SDS 4HEI

HIGHER EDUCATION MISSION FOR SUSTAINABILITY

Your guide to

Best Practice Case Studies

Co-funded by the
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introduction

Welcome to our "**Best Practice Case Studies**", a valuable compilation that delves into the transformative journey of the SDS4HEI project. This initiative is an enlightening and inspiring endeavour, aimed at reshaping the landscape of **sustainable development** in **higher education institutions** across Europe.

In the following case studies, you will embark on an exploration of excellence, innovation and the profound impact of sustainability strategies on real-world outcomes. They bring to light a series of illuminating met challenges, each representing a unique facet of success, collaboration and progress achieved .

These case studies not only provide a comprehensive overview of the methodologies applied but also offer a firsthand glimpse into **possible transformative processes**. They serve as a testament to dedication to learning, flexibility and adaptation.

By celebrating these best practice stories, we aim to inspire and guide not only our immediate partners but also the broader academic community and its stakeholders. It is our hope that these case studies will encourage new approaches to sustainable development in higher education institutions while fostering a culture of continuous improvement, adaptation, and shared success.

As we embark on this enlightening journey through the best practice case studies, we invite you to engage, learn and share in the spirit of knowledge exchange and collective growth. Together, we can help shape a brighter, more sustainable future in European higher education, and these case studies serve as a testament to the impactful work already achieved.

table of contents

Co-funded by the Erasmus+ Programme of the European Union

01

Westphalian University of Applied Sciences Gelsenkirchen

Westphalian University of Applied Sciences Gelsenkirchen

BEST PRACTICE CASE STUDY

Westphalian University of Applied Sciences Gelsenkirchen

GERMANY

- ECONOMIC ✓
- SOCIAL
- ENVIRONMENT ✓
- CULTURAL

OVERVIEW

Westphalian University of Applied Sciences Gelsenkirchen (WH), located at the heart of the Ruhr valley, a populous region with Germany's highest density of further education and a diversified industry, productively combines scientific innovations with sustainable transformation. With the internal university research funding "Research Challenge Sustainability", the WH aims at supporting the development of applicable sustainable solutions in different fields, working for a greener ecosystem.

SOCIAL INNOVATION GAME

To make our way of life and our economy more sustainable, major changes are needed in many different areas. We need an energy and mobility 'turnaround', as well as a resource and consumption turnaround. Sustainable development poses many challenges for society and creative ideas are needed for the great transformation. The WH is convinced that every discipline can contribute to the necessary social-ecological transformation.

With the Research Challenge Sustainability, the Westphalian University of Applied Sciences Gelsenkirchen would like to give its students and researchers the opportunity to address sustainability related questions, to develop ideas and to work on them within the framework of a research project. The Research Challenge Sustainability focuses on solutions in the field of ecological sustainability.

WHICH SUSTAINABLE DEVELOPMENT GOALS?

SDG 1	No Poverty	
SDG 2	Zero Hunger	
SDG 3	Good Health & Wellbeing	✓
SDG 4	Quality Education	✓
SDG 5	Gender Equality	
SDG 6	Clean Water & Sanitation	✓
SDG 7	Affordable & Clean Energy	✓
SDG 8	Decent Work & Economic Growth	
SDG 9	Industry, Innovation & Infrastructure	
SDG 10	Reduced Inequality	
SDG 11	Sustainable Cities & Communities	✓
SDG 12	Responsible Consumption & Production	✓
SDG 13	Climate Action	✓
SDG 14	Life Below Water	
SDG 15	Life on Land	
SDG 16	Peace & Justice Strong Institutions	
SDG 17	Partnerships to achieve the Goal	

INTERVENTION

RESEARCH CHALLENGE SUSTAINABILITY

HOW IT STARTED

The first Sustainability Research Challenge was launched at the WH in the fall of 2020 and has been held twice a year ever since. It is now already in its seventh round. From the very beginning, the internal university research funding consisted of two funding lines: funding line I for professors and funding line II for students.

The thematic specifications of the first challenges were initially somewhat narrower, for example, they dealt with questions of water supply, the energy turnaround and digitalization. In the most recent challenges, however, the range of topics was expanded so that all research ideas contributing to ecological sustainability could be submitted. The advantage of this is that all disciplines can participate and the scope for developing ideas is greater.

The Research Challenge Sustainability was initially designed for a three-year testing phase and presented a new format for promoting research in the field of sustainability. Due to the thoroughly positive response, it was extended for another three years.

KEY ACTORS

- All students and professors at the WH are invited to participate in the Research Challenge. Individuals or small research teams can apply.
- There is a jury that evaluates the submitted applications based on certain criteria and makes a funding recommendation to the Executive Board. The jury is made up of representatives from the various departments, administrative staff and members of the Executive Board.
- The Executive Board ultimately decides on the funding of the research projects.

INCENTIVES TO RESEARCH ON SD

- **Learn to do Research:** Funding line II of the Research Challenge Sustainability offers the opportunity to introduce students to research. They usually write a project proposal for the first time. In doing so, they learn how to formulate their research idea according to the given criteria and how to calculate the costs of their research project. Working independently for the first time on a research topic of their own choice promotes an experience-based learning process that can be the start of an academic career. The work on the research project can also be used to prepare a bachelor's or master's thesis.

- **Skills Development:** In their research project, students deal with issues from the field of sustainability in terms of subject matter and content, but also acquire other skills that are important to engage in sustainable development, such as problem-solving skills.

- **From Research to the Real World:** The WH offers co-creation and design spaces as well as special consulting and support services to further develop ideas. The MakerSpaces are creative places with digital and manual tools, for example for building prototypes. The Andersmacher are an initiative to promote start-up culture at the WH. They offer a wide range of formats to help students further develop their ideas into business ideas or patent applications.

- **Start Something new:** Funding line I for professors offers them the opportunity to work on a research idea that pays attention to ecological sustainability, independently of external funding programs and the associated topic specifications. In this way, they can also familiarize themselves in a protected framework with a new field of research in which they may not have been active before. The internal university research funding can also be used to prepare a larger research proposal to external funders.

- **Interdisciplinarity:** The challenges and problems facing our society are complex; therefore, it makes sense to work on them in an interdisciplinary manner. A desirable criterion for Research Challenge projects is an interdisciplinary approach. In this way, the Research Challenge aims to provide an impetus for collaboration between different disciplines.

OUTCOME

ENHANCING SUSTAINABLE DEVELOPMENT

With the Research Challenge Sustainability, the Westphalian University of Applied Sciences Gelsenkirchen provides an incentive for both professors and students to develop a concrete research project from their research questions in the field of sustainability and gives them the opportunity to implement it.

So far, 17 projects by students and six projects by professors have already been selected for funding. The various projects cover a wide range of topics. A couple of projects, for example, deal with questions of the energy transition, such as a tracking system for photovoltaic systems or a material analysis for water electrolysis. Several projects were dedicated to the purification of water. There were also projects on heating and cooling systems, on microplastics in the human intestine and on the more efficient use of fertilizers in agriculture with the help of drones.

All in all, this shows that the Research Challenge has succeeded in stimulating research projects on very different

Research and Learning Landscape

The HEI as a Part of a Bigger Picture

Westfälische Hochschule
Gelsenkirchen Bocholt Recklinghausen
University of Applied Sciences

IAT
Institute for Work and Technology

The Westphalian University of Applied Sciences Gelsenkirchen has a technical-scientific-economic profile, complemented by degree programs in law and journalism/public relations. It possesses key engineering, technology, natural science and business studies competencies. The Westphalian University is also known for their work for educational justice, for example, in 2012, it became the first university in Germany to anchor the so-called ‘Talent Scouting’ as a central task alongside teaching, research and transfer.

As a meaningful addition, the WH strives to focus its sustainability-related activities even more strongly on the area of ecological responsibility and anchor it even more firmly as a profile field with a cross-cutting character. The WH aims at developing solutions that do not merely postpone problems or externalize burdens, but also respect complex system interrelationships. Conflicting goals are therefore openly discussed. Sustainability is an integral part of the work and a compass for action.

Balance in the three dimensions of sustainability - ecological responsibility, social justice and economic performance - is important. In other words, a one-sided focus on one dimension, which can lead to distortions in society and hardly generate acceptance, would fall too short.

Sustainability is seen as a guiding principle that gives the Westphalian University of Applied Sciences Gelsenkirchen its profile and meaning. The process towards more sustainable development includes the challenge but also the chance to rethink the future and fulfills the promise of science to work on solutions for tomorrow. With this understanding, the WH would like to support the sustainability strategy of the United Nations' Agenda 2030, including the Sustainable Development Goals (SDGs) formulated therein, as well as the sustainability strategies of the German federal government and the state of North Rhine-Westphalia.

With the format of the Research Challenge Sustainability, the Westphalian University of Applied Sciences wants to make practical contributions to sustainable development in the region and beyond. It pays particular attention to the core area of research. Many researchers at the WH are already working in sustainability-oriented research fields, for example through research activities with regard to energy transition. These research fields target many different SDGs. Through the Research Challenge, new additional sustainability-oriented research projects are stimulated and promoted. The goal is to continuously support approaches to solutions that contribute to the success of the socio-ecological transformation.

The Research Challenge also contributes to the core area of teaching, since ideas targeting Education for Sustainable Development (ESD) are also eligible for funding. At the WH, there are already numerous courses of study with direct references to topics of sustainable development, including a bachelor's degree program in Sustainable Biological and Chemical Technologies and a bachelor's degree program in Sustainable Engineering and Management. Other courses of study deal with topics of sustainable development even if they do not explicitly carry it in their name. These include, for example, the study programs Environmental Engineering and Industrial Engineering Technical Facility Management.

New concepts or intelligent control mechanisms for economic activity or creating social cohesion can make important contributions to sustainability, but technical and scientific solutions are equally as much needed to shape the energy and mobility transition, for example. The availability of corresponding competencies is the central prerequisite for shaping the socio-ecological transformation. Therefore, the WH will continue to strengthen its activities in the field of study and teaching to impart competencies that are indispensable for shaping an intra- and intergenerationally just future.

Interview Excerpts

Prof. Dr. Andrè Latour is Vice President for Sustainability and International Affairs at the Westphalian University of Applied Sciences Gelsenkirchen and responsible for the topic of sustainable development at the university. His teaching and research areas are public law, in particular public commercial law, energy law and environmental law

” If you want to establish such a Research Challenge or any other sustainability competition, it is necessary to communicate this through as many different channels as possible.

Prof. Dr. Andrè Latour

Turning Great Ideas into Sustainable Solutions

Good afternoon, Prof. Dr. Latour. Could you please tell us briefly what your specific tasks are in this context at the Westphalian University of Applied Sciences?

André Latour: *The WH aspires to become more sustainable in the four core areas of study and teaching, research, third mission and campus operations. The Executive Board supports the different stakeholders in these areas in this endeavor, for example through incentives such as the university's internal research funding which includes the Research Challenge Sustainability. I coordinate the implementation of these measures, ensure that the sustainability activities of the WH become more visible internally and externally, and I am also responsible for our sustainability reporting.*

You have already been invited to present the Research Challenge as a format in higher education networks. In your opinion, what is the recipe for success of the Research Challenge Sustainability?

André Latour: *The conditions for participation are deliberately kept low-threshold. Participants simply fill out a form and submit a three-page project application. This makes it easier for students in particular to submit a project application, since they often have no previous experience in this area. In addition, all disciplines of the Westphalian University of Applied Sciences can participate in the Research Challenge Sustainability and work on their research project to find solutions for sustainable development*.

Do you have any tips for higher education institutions that would like to promote research for sustainability in a similar way?

André Latour: *If you want to establish such a Research Challenge or any other sustainability competition, it is necessary to communicate this through as many different channels as possible. Especially at the beginning you will need patience, until the format is sufficiently well-known across the whole university. It is also important to address researchers and students personally. It is advantageous if the deadlines for submitting project proposals are always the same, so that the stakeholders can adjust and rely on this recurring date.*

What role do Universities of Applied Sciences play for the sustainable development in a region?

André Latour: *Application orientation plays an important role in the field of sustainability, so that research-based solutions can find their way into practice as quickly as possible. New technical and scientific solutions are needed to shape the energy and mobility transition, among other things. As a university of applied sciences, the WH maintains a wide range of close collaborations with companies and local authorities in the region, for example in the field of hydrogen. In addition, it is important that graduates of the universities are equipped with the knowledge and skills to bring sustainability into the regional ecosystem.*

Can you give us an example of a ‘transdisciplinary collaboration’, in which the WH works together with other actors in the Metropole Ruhr?

André Latour: *The WH is working together with the famous soccer club FC Schalke 04, to offer guidance for the road to greater sustainability. In 2023, students have developed a guideline for the preparation of the club’s first sustainability report. Together with the Bochum University of Applied Sciences and the Dortmund University of Applied Sciences, the WH has also founded the Ruhr University Alliance. Here, the universities cooperate in many different fields, including the area of sustainability. The joint project ‘Sustainability on the Road’ we combined excursions to sustainable institutions in the region with science-based lectures.*

Thank you, Prof. Dr. Latour, for sharing your knowledge with us and presenting your path to more sustainability in your HEI as well as in the region.

02

Institut Mines-Telecom Business School

Institut Mines-Telecom Business School

BEST PRACTICE CASE STUDY

Institut Mines-Telecom Business School (IMT-BS)

FRANCE

ECONOMIC ✓

SOCIAL ✓

ENVIRONMENT ✓

CULTURAL ✓

OVERVIEW

Institut Mines-Télécom Business School (IMT-BS) has a decisive contribution to the achievement of the Sustainable Development Goals (SDGs) through higher education in France. Times Higher Education (THE) ranked the IMT-BS as 1st Business School in France and 4th in France for its contribution to the SDGs. On the rank 201-300, out of 1,591 institutions evaluated, with a score of 80.2 out of 100, the IMT-BS ranks as #1 HEI in France on SDG1, SDG4 and SDG5.

SOCIAL INNOVATION GAME

Institut Mines-Télécom Business School (IMT-BS) recognises the need for development of educational pedagogies to address the sustainable development goals (SDGs) through education. Besides the fact that IMT-BS as a socially responsible higher educational institution in France has a critical role in addressing better future, the regional challenges on sustainability increased and a demand for quality education to address those challenges increased as well.

Building on its dual nature of being mix of engineering and business school, and transforming its DNA into educating responsible managers and engineers of tomorrow, the IMT-BS's team of professors developed educational tools and programmes to address SDGs through education while focusing on reducing inequalities, partnering for achieving goals, bringing innovation and delivering quality education. One of such successful attempts is the 'Social Innovation Game' that is certified by the French Foundation for Management Education (FNEGE) as the best educational program in the digital age.

WHICH SUSTAINABLE DEVELOPMENT GOALS?

SDG 1	No Poverty	
SDG 2	Zero Hunger	
SDG 3	Good Health & Wellbeing	
SDG 4	Quality Education	✓
SDG 5	Gender Equality	✓
SDG 6	Clean Water & Sanitation	
SDG 7	Affordable & Clean Energy	
SDG 8	Decent Work & Economic Growth	✓
SDG 9	Industry, Innovation & Infrastructure	✓
SDG 10	Reduced Inequality	✓
SDG 11	Sustainable Cities & Communities	✓
SDG 12	Responsible Consumption & Production	✓
SDG 13	Climate Action	
SDG 14	Life Below Water	
SDG 15	Life on Land	
SDG 16	Peace & Justice Strong Institutions	
SDG 17	Partnerships to achieve the Goal	✓

INTERVENTION

SOCIAL INNOVATION GAME

HOW IT STARTED

Institut Mines-Télécom Business School (IMT-BS) sustainable journey started with the recognition that sustainable challenges at state, regional and institutional level are increasing and that society and government need a knowledge-advised solutions. The French higher educational institutions as socially responsible institutions, including the IMT-BS headed its mission towards sustainability, and the DNA of the IMT-BS became to train the managers of tomorrow focused on innovation and responsible digital transformation. Sustainable development became one of 7 strategic objectives. The ambition was motivated by a mission of IMT-BS to be recognised as the school with a positive impact on its core activity: teaching and research, and positive impact on its campus and ecosystem.

As a higher education and research establishment, IMT-BS is particularly concerned by SDG No. 4: “Quality education” and its is devoted to providing the access to inclusive education open to diversity and training in sustainable development issues to its all students.

It also plans to ensure students a quality of life on campus consistent with global issues and to promote lifelong learning. Those universal objectives lad toward designing the ‘Social Innovation Game’ programme that fully echoes the School's commitments in terms of training and social openness.

KEY ACTORS

- Faculty members, researchers, and students (from both the Bachelor's and the Grande Ecole programme) engaged in delivering educational programme
- Collaborations with national partners (in particular, MakeSense associative network that expended internationally)
- Regional and local companies, officials, CSOs, and local government who propose the sustainability challenges and seek solutions
- The wider community, including academic staff, students and external partners participating through events

SUSTAINABILITY SOLUTIONS

HOW PROGRAMME WORKS

The ‘Social Innovation Game’ is an educational program developed and delivered by the academic staff from the Institut Mines-Télécom-Télécom Business School in partnership with MakeSense (SenseSchool), a national associative network commited to creating tools and programs for collective mobilization to enable everyone to take action and build an inclusive and sustainable society.
Other local and regional organisations are also involved by proposing challenges on sustainability issues. Recent examples include: Activ’Action, Agence pour l’education par le sport, Ericsson, Fleurs de Cocagne, Mairie d’Evry, Microstop, Société Générale, and Théâtre de l’Agora.

The ‘Social Innovation Game’ is designed around a **collective intelligence methodology**, providing an education for sustainable development. The aims of the programme are to ‘use innovation and creativity to raise awareness for societal challenges while engaging students with civil society, private actors, and public agencies’.

Over two days, the **students in mixed teams are exposed to local social, environmental issues posed by institutions, associations, start-ups, and major private companies.**

The first day sees them exchange with the company, engage in creativity exercises, collect field information, and develop a solution. Day 2 allows them to refine the solution and formulate a pitch in order to present to a jury composed of the external organisations. The progression allows the students to develop their soft skills, while meeting the IMT-BS goal of training managers who are both responsible and open. It additionally allows students to apply theoretical knowledge on sustainable development while prioritising their introduction to regional actors who are already working on SDG-related challenges.

Students benefit from engaging with professionals, practical work in teams, and bettering presentation skills, while the external partners benefit from the student proposals in addition to inspiration and stimulation from the experience.

OUTCOME

Enhancing Sustainability

Institut Mines-Télécom Business School (IMT-BS) enhanced the sustainability through its teaching, programmes and engagement with external and internal stakeholders to address sustainability by combining different educational methods ranging from knowledge sharing to concrete action. The 'Social Innovation Game' educational programme best resembles it.

Through the engagement with local stakeholders, mobilisation of academic stuff and both engineering and business students to identify and address sustainabiliy challenges in the education and territory. With the 'Social Innovation Game', the solutions to the challenges must meet at least one of the SDGs, with the appropriate SDG based on the situation presented by the proposing organisation. Through this educational programme, IMT-BS contributed to the achievement of several SDGs.

The most important are **SDG4** 'Quality Education', **SDG9** 'Industry, Innovation and Infrastructure', **SDG10** 'Reduced Inequality', **SDG11** 'Sustainable Cities and Communities' and **SDG17** 'Partnerships to achieve the Goal'.

Till now, numerous students and partners participated in achieving the SDGs through this programme. Just in 2022 6th edition, **264 students responded to one of the 6 issues proposed by partners** (herein, CGI, Grand Paris Sud, Klee Group, La Cloche, l'Ecole Edible, and Sopra Steria). Thanks to **action-oriented creativity workshops and the emergence of innovative concepts**, they were invited to collaborate and solve social and environmental challenges, **offering internal and external stakeholders the opportunity to improve their social and environmental impacts through education**.

The results are positive, and the **main achievement is that students have gained more autonomy, adaptability and responsibility towards sustainability.**

Interview Excerpts

Following the interview with **Mélissa Boudes, Prof. in Management and Organisational Behaviour at the Institut Mines-Télécom Business School** who was one of the coordinators of the educational programme the 'Social Innovation Game', we came to a few conclusions and key milestones connected to how universities can best deliver sustainability through education and how the 'Social Innovation Game' can serve as a good example towards sustainable transition and achievement of the SDG4:

"Developing educational tools to address the sustainability challenges through education: Social Innovation Game"

Mélissa Boudes, Institut Mines-Télécom Business School

Quality Education as one of the stepping stones on which HEIs can build their sustainability transition.

1. It is important to cover both the social and environmental dimensions when developing educational tools and programmes for university students.
2. Universities have a role to sensitive its students for the sustainability and be able to practically show them how to integrate sustainability issues and tackle them in the future.
3. It is important to raise students' awarness on the sustainability in the course of education and equip them with knowledge, tools and skills to resolve sustainability issues through their future jobs.
4. It is important to involve national, local and regional stakeholder to address sustainabilty challeges through developing innovative solutions for sustainability.
5. It is important to show students that diverse stakeholders (private, public, civil, non-governmental, etc.) are important for sustainability and how they play a crucial role in addressing the SDGs.
6. It is important to mix students with different educational levels in teams and put them to work together on the innovative solutions for sustainability challenges.
7. It is important to develop an expertise in sustainabilty and provide to academics who are motivated incetives to create and deliver educational programmes and tools and apply their expertise to solving challenges and fixing future.
8. Motivation for HEIs to develop programme like the 'Social Innovation Game' could be found in the mentoring and talent acquision opportunities for students, developing partnership, accumulating knowledge and ideas on certain topics and areas of sustainability, applying expertise on the region, addressing social responsibility actions through involvement, financing, and other close motives to embody the mission of university to become sustainable.
9. Students are motivated by future job prospects, personal development or feeling of being part of something that is important – in case motivation is lacking it is HEI's role to motivate students.
10. Partnerships and networking for acheiving sustainability are essential, and the 'Social Innovation Game' programme is a good example of it.
11. On the example of the 'Social Innovation Game', an indicators of sucessful programme to address sustainabily are:
    - programme ameliorate individuals' capacity to work in teams, develop an alternative mode of work from that of classic academic pedagogy
    - solutions to the challenges must meet at least one of the SDGs, with the appropriate SDG based on the situation presented by the proposing organisation
    - it can be scaled at the local level
    - it involves multi-stakeholders
    - outcomes are delivering innovative solution to the concrete sustainability challenges and strengthening collaborations between stakeholders to address those challenges
    - programme can be replicated and integrated into future training programmes and teaching practices
    - it resebles the HEI's mission and objectives towards achiving sustainability

KEY SUSTAINABILITY COMPETENCES

Key Competencies Driving the 'Social Innovation Game' Sustainability Success: A Multifaceted Approach to Transformation

The key competencies that were essential for the success and contribution of the 'Social Innovation Game' educational programme to the sustainability journey at the Institut Mines-Télécom Business School are:

Strategic Vision: IMT-BS places sustainable development & social responsibility (SD&SR) among its strategic and priority objectives, as an integral part of its school project, its mission and its values.

Leadership and Collaboration: The bodies involved in defining the IMT-BS strategy, academic programs and research are made up of a variety of players from different backgrounds in order to ensure that the School's various stakeholders are well represented: students, alumni, faculty and researchers, administrative staff, companies, academic players, and public authorities.

Transparency and Accountability: Every year, IMT-BS releases public reports to provide an account of its activities: Annual Activity Report, Principles for Responsible Management Education (PRME SIP) Report and SDG Report.

IMT-BS also submits on a regular basis self-assessment reports to the following accreditation bodies: CEFDG, AACSB, AMBA, Qualiopi, Conférence des Grandes Ecoles, etc. Within the School, the results of satisfaction surveys, the social report, and any other survey concerning the School are shared with the staff.

Innovation and Adaptability: Labaratories, working groups, research teams, research chairs and IMT-BS ecosystem are focused on developing insights into both technological and social innovation with a view of contributing to the sustainability and SDGs in general terms.

Curriculum Integration: IMT-BS promotes a cross-cutting approach that incorporates sustainable development issues into its programs by combining different teaching methodologies ranging from knowledge sharing to concrete action. Its pedagogy is based on the teaching of sustainable development, corporate social responsibility and ethics in all of its programs, from the Bachelor's to the doctoral level.

Research Excellence: The university showcased research excellence by supporting innovative research that addressed sustainability challenges through social and technological innovation contributing to solutions for SDGs.

Partnership and Engagement: Through engagements with external stakeholders, IMT-BS establishes partnerships, joins and establishes networks, co-creates initiatives and events, exchanges technology, knowledge, talents, and expertise, joins projects and shares funding, establishes and signs multilateral and bilateral agreements and more to address sustainability.

Advocacy and Communication: IMT-BS is member of numerous network and referentials addressing sustainability through education. It is committed to the Times Higher Education (THE) Impact Ranking on achievement of SDGs, it contributed to development of roadmap for ecological transition at the IMT group of schools, its leadership and academics are publicly sharing good practices for SDGs either through advocacy, engagement or direct work.

Sustainability Literacy: IMT-BS uses mandatory online testing for all students in the first year of the Integrated Master's in Management program and in the Bachelor program, where students take the Sulitest (Sustainability Literacy Test). The Sulitest aims to assess students' knowledge, skills, and "mentalities" in the field of sustainable development, and it is used as an awareness-raising tool in order to enable students to better understand the major sustainable development issues before starting their classes. IMT-BS is also committed to promoting and embedding SDGs through other initiatives, such as life-long learning opportunities, project funding, conferences, awards for excellence in research and teaching, etc.

Long-Term Vision: Institut Mines-Télécom group with IMT-BS has adopted and signed a 'Sustainable Development & Social Responsibility (SD&SR) Policy' and 'Ecological Transition Strategy' that aims to promote and achieve the sustainability objectives in a long run, and it draws upon proposals for implementing sustainability through leadership, education, student mobility and external engagement activities to make sustainability transition.

03

Bursa Uludağ University

Bursa Uludağ University

BEST PRACTICE CASE STUDY

Bursa Uludağ University

TURKEY

- ECONOMIC ✓
- SOCIAL
- ENVIRONMENT ✓
- CULTURAL

OVERVIEW

The BUU Waste Management Center combines the mission of environmental safety and sustainable resource utilization with the aim of preserving human health. It strives to reduce natural resource consumption, prevent environmental pollution, and protect wildlife by efficiently recycling recyclable waste. Together with team members from every unit within the university, every challenge and obstacle encountered leads to the emergence of new and creative solutions. The waste management center, in coordination with the Sustainable Campus Coordinator, periodically reviews the university's waste management strategies and continuously improves them based on feedback, addressing areas of deficiency.

ZERO WASTE MANAGEMENT CHALLENGE

In line with the goals of zero waste management, the university has taken a significant step. However, the varying levels of awareness among students, academics, and staff regarding waste management within these efforts have made effective waste separation and sustainability strategies challenging. Additionally, ensuring effective collaboration and participation among different units, student communities, and staff is of critical importance. The creation and maintenance of the infrastructure required for zero waste management have also posed financial and physical resource challenges for the university administration, leading to planned but unimplemented actions. Technology integration and data management have sometimes resulted in technical difficulties.

WHICH SUSTAINABLE DEVELOPMENT GOALS?

SDG 1	No Poverty	
SDG 2	Zero Hunger	
SDG 3	Good Health & Wellbeing	✓
SDG 4	Quality Education	
SDG 5	Gender Equality	
SDG 6	Clean Water & Sanitation	
SDG 7	Affordable & Clean Energy	
SDG 8	Decent Work & Economic Growth	
SDG 9	Industry, Innovation & Infrastructure	
SDG 10	Reduced Inequality	
SDG 11	Sustainable Cities & Communities	
SDG 12	Responsible Consumption & Production	✓
SDG 13	Climate Action	✓
SDG 14	Life Below Water	✓
SDG 15	Life on Land	✓
SDG 16	Peace & Justice Strong Institutions	
SDG 17	Partnerships to achieve the Goal	✓

INTERVENTION

ZERO WASTE MANAGEMENT EVOLUTION

HOW IT STARTED

BUU zero waste management is shaped in parallel with the country's overall zero waste policies. This approach aims to minimize waste reduction, recycling, reuse, and disposal, and it has been influenced by legal regulations, the leadership of public institutions, environmental and sustainability awareness, and compliance with international standards in the establishment of the BUU Zero Waste Management Center. As a result of these factors, the BUU Zero Waste Center has initiated sustainable waste management activities such as waste separation, recycling, education, and awareness campaigns. These efforts aim to gradually approach sustainability goals with the participation of students and staff.

KEY ACTORS

- In 2021, the Rector of Bursa Uludağ University (BUU) embraced a sustainability vision and established the "Sustainable Campus Coordinatorship" department. This coordination office, with a primary focus on environmental issues, conducted awareness campaigns in various fields. With a visionary perspective, Prof. Arzu Çihantimur, the new Sustainable Coordinator, is responsible for addressing sustainability in its social, economic, and environmental dimensions.
- Sustainable Campus Coordinatorship is supported by a diverse working group consisting of academics and experts, and it oversees the activities at the university, including the Zero Waste Management Center and the Renewable Energy Center. Waste management is carried out by the Zero Waste Center, which is responsible for waste management across BUU institutions, faculties, vocational schools, research centers, administrative units, and on-campus businesses. The center also collaborates with the Ministry of Environment, Urbanization, and Climate Change, local partnerships, certified firms, and professional organizations.

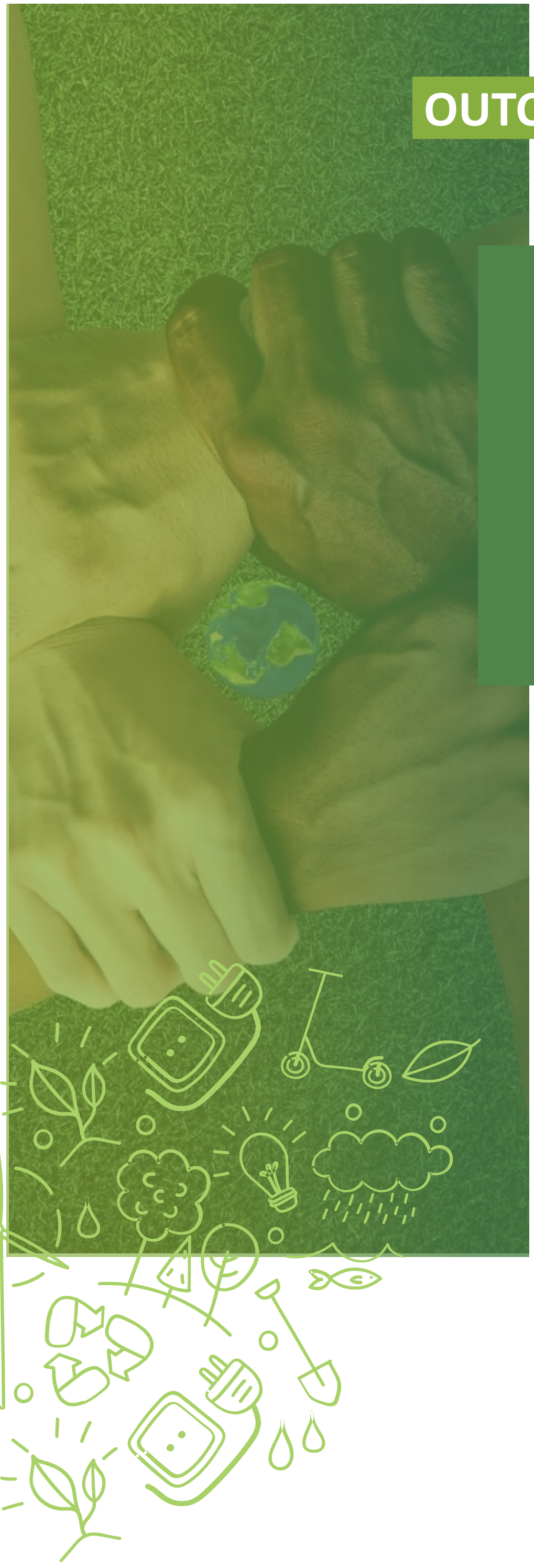
ZERO WASTE SOLUTIONS

1. **Strategic Planning and Reporting**: The BUU Waste Management Center operates with an action plan to fulfill its mission and achieve its vision. It regularly documents its activities through activity reports to track progress and support sustainability.

2. **Operational Initiatives:** The Waste Management Center ensures the environmentally safe collection and recycling of electronic waste through events like "E-waste Days" and on-campus "Waste Collection Centers" aimed at protecting the environment. Additionally, strategically located "Temporary Storage Areas" are used for the organized management of waste from different units. Vegetable cooking oils collected on the university premises are recycled in an eco-friendly manner by the municipality's licensed company, while appropriate containers and storage methods are employed for the management of hazardous and medical waste to safeguard environmental health. Also, BUU started to harvest rainwater to use on the floor cleaning and watering the garden. Additionally, on the World Chronic obstructive pulmonary disease (COPD) Day, BUU organized a «Give Up Smoking» activity. With this event, in addition to discussing healthy lifestyle methods, a reduction in cigarette butt waste will also be achieved. These operational steps aim to contribute to the Waste Management Center's leadership in environmental protection and sustainability goals.

3. **Partnerships and Collaborations:** The BUU Zero Waste Management Center collaborates with stakeholders such as the Ministry of Environment, Urbanization and Climate Change, local partners, certified companies, and professional associations. Furthermore, the income generated from e-waste days is used to purchase computers for schools in rural areas, serving the 17 Sustainable Development Goals (SDGs).

4. **Thought Leadership and Community Engagement:** BUU has been awarded the Zero Waste Certificate, an official document, for its educational units on the central Görükle campus and its 12 different campuses. The Zero Waste Certificate has increased the sense of responsibility for zero waste among employees, students, and administrators.



OUTCOME

ZERO WASTE MANAGEMENT

Bursa Uludağ University (BUU), as part of the Zero Waste Project launched in 2019, established the Waste Management Center with a focus on environmental sustainability and resource utilization.

Under the coordination of the project, a series of activities have been carried out on the University campus and affiliated campuses. In collaboration with the Ministry of Environment, Urbanization, and Climate Change, BUU have ensured compliance with legal regulations related to waste management and obtained the necessary certifications.

BUU continues to work together with all stakeholders to improve these standards and enhance environmentally friendly practices for the BUU campus and its affiliated campuses. The results of these efforts are regularly compiled into reports and shared both within the university and with all stakeholders.

The BUU Waste Management Center continues its work with the aim of prioritizing environmental safety and sustainable resource utilization to protect human health. Additionally, the income generated from activities organized under the Zero Waste management, as well as partnerships and collaborations, are effectively utilized. This approach significantly contributes to the spread of sustainable awareness within our university."

Interview Excerpts

An Overview of Zero Waste Management at Bursa Uludağ University

To gain a better understanding of our university's efforts in zero waste management, we are sharing an interview conducted with the Waste Management Center supervisor, Serkan Karakaya. Here are some questions about zero waste management:

What is the motivation behind launching the Zero Waste Project at our university? What is the significance of this project for the university?

We took action to participate in this nationwide project with the aim of instilling this important awareness in the new generations as an educational institution.

What steps have been taken and what kind of practices have been implemented as part of the Zero Waste Project?

Within the scope of the project, we have taken significant steps towards waste reduction, waste separation, and raising awareness among individuals. We conducted waste analyses to reduce our environmental impact and established recycling bins in many areas of our university. In doing so, we have actively engaged in environmental awareness and sustainability.

What achievements have been made with the establishment of the Waste Management Center, and what activities does this center encompass?

We have put in intensive efforts to reduce environmental pollution. We achieved a 50% separation rate of biodegradable waste from other waste. By implementing waste management approaches such as waste prevention, efficient resource utilization, waste reduction, establishing effective collection systems, and recycling collected waste, we have increased environmental awareness.

How do the documents obtained from the Ministry of Environment, Urbanization, and Climate Change contribute to the success of your project?

The zero waste certification we received from the Ministry of Environment, Urbanization, and Climate Change provides significant support for the development of our projects and efforts to contribute to the economy through waste management. This certification enables us to more effectively direct our sustainability efforts, thereby increasing our contribution to both the environment and the economy.

How have the zero waste practices on the university campus and affiliated campuses been received by students and staff? How does the community support these initiatives?

We have received positive feedback, particularly from our students, regarding the zero waste practices implemented on our university campus and affiliated locations. With this motivation, we will continue to enhance our projects and increase our environmental awareness. Our students have shown great interest in our awareness-raising activities and have provided effective support in fieldwork. We aim to further expand this positive interaction in the future, continuing to make positive changes for our environment and society.

What is the impact of our university's zero waste management efforts on environmental security and human health?

The impact of our university's zero waste management efforts on environmental security is quite comprehensive. These initiatives aim to minimize environmental pollution, prevent forest fires, promote water conservation, reduce air pollution, and mitigate the effects of global warming. Additionally, they are of significant importance for preserving human health by reducing water, air, and soil pollution, contributing to disease prevention. In this way, our efforts align with the goal of offering a more sustainable future for our environment and public health.

What are your future goals regarding zero waste management? Are you planning new projects or initiatives in this field?

We have initiated composting of cafeteria waste in collaboration with Yıldırım Municipality. The compost produced as a result of this work will be used in animal feed production. Additionally, we are developing a project to sell paper waste generated at our university to contribute to our institution's resources. In doing so, we are not only adopting an environmentally friendly approach to waste management but also increasing university resources to support education and environmental projects.

How can students and staff contribute more to zero waste management?

It is of great importance for students and staff to be mindful of efficient resource utilization. In this context, the necessity of waste separation and recycling should be emphasized. Moreover, it is crucial for them to understand that wasting resources may lead to future problems such as water scarcity and global warming. Awareness should be raised, especially about the separation of waste types other than organic waste. This way, a more effective recycling of waste can be achieved. We believe that informing and educating students and staff about waste collection and recycling through workshops and training sessions holds significant value. These educational efforts will be a crucial step in increasing efficiency in waste management and fostering a sustainable environment.

Do you collaborate with other institutions or universities in the field of zero waste management? What is the importance of these collaborations?

We maintain close collaboration with external stakeholders, particularly with the Ministry of Environment, Urbanization, and Climate Change, as well as local municipalities. Through these partnerships, we aim to advance our projects and educate people about environmental awareness by promoting zero waste practices. These collaborations are essential in taking our projects further and building awareness about zero waste management.

BASIC COMPETENCIES IN ZERO WASTE

The Key Competencies Strengthening BUU's Success in Zero Waste Management: A Multifaceted Approach to Transformation

BUU has identified a set of key competencies necessary for its successful journey in zero waste management:

Strategic Vision: BUU is committed to aligning its efforts with the United Nations Sustainable Development Goals (SDGs). In this context, BUU have developed strategies and set goals. Additionally, BUU place significant importance on continuous feedback activities to improve areas where BUU may be lacking.

One of BUU's top priorities is to encourage the development of dynamic individuals who can conduct research and implement solutions in the field of environmental issues within the university. In pursuit of this goal, BUU strives to cultivate informed individuals. Moreover, BUU continue to work in compliance with regulations and specifications by effectively utilizing contemporary technologies. This helps supporting environmental sustainability with a manageable level of knowledge.

Leadership and Collaboration: Effective leadership, led by the university's Rector and managed by the Sustainable Campus Coordinatorship, has facilitated collaboration among various stakeholders, including faculty members, researchers, students, and both central and local administrations.

Transparency and Accountability: The preparation of waste activity reports and monitoring of actions have promoted transparency and accountability, fostering a culture of trust and responsibility within the institution.

Partnership and Participation: BUU has systematized the collection of waste by classifying it internally and has engaged in partnerships with local and central authorities to enable the recycling of collected waste.

Community Engagement: Initiatives such as using the proceeds from e-waste collection days to purchase computers for local schools and community engagement efforts have demonstrated the university's ability to establish a broader public interaction and enhance a sense of shared purpose.

04

Atlantic Technological University

Atlantic Technological University

BEST PRACTICE CASE STUDY

Atlantic Technological University

IRELAND

ECONOMIC	✓
SOCIAL	
ENVIRONMENT	✓
CULTURAL	

OVERVIEW

Atlantic Technological University (ATU) is a new university in Ireland, formed from the merge of Galway-Mayo, Sligo & Donegal Institutes of Technology. The university spans nine campuses that are located along the Atlantic coast, over 250km from the North-West to the West of Ireland. As a new university, ATU is starting to undertake a cultural change where consideration for sustainable development is integrated into all aspects of campus operations and included the newly developed strategic plan.

REDUCTION OF RECYCLING WASTE

Atlantic Technological University (ATU) undertook a challenge to reduce recycling and general waste by 10,000 single-use items per week, at two of its main campuses. As a new university, ATU was determined to address critical environmental issues and make a real impact at local/regional/national level. The university recognised the urgent need for culture change that would align its environmental operations with the United Nations' Sustainable Development Goals and drive a positive impact. Implementation of a new re-usable cup policy would greatly contribute to the goals of responsible consumption & production and also, climate action. The university recognised that disposable coffee/tea cups were the main contributor to the overall waste produced by the university.

ATU's commitment to the environmental aspects of sustainability stemmed from the acknowledgement that every individual, institute-wide has a role to play in contribution to the SDGs. Small changes at local level, can have a big impact in the wider world. Catering facilities on all nine campuses removed availability of disposable cups and other single-use items, encouraging staff and students instead use available crockery, or re-usable '2goCups'.

WHICH SUSTAINABLE DEVELOPMENT GOALS?

SDG 1	No Poverty	
SDG 2	Zero Hunger	
SDG 3	Good Health & Wellbeing	
SDG 4	Quality Education	
SDG 5	Gender Equality	
SDG 6	Clean Water & Sanitation	
SDG 7	Affordable & Clean Energy	
SDG 8	Decent Work & Economic Growth	
SDG 9	Industry, Innovation & Infrastructure	
SDG 10	Reduced Inequality	
SDG 11	Sustainable Cities & Communities	
SDG 12	Responsible Consumption & Production	✓
SDG 13	Climate Action	✓
SDG 14	Life Below Water	
SDG 15	Life on Land	✓
SDG 16	Peace & Justice Strong Institutions	
SDG 17	Partnerships to achieve the Goal	✓

INTERVENTION

PARTNERING FOR WASTE REDUCTION

HOW IT STARTED

Atlantic Technological University's journey to contribute to environmental SDG's began with a recognition of the impact of single-use items – particularly those that are plastic on the environment. Although many of these items are recyclable, they require a large amount of resources to regenerate into materials for other uses. In addition to this, despite being recyclable, many invertedly end up in landfill or discarded, polluting waterways and other vital ecosystems. Lack of management of single-use items results in unnecessary use of resources and degradation of the natural environment.

Three years ago, O'Hehirs Foodcourt who provides catering for ATU Sligo and ATU Letterkenny committed to a 'Green Mission' acknowledging that their day-to-day business of providing food & drinks to staff & students had a negative impact on the earth and its resources. The company committed to undertake actions that would conserve resources, preserve natural habitats and prevent pollution. They made it their mission to reduce, reuse and recycle in their business environment and made a request for everyone to work together to produce results! O'Hehirs vision aligned with ATU's ongoing efforts to promote environmental sustainability and reduce its waste, and also its carbon footprint.

This shared goal led to the development of a holistic plan encompassing removal of single-use items and bins, availability of reusable items, operational improvements, and collaborative partnerships. O'Hehirs worked in conjunction with both campus' Green Councils to ban single use items such as disposable cups and containers. Unfortunately, the pandemic created delays in the initiative, however the ban was implemented in February of 2023.

KEY ACTORS

- University leadership, including Dr. Orla Flynn (President of ATU) and Paul Hannigan (Head of College, Donegal), & Úna Parsons (Head of College, ATU Sligo) endorsed the initiative and provided visionary guidance.
- Michael O'Hehir (owner of O'Hehirs Foodcourt on both campuses) & Des Faul (Canteen Manager) committed to the O'Hehirs Green Mission.
- Green Campus Members at ATU Sligo & Donegal including Staff and students.
- Faculty members, researchers, and students engaged in campus activities and operations across all functions and disciplines.

SOLUTIONS TO REDUCE & REUSE

1. **Partnerships and Collaboration:** ATU Senior Management collaborated closely with O'Hehirs Foodcourt owner and staff, along with Green Campus representatives to develop a plan to remove availability of single-use items on two campuses.

2. **Operational Initiatives:** The institution adopted a Charter to commit to development of campuses that were more sustainable, with set targets. The charter reflects The institute's sustainability Strategy 2021-2025. The charter sets out the mission to: Minimise our environmental impact; Embed sustainability in all we do; and Work with our local community for a sustainable change

3. **Institute Policy Changes** ATU introduced and enforced policy that restricted the availability of single-use items from catering facilities on campus. This included items like paper cups with plastic lids, plastic straws, utensils, and Styrofoam containers.

4. **Phasing-Out & Promotion of Alternatives:** ATU/O'Hehirs removed all single-use items and replaced them with permanent/reusable items such as crockery cups and metal cutlery. Customers were offered re-usable '2goCups' that could be used for takeaway drinks and washed for reuse.

5. **Education & Awareness:** The university supported the initiative through a publicity and awareness campaign across the campuses. Providing all campus users with information relating to waste statistics in Ireland, possibilities for waste reduction and positive outcomes for the change. They encouraged ATU staff and students to bring their own containers and reusable drink bottles for takeaway food and drink options. Culture change that could be shared with the broader community was encouraged to raise awareness.

OUTCOME

ENHANCING ENVIRONMENTAL SUSTAINABILITY

Atlantic Technological University has achieved a profound impact on environmental sustainability across the North-West and West of Ireland through its initiative and activities to ban the use of single-use items

Through its strategic alignment with the United Nations' Sustainable Development Goals (SDGs) for environmental impact, ATU's actions have yielded tangible outcomes.

Since February 2023, General waste has been reduced by 50% and recycling waste has been increased by 75%. Policy implementation has prevented the use of nearly half a million single-use items in the past 9 months. This includes over 1,700 cups per week ending up as waste. This is in line with 2030 targets.

The initiative has significantly reduced ATU's carbon footprint, whilst also contributing to Ireland meeting the EU recycling targets that are vital to environmental sustainability. Although Ireland had previously met EU recycling targets (55%), the targets will become more stringent in the near future, with 65% in 2025 and 75% in 2030. The university's commitment to implement a cultural change in the single-use items are viewed and used contributed to a more environmentally responsible campuses.

ATU intends to expand the initiative to its seven other campuses so that all campuses may become single-use free, supporting broader environmental goals for the university, the community and the region. This initiative has empowered staff and students to play their role in waste reduction for the benefit of the environment and its ecosystems.

Background & Detail

"Removing Single-Use Items from Catering Facilities at ATU Donegal & ATU Sligo"

The initiative unfolded from ATU's ongoing efforts to promote environmental sustainability through waste reduction and carbon footprint reduction. Through collaboration with O'Hehirs Foodcourt, who provides catering for two ATU campuses, it was identified that O'Hehirs also had a Green Mission to reduce impact on the environment and that these aligned goals could be addressed on multiple ATU campuses.

In 2020, Ireland produced 1.12 million tonnes of packaging waste. This is enough to fill the Aviva Sports Stadium (Ireland) to the roof almost 70 times. This was the fourth year in a row that Ireland had generated packaging waste that exceeded more than 100 tonnes. Although Ireland has met EU recycling targets, it is vital that performance is improved to meet future targets that are more stringent, particularly with regard to plastics.

Ireland, like many other countries, is actively working to reduce single-use plastic and waste. The country has taken several initiatives to address this issue. These include the Plastic Bag Levy (2002) which has significantly reduced the use of single-use plastic bags; Ban on Microbeads (2018) banning the manufacture and sale of personal care products containing microbeads, which are tiny plastic particles harmful to the environment; Single-Use Plastics Directive, an EU regulation regarding single-use plastics aimed to reduce the impact of certain single-use plastic products on the environment; Plastic Packaging Waste Reduction, through promoting recycling and waste reduction. There are recycling programs and facilities in place for plastic materials; Plastic-Free Initiatives, implemented by various communities and organizations across Ireland, examples include promoting reusable shopping bags, encouraging the use of reusable water bottles, and organizing clean-up events to tackle plastic waste in the environment; Public Awareness Campaigns & Education Programmes conducted to inform and educate the public about the environmental impact of single-use plastics and the importance of waste reduction; Circular Economy Initiatives that explore the concept of a circular economy, which promotes the recycling and reuse of materials to reduce waste and minimize environmental impact.

The reduction of single-use plastic and waste is important for several compelling reasons, all of which are related to environmental, economic, and societal concerns. These include the environmental impact of ocean pollution and land pollution, resource depletion, climate change and biodiversity preservation. Economic/Societal impact includes human health, economic benefits, aesthetic & social impact, long-term sustainability, international policy agreements and consumer demand. The reduction of single-use plastics and waste is an ongoing process, where governments, businesses, and individuals continue to work together to find sustainable solutions to align with international agreements and reflect the growing awareness of the need for responsible environmental practices.

ATU and O'Hehirs' collaboration highlighted that simple actions could be undertaken that would have a positive impact on Ireland's environmental goals, including waste reduction; the actions could also enhance the capacity of each organisation to improve their own environmental impact including their carbon footprints.

Dr Orla Flynn, President of ATU, said that eliminating single-use plastics is a significant step toward creating a more sustainable future for the broader community, "We have a responsibility to protect the environment for future generations, and this includes reducing our waste across all our campuses. The university's commitment to sustainability has already received positive feedback from students, staff, and the wider community, and we should be proud that we are part of the growing movement towards a more sustainable future. Our next step will be supporting all our campuses to build on these good practices".

Dylan Murphy, student of the Sligo Green Campus Initiative stated "The implementation of 2GoCups was delayed due to Covid so it's fantastic to see it come to fruition. It is a simple step to less waste on campus, without stopping anyone from taking a hot beverage to go. Win-win."

Michael O'Hehir, owner of O'Hehir's Bakery and operator of canteen facilities on both campuses, said he is delighted to lead this as part of a business-wide 'Green mission' for O'Hehir's, "We are very pleased with the positive impact these changes have had. The ownership and commitment from our team in the ATU and the support from all our stakeholders have been incredible and encourage us to continue this journey."

ATU and O'Hehirs also acknowledge the greater societal impact of the removal of single-use items. The students, faculty, and staff have been encouraged to take individual actions to reduce their plastic usage by bringing their own reusable coffee cups, containers and water bottles to work.

Through an education and awareness campaign, the institute bears a heightened awareness of how the small actions of individuals can greatly impact the bigger picture. The actions have resulted in a cultural change where individuals now question whether single-use items are justified in various environments. The initiative has moved from campus boundaries into the broader community, encouraging the rejection of single-use items across all facets of society.

KEY SUSTAINABILITY COMPETENCES

Key Competencies Driving ATU's Removal of Single-Use Items and Plastics from Catering Facilities at ATU Sligo and Donegal

The sustainability journey undertaken by Atlantic Technological University (ATU) demonstrated a range of key competencies that were essential for its success:

Strategic Vision: ATU showcased a clear strategic vision by aligning its efforts with Irish & EU targets, as well as the United Nations' Sustainable Development Goals (SDGs). This vision guided their actions and decisions.

Leadership and Collaboration: Effective leadership, led by individuals like Dr. Orla Flynn and Michael O'Hehir, facilitated collaboration among diverse stakeholders, including faculty, researchers, students, and catering staff. This collaboration was crucial for integrating environmental sustainability across campus operations.

Transparency and Accountability: The assessment of progress against goals and commitments demonstrated transparency and accountability, fostering trust and a culture of responsibility within the institution.

Innovation and Adaptability: ATU demonstrated innovation by influencing such impactful change through simple policy change and implementation. Their ability to adapt and to align with targets showcased their adaptability.

Partnership and Engagement: ATU's collaborations with local, regional and national stakeholders demonstrated their ability to forge impactful partnerships and engage communities to drive change.

Advocacy and Communication: Leveraging their achievements, ATU has effectively advocated for environmental sustainability across the higher education sector and into the broader community, showcasing strong communication skills and the ability to inspire others through education & awareness campaigns.

Sustainability Literacy: The institution's commitment to sustainability literacy through campus operational reform has highlighted their dedication to educating staff and also a generation of graduates equipped to address global challenges with special attention to environmental impacts.

Long-Term Vision: ATU's development of a feasible sustainability strategy and commitment to targets beyond the short term displayed a long-term vision and dedication to sustainable transformation.

Community Engagement: Initiatives like '2GoCups' encourages community engagement through publicity and action-based initiatives. These efforts showcased their ability to engage the wider public and foster a sense of shared purpose.

05

Manchester Metropolitan University

European E-Learning Institute

BEST PRACTICE CASE STUDY

Manchester Metropolitan University

ENGLAND

- ECONOMIC ✓
- SOCIAL
- ENVIRONMENT ✓
- CULTURAL

OVERVIEW

Manchester Metropolitan University (MMU), a renowned British institution, is at the forefront of environmental initiatives. Ranked highly in the 2023 Times Higher Education Impact Rankings, MMU embeds United Nations SDGs into its teaching, research, and day-to-day activities. Joint efforts with international associates bring about significant advancements, highlighted by their partnership with the European Sustainability Hub, promoting innovation and fairness for a brighter tomorrow.

SUSTAINABILITY CHALLENGE

Manchester Metropolitan University (MMU) have addressed the intricate and ever changing environmental and societal matters, encompassing climate change, societal disparity, and water preservation. In an ever-evolving global setting, the university acknowledged the immediate necessity to harmonise its activities, studies, and teaching with the United Nations' Sustainable Development Goals (SDGs) to bring about a positive outcome.

MMU's dedication to sustainability was born from the understanding that old-fashioned methods were not up to the task of tackling the intertwined challenges of today. The university aimed to establish a thorough and all-encompassing strategy that not only centred on protecting the environment but also gave importance to social justice and robustness. Adjusting to a warmer climate, advocating for responsible water usage, and preparing students with the competencies to instigate significant change were fundamental issues.

WHICH SUSTAINABLE DEVELOPMENT GOALS?

SDG 1	No Poverty	
SDG 2	Zero Hunger	
SDG 3	Good Health & Wellbeing	
SDG 4	Quality Education	
SDG 5	Gender Equality	
SDG 6	Clean Water & Sanitation	
SDG 7	Affordable & Clean Energy	✓
SDG 8	Decent Work & Economic Growth	
SDG 9	Industry, Innovation & Infrastructure	✓
SDG 10	Reduced Inequality	
SDG 11	Sustainable Cities & Communities	
SDG 12	Responsible Consumption & Production	
SDG 13	Climate Action	
SDG 14	Life Below Water	
SDG 15	Life on Land	
SDG 16	Peace & Justice Strong Institutions	
SDG 17	Partnerships to achieve the Goal	

SUSTAINABILITY EVOLUTION

INTERVENTION

HOW IT STARTED

Manchester Metropolitan University's (MMU) sustainability journey started when they recognised the urgent global issues of climate change, social inequality, and environmental harm. Reacting to these challenges, the university embarked on a thoughtful process to weave sustainability into its main objectives. This move was motivated by the wish to match the United Nations' Sustainable Development Goals (SDGs) and bring about a positive shift within the university, the local community, and even wider. This dedication resulted in a comprehensive sustainability plan that includes updates to the syllabus, enhancements in day-to-day operations, significant research, and partnerships with various stakeholders.

Manchester Metropolitan University's sustainability initiatives have been shaped by the valuable contributions of various members of its community

HERE'S A DETAILED BREAKDOWN:

- **Workshop Attendees:** A notable group of 150 colleagues and students actively participated in one or more workshops, bringing their insights and ideas to the table.
- **Survey Respondents:** The university's call for opinions was met with enthusiasm as 387 individuals provided direct feedback through the 'Your Views Matter' survey.
- **Instagram Engagement:** A student-led initiative on Instagram to understand pressing concerns saw a considerable engagement with 2,723 students responding to the poll, showcasing their interest in the university's sustainability goals.
- **Engagement Activities:** An impressive number of 4,135 comments and ideas were generated through various engagement activities, reflecting the vibrant and committed community of Manchester Met.

SUSTAINABILITY SOLUTIONS

1. **Carbon Reduction:** Manchester Met has been committed to reducing its carbon footprint and has implemented measures to achieve this. For instance, they have worked towards improving the energy efficiency of their buildings and have also invested in renewable energy sources.

2. **Waste Management:** The university has promoted recycling and waste minimisation strategies. They have aimed to reduce single-use plastics and encouraged the use of reusable items on campus.

3. **Sustainable Transport:** Manchester Met has promoted the use of public transport, cycling, and walking among students and staff. They've also made efforts to provide facilities like cycle storage to facilitate this.

4. **Research and Education:** The university has integrated sustainability into its curriculum across various disciplines. This ensures that students understand the importance of sustainable practices in their respective fields.

5. **Biodiversity:** Manchester Met has worked on enhancing biodiversity on campus, including the creation and maintenance of green spaces, which provide habitats for local wildlife.

6. **Water Management:** The university has also implemented measures to reduce water consumption and improve water efficiency on campus.

7. **Engagement and Partnerships:** Manchester Met has collaborated with local communities, organisations, and other institutions to promote sustainability and share best practices.

8. **Awards and Recognition:** Manchester Met has been recognised for its sustainability efforts and has received various awards over the years.

OUTCOME

ENHANCING SUSTAINABILITY

Manchester Metropolitan University (MMU) has made significant strides in sustainability across its academic activities, research, and campus initiatives. In alignment with the United Nations' Sustainable Development Goals (SDGs), MMU's comprehensive efforts have garnered international recognition.

MMU's dedication to sustainability is evident in its active pursuit of a zero-carbon campus. This ambition is underlined by their top-three ranking in the People and Planet University League for environmental performance over a decade. The university's sustainable campus development and partnerships, especially the carbon literacy training and collaboration with regional employers, showcase their commitment to environmental responsibility.

Academically, MMU's focus on sustainability is highlighted through its emphasis on producing graduates in health-related fields and its strong health research output. The incorporation of sustainability principles in the curriculum ensures that graduates are equipped with a deep understanding of global challenges. MMU's emphasis on areas such as ecosystem education, nature-based solutions, and climate change action further equips students to make a significant impact in their respective fields.

MORE ON MMU

Manchester Metropolitan University (Manchester Met) is making its mark in the global sustainability arena, securing a place in the illustrious top 100 of the Times Higher Education's Impact Rankings.

> *" Equipping Our Students, Partners, and the Broader Community to Be Sustainability Change Agents"*
>
> **Professor Liz Price, Deputy Pro-Vice-Chancellor of Sustainability at Manchester Metropolitan University.**

These rankings, which derive their criteria from the UN's Sustainable Development Goals (SDGs), highlight the dedication of universities worldwide to initiate positive sustainable development actions. The benchmarks range from tackling climate change, endorsing good health and wellbeing, to addressing issues of inequality.

In the global league table, Manchester Met proudly sits at the 66th position. The University also received notable rankings in specific categories, clinching 3rd in the 'Responsible Consumption and Production' and 7th in the 'Partnerships for the Goals'.

The SDGs serve as global benchmarks, providing a roadmap for constructing a sustainable future. Universities participating in the THE's Impact Rankings are evaluated against these comprehensive goals.

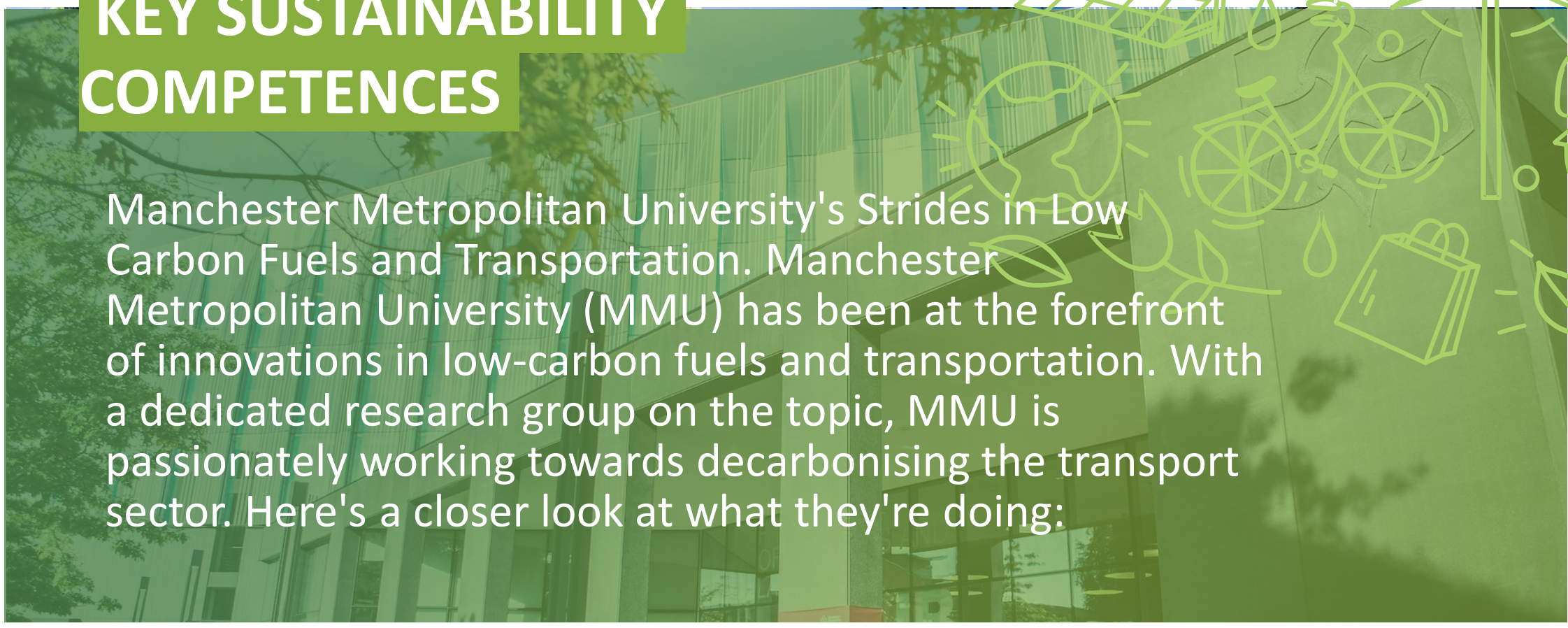
Manchester Met's stellar performance also extends to several other SDGs:

- **Good Health and Wellbeing:** Recognised for the abundant graduates in health-related fields and robust health research.
- **Quality Education:** Lauded for its percentage of graduates with teaching qualifications, lifelong learning commitment, and opportunities provided for first-generation students.
- **Decent Work and Economic Growth:** Celebrated for championing sustainable economic growth and endorsing equal pay.
- **Sustainable Cities and Communities:** Commended for its support for arts, heritage sectors, and sustainable practices.
- **Climate Action:** Acknowledged for its emphasis on low-carbon energy and environmental education, inclusive of Manchester Met's innovative Carbon Literacy training.
- **Life on Land:** Applauded for its dedication to ecosystem education and action, particularly nature-centric solutions to address climate change and biodiversity loss.

Professor Liz Price, Manchester Met's Deputy Pro-Vice-Chancellor of Sustainability, expressed her pleasure with the ranking. "It's not just about our sustainable campus; it's about equipping our students, partners, and the broader community to be sustainability change agents. Our partnership ranking is a testament to impactful initiatives such as our carbon literacy training and collaboration with regional employers to cater to the increasing demand for net-zero skills."

Furthermore, Manchester Met has unveiled its Sustainability Strategy, extending to 2026. This strategy is not just a continuation of the University's journey towards a greener, zero-carbon campus – an effort that has seen them consistently rank in the top three in the People and Planet University League for a decade – but it also further highlights how Manchester Met aims to support

KEY SUSTAINABILITY COMPETENCES



Manchester Metropolitan University's Strides in Low Carbon Fuels and Transportation. Manchester Metropolitan University (MMU) has been at the forefront of innovations in low-carbon fuels and transportation. With a dedicated research group on the topic, MMU is passionately working towards decarbonising the transport sector. Here's a closer look at what they're doing:

ABOUT THE RESEARCH GROUP

The Low Carbon Fuels and Transportation research group boasts a multidisciplinary team that holds significant expertise in producing and applying fuels with reduced carbon content. This aims to facilitate a low-carbon economy. As urban areas grow, the innovations in cleaner transport will pave the way for economic opportunities in the UK, ultimately enhancing the living standards and mobility of its residents.

MMU aspires to develop and share new knowledge to implement a robust clean growth strategy. The ultimate goal is to decarbonise transport, taking significant steps towards zero carbon emissions. Collaborating with a myriad of companies and governmental departments, MMU strives to align with evolving consumer demands for a reduced carbon footprint in the transportation sector.

SOME OF THEIR NOTABLE PARTNERS INCLUDE:

- Connected Places Catapult
- Cryofuel Tank Systems
- Department for Transport
- G-volution
- Gerrard's of Swinton
- and many more.
- Diverse Research Facilitiy

MMU's state-of-the-art facilities cater to a wide array of analytical techniques for characterising and testing. **Some of the standout instruments and techniques include:**

- Fourier transform infra-red attenuated total reflectance (FTIR-ATR)
- Raman spectroscopy
- Gas and high-performance liquid chromatography/mass spectroscopy (GC/HPLC-MS)
- Scanning electron microscopy (SEM)
- And various 3D printing technologies.
- Key Projects of The Group

1. **Hydrogen as a Transportation Fuel:**
   Hydrogen promises a clean future with its combustion only resulting in water as a by-product. MMU is exploring materials and manufacturing methods to make hydrogen-based fuelling solutions more viable for engines.

2. **Dual Fuel:**
   By partially substituting diesel with alternatives like natural gas, MMU is reducing operating costs, carbon footprints, and exhaust emissions. They've even developed a catalytic converter prototype to tackle emission challenges.

3. **Natural Gas Storage:**
   With the introduction of revised regulations, MMU has been at the vanguard of creating innovative storage tanks for trucks powered by liquefied natural gas, using 3D printing techniques.

4. **Biomethane:**
   MMU is delving into the optimisation and design of anaerobic digestion systems. Collaborating internationally, they're focusing on turning biomass and organic waste into energy, fuel, and essential chemicals.

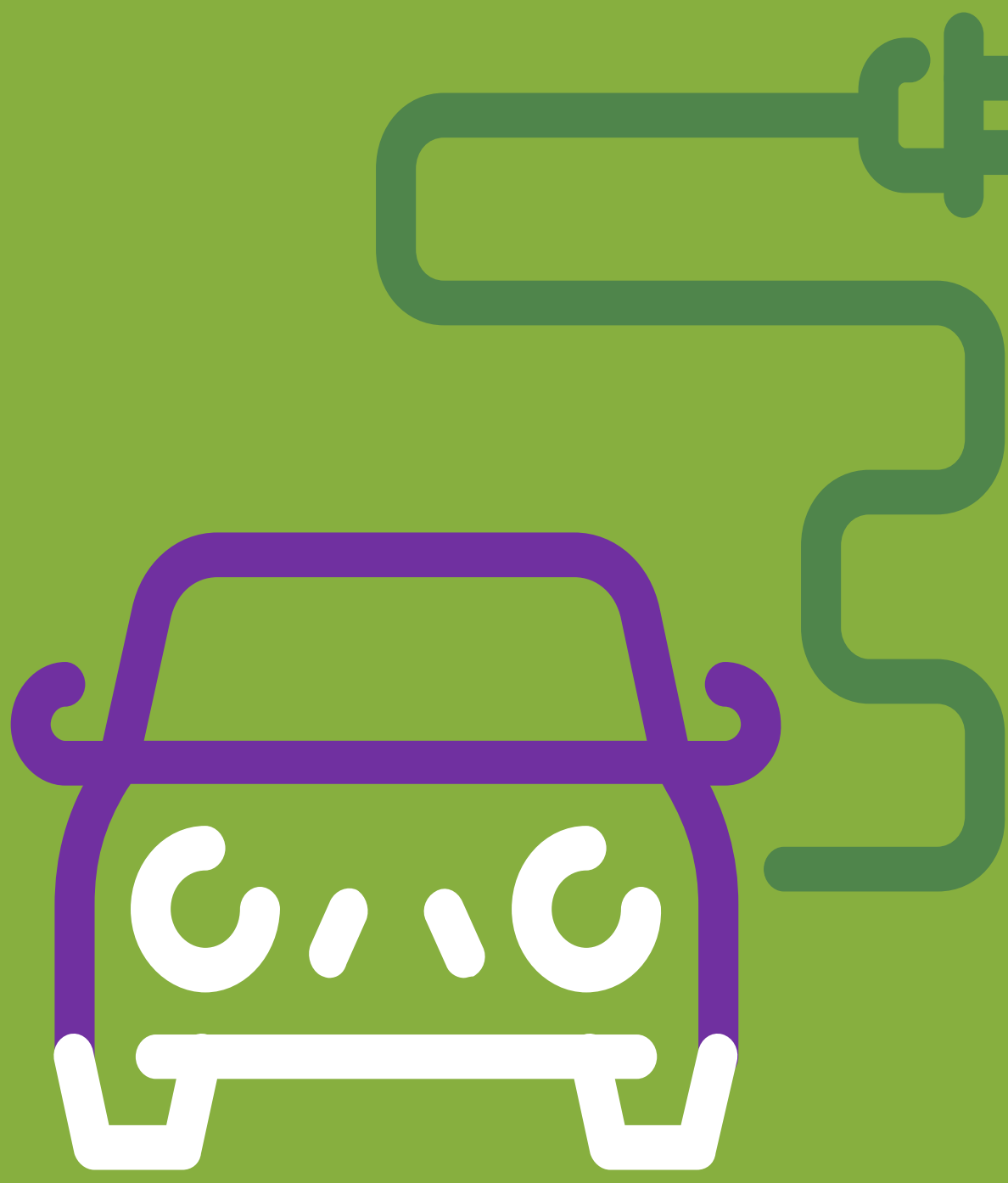
5. **Biodiesel:**
   Exploring the potential of fuels from renewable crops and waste cooking oil, MMU's research highlights their potential as viable diesel substitutes. They are also investigating the combustion characteristics and emissions of biodiesel made from waste cooking oil.

In conclusion, Manchester Metropolitan University, with its dedicated team and sophisticated facilities, is leading the charge in developing a sustainable transport future. The university's commitment to reducing the carbon footprint and advancing clean fuel technologies is indeed commendable.

06

Western Sydney University

Momentum



BEST PRACTICE CASE STUDY

WESTERN SYDNEY UNIVERSITY

AUSTRALIA

SDS 4HEI
HIGHER EDUCATION MISSION FOR SUSTAINABILITY

- ECONOMIC ✓
- SOCIAL ✓
- ENVIRONMENT ✓
- CULTURAL

OVERVIEW

Western Sydney University (WSU), a pioneering Australian institution, leads in sustainability. Ranked #1 in 2023 Times Higher Education Impact Rankings, WSU integrates United Nations SDGs into curriculum, research, and operations. Collaborations with global partners drive transformative change, exemplified by the Australia India Water Centre, fostering innovation and equity for a sustainable future.

SUSTAINABILITY CHALLENGE

Western Sydney University (WSU) faced the critical sustainability challenge of addressing complex environmental and societal issues, including climate change, social inequality, and water security. Amid a rapidly changing world, the institution recognized the urgent need to align its operations, research, and education with the United Nations' Sustainable Development Goals (SDGs) to drive positive impact.

WSU's commitment to sustainability stemmed from the recognition that traditional approaches were insufficient to address the interconnected challenges of the modern era. The institution sought to create a comprehensive and holistic framework that not only focused on environmental conservation but also prioritized social equity and resilience. The need to adapt to a warming climate, promote sustainable water management, and equip graduates with the skills to drive meaningful change were central concerns.

WHICH SUSTAINABLE DEVELOPMENT GOALS?

SDG 1	No Poverty	
SDG 2	Zero Hunger	
SDG 3	Good Health & Wellbeing	
SDG 4	Quality Education	
SDG 5	Gender Equality	
SDG 6	Clean Water & Sanitation	✓
SDG 7	Affordable & Clean Energy	
SDG 8	Decent Work & Economic Growth	
SDG 9	Industry, Innovation & Infrastructure	
SDG 10	Reduced Inequality	✓
SDG 11	Sustainable Cities & Communities	
SDG 12	Responsible Consumption & Production	✓
SDG 13	Climate Action	
SDG 14	Life Below Water	
SDG 15	Life on Land	
SDG 16	Peace & Justice Strong Institutions	
SDG 17	Partnerships to achieve the Goal	

INTERVENTION

SUSTAINABILITY EVOLUTION

HOW IT STARTED

Western Sydney University's (WSU) sustainability journey began with a recognition of the pressing global challenges posed by climate change, social inequality, and environmental degradation. In response to this, the institution initiated a process of introspection and strategic planning to integrate sustainability into its core mission. This evolution was catalysed by a desire to align with the United Nations' Sustainable Development Goals (SDGs) and promote positive change within the institution, the community, and beyond. This commitment led to the development of a holistic sustainability framework encompassing curriculum reform, operational improvements, impactful research, and collaborative partnerships.

KEY ACTORS:

- **University leadership, including Deborah Sweeney (Deputy Vice-Chancellor and Vice-President, Research, Enterprise, and International) and Kevin Dunn (Pro Vice-Chancellor, Research), provided visionary guidance.**
- **Faculty members, researchers, and students engaged in curriculum redesign, ensuring sustainability principles were embedded across disciplines.**
- **Collaborations with local and global partners, exemplified by the Australia India Water Centre, extended the institution's impact.**
- **The wider community, including staff, students, and the public, participated through events like the Thought Leadership Event Series, fostering collective engagement and driving the institution's transformational sustainability journey..**

SUSTAINABILITY SOLUTIONS

1. **Strategic Planning and Reporting:** WSU produced annual institutional sustainability reports, tracking commitments to the UN-led Race to Zero for Universities and Colleges. A sustainability decadal ambition, Sustainability and Resilience 2030, was developed, outlining a roadmap to address climate adaptation, mitigation, and social inequality.

2. **Operational Initiatives:** The institution adopted a sustainable energy plan with targets for carbon neutrality by 2023 and climate positivity by 2029. This included transitioning to 100% GreenPower accredited electricity supply, developing a carbon transition plan, and implementing solar car parks and rooftop PV.

3. **Curriculum Integration:** WSU embedded sustainability across the curriculum, from undergraduate courses to microcredentials. New offerings included specializations in climate justice, equitable technologies, and eco-social design, fostering sustainability literacy among students.

4. **Research Excellence:** The university supported innovative research addressing sustainable development challenges, such as climate change and social injustice. Researchers were encouraged to align their work with SDGs through keywords and metrics, while research achievements were celebrated through publications like Future Makers.

5. **Partnerships and Collaboration:** WSU collaborated closely with local and global partners to amplify impact. Initiatives like the Australia India Water Centre engaged village communities to address water security and sanitation challenges, showcasing the power of collaborative research.

6. **Thought Leadership and Community Engagement:** The institution extended its thought leadership to the community through activities like the Thought Leadership Event Series, engaging the public in sustainability initiatives and fostering a sense of collective responsibility.

7. **Mentorship and Advocacy:** WSU leveraged its rankings success to mentor other universities, guiding them in aligning their operations, research, and curriculum with SDGs. This mentorship extended through workshops, analytics, and presentations, fostering a broader culture of sustainability.

OUTCOME

ENHANCING SUSTAINABILITY

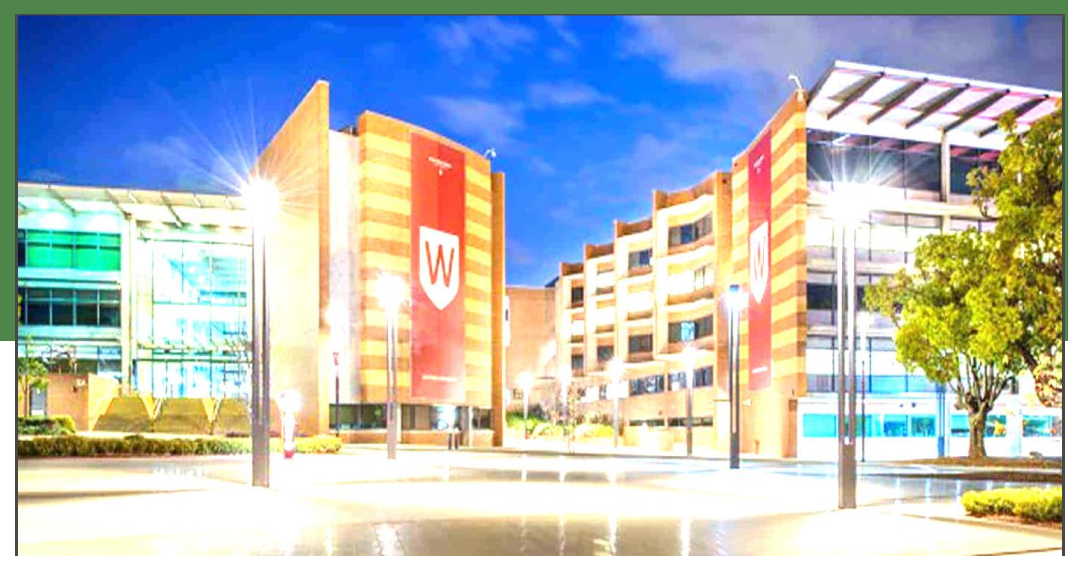
Western Sydney University (WSU) has achieved a profound and multi-faceted enhancement of sustainability across its operations, research, curriculum, and engagement efforts. Through its strategic alignment with the United Nations' Sustainable Development Goals (SDGs), WSU's comprehensive approach has yielded tangible outcomes.

Operationally, WSU's commitment to carbon neutrality and climate positivity by 2029, exemplified by achieving 100% GreenPower accredited electricity supply ahead of schedule, has significantly reduced its carbon footprint. The institution's sustainable energy plan, carbon transition strategy, and infrastructure developments such as electric vehicle charging and solar installations have contributed to a more environmentally responsible campus.

Academically, the integration of sustainability principles across curricula has produced graduates with enhanced sustainability literacy, capable of addressing complex global challenges. Specializations in areas like climate justice and eco-social design empower students with the knowledge and skills to drive meaningful change.

KEY SUSTAINABILITY COMPETENCES

Key Competencies Driving WSU's Sustainability Success: A Multifaceted Approach to Transformation



The sustainability journey undertaken by Western Sydney University (WSU) demonstrated a range of key competencies that were essential for its success:

Strategic Vision: WSU showcased a clear strategic vision by aligning its efforts with the United Nations' Sustainable Development Goals (SDGs), setting ambitious targets, and outlining a sustainability decadal ambition. This vision guided their actions and decisions.

Leadership and Collaboration: Effective leadership, led by individuals like Deborah Sweeney, facilitated collaboration among diverse stakeholders, including faculty, researchers, students, and global partners. This collaboration was crucial for integrating sustainability across operations, curriculum, and research.

Transparency and Accountability: The production of annual sustainability reports and tracking progress against commitments demonstrated transparency and accountability, fostering trust and a culture of responsibility within the institution.

Innovation and Adaptability: WSU demonstrated innovation by implementing operational initiatives such as sustainable energy plans, carbon transition strategies, and infrastructure developments. Their ability to adapt and fast-track targets, such as achieving 100% GreenPower accredited electricity supply ahead of schedule, showcased adaptability.

Curriculum Integration: Embedding sustainability across the curriculum required curriculum design and development skills, ensuring that students acquired knowledge and skills aligned with SDGs.

Research Excellence: The university showcased research excellence by supporting innovative research that addressed sustainability challenges, contributing to solutions for climate change, social injustice, and other global issues.

Partnership and Engagement: WSU's collaborations with local and global partners, as exemplified by the Australia India Water Centre, demonstrated their ability to forge impactful partnerships and engage communities to drive change.

Advocacy and Communication: Leveraging their ranking achievements, WSU effectively advocated for sustainability across the sector, showcasing strong communication skills and the ability to inspire others.

Sustainability Literacy: The institution's commitment to sustainability literacy through curriculum reform and specialized offerings highlighted their dedication to educating a generation of graduates equipped to address global challenges.

Long-Term Vision: WSU's development of a sustainability decadal ambition and commitment to targets beyond the short term displayed a long-term vision and dedication to sustainable transformation.

Community Engagement: Initiatives like the Thought Leadership Event Series and community engagement efforts showcased their ability to engage the wider public and foster a sense of shared purpose.

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