



# Sustainability Strategy

## Technical University of Cluj-Napoca 2022 – 2030

MINISTRY OF EDUCATION



**TECHNICAL UNIVERSITY**  
OF CLUJ-NAPOCA, ROMANIA

**eut+**  
EUROPEAN UNIVERSITY  
OF TECHNOLOGY

## Content

1	European and national context.....	3
2	Institutional context.....	6
3	Vision .....	9
4	Mission .....	9
5	Assumed values .....	10
6	Strategy and plan of measures .....	12
6.1	Areas of intervention and objectives.....	12
6.1.1	Education and Research (ER).....	12
6.1.2	Energy (E) .....	13
6.1.3	Campus and Community (CC).....	14
6.1.4	Governance and Partnerships (GP).....	15
6.2	Measures and indicators .....	16
7	Conclusions.....	22

October 2022

Version 0.9

# 1 European and national context

At the United Nations General Assembly, several countries around the world have adhered to the *2030 Agenda for Sustainable Development*<sup>1</sup> and the 17 Sustainable Development Goals (SDGs), setting out concrete actions to be taken for people and the planet. This 2030 Agenda, together with *the Paris Agreement on climate change*<sup>2</sup>, represent the roadmap for sustainable development through the economic, social, environmental and governance dimensions. The European Union (EU) has established some of the highest social and environmental standards, adopted some of the most ambitious policies for the protection of human health and has become a world leader in the fight against climate change.

The EU Member States have integrated the 17 SDGs into their public policies, and Romania has established the national framework for supporting it through the integrated approach of the objectives by developing the *National Strategy for the Sustainable Development of Romania 2030 (NSSDR 2030)*,<sup>3</sup> applying to higher education institutions inclusively.

In order to promote the principles and values of the Strategy, the key document was elaborated, which guides the implementation of the NSSDR 2030 by proposing actions to strengthen and extend the governance framework for sustainable development: *the National Action Plan for the implementation of the National Strategy for Sustainable Development of Romania 2030 (NAP)*<sup>4</sup>.

Through the 4 priority directions and the 12 specific objectives, the National Action Plan supports an integrated and multidimensional approach to sustainable development. Reaching the level established for the targets related to the 17 SDGs will be achieved by implementing a package of 22 actions subsumed to the 4 priority directions of action:

1. Strengthening and broadening the governance framework for sustainable development
2. Supporting the implementation of NSSDR 2030 through education and training programs for sustainable development
3. Promoting the principles and values of the concept of sustainable development, including through decarbonisation
4. Monitoring and evaluation of the implementation of the NSSDR 2030

Climate change as well as energy transitions represent an existential challenge for Europe but also for the whole world. The *European Green*

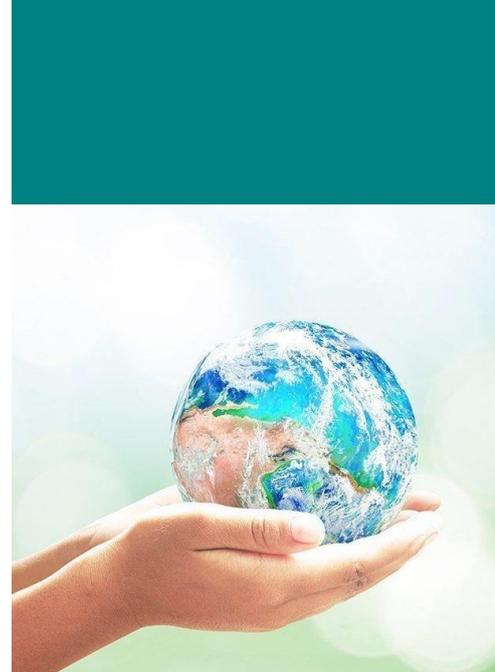
---

<sup>1</sup> [The 2030 Agenda for Sustainable Development | United Nations](#)

<sup>2</sup> [Paris Agreement – United Nations Convention Framework on Climate Changes | European Union](#)

<sup>3</sup> [National Strategy for the Sustainable Development of Romania 2030](#)

<sup>4</sup> [National Action Plan for the Implementation of the National Strategy for Sustainable Development 2030](#)



*Deal* initiative <sup>5</sup> RePowerEU <sup>6</sup> are primarily aimed at transforming the European Union into a modern, competitive and resource-efficient economy, whereby Europe reaches net-zero greenhouse gas emissions by 2050, economic growth is dissociated from resource use and no citizen or geographical area is left behind.

The necessary actions shall cover all sectors of the economy and shall cover:

- Advanced scientific research focused on innovative solutions and environmentally friendly technologies;
- Supporting accelerated innovation in industry;
- Less polluting, cheaper and healthier forms of private and public transport;
- Buildings with intelligent, energy efficient solutions and equipped with renewable sources;
- Collaboration with international partners for sustainable development

In this context, the Technical University of Cluj-Napoca, like many other universities in the country, but as main initiator in the field, is facing both major challenges and real opportunities for sustainable development, both assuming a pragmatic, realistic approach, focused on the real needs of the regional and national socio-economic environment, by orienting the entire educational process, scientific research and innovation towards this requirement.



---

<sup>5</sup> [European Green Pact | European Union](#)

<sup>6</sup> [A plan to rapidly reduce dependence on Russian fossil fuels and fast forward green transition](#)



*„Sustainable Development represents, in the Romanian context, the desire to achieve a balance, a synthesis between the aspirations of the citizen born free, the society on which he depends and through which he defines himself and the context that allows self-realization. This balance starts from human, a central actor who seeks an individual balance and favorable conditions to achieve himself. The favorable conditions are influenced by the society that has to support and motivate it and by the environment through which it finds itself and can find its balance. The role of the state in the context of sustainable development is to help achieve this balance, not only for the citizens of now, but also for future generations.*

**Romania's National Strategy for Sustainable Development 2030**

## 2 Institutional context

Today, in the Technical University of Cluj-Napoca studies over 20,000 students, guided by approximately 1,000 teachers and scientific researchers, along with 888 members of the auxiliary and non-teaching staff, which positions it as the sixth university in Romania in terms of the number of students and the fourth in terms of the level of institutional funding, respectively. The educational offer of the university includes 95 bachelor programs, 103 master's programs, 14 doctoral fields as well as continuous training programs, psychopedagogical training and postgraduate academic studies.

Fundamental or applicative scientific research, technological development and innovation position our University as one of the national universities of advanced education and research with a wide national and international visibility and recognition. The research topics cover the fields of engineering, exact sciences and humanities and are addressed through 89 in-house accredited research structures (Research Centers, Groups and Laboratories).

The material basis of the University has expanded and diversified considerably, the buildings in the two university centers (Cluj-Napoca and Baia-Mare) and in the 4 university extensions (Zalău, Satu-Mare, Alba-Iulia and Bistrița) totaling a total area of approximately 200,000 sqm. The quality of the spaces on the Campus (10 student dormitories, 3 restaurants, 4 libraries, a bookstore and a printing house) has been permanently improved. In addition, we must mention the sports base that includes the swimming complex in Cluj-Napoca, two gyms and three sports fields for various activities, respectively, where a series of intervention packages have been applied in recent years in terms of energy efficiency.

All these synthetic data indisputably highlight the fact that the Technical University of Cluj-Napoca is today a modern, diverse and complex organization, both in terms of the human resources involved, the patrimonial ones, as well as the financial resources to be managed.

The Technical University of Cluj-Napoca recognizes and applies the value of the principles of sustainable development. Sustainable development involves a set of social, economic and environmental principles that allow the development of all activities specific to the University within the society, with the fulfillment of the requirements of the present and without compromising the ability of the new generations to meet their own requirements. Thus, was initiated and carried out the implementation of a well-documented Strategic Sustainable Development Plan with monitorable indicators for all specific activities, defining the areas of interest: *Education and Scientific Research, Campus and Community, Governance and Partnerships*.



The Technical University of Cluj Napoca considers the students as implementers, innovators, entrepreneurs, respectively responsible citizens and involved in the entire set of actions aimed at sustainable development, an approach that is reflected in the proposed action plan and assumed as a commitment of the University board.

In the national and European context, the Technical University of Cluj-Napoca has assumed, through the TUCN Strategy 2020-2024<sup>7</sup>, a major direction of hard development and inclusion having as main purpose the consolidation of institutional policies, the multiplication and promotion of examples of good practices regarding hard and inclusive development. The directions of action proposed in the Strategy refer to:

- elaborating and developing an institutional strategy on the sustainable and inclusive development as an integral part of the professional activities and university management, by creating a favourable environment, namely the involvement and awareness of the community,
- ensuring the conditions of education, research, innovation and artistic creation that facilitate the access, integration and development of the entire community in the University, locally and regionally,
- promoting lifelong learning opportunities by adapting the educational offer to the demands of the labour market and to the needs of personal and social development.

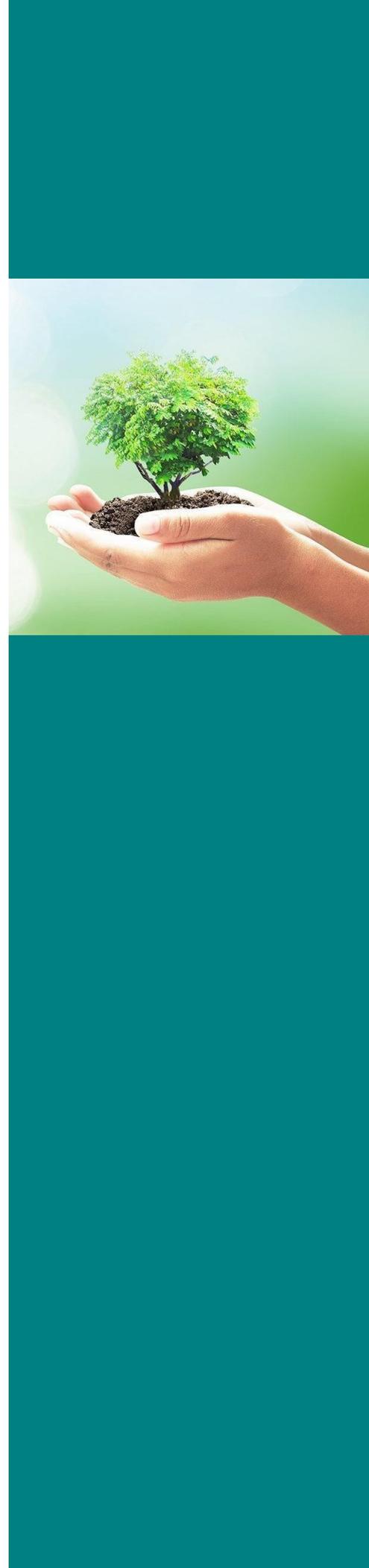
This document presents the Institutional Strategic Plan on Sustainable Development for the period 2022-2030, as an integral part of the professional activities of education, research, infrastructure development and university management, by creating a context based on awareness and the involvement of the entire community of the University in its realization.

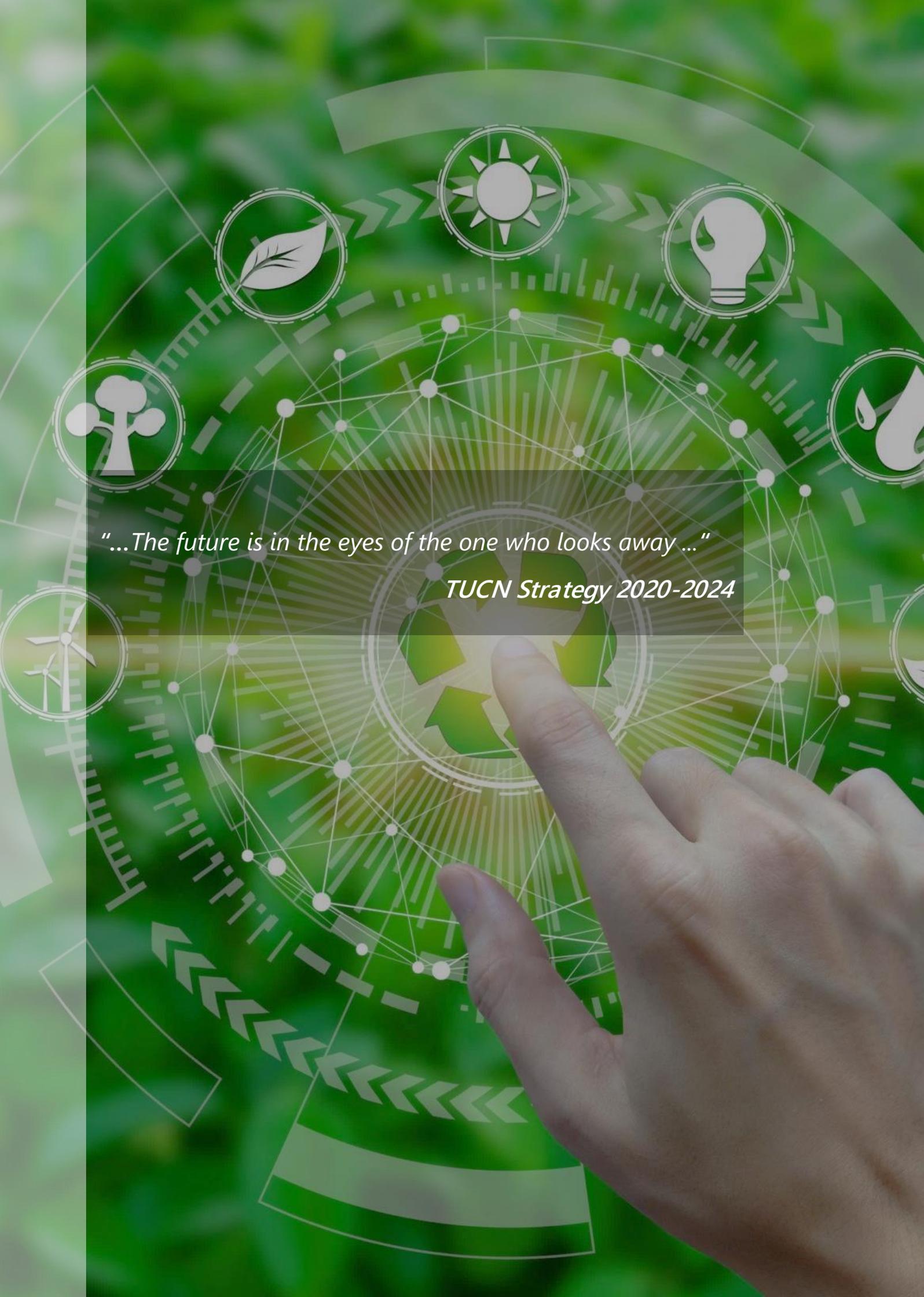
The directions of action that support the implementation of the Strategic Plan of Sustainable Development are:

- Cultivating a student-oriented, informed, up-to-date and practical culture of sustainable development
- Conscious involvement of the entire community (academic staff, students, and administrative staff) in initiatives and actions on sustainable development, with the aim of becoming Active Citizens for a sustainable community.
- Streamlining and reducing energy consumption in all buildings under the university's heritage, by adopting an Action Plan for climate and sustainable energy aimed at reducing the consumption footprint of the University and increasing the degree of equipment of the buildings with smart solutions and local renewable sources.
- Collaborating with various local groups and communities, especially with the municipalities where the University has a presence, at national and international level in order to actively contribute to the creation of the sustainable communities and participation in joint projects.

---

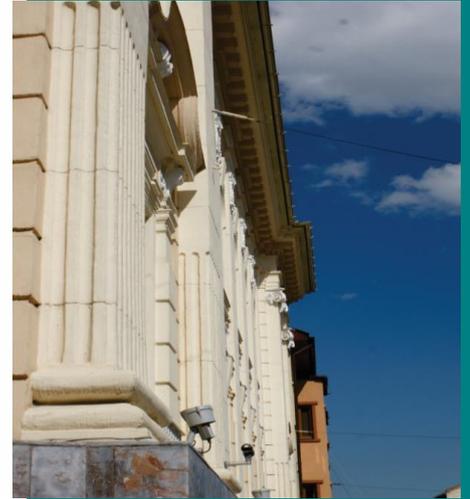
<sup>7</sup> [Strategy of the TUCN 2024](#)



The image features a hand in the bottom right corner pointing towards a central graphic. The background is a vibrant green with a complex network of white lines and dots. Several circular icons are scattered around: a sun, a leaf, a lightbulb, a tree, a water drop, and a wind turbine. A large, semi-transparent recycling symbol is positioned in the center, with the hand's index finger pointing directly at it. The overall aesthetic is clean, modern, and focused on environmental and technological themes.

*"...The future is in the eyes of the one who looks away ..."*

*TUCN Strategy 2020-2024*



### 3 Vision

At the Technical University of Cluj-Napoca, being aware of our role in the society and the region, we want to create a sustainable study and working environment, that will have a positive impact in all areas where University is involved.

*Our vision is to reach the top 3 sustainable universities in the country, ensuring that everything we do is sustainable: the education we provide to students, research and innovation and all the processes that take place in Campus.*

Based on a way of working in partnerships at both local, regional and international level, we will address the Sustainable Development Goals proposed by the UN, building on our strengths in research and education, with the aim of promoting the solutions and cultural change necessary for the transition to a sustainable future.

### 4 Mission

Our mission is to implement sustainability initiatives in an integrated approach by involving the entire academic community in the development of excellence practices that have the capacity to become a positive force in building a sustainable society for all.

The University has a responsibility to be a promoter in creating a world where environmental, economic and social aspects exist in balance, in order to meet the needs of both current and future generations resources. As an institution of higher education, we promote and educate through current policies and example-actions, inspiring new generations to share practices and knowledge with passion and ingenuity.

## 5 Assumed values

The values underlying the design of the Strategic Plan for Durable Development reflect the vision expressed in the University Strategy 2020-2024 document, the main pillars being: excellence in education, research and innovation, good governance and collaboration through strategic partnerships, based on a context in which the essential values are integrity, diversity and inclusion.

As the main promoter and supplier of courses accredited at regional level, complementary to research and innovation projects in the field of energy efficiency, renewable sources and the circular economy of national and international level developed and implemented, the Technical University of Cluj Napoca aims to become a *national leader* in the field of *sustainable energy engineering, decarbonisation and sustainable development*.

By integrating the principles and mechanisms aimed at sustainable development in culture, operational policies and governance, in the context of defining and implementing the Sustainable Development Strategy, the Technical University of Cluj-Napoca aims to obtain international recognition in the transition process to a sustainable future.

The strategic plan for sustainable development of the University is based on the following fundamental assumed values:

**Responsibility** – The set of all actions carried out as activities in the University, involves respect for people and the environment, and the continuous empowerment of the community.

**Excellence** – The University makes constant efforts to apply high standards of education and research for the community and society.

**Openness** – The University represents a community open to collaboration and various and strategic partnerships, supporting cultural diversity, internationalization and innovative spirit.

**Sustainability** – Ensuring the role of a University that actively and continuously supports the implementation of sustainability in *Campus and Community*, thus generating future generations of educated citizens for a sustainable future.





## 6 Strategy and plan of measures

### 6.1 Areas of intervention and objectives

#### 6.1.1 Education and Research (ER)

In the Technical University of Cluj-Napoca, educational and research-innovation activities are the basis for preparing the next generations of students, researchers and innovators, able to address the evolutionary challenges of society in the context of sustainable development. As a facilitator with a significant research activity at national and European levels, the University integrates and supports an important number of *Multidisciplinary* Research Centers aimed at sustainable development.

**Strategic goal** - the implementation of a culture of sustainability at the level of the entire community, through formal and non-formal education and by stimulating the multidisciplinary research activity that integrate various aspects regarding sustainability.

#### Objectives

- Identifying and documenting in current academic programs, the curricular content that targets and promotes sustainability
- Providing opportunities for non-formal learning about sustainability - general courses of wide audience and for the University Community, as to become an active player in the transition to the Green-Sustainable Campus
- Promoting and facilitating multidisciplinary and the perspective generated by sustainable development in all research activities, where possible
- Facilitating the creation of new sustainability leaders and entrepreneurs through research and innovation activities

The associated Sustainable Development Goals (SDGs) are:



## 6.1.2 Energy (E)

Addressing a major challenge such as climate change requires a truly collaborative, society-wide perspective. The Technical University of Cluj Napoca is an essential partner and actively involved in the education, creation and support of policies and their implementation on campus and various communities, including in direct relationship with the Municipality of Cluj Napoca a community that has committed to decarbonize its current level by over 80% by 2030.

In the current context of an energy transition towards renewable sources, decarbonisation and environment with low greenhouse gas emissions, the University, through all its actions and policies, is in agreement with the objectives, financial allocations and actions of the decision-makers in Romania and at European levels, the most important being the improvement of energy efficiency by at least 45% by 2030, and the introduction of local renewable sources for self-consumption, respectively.

At the Technical University of Cluj-Napoca we have also committed to act as an example of the best practices at local and regional levels and to play our leader in the transition process towards the realization of a Green Campus.

**Strategic goal** - Building on the progress made at University level in recent years, we will continue to promote and use new technologies to increase the energy efficiency of heritage buildings according to the Action Plan for Climate and Sustainable Energy (PACED), supporting an ambitious investment transition plan to carbon neutrality.

### Objectives:

- Demonstrate strategic local and regional visibility by setting realistic targets in the field of sustainable energy and greenhouse gas emissions.
- Actively reduce energy consumption as well as achieving sustainable purchasing
- Continuously investment in renewable energy sources and reinvesting energy cost savings in new sustainability projects.
- Raise the community awareness of the importance of the energy transition and the role that each one has in this context.

The associated Sustainable Development Goals (SDGs) are:



### 6.1.3 Campus and Community (CC)

Sustainable development aspires to improve the health of the environment, society and the economy. The health of the community is determined by a wide range of social, environmental factors and various economic influences. The sustainability and vitality of our University depends on the health of the community and each other.

Increasing the availability of clean water, green energy, providing opportunities for active transport, identifying ways to reduce the waste generated and dispose of single-use plastics, aiming at easy access to safe and clean drinking water, providing healthy, safe and sustainable services, creating opportunities for physical activity, all of which have a positive effect and impact on health and well-being at individual and community level.

We fully agree that not only health education, but also healthy ecosystems - Campus and Community, are the essential foundation for good life. Globally, health is reflected in all sustainable development goals through direct or indirect correlation. We are fully aware that we depend on the environment and nature to support our educational and economic processes, but also food security, health and the quality of life of the Community.

**Strategic goal** - the mission of the University is to create an environment favorable to the entire Community, by reorienting the services in accordance with the principles of sustainable development and strengthening community action.

#### Objectives

- Ensuring a positive impact by improving environmental management on Campus in accordance with their own aspirations to be a role model in education in the field of sustainable development. Minimizing the impact on the University's own ecosystem and the environment, both through activities and through operational and infrastructure development activities.
- Applying a unitary approach throughout the University, from the perspective of information and involvement, with the aim of improving the well-being of the entire Community that learns and works in the University, in terms of physical, mental, and social health.
- Raising awareness of biodiversity appreciation for ecosystem health, personal health and well-being.

The associated Sustainable Development Goals (SDGs) are:



## 6.1.4 Governance and Partnerships (GP)

At the Technical University of Cluj-Napoca we are aware that sustainable development cannot be adequately approached by a single group working in isolation. The complex problems that arise cover many areas of our work and require an integrated approach, bringing together our strengths as an education and research institution.

Social and environmental challenges are addressed by teachers and researchers in various fields, sustainability projects in Campus are implemented by technical and administrative staff, and students ensure that their priorities are achieved by getting involved in shaping our agenda.

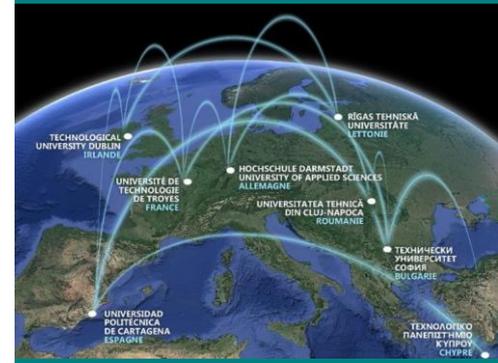
As an ongoing basis, we aim to expand partnerships to increase opportunities for transdisciplinary research in the field of sustainability, to increase the visibility of University's activities in this field and to gain knowledge to valuable international practices.

**Strategic goal** - The University aims to optimize development opportunities in a sustainable manner and to integrate environmental and sustainability concerns into inter-university partnerships or with the socio-economic agents.

### Objectives

- The involvement of the entire University Community in the incorporation of the Sustainable Development Goals in education, research, services, and the processes that take place in the university
- Creating a technology-driven University that improves the student experience and supports the efficiency of information and operations
- Encouraging entrepreneurial activities for resource efficiency and increasing income diversity to finance future growth and development

The associated Sustainable Development Goals (SDGs) are:



## 6.2 Measures and indicators

No.	Measure	Indicators	Responsible	Term
ER1	Integration of concepts, mechanisms and approaches on sustainable development in the educational programs of the University	Number of courses that integrate aspects of sustainable development (min 30% of the courses in the Curriculum integrates notions of sustainable development) Number of dedicated courses (min. 1/year) Number of specific courses (min 5% of the total courses)	Vice-Rector educational, Head of Departments Course leaders	Ongoing
ER2	Encouragement and support offered to non-formal education initiatives for sustainability in the University	Number of courses, workshops, summer schools (min. 2/year) Number of students (internal/external) participants	Vice -Rector educational, Head of Departments	Ongoing
ER3	Participation of the technical staff of the General Administrative Directorate in training sessions, and development of competences in the field of sustainable development and energy efficiency, through <i>in-house</i> courses	Number of courses (min. 2/year) Number of participants (approx. 20)	DGA Research Project Directors	2024

No.	Measure	Indicators	Responsible	Term
ER4	Proposing and implementing research and development projects in areas related to sustainable development (according to the 17 SDGs - Sustainable Development Goals)	Number of research projects (min. 2/year) Number of publications (min. 200) Number of associated events (min. 2)	Vice-Rector CII, Vice-rector MURMSE, Project Directors, Department Managers	Ongoing
ER5	Supporting and promoting pilot demonstration projects such as <i>living labs</i> , regarding innovative solutions with applicability in the University's own buildings aimed at energy efficiency, renewable sources, smart buildings, etc.	Number of pilot projects (min. 2)	DGA Project managers	2025
E1	Increasing the awareness and involvement of the university and local community on the subject of energy efficiency and the transition to clean energy, through information campaigns and training in the field. Launch of materials to promote energy efficiency in buildings: guides, posters, stickers	Number of campaigns/year (min. 2)	Vice-Rector MRPF Bureau of Image and Public Relations Project managers Student Organizations	Ongoing
E2	Development of a Community-wide network for monitoring energy consumption on campus. Installation of smart thermostats (temperature, humidity, Co2) Designation of an Energy Manager	Monitoring structure Energy Manager	Board of Directors	2023
E3	Monitoring the level of energy consumption and emissions, as well as the measures to reduce the CO <sub>2</sub> emissions at the level of the University's buildings and infrastructure;	Annual Report	DGA Sustainable Development Commission Energy Manager	Ongoing

No.	Measure	Indicators	Responsible	Term
E4	Develop a <i>Sustainable Climate and Energy Action Plan (PACED)</i> for the major renovation of UTCN buildings and to significantly reduce energy consumption and greenhouse gas emissions, in line with the ER resolution	Plan PACED Increase energy efficiency min.45% -2030 vs 2012 Increase Decarbonization min 80% - 2030 vs 2005	The Sustainable Development Commission, DGA	2023
E5	Coordination of accessing and allocating financial resources, with priority non-reimbursable in order to significantly increase the comfort and energy efficiency of the patrimonial buildings	Number of projects (min.2/year)	Vice-Rector CII Vice-Rector MURMSE	Ongoing
E6	Implementation of energy-efficient lighting systems (motion sensors in corridors and toilets, the classrooms equipped with presence sensors, photovoltaic lighting devices for outdoor lighting of dormitories) Development of electric vehicle supply infrastructures adjacent to buildings	Min 30% LED lighting Number of stations (min.2)	DGA Vice-Rector MRPF	2024
E7	Implementation of infrastructures to support transformations in the heritage of buildings, where possible, to become prosumers	15% of energy from renewable sources Number of prosumer buildings (min. 1)	DGA Vice-Rector MRPF	2024
E8	Green-buildings certification for new spaces under renovation	Certificates for new buildings on Campus (BT and CM)	Energy Manager	2024

No.	Measure	Indicators	Responsible	Term
CC1	Raising awareness in Campus and Community about the appreciation of biodiversity for ecosystem health, well-being and personal health through information actions and promotional materials	Number of information actions (min. 1)	Vice-Rector MRPF Bureau of Image and Public Relations Student Organizations	Ongoing
CC2	Prioritizing the employment of students in various social and sports activities.	Number of students (min. 25%)	Vice-rector CCOC, Student organizations	Ongoing
CC3	Development of Community-wide initiatives to support and monitor physical and mental health (safety of Internet use, cyberbullying)	Number of shares (min. 1 /semester)	Vice-rector CCOC, Student organizations	2023
CC4	Development and implementation of a sustainable procurement policy	Acquisition policy 25% of sustainable purchases	Board of Directors Administrative Technical Directorate	2024
CC5	Development and implementation of a waste management policy, reduction of paper consumption and single use of plastic containers. Implementation of eco-containers.	No eco-containers (min.2) Plastic free campus 2030 50% reduction of paper consumption 2025	DGA Technical and Administrative Directorate Student organizations	2024
CC6	Reducing water consumption. The use of rainwater for the maintenance of green spaces in the Campus and sanitary systems	10% yearly	DGA Technical and Administrative Directorate Student organizations	Ongoing

No.	Measure	Indicators	Responsible	Term
CC7	Active transport (bicycles, electric vehicles) carried out, and Campuses with prioritized pedestrian access, made with the support and collaboration with the local public administration, that already implemented its own public policies and infrastructures, as the University has a city distributed structure of the Campus	Specific spaces for bicycle parking (min 1 / site on Campus) Electric vehicles (min. 2)	DGA Technical and Administrative Directorate Student organizations	2024
GP1	Development of the "Green University" Charter, in accordance with international and national policies	Charter Green University Adhere to the "UI Green Metric World University" Green Metric UI Rating and Certification	Board of Directors Committee on Sustainable Development	2024
GP2	Establishing new strategic partnerships at the level of the local, national and international community for the implementation of the SDG objectives. Establishing new strategic partnerships at the level of the local, national and international community for the implementation of the SDG objectives	No.of Partnerships (min 2/year)	Rector UTCN Vice-Rector RI Vice-Rector CII Vice-Rector MURMSE	Ongoing
GP3	Evaluation and documentation of the University's progress in achieving the established targets correlated to the Sustainable Development Goals (the 17 SDGs)	Sustainable development goals Report	Rector UTCN The Sustainable Development Commission	yearly
GP4	Dissemination and transfer of knowledge and results within the Consortium of Technical Universities in Romania ARUT	Number of meetings / workshops (min. 1)	Rector UTCN Vice-Rector RI	Ongoing

No.	Measure	Indicators	Responsible	Term
GP5	Dissemination and transfer of knowledge and results within the EUT+	Number of meetings / workshops (min. 1)	Rector UTCN Vice-Rector RI	Ongoing

## 7 Conclusions and commitment

Based on the context of European and national policies, it was identified the necessity of concretizing the concept of sustainable development within the Technical University of Cluj-Napoca.

As a higher education and research institution, the University has the knowledge and the potential to support innovatively addressing environmental challenges, in meaningful ways through education, research and sustainable operational practices. The University Community has the capacity to play an important role in the assimilation, implementation and perpetuation of the values and principles of sustainable development, which are essentially aimed at minimizing the University impact on the environment by reducing the University ecological footprint.

The Sustainable Development Goals defined by the United Nations Committee, represent the main instrument for continuous development and monitoring the internal processes, providing the Community with an appropriate context for education, research and development.

By adopting the Sustainable Development Goals at a strategic level, the University can contribute to the formation of a sustainable society, where higher education is connected with the business environment, the entrepreneurs, the industry and with international partners.

