

FINAL REPORT



Summer University 2022



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INTRODUCTION

The **Green.Building.Solutions. (GBS) Summer University** offers first-hand knowledge about sustainable architecture and engineering expertise bundled into a three-week academic summer program based in the world's most liveable city: Vienna. This UNESCO-awarded program addresses a broad range of professions such as architecture, urban planning, building engineering, environmental management, project development and construction.

GBS is organized by **OeAD student housing** in close collaboration with BOKU University and TU Vienna, along with a variety of further partner institutions. It showcases the Austrian in-depth expertise in ecological construction and sustainable urban planning to a constantly growing audience from all around the world.

47 participants from 26 nations completed the summer university successfully in 2022. Being back to Vienna in person from July 16 to

August 7, after having been held online for the last two years, the students came from backgrounds in the fields of architecture, urban and regional planning as well as civil-, energy- and environmental engineering. Working together in groups, they produced high quality project designs dealing with the topic of "Developing a new sustainable residential area in the south of Vienna under the aspects of decarbonization, social inclusion and climate change adaptation".

GBS 2022 was a huge success evidenced by the quality of the project design work outcomes and by the positive feedback from both students and the lecturers involved. Based on these experiences, we strive to facilitate the participation of an expanding audience for the 2023 edition to empower even more people with the awareness, knowledge and expertise about how to build sustainably in the future.



Opening at Kuppelsaal, TU Wien with 47 GBS students from 26 nations and the organizing team.

WHY GREEN.BUILDING.SOLUTIONS.?

The **future growth of cities and increase in population** pose several challenges to municipalities, city planners and architects. To create ecological and sustainable solutions for urban development and the building sector, education, problem awareness and interdisciplinary collaboration are crucial.

Mitigation of the consequences of ongoing climate change demands the immediate reduction of CO₂ emissions in the construction sector. Energy efficiency, climate neutral approaches and circular economy concepts need to be consistently implemented across the industry. Therefore, sharing the best practices for net-zero energy housing, adaptive building systems and positive energy districts will pave the way for the development of future-proof solutions.

Existing buildings and infrastructures will continue to represent most of our urban built environment. Efficient renovation of existing buildings is essential to achieve objectives such as the Sustainable Development Goals. This needs to be a concerted effort supported from both a financial and political perspective. Each day, 30 hectares of land are claimed by infrastructure and construction across Austria. This development has to be put to a halt and, in order to do so, the use of existing buildings and

already sealed areas needs to be increasingly incentivized to make these more attractive.

The circular economy concept, as well as recycling and re-use of construction materials, need to become the default solution for the construction sector in a society where poor resource management often leads to waste. A widespread change in behaviour needs to take place across the value chain of buildings to reduce their significant carbon footprint.

Since 2011, GBS has showcased how **sustainable buildings are not only possible, but can also achieve the highest quality standards, delivering a healthy living environment** for generations to come. This is demonstrated by pioneering architects, planners and engineers sharing their personal experiences and best practices. Assisting the transition from the postmodern industrial era towards a circular and regenerative society, in which the urban built environment plays a central role, the aim of the GBS is to provide participants with a state-of-the-art toolset with which they can immediately leverage their careers.

We would like to thank all alumni, teachers, partners, sponsors, and the whole team for their everlasting dedication and for making GBS a great success in 2022.

Best wishes, the organizing and management team

Günther Jedliczka (OeAD student housing), Karin Stieldorf (TU Vienna), Georg Reinberg (Reinberg Architekten ZT), Gerhard Zucker (Austrian Institute of Technology), Doris Österreicher (BOKU Vienna), Marcello Turrini (Università Parma), Barbara Mayr (OeAD student housing)

WHY OeAD STUDENT HOUSING?

Sustainability is of great importance to OeAD student housing's mission. As a responsible non-profit organization, the company takes the lead in providing affordable, sustainable and energy efficient accommodation to 12.000 international students and guest professors throughout Austria per year. From those, 3.000 tenants are accommodated in energy efficient student residences.

Across the numerous buildings which have been certified to the highest standards, our residents have the added benefit and opportunity to experience new innovations in passive house technologies first-hand. Through using high-quality building materials and efficient insulation, an average "passive house for active students" needs 90% less thermal energy than similar buildings based on average energy consumption. It offers a healthier and more comfortable living

environment, for example in terms of air quality. The company is deeply engaged and dedicated to making the best possible use of resources to achieve these ambitious goals. And successfully so: Each year, the pioneering buildings are visited by local and international high-level delegations.

OeAD student housing is multiply awarded for its innovative buildings as well as its activities: e. g. with the FIABICI World Prix d'Excellence (2019), the Green Product Award (2021) and the SDG Award (2020). The mineroom in Leoben reached klimaaktiv GOLD Standard and was awarded with – amongst others – the "Steirischer Holzbaupreis" and the Passive House Award in 2021. The GBS won the "Green Product Award" in 2022 ("Architecture & Tiny Houses") and received an award from the radio Ö1 initiative "Reparatur der Zukunft".

The initiative

Drawing from its own expertise as a property developer and operator, OeAD student housing is uniquely positioned to disseminate knowledge in the sustainable building sector, which is the primary target of the GBS Summer University. Globally, Austria is a forerunner in energy efficient and climate-conscious building practices. The country is continuously doing research on green, ecological and alternative solutions in this sector, which has allowed OeAD student housing to engage with world class experts. GBS acts as a platform for

local experts to convey their insights and knowledge to an international audience of people who consequently become pioneers in this field in their home countries.

Over 440 alumni from 88 nations worldwide have become GBS ambassadors in their home countries over the past 12 years. During the intensive three-week program, all international participants are gathered under one roof: one of the OeAD student housing guesthouses certified to the passive house standard, like the guesthouse at Molkereistraße in 2022.

CHALLENGES IN THE BUILDING SECTOR

"Managing urban areas has become one of the most important development challenges of the 21st century. Our success or failure in building sustainable cities will be a major factor in the success of the post-2015 UN development agenda."

John Wilmoth

Director of UN DESA's Population Division

Population growth, the intensification of urban agglomerations together with the consequences of climate change and the COVID-pandemic have already begun to pose major challenges, and this is expected to continue in future decades. This constitutes not only the urgency for solutions in the building industry but also brings to the forefront social issues like population growth, migration and integration on a political level.

Global goals like the COP 21 Paris Agreement to keep global temperature rise below two degrees above pre-industrial levels, or the Sustainable Development Goals serve as foundational guidelines for the GBS summer university. In addition to raising general awareness, GBS offers a unique chance to learn actionable skills and expertise that will increasingly be in demand in the future. Thermal renovation and insulation,

construction of energy efficient buildings and even plus energy districts are part of the global climate change adaptation and mitigation strategy. This implies not only the necessity to reduce greenhouse gas emissions from a technical perspective but also the need for healthy changes in economic systems to enable those reductions.

Renewable energy technologies and their uses are well established in a lot of northern countries, where harvesting sunlight and wind is part of national priorities. Renewables would be able to replace, or at least substitute, fossil fuels, eliminating the need for coal mining in the process. To tap the full potential of these renewables, future architects and building engineers need to focus on renewable energy and innovative technology integration in their design process.

THE CURRICULUM

The **central topics** of GBS are sustainable architecture and resource-efficient planning including renewable energy concepts. This naturally includes the integration of ecological aspects and new technologies, but also tackles socio-political issues. The program gives participants a unique opportunity to learn about specialized content from an interdisciplinary point of view, in an international and multicultural setting. The imparted knowledge both deepens the existing competences of the participants and broadens their perspectives. The overall aim of the course is to generate awareness and develop long-lasting know-how, ultimately leading to real world implementations.

The **target groups of the summer program** are architects, urban and energy planners, constructors, building and civil engineers as well as students and professionals from similar fields in the construction environment. We also invite people with fields of study such as resource planning, ecology, and landscape

planning to apply. The focus lies on academics and professionals; therefore, our minimum requirement is a successfully completed bachelor's degree in a building related field, as well as very good knowledge of the English language.

The three modules of GBS

The learning methodology includes lectures, workshops and excursions for each of these three modules:

Module 1. Sustainability in Building and Urban Planning

Module 2. Principles of Passive House planning

Module 3. Renewable Energies and Business Concepts

The GBS offers a **unique opportunity** for students, to gain 7 ECTS from BOKU University to connect with experts and like-minded people from all over the world. Thanks to our sponsors, we also can invite highly qualified students from low-income backgrounds based on a **scholarship system**.



Passive house pioneers on the stage at BOKU.



D. Österreicher talks about building for the future.

Features of the program 2022

This year, **47 people from 26 nations participated** in the GBS Summer University. They came from countries such as Mexico, USA, Nicaragua, Ukraine, Egypt, UK, Ireland, Nicaragua, Russia, Iran, Portugal, Italy, Spain, Serbia and many other countries.

There was a **total of 19 days of teaching** within **9 thematic blocks**. Renowned and dedicated lecturers, workshop leaders and facilitators contributed with their expertise and showed the participants the most recent and pioneering projects in Vienna. The program included:

- **Inspiring talks and discussions** about sustainable architecture, ecological building alternatives, passive house technologies, renewable energy production

and integrated urban planning.

- **A real-life case study project work** about a residential building for a city development area in the 23rd district of Vienna, which was executed in an international setting and in interdisciplinary project groups.
- **Building simulation workshops** by the Austrian Institute of Technology (AIT), to assess the energy demand and consumption of the proposed building design created as part of the project work with the software IDA-ICE.
- **Excursions, site visits and tours** guided by experts demonstrating Vienna's best practice examples of low energy housing, circular economy and sustainable urban planning.



Walking tour in aspern Seestadt and pioneering buildings.



Trip to the area of the former Ferry-Dusika stadium.



Vienna Culture: Courtyard café in the Hundertwasser Haus.



Excursion to project site with architect G. Reinberg.

Set up of the program in 2022

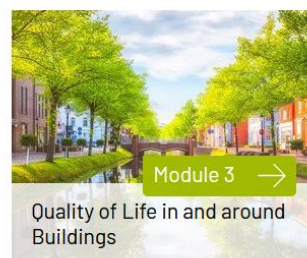
The **GBS Summer University** is organized and implemented under the leadership of OeAD student housing which is responsible for management and coordination of the master-level program.

The following **Austrian universities** and institutions provide main support and are actively involved in the content curation: University of Natural Resources and Life Sciences Vienna (BOKU), Technical University Vienna (TU Wien), University of Vienna, Danube University Krems, University of Applied Sciences (FH Technikum Wien), Austrian Institute of Technology (AIT) as well as Reinberg Architekten ZT. BOKU and TU provide the

lecture halls during the three weeks. The content is structured according to modules to interconnect the main topics in a better way:

In the first and second week, the students are introduced to the topics of green building, passive house technologies and energy efficiency. Additionally, they get to know about their interdisciplinary group project assignment, where their expertise is merged in the application of a real design project.

In the third week, the students implement the knowledge and contents gained on the design of the group project: a sustainable residential building in the 23rd district, producing highly qualitative outcomes.



The start of the program

The GBS Summer University starts on a Sunday, where the students are introduced to the program, the content and organisation, as well as to the topic of the project work. This is followed by an architectural tour through Vienna's inner districts, with emphasis on historical and architecturally important buildings. Afterwards, the students get to know each other during a vegetarian lunch at the OeAD student housing office. The last activity on this very first day is an icebreaker session and playing some introductory games to allow for the students to easily connect to each other.

On Monday morning, D. Österreichischer (BOKU University) and S. Schleicher (University of Graz) started with an overview of the current climate change issue to provide a starting point for the main content of GBS: how to make buildings more sustainable and future-proof. After that, the students presented their preparatory works dealing with green buildings and sustainable technologies in their home countries. This task is an initial assessment of the students' background knowledge and serves to expand horizons and to exchange the know-how and expertise from different parts of the world.

"A good life for all within the planetary boundaries" was the topic of the public opening event for the AEMS and GBS summer programs that was taking place on Monday afternoon in the TU Wien Kuppelsaal. The event welcomed 250 people on-site and another 40 people watching the livestream online. The keynote

speakers were Ernst Ulrich v. Weizsäcker (Club of Rome), Helga Kromp-Kolb, Anika Dafert (Fridays for Future) and Harald Frey (TU Wien). A final panel discussion, moderated by Nora Laufer (Der Standard), closed the official part before the audience used the chance for networking with dinner and wine. The event was recorded and is available on our YouTube channel: www.youtube.com/oeadhousing.



E.U. Weizsäcker & H. Kromp-Kolb at the opening podium.



G. Jedliczka welcomes students and the audience.



The AEMS & GBS opening event took place at TU Wien.

THE PROGRAM CONTENT

The content of the lectures was planned based on the modules of the curriculum and ranged from passive house technologies and renewable energy production to “greening” strategies for buildings. Thereby, we did not only invite representatives and guest speakers from long-standing partner universities, but also other internationally renowned pioneers. The lecture program covered a wide range of topics and was assembled in a modular structure, which closely followed the framework of the Sustainable Development Goals promoted by the United Nations. In 2022 the modules were specified as follows:

0. “Introduction and Orientation”

The program kicked off with a lecture by Stefan P. Schleicher (University Graz) together with Doris Österreicher (BOKU University) who introduced the students to the topic “Building(s) for the future” including a lively discussion.

1. “Global challenges and role of buildings”

Here, the focus was climate change resiliency – discussed from a socio-cultural and scientific perspective. Leading international experts such as Emanuele Naboni (University Parma), and local expert Peter Holzer (Institute of Building Research & Innovation) gave insights to climate sensitive design, adaptive strategies and climate change resilience.

2. “Historical development and introduction of green building design”

The general aspects of sustainable and regenerative design were discussed in this part. Georg W. Reinberg (Reinberg Architekten ZT) demonstrated the new aesthetics of green building architecture by way of a review of his

own projects. Another passive house pioneer, Martin Treberspurg (Treberspurg Architekten ZT), introduced the topic of the passive house standard and its development by visualizing his projects. Laszlo Lepp (Passivhaus Austria) and Günter Lang (passathon.at) went more into detail about the passive house certification and international growth of the standard. This was followed by a panel discussion on “How to implement passive house strategies and sustainability successfully as future architects”.

3. “Quality of life in and around buildings”

In this module, health and wellness were the main target of design at a construction level, but also at an urban level. Dawid Michulec (NEUBAU best.energy) explained how to achieve the thermal comfort in highly efficient buildings, and Isabel Mühlbauer illustrated the idea of increasing comfort by installing living walls and green roofs in detail. Another important aspect is the optimization of daylight: lectures, workshops and discussions were delivered by Gregor Radinger and Marcello Turrini (University of Parma) at Danube University Krems. Ghazal Etminan (AIT) talked about Positive Energy Districts (PEDs) and concluded with showcasing the European practice in design and implementation of PEDs. All the topics were carefully coordinated to convey theoretical knowledge, but also the practical application with use of examples.

4. “Socially inclusive and accessible urban spaces”

Of high importance here were topics of equity

and social inclusion, discussed by experts in the field of sustainable and participative urban planning. While architect and urbanism researcher Robert Temel talked about social housing in Vienna, Yvonne Franz (Universität Wien) explained the inclusive strategies in local planning for sustainability in-depth, also with reference to the surroundings of the project work area.

5. "Circular economy in the building sector",

Within this module, the economic and environmental advantages of recycling in the building sector have been explored in their scientific and practical aspects. Architect Thomas Romm (Thomas Romm ZT, Baukarussell) described strategies for resource-efficient construction and urban mining and guided a visit to the construction site of a future new sports arena (former Ferry Dusika stadium) - which was perceived as a highlight for the students. Roland Bechman (Werner Sobek AG) taught on the topic of "Tackling a Double Challenge - How to Build More While Using Less" and explained how to approach the highly relevant topic of recycling in the building sector. Johanna Kairi (Stora Enso) talked about "Wood as construction Material" before the students enjoyed a guided tour through the wooden university buildings Ilse-Wallentin-Haus and TüWI at BOKU.

6. "Energy concepts and technologies"

This is a cornerstone module of GBS, where the latest findings of technology for the use of renewable energy are taught by experts of AIT. While Thomas Natiesta talked about

technology of heat pumps and solar thermal collectors, Karl Berger gave insights into photovoltaic technology in architecture. Teresa Fink elaborated ideas about the integration of digital planning before the students visited AITs labs. Additionally, the "GreenWaterRecycling" research project and the innovative approach "Anergy" were introduced to the GBS students.

7. "Software toolbox"

In this module, the participants learned how to use the most up-to-date calculation software for energy demand and use in buildings. Philip Horn (ecob.consulting) introduced the technique of the building dynamic simulations and how to use the software IDA-ICE. Agron Deralla from the architectural office AllesWirdGut inspired the students with his lecture about BIM (Building Information Modelling) - another topic of increasing relevance in the digital planning era.

8. "Team design project"

This is the applied part of the knowledge that the students gain the program: the topic this year was sustainable residential housing as it will be explained in detail in the following chapter.



The unique light lab at Danube University in Krems.

Excursions, field trips and cultural events

The program included **ten excursions**, including the site visit of the project area in the 23rd district. Long-standing and dedicated partner **GRÜNSTATTGRAU** introduced the diverse opportunities of greening methods for buildings and its benefits on the climate in Vienna which was topped by a visit on their green office roof and a tour to some implemented green facades in the city.

At the full day excursion on the first Saturday, participants visited Vienna's Sonnwendviertel to see the **Bike and Rails passive house**, which was collaboratively built in a participative planning approach involving its residents with a special eye on sustainability aspects.

In the afternoon, the group went to **Blaue Lagune**, where CEO E. Benischek welcomed us warmly and presented the new construction center nearby. The second full day excursion took place at the Danube University in Krems. After lectures, the students visited the unique light-laboratory, did some light-measurements and closed with a lively discussion about daylight & architecture. The Heurigen-visit was the final program point of this day before the bus took us back to Vienna.

This year's program included the visit of the **aspern Seestadt** in a special format: while one group was cycling to collect the energy-efficient lighthouses of the passathon competition via an app, a second group did so by walking. The tour revealed lighthouse building from Stadlau to aspern Seestadt including the awarded and pioneering student

guest houses **GreenHouse** and **PopUp dorms**.

A special visit was organized to a **private apartment** which was renovated according to passive house standards during the early phase of the passive house movement. While the participants followed the explanations of the owner, he did not hesitate to share all the details and to answer all questions.

In addition to that, the klimaaktiv GOLD certified university buildings of **BOKU –TÜWI and Ilse-Wallentin-Haus** – were presented. Highlights for the students were the visits to the latest digital innovations in urban planning, such as the City Intelligence Lab and the Photovoltaic Lab at the **Austrian Institute of Technology (AIT)**.

Social and cultural activities are important components of GBS – and got even more important after the pandemic. These included the guided architectural tour of downtown Vienna, the visit of the two buildings designed by Hundertwasser: **The "Hunderwasser-Haus"** (1030) and the **Spittelau** waste incineration plant. In addition to these visits, also the **waltzing lessons** were received with great pleasure. **Optional sessions for the summer school "Alternative Economic and Monetary Systems (AEMS)"** and GBS were organized – two sport events, a **movie screening** of the film "NOW", and a **panel discussion** at TUtheSky including a discussion about "Monetary systems of the future" – which aimed to enable exchange, interaction and networking between the students, experts and local guests.

GROUP DESIGN PROJECTS

During the final week, the participants were dedicated entirely to the practical aspects of designing sustainably built environments. They took on a real-life project under the daily supervision of experts. This year's topic for the project work was **"Developing a new sustainable residential area in the south of Vienna under the aspects of decarbonization, social inclusion and climate change adaptation"**.

Each multicultural and -disciplinary group had

Requirements on the design

The design needed to respect the following:

- Development of the "big picture": a new vision for the community and its position in the area
- Area of short ways and cyclists & public transport
- Age and social diversity, multifunctionality, mixed use
- Density, tailor-made for the size of the place
- Urban gardening and food production
- Adaptability, flexibility, resilience

The groups consisted of 6-7 people, each with different fields of study and professional backgrounds. The teams were created to encourage interdisciplinary collaboration and exchange of knowledge as much as possible, enabling dialogue about architecture, building physics, engineering, planning and so on. Each project team had to develop a detailed plan of their building including floor plans, (façade) sections and views as the final output. This aimed not only at implementing the theoretical knowledge from the lectures into the project design, but also to simulate the energy demand – as elaborated in the software tool workshop –

to design a new sustainable residential building for Meischlgasse, located in the urban development area of the 23rd Viennese district. The following questions were a guidance to the planning process and of main interest: What are the main issues of good urban planning? Are there local characteristics and traditions to be included? Which level of density fits for the area or in general? Which height of buildings is favourable for this environment? What are the traffic system planning issues?

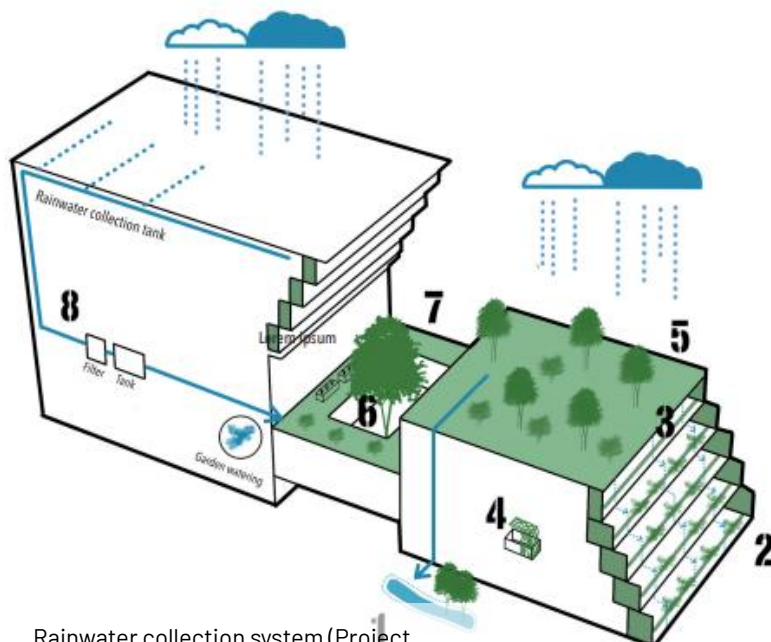
- Planning guidelines for energy efficient construction
- Regional building materials
- Massive support construction combined with fill-in of renewable materials
- Durability, repairability, longevity
- Recycling, upcycling
- Quality not quantity
- Enabling a sustainable way of life
- Social considerations / neighbourhood

which was based on an energy supply concept and provided a challenging task. Ecological and comfortable, but also biophilic design were aspects of high interest. Further, ecological material use and circular economy were targets for the students. Besides the above-mentioned reuse of materials, the adoption of environmentally friendly materials with a lower ecological footprint, maintaining and developing of green areas had to be considered. Finally, it was rewarding for the organizers to see how the implemented program encouraged the groups in the adoption of new ecological strategies for the projects.



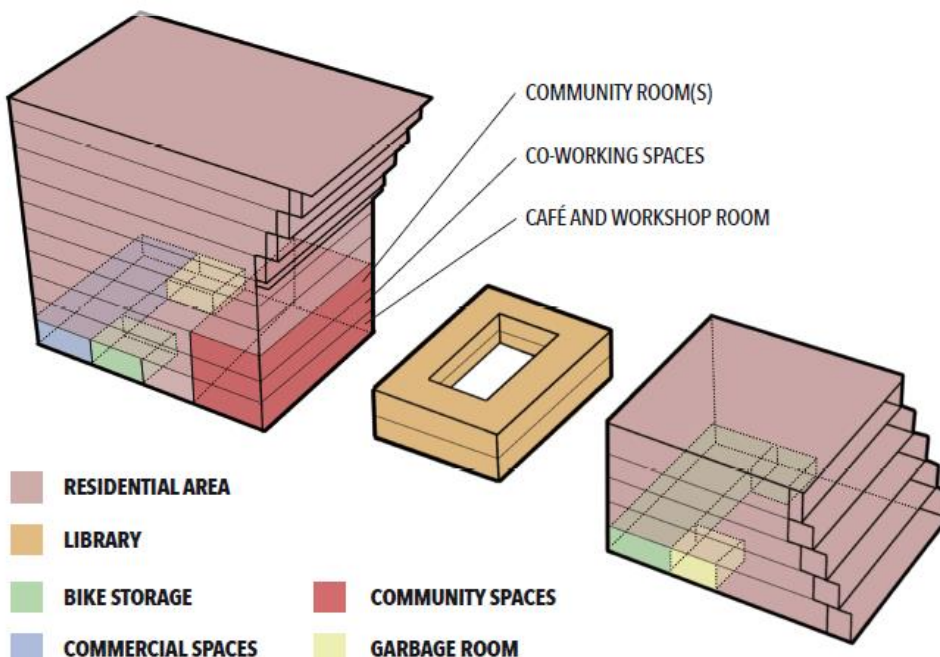
VIEW FROM THE NORTHEAST

View from the northeast (Project Group: *Pneuma*)



Rainwater collection system (Project Group: *4more Green*)

- 1 RAIN GARDEN**
Excess water from the roof surface is selectively discharged, stored and purified by substrate. Soil and vegetation counteract overheating through evaporation.
- 2 VERTICAL FARMING**
Private balconies contain plough boxes which can be used by residents for growing flowers, herbs or other plants. The Greening creates a positive microclimate, reduces noise and binds pollutants.
- 3 WATERING SYSTEM FOR STEPS**
Excess water from the roof surface is led by pipes to the balconies. Due to the delayed forwarding, the water can supply the plants with water at a later point in time.
- 4 BALCONY GREEN CLIMBERS**
Climbing plants on trellises (e.g., lattice) save space and provide shade for balconies on the east and west sides of the building. In this way, they also reduce the risk of overheating of the apartments through solar radiation.
- 5 INTENSIVE ROOF TOP GARDEN**
The intensive green roof on the south contributes to the microclimate of the street and also serves as a shady retreat in the summer for the residents and animals. The maximum height of the trees should be 10 meters.
- 6 GREEN COURTYARD**
An integrated and in the ground planted tree surrounded by benches and smaller plants gives shadow and reduces the temperature through evaporation for the courtyard, the library and the roof top garden.
- 7 LIBRARY ROOF TOP GARDEN**
Green roof with cultivation area for smaller edible plants on the substitute and additional planter boxes. This increases biodiversity and strengthens self-sufficiency in cities.
- 8 RAINWATER HARVESTING**
Rainwater collection and tank under the PV panels. The filtered and then led to a tank in the basement, re it is distributed and used for toilet flushing en watering.



Volumes and Functions (Project Group: *Urban Sprout*)

Final presentations

The final presentations of the group projects were held on the last Saturday of the program. Each group presented their design in Kuppelsaal to a **panel of experts and a jury** composed of Georg Reinberg, Karin Stieldorf, and Peter Holzer. Overall, the jury was amazed by the outcomes and design approaches the students were presenting. The participants managed to produce **interdisciplinary project outcomes of a very high quality** integrating the main aspects they were taught in the lectures. Considering the short timeframe allocated for the project, this is regarded as a great success for the GBS 2022. Everyone was highly satisfied

with the course, and the organizers were proud of the outstanding results.

The **official touch down** took place after the group presentations of the projects in Kuppelsaal. The program closed with a ceremony moderated by Eugene Quinn including the handover of the certificates by the project supervisors and the organizing team. The new graduates were happy and relieved to finally receive their well-deserved certificate. Afterwards, there was a great celebration before the GBS 2022 successfully closed!



Handing over of the certificates by architect G. Reinberg.



Poster exhibition at the final closing event in Kuppelsaal.



Students are relieved after the final presentations.



Student presents the project work of his group.

GBS and Pharos University collaboration

For the first time in 2022, there was a collaboration of GBS Summer University with Pharos University in Alexandria (PUA) and with the program "Passive House Design and High-Tech Architecture" by GBS Alumni and architect Ragy Elgendy. The aim was to stimulate exchange, networking and knowledge transfer between the two groups of students and to

promote a basis for the transfer of know-how between Austria and Egypt in the field of green building and engineering. While the students of Alexandria performed great and closed their program successfully after 2 weeks, the long-term goal of the collaboration is to establish an annual combined summer program for students of Pharos University together with GBS.



GBS 2022 students together with 17 Pharos students from Alexandria at the opening in Kuppelsaal, TU Wien.

ACHIEVEMENTS & FUTURE IDEAS

This year's 12th instalment of GBS was not only a success, but also exceeded the expectations of participants, organizers and lecturers. This year's graduates, who designed well-researched and high-quality projects, now have the chance to implement their newly acquired know-how in their home country. The "old but new" format demonstrated how the GBS program can create the space to effectively share pioneering knowledge with an international audience.

Intercultural networking and exchange of expertise – also with the students from Pharos University in Alexandria, as well as with the students of AEMS – were encouraged in several events. We are therefore happy for the GBS to have again taken place in person with the possibility for live interactions between different cultures, nations and professions. They all seized the opportunity to develop their skill set within a group of like-minded people with diverse backgrounds. Additionally, there were some alumni from the past two online-

editions, who used their voucher and offer to stay in the OeAD passive houses in Vienna in 2022, and could also connect with the team and this year's generation of GBS scholars.

Since its beginning in 2011, GBS hosted more than 440 participants from 88 nations from all over the globe. To continue this engagement and foster connections, there is a Facebook alumni group, an Instagram and a Twitter account, as well as LinkedIn. Furthermore, a newsletter is sent around four times per year to keep in touch with partners, contributors and alumni, as well as other interested people.

We are looking forward to 2023 and to hopefully allow for even more people to participate in the green building movement – especially as we are convinced that collaboration and knowledge-sharing build the very basis to further implement and spread the vision of sustainable building all over the world. Therefore, if you are interested in supporting us or are looking to contribute: we would be happy if you get in contact with us!

WHAT PARTICIPANTS SAY ABOUT THE GBS 2022



"I've found the Green.Building.Solutions. programme to be really informative. I've met so many people from lots of different backgrounds and I've found out how people can come together to make sure that we're building a sustainable future - also it's based in Vienna, which is an absolutely beautiful city full of culture."

Eloise Kalavsky, Acoustical and Audio Engineering, UK



"The GBS programme provided a lot of information about the different solutions that we have and the excursions allowed us to see these solutions with our own eyes, not just in lectures. Green.Building.Solutions. is really useful for my future as an architect."

Kirill Glushenko, Architecture, Russia



The Green.Building.Solutions. programme was a great opportunity for me. Although it was quite intense as we had a lot of work to do, it was also a lot of fun. I had the chance to learn new things and exchange ideas from my country with other students from all over the world, as well as seeing how the standard of green buildings is progressing.

Drilon Buleshkaj, Mechanical Engineering – Thermoenergetics and Renewable Energy, Kosovo



"I've really enjoyed the Green.Building.Solutions. programme even though I'm not in architecture or in engineering, I've been able to learn so much about sustainable architecture and technology, and I've definitely learnt a lot that I can bring back to the United States with me."

Erika Meilin Wu, Global Studies and Environmental Studies, USA



"I've really enjoyed the Green.Building.Solutions. programme. It helped me to figure out that I actually want to study architecture and learn more about all the different components and aspects of green buildings. There's everything from biodiversity to climate adaptation, including the landscaping, the materials, and the urban and social planning that we have to think of."

Sofie Christiane Brøgger Jensen, Environmental Studies & Politics, Denmark

We would like to thank all our partners, sponsors and supporters for making this event possible.

Academic partners:



Sponsors and financial support:



MANY THANKS TO

We are deeply grateful about the excellent contributions and the dedication by all the people involved in the program!

Special thanks to all our international and national partners:

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GBS will be back in July and August, 2023!

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