## Carbon neutrality cannot be achieved without positive climate impacts

In the pursuit of a carbon neutral built environment, the reduction of emissions by 80 percent alone is not sufficient. We will also need positive impacts each year, and they must be equal to the amount of emissions produced.

One of these impacts is the carbon storage in long-lived wood products included in the LULUCF calculations as well, which refers to the annual difference between new wood products and decommissioned wood products. This represents the increase in carbon storage in wood products. In 2017, the figure corresponded to approximately 19 percent of the annual emissions of the built environment, but it does of course comprise the carbon storage for wood products used in other sectors as well.

The carbonation of concrete from demolished buildings, renewable energy supplied to the network, or carbon sinks resulting from the creation of green spaces could also be included in the positive environmental impacts. The programme also presents measures for increasing these positive impacts, but the assessment of their effectiveness will require further investigation. In terms of magnitude, these positive impacts represent approximately 20 percent of the current greenhouse gas emissions of the built environment. These impacts must be reinforced and maintained alongside the emission reduction measures to achieve carbon neutrality.

*Reduction in the emissions of the built environment and the increase in positive impacts described for target years 2025, 2030, and 2035.*



# TABLES OF MEASURES

In this chapter, we present measures for eight different operator groups in the real estate and construction sector:

- Building products industry
- Construction companies
- Developers
- Infrastructure project clients
- Planners and other specialists
- Real estate investors
- Municipalities, cities, and other public operators
- Organizations

The tables of measures offer guidelines for the development of the operators' processes, but they do not provide strict instructions on how to adjust their business activities. This is a decision only the companies themselves can do.

## Instructions for reading the tables of measures

The tables include the key measures each group of operators can influence. The measures are divided under the headings of "Development of Organization" and "Development of Production."

Development of Organization is aimed at improving management, competence, and communications in your organization. In turn, Development of Production aims to reduce the emissions of each individual construction project or manufacturing plant. The tables of measures present years for the commencement and completion of each measure. However, the operators can adapt the provided timeframes in their own activities to correspond to their specific needs as well as specify more ambitious targets.



# BUILDING PRODUCTS INDUSTRY

## Organizational developments

	-2023	-2025	-2030	-2035
MANAGE	Assess the emissions of your organization in accordance with the GHG protocol including Scopes 1, 2, and 3	Make a commitment to a general accepted emissions reporting system such as Science Based Targets	Require your stakeholder groups to commit to carbon neutrality	
	Specify targets and create a plan of action for reducing the total emissions of your value chain. Set a benchmark for different product types. Prepare plant-specific action plans	Prepare a circular economy strategy and indicators for your organization	Compensate the emissions you cannot eliminate	
	Set internal prices for emission reductions in your organization	Monitor the development of the emission situation in the value chain and specify your objectives and action plan further where necessary.		
	Join the FIGBC and participate in the sector's joint development projects	Take part in regional material flow projects, such as the development of materials markets	Prepare an action plan for carbon positivity	
	Take part in joint projects in the sector that promote carbon neutrality	Participate in the negotiations for a new Energy Efficiency Agreement		
TRAIN	Draw up competence requirements for different roles in your organization and improve the organization's competence on controlling the total emissions in line with the competence requirements	Make sure that relevant internal stakeholders can interpret and produce EPDs		
	Comprehensively involve your personnel in the process. Survey interested parties in different business units and utilize them in the deployment of the development activities throughout the organization	Train your personnel on subjects related to low-carbon construction, product declarations, circular economy, biodiversity, compensation, and adapting to climate change in line with the competence requirements	Utilize personal bonus schemes as incentives for developing low-carbon approaches	
	Offer thesis project opportunities pertaining to low-carbon approaches			
VERIFY	Prepare product-specific Environmental Product Declarations beginning with more carbon-intensive products	Prepare EPDs for the top 40 % of your best-selling products	Prepare EPDs for the top 70 % of your best-selling products	Prepare EPDs for all products
	Make sure that the EPDs are prepared in accordance with EN 15804 + A2 standard and that they are verified by a third party			
	Produce and publish information on the life-cycle emissions of products and solutions	Support your customers and other stakeholders in choose low-carbon alternatives	Require EPDs from the packaging as well	
DEVELOP	Make the extension of the product life-cycle (repairability, serviceability, and remanufacturing) and the recyclability of products key principles of product development	Develop recycling services for products	Make sure that raw materials used for products comprise 20 % of recycled materials	Make sure that raw materials used for products comprise 50 % of recycled materials
	Further develop all products of your company in accordance with the principle of sustained development from the perspective of circular economy business models	Make sure that 20 % of products can be recycled. Prepare recycling instructions for the products	Make sure that 50 % of products can be recycled. Prepare recycling instructions for the products	Make sure that 75 % of products can be recycled. Prepare recycling instructions for the products
	Include Environmental Product Declarations in product development to support the development	Investigate the possibility of servitizing products instead of selling them. Investigate options for developing factory-serviced products instead replaceable products	Develop alternative products for products in your portfolio that are difficult to improve	
		Also remember to develop your packaging further! Reduce the amount of packaging materials used and utilize recyclable and reusable packaging options. Aim toward 100-percent material flow with packaging		
COMMUNICATE	Communicate openly both internally and externally on the environmental impact of construction and the best concrete practices and major challenges of the low-carbon approach	Communicate transparently on the subject if your organization uses compensation systems in its activities		
	Inform your customers of the carbon footprint of your products and guide them to make low-carbon choices	Report the life-cycle carbon footprint of your products to your customers	Communicate on the successes of your organization as well!	
	Involve your supply chain in the reduction of emissions	Create examples of manufacturing-plant-specific measures and their effectiveness		



The building products industry has a major responsibility in the emission reduction work of the sector. Low-carbon buildings cannot be built without low-carbon products.

In recent years, we have observed a significant turning point in the sector with suppliers introducing more and more innovative products to the market, which have been manufactured taking into account the energy consumption of manufacturing plants, origin of materials, and recyclability in the future.

In order to achieve their objective, material suppliers must prepare a plan for each manufacturing plant. The corrective measures vary significantly, but the goal remains the same: the emissions from manufacturing must be halved without compromising on technical characteristics.

## Manufacturing-plant-specific measures

	-2023	-2025	-2030	-2035
ENERGY EFFICIENCY	Replace purchased electricity with fossil-free sources. Favor renewable energy sources	Ensure access to renewable electricity by favoring Power Purchase Agreements. Only purchase electricity from renewable sources		Only use fossil-free energy
	Transition the first manufacturing plants from fossil fuels to renewable fuels or the electrification of production	Transition 50 % of manufacturing plants from fossil fuels to renewable fuels or the electrification of production		Transition 100 % of manufacturing plants from fossil fuels to renewable fuels or the electrification of production
	Make sure that the energy-efficiency of manufacturing plants and the related properties is at a decent level and that waste energy is recycled inhouse or externally. Investigate the possibility of electrifying the operation of your manufacturing plant			
MATERIAL AND PROCESS EMISSIONS	Join the sector's Energy Efficiency Agreement			Invest in local production of renewable energy
	Investigate your options to utilize recycled raw materials in production Prepare a circular economy promotion plan for your manufacturing plant			Monitor the implementation of the circular economy promotion plan and develop the plan further where necessary
	Identify the emission sources of each product of your manufacturing plant and develop alternative production methods for processes whose emissions are difficult to reduce		Also account for the plant's consumption of water and the amount of process waste produced. Develop a plan to minimize these.	
	Enable the recovery of surplus materials for use as raw material in manufacturing plants	Where possible, utilize renewable and bio-based raw materials		Aim to phase out fossil materials in production
	Replace fossil materials used in packaging with bio-based products			
		Develop products that can absorb carbon dioxide		
		Pilot carbon capture technologies in manufacturing plants		Develop and implement carbon capture technologies in manufacturing plants
SUPPLY CHAIN	Discuss the carbon dioxide emissions resulting from their activities with your suppliers and partners and guide them to create an action plan for reducing emissions		Require the use of renewable fuels in transportation	
	Require your suppliers to set their own emission reduction targets (for example, Science Based Targets) and benchmarks for the emissions of products			
	When choosing suppliers, also take the environmental objectives into account: will the partnership help you in achieving your objectives?		Require your suppliers to reduce the emissions from their activities by 30 %	
	Conclude partnerships: identify and utilize local industrial side flows and offer your production side flows to other operators			Require your suppliers to reduce the emissions from their activities by 50 %

# CONSTRUCTION COMPANIES

The emissions from the activities of construction companies comprise worksite activities and transportation. The electrification of worksites requires persistent work and novel innovations. However, construction companies can also influence the products they build. They can function as experts on the impact of construction and material choices on climate change toward the clients

## Organizational developments

	-2023	-2025	-2030	-2035
<b>MANAGE</b>	Assess the emissions of your organization in accordance with the GHG protocol including Scopes 1, 2, and 3	Make a commitment to a general accepted emissions reporting system such as Science Based Targets	Monitor the development of the emission situation of your activities and specify your objectives and action plan further where necessary	Compensate the emissions you cannot eliminate
	Specify targets and create a plan of action for reducing the emissions from your business activities. Set a benchmark for different project types.		Prepare a circular economy strategy and indicators for your organization	Prepare an action plan for carbon positivity
	Specify targets and create a plan of action for reducing the emissions from your business activities. Set a benchmark for different project types.		Create an Emission-Free Worksite concept that you can offer to clients as a service. Make sure that all worksites have implemented an emission monitoring system.	Require a carbon neutrality commitment from your stakeholders
	Engage in market dialogs through which concrete and realistic criteria for public tendering can be created			
	Develop a process of low-carbon construction and deploy it throughout your organization	Develop your low-carbon process further toward carbon neutrality and begin to deploy it throughout your organization	Develop a carbon neutrality concept for each project type	
	Join the FIGBC and participate in the sector's joint development projects	Take part in joint projects in the sector that promote carbon neutrality	Take part in the development of material banks and other circular economy projects	
<b>TRAIN</b>	Offer training to your subcontracting chain as well			
	Draw up competence requirements for different roles in your organization and improve the organization's competence on controlling the total emissions in line with the competence requirements	Make sure that your procurement personnel can interpret EPDs		
	Make sure that your production personnel understand the impact of worksite activities on the emissions of a building	Train your personnel on subjects related to low-carbon construction, product declarations, circular economy, biodiversity, compensation, and adapting to climate change in line with the competence requirements		
	Make sure that your key stakeholder groups can interpret carbon footprint calculations and Environmental Product Declarations			Improve repair construction competence
	Comprehensively involve your personnel in the process Survey interested parties in different business units and utilize them in the deployment of the development activities throughout the organization		Utilize personal bonus schemes as incentives for developing low-carbon approaches	
	Offer thesis project opportunities pertaining to low-carbon approaches			
<b>COMMUNICATE</b>	Communicate openly both internally and externally on the environmental impact of construction and the best concrete practices and major challenges of the low-carbon approach	Communicate transparently on the subject if your organization uses compensation systems in its activities		
		Inform your customers of the life-cycle carbon footprint of the products and buildings and guide them to make low-carbon choices	Report the life-cycle carbon footprint of your products to your customers	
	Involve your supply chain in the reduction of emissions	Evaluate the effectiveness of your successes and demand development from your own activities		
	Remember to communicate on your successes as well!			

# Production measures

	-2023	-2025	-2030	-2035
PLANNING GUIDANCE	Aim to utilize data models and other digital solutions to boost the efficiency of quantity surveying, carbon footprint calculation, and materials management on the worksite		Include instructions for the carbon neutral use of the building in its maintenance manual	
	<b>Assess the carbon footprint of each project during the planning stage and use the information for support in planning guidance. Verify your calculations once the project has been completed</b>	<b>Reduce the life-cycle carbon footprint of each project by 15 % compared to the reference level during the planning stage</b>	<b>Reduce the life-cycle carbon footprint of each project by 50 % compared to the reference level during the planning stage</b>	
	Assess the energy requirements and emission coefficients of each project during the planning stage and use the information for support in planning guidance. Verify your calculations once the project has been completed	Conduct a demolition review and materials survey in repair and demolition projects. Aim to reuse materials as much as possible		<b>Reduce the life-cycle carbon footprint of each project by 70 % compared to the reference level during the planning stage</b>
	Set project-specific targets to support the overall objective of your organization In the planning brief, emphasize material efficiency and reduction of loss	<b>Pilot carbon neutrality plans for different project types</b> In the planning brief, encourage the assessment of low-carbon alternatives on the product level		
UTILIZATION OF CIRCULAR ECONOMY		<b>Produce material passports for projects</b>		
	<b>Prepare a recycling plan for worksites, which ensures that no mixed waste is generated at the sites. Recycle all worksite waste. Aim to reduce the amount of combustible waste generated</b>	<b>Set a target recycling rate for the materials used in a project</b>	<b>Make sure that 25 % of the materials used in a project are produced from recycled materials</b>	
	Execute temporary structures, such as molds, scaffolds, and safety equipment, utilizing reusable solutions Work together with material suppliers to improve lot sizes to allow you to order the exact right amount of product to the worksite	Identify partners through whom you can recycle surplus materials Prepare a demolition plan for the property, which indicates subsequent uses for the materials	<b>Make sure that 40 % of the materials used in a project are produced from recycled materials</b>	
	Where necessary, conduct a demolition survey and aim to utilize demolition materials on-site; this should be taken into account in project planning from the beginning	Before a project commences, investigate nearby demolition sites, worksites, and industrial plants that could provide recycled materials		
FAVORING LOW-CARBON SOLUTIONS	Investigate your options for using low-carbon products Inform your clients of the available options	During procurement, demand information on the fuel consumption of transportation and manufacturing plants <b>Demand carbon neutrality plans from major material suppliers</b>		
	<b>Demand EPDs or other proof of material emissions for the most commonly used materials. Indicators can be based on a cost estimate or mass</b>	<b>Require EPDs for 30 % of procured items. Indicators can be based on a cost estimate or mass</b>	<b>Require EPDs for 60 % of procured items. Indicators can be based on a cost estimate or mass</b>	
	<b>Support material suppliers in the development of low-carbon products and solutions by identifying applications for new products and thus increasing the demand for low-carbon solutions</b>	Determine the amount of fossil fuels and fossil materials used in the manufacturing of materials Pilot timber construction and the use of renewable materials in construction	<b>Require EPDs for almost all materials. Indicators can be based on a cost estimate or mass</b> Make sure that fossil fuels or fossil raw materials have not been used in the manufacturing of materials for the project	
	Favor prefabrication in order to reduce wastage		Start building your first carbon neutral project	
EMISSION CONTROL FOR WORKSITES	<b>Optimize worksite processes by using data models or other digital tools</b> Ensure the efficient use of equipment by renting equipment from external parties and also by leasing your equipment to others when it is not needed	<b>Use only renewable energy in production</b> Use only low-emission equipment at worksites and for transportation	<b>Discuss the modernization of equipment and the development of existing equipment with equipment rental partners</b>	Favor electrically operated equipment
	Optimize the utilization of working machinery by offering training and intensive courses on ecologic driving to the operators	<b>Phase out generators powered by fossil fuels at worksites</b>	Monitor and improve the energy efficiency of worksite facilities	<b>Make sure that the charging infrastructure of worksites also supports the needs of subcontractors</b>
	<b>Assess the calculation of the worksite carbon footprint to ensure that it also includes any demolition and excavation work carried out at the site</b>	Reduce the length of the worksite stage by favoring prefabrication		Support the development of existing working machinery toward electrification
	<b>Only renewable electricity is used at worksites and possible sources of renewable thermal energy are investigated</b>	The emissions from procurement and transportation are identified and reported to the client		<b>Support the modernization of equipment by your partners and the product development of equipment manufacturers by proposing pilot projects and partnership models</b>
	<b>Worksite generators use renewable fuels wherever possible</b>	The scheduling of worksites is designed such that energy-efficiency is maximized		
	Aim to connect the worksite to the heating system of the property as quickly as possible			

# DEVELOPERS

Developers have influence over everything during the construction stage. Due to their comprehensive outlook and influence, developers can ensure that low-carbon objectives are made part of the project from the very beginning. The guidance process emulates cost control.

When the reduction of carbon footprint is made a priority from the very beginning of a project, positive impacts can be achieved without sacrificing the project's other objectives.

## Organizational developments

	-2023	-2025	-2030	-2035
<b>MANAGE</b>	Assess the emissions of your organization in accordance with the GHG protocol including Scopes 1, 2, and 3	Make a commitment to a general accepted emissions reporting system such as Science Based Targets	Monitor the development of the emission situation of your activities and specify your objectives and action plan further where necessary	
	Specify targets and create a plan of action for reducing the total emissions of your value chain. Set a benchmark for different product types		Prepare a circular economy strategy and indicators for your organization	Compensate the emissions you cannot eliminate
	Include a Life-Cycle Assessment of the carbon footprint in the early-stage project plans	Take part in the negotiations for new joint Energy Efficiency Agreements for the sector		Report the structural and life-cycle carbon footprint in the context of real estate transactions
	Develop a process of low-carbon construction using multi-objective optimization and deploy it throughout your organization	Continue the development of your low-carbon construction process to support carbon neutrality and deploy the process within your organization		Only use contractors who have made a commitment to develop their activities toward carbon neutrality
	Use electronic maintenance manuals and material passports		Demand your contractors to make a carbon neutrality commitment	
	Join the FIGBC and participate in the sector's joint development projects	Carbon neutrality of energy consumption is achieved throughout the portfolio		
	Join the Net Zero Carbon Buildings Commitment	Take part in joint projects in the sector that promote carbon neutrality		
<b>TRAIN</b>	Draw up competence requirements for different roles in your organization and improve the organization's competence on controlling the total emissions in line with the competence requirements	Train your personnel on subjects related to low-carbon construction, product declarations, circular economy, biodiversity, compensation, and adapting to climate change in line with the competence requirements		Make sure that all personnel working in design and control functions related to projects are able to guide the project toward a low-carbon result
	Make sure that your key stakeholder groups can interpret carbon footprint calculations and Environmental Product Declarations		Utilize personal bonus schemes as incentives for developing low-carbon approaches	
	Comprehensively involve your personnel in the process Survey interested parties in different business units and utilize them in the deployment of the development activities throughout the organization		In tendering, require consultants and contractors to have experience of carbon footprint management in construction projects	
		Offer thesis project opportunities pertaining to low-carbon approaches		
<b>COMMUNICATE</b>	Communicate openly both internally and externally on the environmental impact of construction and the best concrete practices and major challenges of the low-carbon approach	Communicate transparently on the subject if your organization uses compensation systems in its activities		Report the life-cycle carbon footprint of properties to tenants and other residents
	Inform your customers of the carbon footprint of your products and guide them to make low-carbon choices		Evaluate the effectiveness of your successes and demand development from your own activities	
	Communicate internally and externally on the progress of your emission reduction plans	Involve your supply chain in the reduction of emissions		
	Exchange information with other operators in the sector Remember to communicate on your successes as well			

# Production measures

	-2023	-2025	-2030	-2035
PLANNING GUIDANCE	Assess whether customer value could be created without new construction. Can the service be provided within an existing property?		Prepare a carbon neutrality plan for each project and assess the cost impact	
	Set project-specific targets to support the overall objective of your organization	Reduce the life-cycle carbon footprint of each project by 15 % compared to the reference level during the planning stage		
	Assess the carbon footprint of each project during the planning stage and use the information for support in planning guidance. Verify your calculations once the project has been completed	Evaluate possibilities of using renewable and carbon-binding materials	Reduce the life-cycle carbon footprint of each project by 50 % compared to the reference level during the planning stage	
	Assess the energy requirements and emission coefficients of each project during the planning stage and use the information for support in planning guidance. Verify your calculations once the project has been completed	Survey the utilization of all roof areas for energy production, rainwater management, or urban greening		Reduce the life-cycle carbon footprint of each project by 70 % compared to the reference level during the planning stage
	Designate a carbon footprint specialist for the project from within or outside of the organization	Designate a structure technical specialist for the project to supervise the resource-efficiency of the plans		
	Demand detailed ground surveys at the early stage of project planning	Conduct ground surveys before project planning or preferably before the acquisition of land to ensure that the plot can be used for a low-carbon construction project	Include instructions for the carbon neutral use of the building in its maintenance manual	
	In repair and demolition projects, carry out a materials survey and aim to reuse as much of the materials as possible		Prepare a report of the project's adaptability to climate change	
	In the planning brief, emphasize material efficiency and reduction of loss. In the planning brief, encourage the assessment of low-carbon alternatives on the solution and product level	Prepare demolition and reuse plans for all new construction projects	Make sure that the intended use of each project can be altered where necessary	
	Prepare plans for the alteration of the intended use for parking solutions			
	UTILIZATION OF CIRCULAR ECONOMY	Implement sharing economy solutions in projects, including car sharing and communal tools		
Where necessary, perform a demolition survey and aim to utilize the demolition materials on-site; this should be taken into account in project planning from the beginning		Before a project commences, investigate nearby demolition sites, worksites, and industrial plants that could provide recycled materials	Prepare a demolition plan for the property, which indicates possible further and subsequent uses for the materials and structures	
Specify sorting targets for worksites		Specify a target recycling rate for the project	Make sure that 25 % of the materials used in a project are produced from recycled materials	Make sure that 40 % of the materials used in a project are produced from recycled materials
Join the Sustainable Demolition Green Deal commitment				
FAVORING LOW-CARBON SOLUTIONS	Require EPDs for the largest materials	Require EPDs for 40 % of procured items	Require EPDs for 60 % of procured items	Require EPDs for all materials
	Investigate your options for using low-carbon products	Pilot timber construction and the use of other renewable materials in construction	Utilize hybrid construction solutions in projects	
	Encourage proposals for low-carbon planning and implementation solutions	Support material suppliers in the development of low-carbon products and solutions by identifying applications for new products and thus increasing the demand for low-carbon solutions	Make sure that fossil fuels or fossil raw materials have not been used in the manufacturing of materials for the project	Utilize trans-seasonal storage in all projects
	Investigate possibilities for using locally produced energy in projects	Investigate the possibilities for trans-seasonal storage in projects	Produce energy locally in all projects	
	Energy for new projects is only purchased from renewable sources	Investigate possibilities for using locally produced energy in projects		
	If parking solutions are included in the plans of a project, make sure to include options for charging electric vehicles	Negotiate a purchase agreement for renewable energy with the energy company, which can be utilized by the residents and users as they wish	Start building your first carbon neutral project	
CONTRACTOR COOPERATION	Specify limit values for waste material before the contract	Determine the structures that are most significant in terms of the emissions of the project and investigate low-carbon alternatives	Demand that life-cycle emission calculations are updated during large-scale procurement. Include emissions calculations in monthly reporting	
	Assess the calculation of the worksite carbon footprint to ensure that it also includes any demolition and excavation work carried out at the site		Demand carbon neutrality throughout the life-cycle from new projects	
	Implement consistent procurement criteria for major product groups	Extend the planned useful life by preparing plans for adaptability and alteration of intended use	Demand emission reduction strategies and measures from contractors	
	Create contract forms that support the contractors and planner in innovating new means of reducing emissions	Include the entire production chain in the reduction of emissions	Support the modernization of equipment by your partners and the product development of equipment manufacturers by proposing pilot projects and partnership models	
		Aim to design the scheduling of worksites such that energy-efficiency is maximized		



# CLIENT ORGANIZATIONS IN INFRASTRUCTURE PROJECTS

Infrastructure projects are typically long-term projects with substantial emissions. Functional infrastructure is however necessary for the creation of a low-carbon society.

The clients in infrastructure projects can hasten the low-carbonization of the sector significantly through their actions. Emissions during the construction stage can be reduced in all projects without sacrificing the quality of the results. Clients can also influence the use of infrastructure through information steering. More information about the execution of sustainable infrastructure projects can be found in the Sustainable Infrastructure specification published by FIGBC

## Organizational developments

	-2023	-2025	-2030	-2035	
<b>MANAGE</b>	<ul style="list-style-type: none"> <li>Contribute to the development of an emission database</li> <li><b>Assess the emissions of your organization in accordance with the GHG protocol including Scopes 1, 2, and 3</b></li> <li><b>Specify objectives and intermediate targets and create a plan of action for reducing the emissions from your business activities. Set a benchmark for different project types</b></li> <li>Implement the knowledge-based management model from the Infra 2035 project to support project planning</li> <li><b>Develop a process of low-carbon construction using multi-objective optimization and deploy it throughout your organization</b></li> <li>Engage in active dialog with parties in the procurement chain to better understand the procurement chain challenges. Support the parties in the procurement chain in reducing emissions.</li> <li>Join the Green Deal for Emission-Free Worksites</li> <li>Use electronic maintenance manuals and material passports</li> <li><b>Prepare reports on the first trials for project-specific carbon footprint assessment to support the standardization of calculation methods</b></li> <li>Join the FIGBC and participate in the sector's joint development projects</li> </ul>	<ul style="list-style-type: none"> <li>Make a commitment to a general accepted emissions reporting system such as Science Based Targets</li> <li>Include a Life-Cycle Assessment of the carbon footprint in the early-stage project plans</li> <li>Prepare a circular economy strategy and indicators for your organization</li> <li>Continue the development of your low-carbon construction process to support carbon neutrality and deploy the process within your organization</li> <li>Influence guidance in the sector and the development of legislation. Make sure that planning guidelines steer toward low-carbon construction methods</li> <li>Support the development of digital tools for the sector, such as regional aggregate management services, by proposing pilot projects.</li> </ul>	<ul style="list-style-type: none"> <li><b>Monitor the development of the emission situation of your activities and specify your objectives and action plan further where necessary</b></li> <li>Prepare a circular economy strategy and indicators for your organization</li> <li>Demand your contractors to make a carbon neutrality commitment</li> <li>Only use contractors who have made a commitment to develop their activities toward carbon neutrality</li> <li>Take part in joint projects in the sector that promote carbon neutrality</li> </ul>	<ul style="list-style-type: none"> <li><b>Compensate the emissions you cannot eliminate</b></li> <li><b>Require your stakeholder groups to commit to carbon neutrality</b></li> </ul>	
	<b>TRAIN</b>	<ul style="list-style-type: none"> <li><b>Draw up competence requirements for different roles in your organization and improve the organization's competence on controlling the total emissions in line with the competence requirements</b></li> <li><b>Make sure that your key stakeholder groups can interpret carbon footprint calculations and Environmental Product Declarations</b></li> <li><b>Comprehensively involve your personnel in the process Survey interested parties in different business units and utilize them in the deployment of the development activities throughout the organization</b></li> <li>Utilize personal bonus schemes as incentives for developing low-carbon approaches</li> </ul>	<ul style="list-style-type: none"> <li>Train your personnel on subjects related to low-carbon construction, product declarations, circular economy, biodiversity, compensation, and adapting to climate change in line with the competence requirements</li> </ul>	<ul style="list-style-type: none"> <li><b>Make sure that your key stakeholder groups can interpret carbon footprint calculations and Environmental Product Declarations</b></li> </ul>	
			<ul style="list-style-type: none"> <li>Offer thesis project opportunities pertaining to low-carbon approaches</li> </ul>		
		<b>COMMUNICATE</b>	<ul style="list-style-type: none"> <li><b>Communicate openly both internally and externally on the environmental impact of construction and the best concrete practices and major challenges of the low-carbon approach</b></li> <li>Make sure that communications account for the entire life-cycle of the project, ranging from construction to use and demolition</li> <li>Communicate internally and externally on the progress of your emission reduction plans</li> </ul>	<ul style="list-style-type: none"> <li><b>Communicate transparently on the subject if your organization uses compensation systems in its activities</b></li> <li>Communicate with the users on the carbon footprint of construction and maintenance of projects</li> <li>Evaluate the effectiveness of your successes and demand development from your own activities</li> </ul>	
			<ul style="list-style-type: none"> <li><b>Involve your supply chain in the reduction of emissions</b></li> </ul>		
			<ul style="list-style-type: none"> <li>Exchange information with other operators in the sector Remember to communicate on your successes as well!</li> </ul>		

# Production measures

	-2023	-2025	-2030	-2035
<b>PLANNING GUIDANCE</b>	<p>Include the carbon footprint of construction in the Environmental Impact Assessments for transport infrastructure projects</p> <p><b>Controlling the carbon footprint of all projects is part of the design process</b></p> <p><b>Based on the initial plans, prepare the first life-cycle carbon footprint calculations, which the contractors can use to optimize their solutions during the tendering and development stages</b></p> <p><b>Make sure that the project uses correctly designed structure technical solutions by requesting internal audits from design firms</b></p> <p>Extend the planned useful life by preparing plans for adaptability and alteration of intended use</p> <p>Use procurement schemes that support the contractors and planners in innovating new means of reducing emissions</p> <p><b>Conduct extensive ground surveys to serve the design of both aggregate use and other structures</b></p>	<p>Communicate on the scheduling of infrastructure projects with other operators to identify synergies between projects</p> <p>Update your planning brief: add recovery and use of recycled materials, favor renewable and low-carbon raw materials</p> <p><b>Specify carbon budgets for projects</b></p> <p><b>Make sure that the planning schedule has sufficient flexibility to allow for thorough planning. By conducting ground surveys at a sufficiently early stage and with sufficient scope, subgrade reinforcement solutions can be optimized particularly in challenging and carbon-intense projects</b></p>	<p><b>Specify carbon budgets for projects, which are at least 25 % below the specified reference level</b></p>	<p>Make carbon neutrality or carbon negativity the starting point of planning. Specify which measures can be carried out in further planning</p>
	<p><b>Use an aggregate coordinator to ensure effective recycling of soil resources and the replacement of rock materials with demolition and recovered materials wherever possible. Engage in active cooperation with other infrastructure projects</b></p>	<p>Demand the contractor to provide alternatives based on recovered and recycled materials</p>		
	<p>Before a project commences, investigate nearby demolition sites, worksites, and industrial plants that could provide recycled materials</p> <p><b>Specify sorting targets for worksites</b></p>	<p><b>Specify a target recycling rate for the project</b></p>	<p><b>Make sure that 25 % of the materials used in a project are produced from recycled materials</b></p>	<p><b>Make sure that 40 % of the materials used in a project are produced from recycled materials</b></p>
	<p>Demand contractors to recover installation waste from worksites and to forward it for reuse</p>	<p>Specify a limit value for waste material before the contract</p>	<p>Recycling of surplus materials for the same purpose they were originally produced for</p>	
<b>UTILIZATION OF CIRCULAR ECONOMY</b>	<p><b>Required EPDs or other emissions calculations for materials with the most substantial emissions</b></p> <p>Investigate your options for using low-carbon products</p> <p><b>Encourage proposals for low-carbon planning and implementation solutions</b></p> <p>Investigate possibilities for using locally produced energy in projects</p> <p><b>In the procurement organization, form a view of the opportunities for low-carbon procurement that are realistic from the perspective of your business activities and their impact on the total cost</b></p> <p>If parking solutions are included in the plans of a project, make sure to include options for charging electric vehicles</p>	<p><b>Require EPDs for 40 % of procured items</b></p> <p>Include own energy production in transport infrastructure projects, for example in the form of solar or wind energy</p> <p><b>Support material suppliers in the development of low-carbon products and solutions by identifying applications for new products and thus increasing the demand for low-carbon solutions</b></p> <p>Maximize the carbon sequestered in soil and green infrastructure in your projects</p>	<p><b>Require EPDs for 60 % of procured items</b></p> <p>Make sure that your procurement criteria are linked with the topical and ambitious solutions available at each time by communicating with material and equipment suppliers and service providers</p>	<p><b>Require EPDs for all materials</b></p> <p>Produce energy locally in all projects</p> <p><b>Start building your first carbon neutral project</b></p>
	<p><b>Set ambitious and realistic procurement criteria for each program, see the KIEPPI project of the City of Tampere</b></p> <p>Set incentives in planning contracts for suggesting potential areas for emission reduction</p> <p>Increase the efficiency of the operation of working machinery by offering the operators further training and instructions</p> <p>Provide contractors the option to charge electric machinery at the worksite</p> <p><b>Utilize market dialog and joint development to identify the best solutions Also experiment with proactive market dialog or other new forms of procurement</b></p> <p><b>Demand contractors to commit to emission reduction targets pertaining to working machinery fuels</b></p> <p><b>Make sure that indicators are specified for targets and that their realization is regularly monitored</b></p> <p><b>Add incentives in contract agreements, for example</b></p>	<p><b>Develop forms of procurement where the contractor is remunerated for the development and implementation of emission reductions</b></p> <p>Phase out generators powered by combustion engines at worksites</p> <p>Utilize electric machinery (particularly battery-powered machines) at worksites and in transportation</p>		
<b>FAVORING LOW-CARBON SOLUTIONS</b>				
<b>CONTRACTOR COOPERATION</b>				

# DESIGNERS AND OTHER SPECIALISTS

Consultants push the sector forward by offering expert services and developing new solutions to challenges that slow down progress.

	-2023	-2025	-2030	-2035
<b>MANAGE</b>	<p><b>Assess the emissions of your organization in accordance with the GHG protocol including Scopes 1, 2, and 3</b></p> <p><b>Specify objectives and intermediate targets, and create a plan of action for reducing the emissions from your business activities</b></p> <p>Join the FIGBC and participate in the sector's joint development projects</p>	<p>Make a commitment to a general accepted emissions reporting system such as Science Based Targets</p> <p>Prepare a strategy for expediting circular economy in the sector Which new services can be provided? How can you develop your own competence?</p> <p>Take part in joint projects in the sector that promote carbon neutrality</p>	<p><b>Monitor the development of the emission situation of your activities and specify your objectives and action plan further where necessary</b></p> <p>Prepare an action plan for carbon positivity</p>	<p><b>Require your stakeholder groups to commit to carbon neutrality</b></p> <p><b>Compensate the emissions you cannot eliminate</b></p>
	<p><b>Draw up competence requirements for different roles in your organization and improve the organization's competence on controlling the total emissions in line with the competence requirements</b></p> <p>Train your personnel on subjects related to low-carbon construction, product declarations, circular economy, biodiversity, compensation, and adapting to climate change in line with the competence requirements</p> <p><b>Comprehensively involve your personnel in the process Survey interested parties in different business units and utilize them in the deployment of the development activities throughout the organization</b></p> <p>Offer thesis project opportunities pertaining to low-carbon approaches</p> <p><b>Make sure that all personnel working in design and control functions related to projects are able to guide the project toward a low-carbon result</b></p>	<p><b>Train your personnel extensively to become developers of low-carbon solutions. Make sure that, for example, structural and building services engineers are aware of the most significant emission reduction potential from the perspective of their work</b></p> <p>Utilize personal bonus schemes as incentives for developing low-carbon approaches</p>		
<b>TRAIN</b>	<p><b>Communicate openly both internally and externally on the environmental impact of real estate and the best concrete practices and major challenges of the low-carbon approach</b></p> <p>Communicate internally and externally on the progress of your emission reduction plans</p>	<p><b>Communicate transparently on the subject if your organization uses compensation systems in its activities</b></p> <p>Involve your supply chain in the reduction of emissions</p> <p>Evaluate the effectiveness of your successes and demand development from your own activities</p> <p><b>Involve your supply chain in the reduction of emissions</b></p> <p>Exchange information with other operators in the sector Remember to communicate on your successes as well!</p>		
	<p><b>Improve your own competence and range of services pertaining to controlling the life-cycle carbon footprint</b></p> <p><b>Improve your own competence and range of services pertaining to the drafting of EPDs</b></p> <p>Develop your own competence on timber construction, hybrid construction, and bio-based materials</p> <p>Develop your own competence on repair construction and alterations of intended use</p> <p>Help organizations to develop circular economy objectives and strategies</p> <p><b>Develop solutions that allow for more effective utilization of data modeling in emissions calculations</b></p> <p>Draw up a checklist that can be used to ensure that the low-carbon approach is taken into account in all projects</p> <p>Make sure that energy emissions are assessed in each project</p> <p><b>Actively offer services related to emission control alongside your other services. Share information on the carbon footprint of structures to your customer as part of the structural design. Share information on the emissions of energy consumption as part of the building services design.</b></p> <p><b>Develop your own competence on carbon handprint. Develop calculation models for taking the greenery on plots into account in emissions calculation</b></p> <p><b>Improve your competence and range of services further to include circular economy in planning and project guidance</b></p>	<p><b>Make sure that there are 100 qualified life-cycle emission control specialists working in the sector</b></p> <p><b>Make sure that there are 20 qualified EPD verifiers working in the sector</b></p> <p>Develop your own competence on different material types</p> <p>Develop new low-carbon solutions alongside standard solutions</p> <p><b>Make sure that the IFC model of the project supports the calculation of carbon footprint</b></p> <p><b>Devise an internal auditing system that is used to ensure the resource-efficiency of architectural and structural solutions</b></p> <p><b>Develop your competence on carbon-binding materials and materials in the manufacturing of which carbon dioxide could be utilized</b></p>	<p><b>Make sure that there are 200 qualified life-cycle emission control specialists working in the sector</b></p> <p><b>Make sure that there are 40 qualified EPD verifiers working in the sector</b></p>	<p><b>Make sure that there are 250 qualified life-cycle emission control specialists working in the sector</b></p> <p><b>Make sure that there are 50 qualified EPD verifiers working in the sector</b></p>
<b>COMMUNICATE</b>				
<b>FAVORING LOW-CARBON SOLUTIONS</b>				



# REAL ESTATE INVESTORS

EU legislation and the taxonomy criteria in particular will have a substantial impact on the activities of real estate investors. Thus, investors have significant influence on the carbon neutralization of the energy consumption of property stock in particular.

	-2023	-2025	-2030	-2035
<b>MANAGE</b>	Assess the emissions of your organization in accordance with the GHG protocol including Scopes 1, 2, and 3	Make a commitment to a general accepted emissions reporting system such as Science Based Targets	Monitor the development of the emission situation of your activities and specify your objectives and action plan further where necessary	
	Specify objectives and intermediate targets and create a plan of action for reducing the emissions from your business activities. Set a benchmark for different project types.	Prepare a circular economy strategy and indicators for your organization	Demand your contractors to make a carbon neutrality commitment	Require your stakeholder groups to commit to carbon neutrality
	Include a Life-Cycle Assessment of the carbon footprint in the early-stage project plans			
	Determine the taxonomy-eligibility of your business activities and prepare an action plan for improving your eligibility		Only invest in projects that are taxonomy-eligible	
	Join the Net Zero Carbon Buildings Commitment			
	Demand service providers to make a carbon neutrality commitment to minimize the use-phase emissions of real estate			
	Use electronic maintenance manuals and material passports	Take part in the negotiations for joint Energy Efficiency Agreements for the sector	Achieve carbon neutrality of energy consumption throughout your portfolio	Compensate the emissions you cannot eliminate
	Join the FIGBC and participate in the sector's joint development projects	Take part in joint projects in the sector that promote carbon neutrality		
<b>Report the structural and life-cycle carbon footprint in the context of real estate transactions</b>				
<b>TRAIN</b>	Draw up competence requirements for different roles in your organization and improve the organization's competence on controlling the total emissions in line with the competence requirements	Train your personnel on subjects related to low-carbon construction, product declarations, circular economy, biodiversity, compensation, and adapting to climate change in line with the competence requirements		
	Make sure that your key stakeholder groups can interpret carbon footprint calculations and Environmental Product Declarations		Make sure that all personnel working in design and control functions related to projects are able to guide the project toward a low-carbon result	
	Comprehensively involve your personnel in the process. Survey interested parties in different business units and utilize them in the deployment of the development activities throughout the organization		Utilize personal bonus schemes as incentives for developing low-carbon approaches	
	Make sure that all personnel working in design and control functions related to projects are able to guide the project toward a low-carbon result		Make training available for your subcontracting chain as well	
<b>COMMUNICATE</b>	Communicate openly both internally and externally on the environmental impact of construction and the best concrete practices and major challenges of the low-carbon approach	Increase transparency on the environmental impacts of construction projects. Use your own projects as examples and produce monitoring data for general use. Communicate openly on best practices and challenges		
	Make sure that communications account for the entire life-cycle of the project, ranging from construction to use and demolition		Share the results and lessons from projects openly with others and distribute practices that have proved effective	
	Communicate internally and externally on the progress of your emission reduction plans	Evaluate the effectiveness of your successes and demand development from your own activities		
	<b>Involve your supply chain in the reduction of emissions</b>			
	Exchange information with other operators in the sector Remember to communicate on your successes as well!			
<b>FAVORING LOW-CARBON SOLUTIONS</b>	Monitor the energy consumption of properties	Utilize comprehensive monitoring of energy consumption by properties and regularly develop the monitoring	Ensure access to renewable energy through Power Purchase Agreements, for example	
	Compare methods of energy production during the investment stage	Make sure that majority of purchased electricity comes from renewable sources	Make sure that majority of delivered energy comes from renewable sources	
	Survey energy efficiency measures and implement the most feasible ones	Carry out energy efficiency projects each year	Make sure that the energy efficiency of your properties is at the highest level in the sector	
	Take part in Energy Efficiency Agreements			
	Set ambitious targets for emissions and monitor their achievement actively		Compensate for the remaining energy consumption emissions by investing in carbon sinks	
	Investigate your options for on-site production of renewable energy	Implement renewable energy production in multiple properties	Utilize demand flexibility, recycling of waste energy, and energy storage at your properties	
REPAIRS, ALTERATION WORK	Create solutions for facilitating the recycling and recovery of users' movable property			
	See the table of measures for Developers			

# MUNICIPALITIES, CITIES, AND OTHER PUBLIC ENTITIES

Public operators influence all construction projects and properties. Their steering effect is significant in zoning, construction supervision, and regulation, but municipalities are also a substantial property owner and developer. Public operators have been specified special measures, but they should also take the measures included in the tables of measures for developers and real estate investors into account in their projects.

## National regulation

	-2023	-2025	-2030	-2035	
REGULATORY WORK	Specify limit values for the life-cycle carbon footprint of projects				
	Gradually tighten the limit values for life-cycle carbon footprint		The limit values for carbon footprint amounts to 50 % of the original limit value	The limit values for carbon footprint amounts to 70 % of the original limit value	
	Specify national emission targets for transport infrastructure projects				
	Maintain and update an emission database (co2data.fi)				
	Develop legislation to support the reuse of structures and materials	Update and streamline recycling regulations and permit processes to allow for the use of recovered and recycled materials in short-term projects as well	Expedite the approval process for new materials		
<b>Development of the activities of the municipality or city</b>					
MANAGE	Demand service providers to make a carbon neutrality commitment to minimize the use-phase emissions of real estate		Monitor the development of the emission situation of your activities and specify your objectives and action plan further where necessary	Compensate the emissions you cannot eliminate	
	Assess the emissions of your organization in accordance with the GHG protocol including Scopes 1, 2, 3	Make a commitment to a general accepted emissions reporting system such as Science Based Targets			
	Prepare a carbon neutrality objective, intermediate targets, action plan, and monitoring tools for the municipality Make sure that the low-carbon approach is included in the municipal or urban strategy	Prepare a circular economy objective, intermediate targets, and monitoring tools for the municipality	Require your stakeholder groups to commit to carbon neutrality		
	Prepare instructions for low-carbon planning	Investigate options for offering lower council tax rates to low-carbon buildings	Plan the execution of infrastructure projects on long-term basis to allow for the identification of synergies between projects		
	Steer the mindset of policymakers to emphasize the low-carbon approach Make sure that municipal decisionmakers have sufficient information for their decision-making	Guide the users of properties to make ecological choices			
	Support private property owners through consultation and training	Initiate plans for the coordination of the energy efficiency consultation service sector and allocate resources required for the coordination			
	Reinforce cooperation between cities to promote the low-carbon approach. Contribute to making the low-carbon approach a leading principle in regional programs as well	Create international contacts in order to identify best practices	Promote international cooperation and support other cities with their objectives		
	Engage housing companies in energy efficiency work through effective information steering	Take part in joint projects in the sector that promote carbon neutrality			
	Join the FIGBC and participate in the sector's joint development projects				
	Steer urban construction by specifying low-carbon objectives in land use agreements and the conditions for plot sales				
	Help ambitious operators to pilot their solutions				
	TRAIN	Draw up competence requirements for different roles and improve internal competence on controlling total emissions in line with the competence requirements	Train your personnel on subjects related to low-carbon construction, product declarations, circular economy, biodiversity, compensation, and adapting to climate change in line with the competence requirements		
		Make sure that your key stakeholder groups can interpret carbon footprint calculations and Environmental Product Declarations			
Comprehensively involve your personnel in the process Survey interested parties in different departments and utilize them in the deployment of the development activities		Utilize personal bonus schemes as incentives for developing low-carbon approaches			
Make sure that all personnel working in design and control functions related to projects are able to guide the project toward a low-carbon result		Make training available for your subcontracting chain as well	In tendering, require consultants and contractors to have experience of carbon footprint management in construction projects		
	Offer thesis project opportunities pertaining to low-carbon approaches				
COMMUNICATE	Communicate openly both internally and externally on the environmental impact of construction and the best concrete practices and major challenges of the low-carbon approach	Increase transparency on the environmental impacts of construction projects. Use your own projects as examples and produce monitoring data for general use. Communicate openly on best practices and challenges			
	Make sure that communications account for the entire life-cycle of the project, ranging from construction to use and demolition	Share the results and lessons from projects openly with others and distribute practices that have proved effective			
	Communicate internally and externally on the progress of your emission reduction plans	Evaluate the effectiveness of your successes and demand development from your own activities			
	Make sure that residents also have the opportunity to review the climate impact of zoning and urban planning decisions	Involve your supply chain in the reduction of emissions			
	Exchange information with other operators in the sector Remember to communicate on your successes as well!				

## Production measures

	-2023	-2025	-2030	-2035
<b>ZONING AND PERMITS</b>	<b>Also see the table of measures for infrastructure project clients!</b>			
	<b>Specify low-carbon objectives already at the zoning stage. Also account for the adaptation to climate change</b>	Reserve space for the storage of energy in properties in new town plans		
	Specify life-cycle carbon footprint requirements for plot tendering competitions	Include carbon footprint steering in planning reservation processes		
	<b>Focus construction in areas with the best conditions for low-carbon construction, taking into account the foundation conditions, existing carbon sinks, and infrastructure</b>	<b>Favor infill development and utilize ground surveys in zoning</b>		Only add to the built environment through infilling
	<b>Protect natural areas and avoid construction in such areas Include regenerative design as a basis for regional planning</b>	<b>Increase the number of trees in green areas and unzoned areas</b>		<b>Aim toward zoning where changes in land use have reached equilibrium</b>
	Require demolition and recycling plans for new construction projects	<b>Include requirements for demolition and adaptability plans in building permits</b>		
	<b>Allow alterations of intended use to enable effective use of building stock</b>	<b>Specify objectives on the use of renewable materials for projects</b>		
	Investigate options to expedite the zoning and permit processes for low-carbon projects	Investigate options for higher council tax rates or land use fees for carbon-intensive projects		
	Investigate options for favoring market-based parking and support the spread of electric charging infrastructure	Develop the urban structure to support low-carbon housing. Locate services, workplace areas, and residential areas such that they overlap		Prohibit the use of landfill sites and require that all materials are recycled
	Encourage bicycle and pedestrian traffic			
<b>Determine the typology with the lowest regional carbon emissions and aim to zone the land accordingly</b>				
<b>DEVELOP</b>	<b>See the table of measures for developers as well!</b>			
	Determine the energy efficiency potential of your projects and specify objectives for local production of energy	Make sure that the consumption of energy in your projects is carbon neutral		<b>Adjust the objectives for all new projects to reach carbon neutrality by 2035</b>
	<b>Specify life-cycle carbon footprint requirements for your design competitions and competitive bidding</b>	Require life-cycle emissions calculation and reporting from your projects		Specify objectives pertaining to the environmental manufacturing of materials in timber construction
	<b>Include life-cycle carbon footprint steering in all public procurement as part of invitations to tender and competitions</b>	Assess the emissions from procurement and transportation in your projects		Require EPDs for all materials in your projects
	Specify a limit value for waste material before the contract	Examine whether the emissions of the project can be reduced by utilizing modularity or prefabricated products		
	Determine the emissions from your projects and set project-specific target levels	Specify target levels for emissions from procurement and transportation in your projects		<b>Material emissions of projects 50 % below the reference level</b>
	<b>Increase market dialog in competitive tendering to ensure that the low-carbon objectives specified by the client for the procurement are achieved</b>	Develop the life-cycle contract model and collaborative contract form applications further to ensure that they are suitable for both individual and multiple repair projects		<b>Specify a target recycling rate of 20% for the projects</b>
	Aim to avoid demolition and enable the use of buildings for varying applications	<b>Make life-cycle thinking and durability key design criteria in projects</b>		
	If a plot has an existing building, carry out a comparison between demolishing and repairing the building before the project commences. If the decision is made to demolish the building, conduct demolition survey on the plot and aim to reuse the materials as much as possible			
	<b>Provide an example through public projects and create demand for low-carbon solutions</b>	Make sure that the area offers solutions that enable aggregate coordination	<b>Require the implementation of the Emission-Free Worksite concept at your worksites</b>	
<b>DEVELOP</b>	<b>See the table of measures for real estate investors as well!</b>			
	<b>Prepare a plan for improving the energy efficiency of municipal buildings</b>	<b>Carry out comprehensive renovations in your property stock and pursue carbon neutrality for energy consumption</b>		
	Introduce electric maintenance manuals	Investigate possibilities for using locally produced energy in projects		
	<b>Prepare for climate change by improving the management of rainwater and reducing heat islands</b>	<b>Improve the carbon-binding ecosystem potential of green areas</b>		
	<b>Improve the efficiency of space utilization through sharing solutions and offering facilities to other operators</b>			
	If parking solutions are included in the plans of a project, make sure to include options for charging electric vehicles	Extensively facilitate bicycle and pedestrian traffic; light electric vehicles, covered roads, year-round maintenance of bicycle paths		
<b>Facilitate temporary use of underutilized facilities. Design new facilities in accordance with principles of adaptability</b>				

# NON-GOVERNMENTAL ORGANIZATIONS

	-2023	-2025	-2030	-2035
DETERMINE	<p><b>Determine your organization's vision for the future in terms of sustainable development – what kind of a built environment are you working toward? Specify objectives and prepare an action plan for the coming years accordingly to promote carbon neutrality, and communicate on the subject with members</b></p>	<p>Establish a joint steering committee of the real estate and construction sector for sustainable development that coordinates and organizes the carbon neutrality activities of the organizations and monitors progress in the sector. The committee may convene 2–4 times per year.</p>		<p>Update the compensation instructions and encourage operators to favor compensation methods that bind carbon dioxide.</p>
	<p>Create a shared set of rules with other operators in the sector for the life-cycle carbon footprint assessment in infrastructure projects.</p>	<p>Specify calculation instructions for the local carbon footprint. Pilot the method, develop it further, and deploy it.</p>		
	<p>Prepare a Carbon Neutral Built Environment action plan. Assess the total emissions of the built environment at least every other year.</p>	<p>Regularly assess the sector's emissions and the implementation of the action plan.</p>	<p>Revise the sector's action plan where necessary.</p>	<p>Define carbon negativity.</p>
	<p>Create a definition for a carbon neutral building, building use, infrastructure project, and area.</p>	<p>Create a shared set of rules for the use of compensation in the real estate and construction sector.</p>		
DEVELOP	<p>Develop and support cooperation networks and exchange of information in the sector.</p>			
	<p>Influence leading environmental certification systems to increase the importance of the life-cycle carbon footprint in the scoring of construction projects.</p>	<p>Promote the introduction of incentives for the implementation of the low-carbon approach. Make sure that operators in the sector are aware of existing incentives.</p>		
	<p>Maintain a database of best low-carbon and circular economy solutions.</p>	<p>Encourage members to identify new development project opportunities and to apply for funding to execute such projects.</p>		
	<p>Help life-cycle specialists standardize their methods to ensure that the calculation methods and results are independent of the calculator.</p>	<p>Investigate how to best steer conventional medium or light repair projects toward low-carbon solutions. Prepare a guide for low-carbon renovations.</p>		
ENGAGE	<p>Advise and support your members on how to communicate openly and truthfully on their emissions. Establish a dialog on false marketing and root out green washing in the sector.</p>			
	<p>Engage companies in the sector to make low-carbon commitments, such as the Net Zero Carbon Buildings Commitment.</p>	<p>Advise and support your members in the creation and implementation of a low-carbon action plan.</p>		
	<p>Communicate with your members, other organizations in the sector, and partners on the concrete actions you are taking to promote the low-carbon approach (annual plan). This helps to avoid overlapping work.</p>			
PROVIDE INFORMATION	<p>Engage and encourage limited liability housing companies to carry out energy renovations by increasing awareness and sharing best practices.</p>			
	<p>Examples of the climate impacts of renovations are provided to those living in detached houses.</p>			
	<p>Share best practices related to low-carbon construction, energy efficiency, and circular economy with the sector.</p>			
	<p>Also introduce international examples to the market.</p>			

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