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GREENO2 NEWSLETTER

Issue #3, 2025

This Newsletter provides an update on the latest developments and activities within the GREENO2 project. We are pleased to take this opportunity to share our progress and the spirit of collaboration that continues to drive the project forward.

In this edition, we would like to:

- introduce all project partners and highlight their contributions,
- present a selection of insightful articles prepared by experts from AKSiM in Toruń,
- showcase examples of good practices implemented at AKSiM, particularly the active involvement of student volunteers who played a key role in presenting project outcomes.

Their engagement illustrates not only the academic dimension of GREENO2, but also its educational and community-building mission.

We warmly invite you to explore the following pages and discover how the partnership within GREENO2 continues to create innovative, inclusive, and sustainable results for the benefit of all stakeholders. 🌍💡

GREENO2: Transforming Universities into Sustainable Green Roof Campuses

The GREENO2 project is an Erasmus+ initiative uniting 8 European institutions — 4 universities, a cultural academy, a research institute, and two companies from Greece, Spain, Romania, Poland, Italy, and Ukraine. Coordinated by the University of Tuscia (Italy), the project aligns with key EU strategies, including the EU Climate Change Adaptation Strategy 2021 and the EU Biodiversity Strategy 2030. GREENO2 aims to transform university spaces into sustainable learning environments by promoting the implementation of green roofs as research and education hubs. These eco-friendly spaces foster well-being, active participation, and environmental awareness within academic communities.

The project seeks to cultivate ecological responsibility by engaging students, academics, and administrative staff. It provides new educational models, technological tools, and green infrastructures that not only enhance sustainability in higher education but also contribute to the broader green economy. Ultimately, GREENO2 aspires to inspire lasting behavioral change and promote sustainable development through innovative campus environments.





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🌐 Meet the participants 🌐

The University of Social and Media Culture (USMC) / Akademia Kultury Społecznej i Medialnej w Toruniu – Akademia Nauk Stosowanych (AKSiM), established in 2001 by Rev. Tadeusz Rydzyk, offers a diverse range of programs, including Social Policy, Media Culture, Political Science, Computer Science, Journalism, Social Communication, Nursing, Law, and Medicine. Accredited by the Polish Accreditation Committee, the university consistently receives positive evaluations, with Journalism and Social Communication recognized as 'outstanding.' USMC continues to expand its facilities, emphasizing modernity and quality education.

<https://www.aksim.edu.pl/>



The University of Tuscia, is a public university. Through the activities carried out by the Department of Agricultural and Forestry Sciences, played a leading role in constructing a green roofs.

<https://www.unitus.it/en/>



UNIVERSITÀ
DEGLI STUDI DELLA
TUSCIA



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Gripen Europe is a research company established in Romania that develops collaborations with the aim of disseminating educational initiatives.

<https://gripeneurope.eu/about/>



Lim Srl is a company that develop skills in the areas of research, monitoring, audiovisual production, and website creation.

<https://limsrl.org/Lim>



Meet the participants!!!

The Panteion University of Social and Political Sciences in Greece was founded in 1927 and has played a primary role in the social and economic development of the country.

<https://www.panteion.gr/en/>





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Xenios Polis is an educational organization that caters to specific groups by providing training, educational materials, and awareness.

<https://xeniospolis.gr/>



The University of Cadiz (UCA) is a modern institution with 15 faculties spread across 4 university campuses.

<https://www.uca.es/?lang=en/>



The Taras Shevchenko National University of Kyiv is active for the implementation of various projects aimed at institutional, social and professional development,

<https://knu.ua/en/>



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**Greetings from volunteers from the University of Social and Media Culture in Toruń,
Poland!!! 🌳🌲🏡**



<https://www.facebook.com/61554915549564/videos/2107968103361540>

The Vital Role of Student Volunteers in International Projects

International initiatives such as GREENO2 clearly demonstrate the crucial contribution of student volunteers. Their commitment, fresh perspectives, and energy give ambitious projects both momentum and a tangible social dimension.

Students not only provide organizational support but also bring forward new ideas, help build bridges across cultures and academic environments, and ensure that projects remain relevant to the younger generation. Thanks to their involvement, initiatives like GREENO2 become more inclusive, innovative, and impactful.

At the same time, volunteering offers invaluable experience for the students themselves. Participation in international projects allows them to develop language skills, strengthen teamwork abilities, and build networks of contacts that may open professional opportunities in the future.

International projects need students just as much as students need opportunities to expand their passions and ambitions. The GREENO2 project is a prime example of how such collaboration can generate meaningful and lasting initiatives with global significance. 🌍💡

Here are some examples of good practices:



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ADVANTAGES OF GREEN ROOFS

Polluted air is filtered by
plants on green roofs
converting CO₂ into O₂,
which significantly improves
air quality.

AIR PURIFICATION



ADVANTAGES OF GREEN ROOFS

Increased biodiversity

Green roofs provide shelter
for small animals, insects
and birds. This is especially
important in urban areas
where there is mainly
concrete.



**Don't kill -
protect the Bees**

**It's all in your
hands**



**If you
take care
of nature,
it will
take care
of you**



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The smell of freshly cut **grass**
has effective stress-reducing
properties.



A little knowledge won't hurt... 😊

FUNCTIONS OF GREEN ROOFS

Green roofs in cities play an important role, bringing a number of benefits to the urban environment, the community and the buildings themselves. First and foremost, they improve air quality. Plants on green roofs absorb carbon dioxide (CO₂) and other air pollutants, helping to improve the city's air quality. In addition, green roofs help mitigate the urban heat island effect by absorbing and reflecting solar radiation, which in turn contributes to lower temperatures within urban areas. Green roofs increase water retention. The substrate on green roofs absorbs rainwater, reducing the amount of precipitation that goes into urban drains. This also helps reduce the risk of urban flooding. Another function is natural thermal insulation, which reduces the loss of heat from buildings in winter and the heating of buildings in summer. In addition, the thermal insulation offered by green roofs can help reduce energy consumption for heating and cooling buildings, which in turn reduces greenhouse gas emissions. Undoubtedly, an additional advantage of green roofs is the aesthetics and general improvement of public spaces. They contribute to improving the aesthetics of urban landscapes. They can also be used as recreational spaces, rooftop gardens or meeting places for residents. In addition, plants on green roofs provide habitat for biodiversity, including insects, birds and other small organisms, supporting local biodiversity in the urban environment. The introduction of green roofs is part of sustainable urban development, promoting harmonious cooperation with the surrounding environment. Green roofs are therefore an important part of urban planning, contributing to the creation of more sustainable and environmentally friendly urban areas. Their various benefits are making them increasingly popular for construction projects around the world.

Katarzyna Szyszko (AKSiM)



TYPES OF GARDENS ON ROOFS

The main types of roof gardens, by form of use, include intensive and extensive gardens. Intensive use rooftop gardens are areas that have been designed for intensive human use, much like traditional gardens at ground level. These gardens can be an attractive alternative to traditional gardens, especially in urban areas where green space is limited. Extensive-use rooftop gardens, on the other hand, are designed not to be used intensively by people. These are gardens that are typically designed for viewing rather than for use as recreational or leisure space. These gardens are designed to be easy to maintain and provide environmental benefits, while not being designed for intensive human use. In addition, there are other categories of rooftop gardens, such as mixed-use gardens, which combine elements of both intensive and extensive use of the space. Each type of roof garden has its own advantages and disadvantages, and choosing the right one depends on your preferences, budget, location and weather conditions.

Katarzyna Szyszko (AKSiM)



GREEN ROOFS WITH EXTENSIVE USE

Green roofs with extensive use are an innovative solution in the field of architecture and ecology that is gaining popularity around the world. These are roofs that use a layer of vegetation instead of traditional roofing materials, such as tiles or sheet metal. Extensive green roofs are typically lighter and less complicated to construct than intensive green roofs, making them more accessible to a wide range of users.

Extensive green roofs are ideal for commercial, residential and public buildings. They can be used on garages, office buildings, apartment blocks or even industrial buildings. Due to their light weight and minimal maintenance requirements, they are an attractive option for property owners who want to improve the ecological footprint of their building.

Extensive use green roofs have a relatively low weight, making them suitable for installation on a variety of building types, including flat and pitched roofs.

Vegetation on these types of roofs is usually resistant to extreme weather conditions and requires minimal maintenance. Plants such as sedums and grasses are ideal for this type of roof.

Extensive green roofs are designed to be self-sustaining in terms of water. In most cases, rain and moisture from the air are enough to irrigate them.

Green roofs help reduce the heat island effect in cities, improve the thermal insulation of buildings, reduce noise and absorb air pollution.

Despite their many advantages, extensive green roofs also have some challenges. The need for proper drainage and water barrier design are important aspects to consider during installation. In addition, while maintenance is minimal, it cannot be completely neglected - periodic inspections are essential to ensure the roof functions properly.

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Extensive use green roofs are an excellent solution for individuals and companies looking for green and economical construction solutions. Their ability to improve the quality of urban life, reduce emissions and enhance architectural aesthetics makes them worth considering in modern construction projects.

Katarzyna Szyszko (AKSiM)



INTENSIVE USE GREEN ROOFS

Intensive use green roofs are an advanced and versatile architectural solution for creating rich green spaces on top of buildings. Unlike extensive green roofs, which are lightweight and require minimal maintenance, intensive roofs are more like traditional gardens and parks, offering more options in terms of both vegetation and functionality. Intensive green roofs are ideal for residential buildings, hotels, office complexes and public facilities that want to create unique spaces for human use. They can be a place for people to meet, relax, and also serve as additional utility spaces. Some intensive green roof designs even include landscaping elements such as paths, ponds and pergolas. Because of their complexity and importance, green intensive roofs pose engineering and construction challenges for designers and building owners. It is important to provide adequate support structure, drainage systems and waterproofing. Installation and maintenance costs are also higher than for extensive roofs, which can affect budgets and long-term planning.

Green intensive roofs can accommodate a variety of plants, from lawns to shrubs to small trees and flowers. This makes them more attractive and can serve a recreational function.

Intensive roofs are much heavier than extensive ones, as they require a deeper layer of substrate that can support a variety of vegetation. This requires a robust building structure.

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With a larger surface area and diverse vegetation, intensive roofs can be used as recreation areas, public spaces and even vegetable gardens.

Due to their complexity, intensive roofs require regular maintenance, irrigation and monitoring of drainage systems.

Intensive use green roofs are the perfect solution for those who want to create a green oasis in the urban landscape. They offer not only aesthetic benefits, but also environmental benefits such as improved air quality, thermal insulation and increased urban biodiversity. Thanks to their versatility, they can transform the roofs of buildings into vibrant places that benefit both people and the environment.

Katarzyna Szyszko
AKSiM Toruń Poland



VERTICAL GARDENS

Living walls, also known as green walls or vertical gardens, are an innovative solution used in urban architecture that involves covering vertical surfaces with plants. They make the urban environment greener, more aesthetically pleasing and environmentally friendly. Living walls are an excellent way to introduce nature into urban spaces, while improving the quality of life for residents. Living walls can be found in various parts of the city, such as office buildings, hotels, shopping malls, schools and even on residential buildings. They are often used as decorative elements, but also as a means to improve the energy efficiency of buildings. In city centers, where there is not enough space for traditional gardens, living walls allow the use of vertical surfaces to introduce greenery. Living walls are an innovative and beautiful solution that can bring numerous benefits to cities. They bring nature into the urban environment,



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improve air quality, provide thermal and acoustic insulation, and contribute to the aesthetics of the urban landscape. Their use in cities is increasingly popular, and the future of green walls seems promising, especially with the growing interest in sustainable solutions in architecture.

Despite its many advantages, living walls pose some challenges for designers and building owners. It is necessary to design an adequate irrigation system, drainage, and provide a suitable structure to hold the plants. In addition, living walls require regular maintenance, which involves costs and the involvement of specialists.

Living walls use special structures to hold plants on vertical surfaces, such as building walls, facades or fences. In this way, unused space in the city can be developed.

A wide range of plants can be used in green walls, including vines, mosses, ferns, as well as flowers or small shrubs. This gives great design possibilities and allows you to adapt the appearance of the wall to the environment.

Living walls help reduce air pollution, absorb carbon dioxide and produce oxygen. In addition, plants can act as thermal and acoustic insulation, reducing energy consumption in buildings.

Green walls introduce elements of nature into cities, improving the aesthetics of urban landscapes. They can become a tourist attraction and improve the well-being of residents.

Katarzyna Szyszko



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Promo material!!!!

<https://www.youtube.com/watch?v=9wMbZrMYzwY>



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