



Budapest University of Technology and Economics

Institutional Climate Strategy - Project Proposal

I. Background

Climate change is one of the most challenging topics of our time, affecting rich and poor countries, as well as small and medium sized enterprises, multinational companies, other institutions and the world's entire wildlife and nature. Mitigating and adapting to the impacts of climate change on the nature, the society and the economy is a complex task that requires long-term commitment and tremendous effort.

Since 2016, when the Paris Climate Agreement was signed, several countries have committed themselves to and set deadlines for implementing a carbon neutral economy¹ and society and protecting wildlife and nature. Recognizing their own social responsibility and their impact on social and economic processes, companies, municipalities, other organizations and institutions have joined this commitment, creating their own climate and environmental sustainability strategies, thus contributing to the combat against climate change. Considering their capabilities and resources in these strategies they set their own deadlines as well as their emission reduction schedules, which are in line with the goals set out in the Paris Climate Agreement. Hungary is also participating in the fight against climate change with ambitious goals.

The leading universities of the world with high international prestige have also developed their own climate strategies. Through their operations, these institutions have done a lot to protect our environment by conducting research and developing teaching curricula on the issues of climate change, environmental protection and innovation.

The present document summarizes the commitment of the Budapest University Technology and Economics to climate actions and details its first steps towards developing a fully fledged climate strategy.

By taking clear steps to get to know and reduce their own carbon footprint, the university can significantly reduce the amount of greenhouse gases it emits into the atmosphere. Via its exemplary behavior, BME can also steer public opinion to enhanced awareness of climate changes and set up new norms to many thousands

¹ At present, the ratio of governments' net zero commitments to global greenhouse gas emissions is already over 80%.



of educators, professors, workers, students or any other partners helping to protect our environment.

The Budapest University of Technology and Economics is a prestigious, internationally acknowledged institution with a history of 240 years, more than 20.000 students, employing about 1,200 full-time lecturers and researchers. BME is a high-ranking and regionally leading university. The University has already been involved in several educational activities related to sustainability, future energy systems and environmental protection, and participated in international research projects on these topics. In addition, the University has implemented several measures and investments, which show its commitment to sustainability and environmental protection. As an international and well-known university, recognizing its responsibility in the combat against climate change, BME is committed to develop and implement its own climate strategy with the ultimate goal of achieving carbon neutral operation of the university and its supply chain teaming up with other stakeholders. The exemplar nature of this commitment is further enhanced by the fact that the BME is the first university in Hungary that aims at carbon neutral operation.

II. Focus areas

Based on the study of the climate strategies of internationally recognized universities, we have identified five key areas that the institution can focus on to achieve carbon neutral operation². These areas are detailed as follows:

1. Sustainable operation of buildings and real estates

Reducing the energy consumption of the properties owned or used by the University, increasing the energy efficiency of the buildings, modernizing and replacing the heating and cooling systems of the buildings suiting to their specifics and features, installing additional renewable energy systems, modernizing lighting, installing smart systems to optimize energy consumption, reducing water usage and educating stakeholders to develop their attitude. This topic also includes setting standards for newly built properties or even obtaining one of the known sustainable building qualifications.

2. Reducing travel-related emissions

² Based on the University's past, educational focuses, territorial and other characteristics, the process of strategy-making may identify further areas of intervention.

In this topic, we can differentiate two groups. On the one hand, emissions related to the daily travel to and from the University of teachers, students and other colleagues. On the other hand, trips and emissions related to the international role of the University, like conferences, guest education and international research. For both groups, the priority is to reduce the amount of travel and distances traveled in kilometer. This can be done by organizing an online conference, providing the possibility of work from home and other solutions. In addition, the environmentally friendly implementation of the remaining journeys should be a priority. In the latter category, for example, this means the possible avoidance of travel by plane, its replacement by other travel mode where possible, or in the case of unavoidable flights, the offset of related emissions with purchased CO₂ quotas. Also, usage of train or public transport instead of car if it is possible. In terms of the daily travel to the institution, the promotion and support of climate-friendly transport options – like cycling, walking, public transport, scooter - is of paramount importance, as is the transformation of the University's car fleet into an environmentally friendly fleet.

3. Examination of material circulations and waste management

The basic idea of the transition to a circular economy model is that we produce an unreasonably large amount of waste during the operation of the economy and in our daily lives. The radical reduction of this amount is very important in order to protect the environment. Therefore, efforts should be made to reduce the amount of waste by optimizing consumption, extending the life cycle of objects and equipment, reusing them or using them with new functions. As far as the reduced amount of waste concerned, efforts should be made to increase the rate of selective collection and recycling. This topic also covers the focus on the significant reduction of the amount of paper used by the institution through the digitization of administration.

4. Making the institution's supply chain sustainable

The University has a significant number of partners and suppliers, of which the energy consumption and environmental impact are many times larger than those of the University. The sustainable, environmentally friendly operation of the University can have itself an impact on the operation of the supply chain. At the same time, the University can achieve a much greater environmental impact by creating institutional policies and regulations for the supply chain, suppliers and other stakeholders and by introducing related incentive systems and measures. These measures may relate to the qualification of the institution's suppliers based on environmental

sustainability or to the standards for food and menus available on the institution's buildings, a sustainable dietary recommendation and also to the preference for local suppliers. However, it may also take into account sustainability factors in the institution's investment decisions. The aim is for the institution to have an impact on the protection of the climate and its natural environment beyond its own operation.

5. Biodiversity

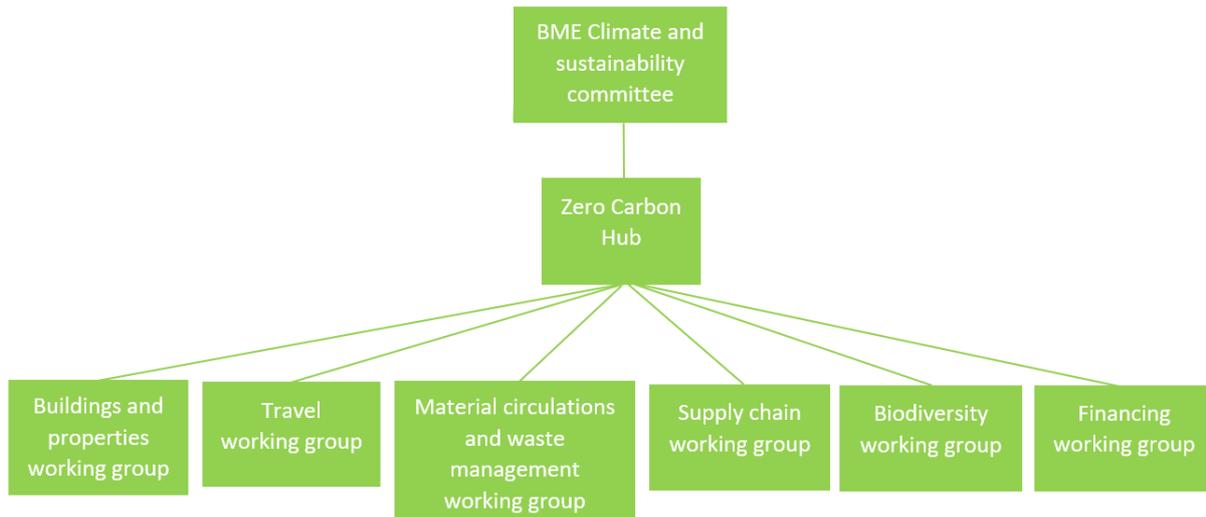
The main cause of biodiversity loss is climate change. Climate change affects biodiversity directly – through the rising of temperature – and indirectly – through the spread of invasive species – as well. The university can help to maintain and enhance biodiversity through its research, education and direct operations. On its campuses and in the area of its real estates, it can create a diverse flora, which, in addition to preserving biodiversity, also supports the reduction of local climate impacts and the well-being of employees and students and creates a healthy working environment.

III. The process of strategy making and implementation

1. The resource requirement of strategy making

- a. In order to successfully implement the Strategy, it is necessary to set up working groups by focus areas. Accordingly, 5 working groups will be set up, and an additional financial working group, which will support the implementation of the strategy from a financial and financing point of view, will search for possible sources of funding and financial support. The number of working group members is 3-5 per group, to which the University's lecturers, students, other employees or even external experts can be delegated. The working groups shall carry out decision preparation and technical support work in their respective fields and, where required, supervise the work of the external experts and subcontractors involved.
- b. The preparation, implementation, monitoring, the possible revision of the Strategy and the communication tasks is coordinated by the Zero Carbon Hub at the University. The Zero Carbon Hub will develop a reporting system following and monitoring the implementation of the Strategy and will report to the University from time to time. The costs related to the preparation, implementation, monitoring and review of the Strategy shall be born by the University and decisions shall be made by the 3-5 members of the Climate and Sustainability Committee appointed by the University's top management.

Figure 1: Governance structure of creating and implementing of the climate strategy



2. The process and the timing of strategy making and implementation is planned as follows.
 - a. Preparation of the preliminary institutional climate strategy concept.
 - b. Internal publication and consultation on the preliminary institutional climate strategy concept to collect comments and proposals
 - c. Discussion of the public comments and the whole preliminary concept in the framework of an internal university workshop and preparation of the final concept.
 - d. The formation of working groups, definition of the main tasks necessary for the preparation of the Strategy.
 - e. Acquisition of data and information necessary for the preparation of the Strategy, preparation of feasibility studies, audits, cost estimates and research. Procurement of subcontractors and partners should also be done at this phase of the project as well as the review of the University's former measures on climate protection and environmental sustainability (education, research, measures, investments, policies, targets). Feasibility studies should cover the quantification and estimation of CO₂ / greenhouse gas (GHG) emissions from the operation of the University (and the operation of its value chain), the composition of the energy sources consumed by the University and its supply chain and the calculation of emissions by focus areas. In addition, the feasibility studies should present the intervention alternative measures suitable for reducing emissions by focus areas, the investment needs of the alternatives, and the potentially available financing possibilities and financial supports. It is necessary to make a decision on which tasks the University can carry out in its own competence with the

involvement of students or university staff and which tasks require the involvement of an external partner.

- f. The preparation of the Strategy, the quantification of goals and milestones, undertaking the final date of emission-free operation, development of a report and information system to monitor the implementation of the Strategy, prioritization of individual emission reduction measures, projects and investments while also define their emission reduction potential and financing needs. In addition, breaking down strategic goals, developing action plans, measures, policies and incentives.
- g. Implementing, follow-up and revising of the strategy.

The deadlines depend to a large extent on the availability of the financial, human and other resources needed to create the strategy and on the date on which the final feasibility studies are completed.

IV. Concluding remarks

Creating and, in particular, implementing a climate strategy is a process that requires a great deal of commitment and effort. Measures that shapes attitudes can be of help to implement the strategy as well as the comprehensive involvement of stakeholders, especially students, in the whole process. It is worth considering that the University as a “living laboratory” that should provide space for innovative, creative ideas, measures and research in connection with protection of our environment. In this way, it will not only support the carbon-neutral operation of the University, but can also be utilized by other institutions as a collection good practices. In addition to the preparation and implementation of a climate strategy, the climate and environmental commitment can be further enhanced by strengthening the related research and education on the one hand and by integrating environmental awareness and sustainability into the governance and decision-making on the other.