



Frederick University



משרד לתיאום פעולה אזורי
وزارة التعاون الإقليمي
The Ministry of Regional Cooperation

Spirit of Material - Building Sustainability: From Sustainable Design to Circular Economy & Talking Buildings

International Student Workshop

29 March - 03 April 2025
Xanthi, Greece

Hosted by DUTH,
Department of Architecture

Edited by
Elias V. Messinas



With the participation of:

GREEN FUND



ECOWEEK
... make change ... climate change

NetHood

Holon 2025

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By Elias V. Messinas

Texts: Elias V. Messinas Editor and Senior Writer

Images: As indicated

Cover: Workshop poster by Eirini Tsetine

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Drawing by Gabby Raveh

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Photo by Noa Dror



Photo by Gil Lupo

INTRODUCTION

The workshop focused on assembly, disassembly, and deconstruction of buildings. It addressed the question of how materials from one building - historic or industrial - can be reused for new uses. When a building is renovated or restored for new uses and energy upgrade, or is demolished for urban renewal, how its materials and building parts can serve as the raw material for new designs.

The new uses can be for new construction, new structures - heavy or light, for example, a pavilion, an installation, a seating area in the public space, or other structures.

The new structures were decided by the students, and were placed in the factory building, in spaces that were meaningful or could serve new uses, or support the future use of the factory as a museum.

This catalogue summarizes the activity and outputs of the workshop, showcasing the potential of circular practices in design. The design proposals developed by the students, demonstrate the creativity potential embedded in the reuse of existing materials, transforming them into new uses. This process, which we anticipate to become mainstream

practice in the coming years, positions the students into the future of the design and architecture practice, which will be guided by anticipated new guidelines, influenced in great part, by the need to preserve the embodied energy of the built environment, without limiting the new generations to create new urban and architectural spaces in the age of climate change.

❖ SPIRIT OF MATERIAL - BUILDING SUSTAINABILITY



Photo by Elias Messinas



Photo by Elias Messinas

ACKNOWLEDGMENTS

The organization of this workshop would not have been made possible without the support and contribution of many people and institutions. We wish to extend our appreciation to all and acknowledge them here.

We thank the Holon Institute of Technology (HIT) for leading the organization and logistics of this workshop and for the Ministry of Regional Cooperation for funding it.

We thank the Democritus University of Thrace (DuTh) for hosting the workshop in Xanthi, Greece and the

Frederick University for supporting it by participating with faculty and students.

We wish to thank in each institution the people that were key in the organization and implementation of the workshop:

The president of HIT Prof. Edward Yakubov for encouraging the engagement of faculty and students with sustainability issues in design, and the rector Shaul Bar Lev for encouraging HIT faculty and students to engage in international activity. Shmuel Goldberg and Mordechay Mishan for their contribution in the successful call for papers to the Ministry of Regional Cooperation.

We thank the Ministry of Regional Cooperation for its generous support of this workshop, and for an excel-

lent collaboration throughout the process.

We thank the International Office of HIT Mala Braslavsky and Galya Refua for their hard work throughout the Call process and the implementation of the workshop.

We thank Prof. David Rawet and Arch. Udi Cramsky for the support of the Faculty of Design and the Department of Interior Design at HIT respectively, in the academic aspects of the workshops.

We thank Prof. Dimitris Polychronopoulos for the support of the Department of Architecture at Democritus University of Thrace for the excellent and fruitful collaboration and the successful planning and implementation of the workshop.

We thank Prof. Byron Ioannou for the support of the

Department of Architecture at Frederick University for the excellent and fruitful cooperation in the planning and implementation of the workshop.

For the planning and implementation of the workshop, I personally thank Eirini Tsetine and Tany Saroglou for successfully undertaking the implementation logistics in Xanthi and at HIT respectively. Without their dedicated work, the workshop would not have been made possible.

I thank colleagues from Israel, Greece and Cyprus for their dedication in working with the students, their professional input, and the positive spirit they brought into the workshop process, leading to creative and innovative projects of high quality, in a very short time: Panagiotis Antoniadis, Udi

Cramsky, Asher Elbaz, Maria Grigoriadou, Zameret Harel Kanot, Byron Ioannou, Natasa Kapandriti, Gregoris Katnis, Christos Koutellis, Dimitris Polychronopoulos, and Michal Sarfaty.

Last but not least, I wish to thank the remarkable students who joined the workshop, who shared their exceptional abilities and talent, but also their character and positive attitude, contributing in making the workshop a meaningful experience in many aspects. I also thank the students for sharing their photographic materials, many of which have been included in this catalogue.

I thank cinematographer Gil Lupo for the high quality photographic documentation of the workshop, Amanda Gann for the language editing of the catalogue,

and Artemis Petropoulou for the graphics of the catalogue.

On behalf of the organizing committee of the workshop,

Elias Messinas,
Senior Lecturer,
Faculty of Design
Holon Institute of Technology
Head organizer
and coordinator

WORKSHOP SITE

Photo by Gil Lupo

THE FACTORY IN KAVALA

The workshop focused on the [Tobacco factory EOK](#) in Kavala, a deserted 1950s exceptional modernist building that has been designated for protection and restoration. The old Tobacco Factory is located on Konstantinou Palaiologou street. It is a historic landmark reflecting the city's rich tobacco industry past. Once a symbol of economic prosperity in the early 20th century, it now waiting to become a cultural site and house the Tobacco Museum, as part of Kavala's industri-

al heritage. The site is surrounded by cultural heritage buildings, old tobacco factories and city landmarks.

The factory is partially in use and partially deserted. Some of the historic parts have been modified by later interventions. The factory is slated to be turned into a museum with a mixed use for the first two stories, to continue serving offices and other functions. The factory was visited by the workshop group and served as a point of departure to focus

on the building as a 'materials bank' and as a source of urban mining and circular design. The building parts, to great extent remaining intact since the factory closed, include doors, windows, machines, metal lockers, bricks from the historic section of the factory, etc. were the basis for new design proposals, which were developed by the student teams in the workshop, and were finally presented in drawings, digital and physical scale models.



❖ SPIRIT OF MATERIAL - BUILDING SUSTAINABILITY

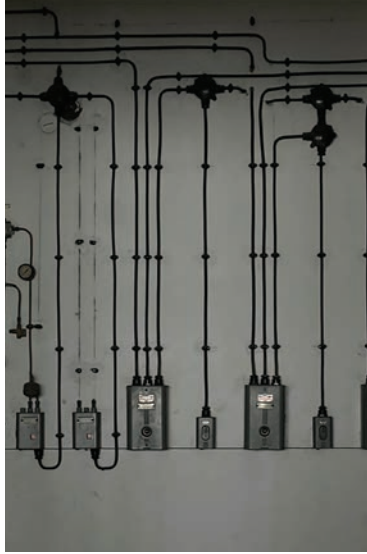


Photo by Maria Grigoriadou

WORKSHOP PROJECTS

IN BETWEEN

The workshop focused on a collaborative project inside the former Tobacco factory, a brutalist building filled with history. As a group of five, the group explored the entire space, taking photographs and analyzing the materials present on site — iron window frames, glass, metal, and electrical wires. Inspired by these elements, the group designed a suspended bridge that spans the building's central patio, connecting a future office area with a space designated to become a museum. The group chose to incorporate a small library on the bridge, creating a peaceful and imaginative environment that contrasts with the raw, abandoned character of the factory. The project, titled *IN BETWEEN*, reflects the group intention to reuse architectural frag-



ABOUT THE PROJECT

In our project, we designed a bridge that spans the atrium of the building, connecting an area designated for future offices with a section planned as a museum. The bridge includes a small library and quiet seating areas, all constructed using recycled materials sourced from the building itself.



RE-USED MATERIALS



OLD WINDOW FRAMES
Used as railings and for the bridge.



OLD MACHINES
(Used as Benches)



OLD WIRE
Used for the bridge structure.



OLD IRON
Used as library.



OLD WOOD
Used as a bench.



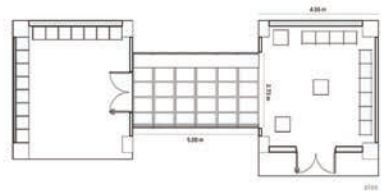
OLD MACHINES
Used as bench.



METAL
Used for railing the base side of the bridge.



WOOD MATERIAL
Used as a sitting surface that will be put on the old machines as you can sit on them comfortably.

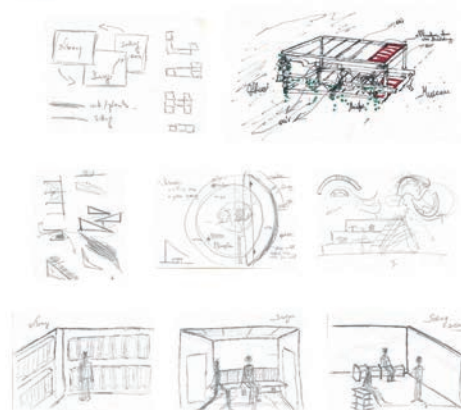


Render: Inel / Autodesk Revit / Developed on: / SketchUp / Virtual Day

ments as storytelling tools. Rather than discarding what remained from the building's past, the group gave these materials a new role in shaping its future. Through this design, the group aimed to preserve the building's identity while proposing a soft, human-centered intervention. This experience allowed the group to engage deeply with the site's physicality and history, turning it into a meaningful architectural gesture.



SKETCHES

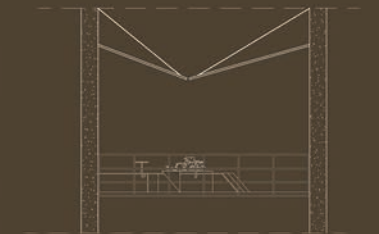
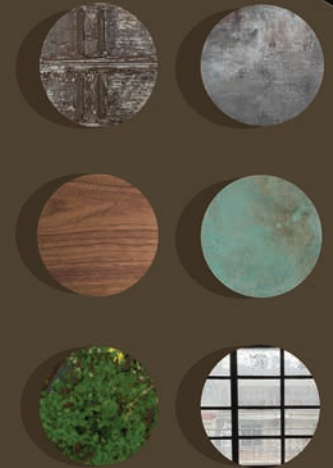
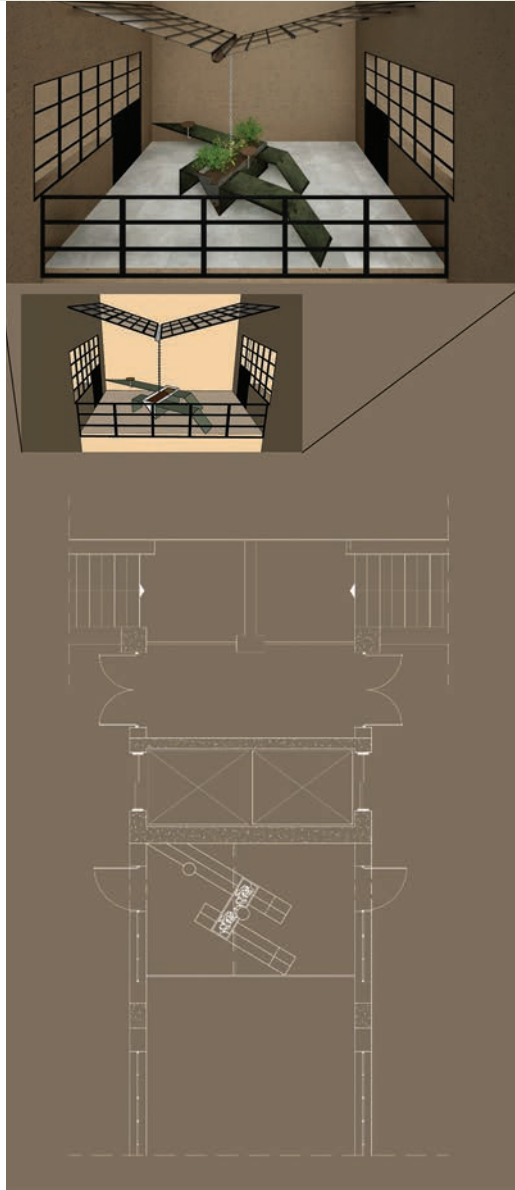


Participants:
 Noa Benismon,
 Amit Brucker
 Anni Georgiadou
 Kaliopi Gerapetriti
 Margarita Gianni
 Olga Violari

BEPANTA | BALCONY

As part of the “*Spirit of Matter*” workshop, the group collaborated to design a shared intervention in the former tobacco factory in Kavala, focusing on the building’s central atrium on the third floor. The group transformed it into a smoking and conversation corner for municipal office workers and future museum visitors.

The group worked with reclaimed materials found on-site at the factory — old window frames which were used as sunshades, locker doors which were turned into benches and tables, and metal mesh which was used as a rain gutter —combined with vegetation to soften the space. The location was chosen for its visibility and potential to serve as a restful moment within the building’s vertical circulation.



The Team

Aria Theodoulou, Evangelia Kampouta
Iakovos Kalli, Noa Bukai
Shani Arviv, Theodora Theodorou

The project promotes sustainability through reuse, minimal intervention, and natural integration. Team tasks were divided based on each member's strengths, allowing the team to learn from one another and build a coherent, shared design. As part of the workshop, the group also took part in guided tours—one through Kavala and the building itself, and another focused on the region's archaeology. These enriching and memorable experiences deepened the group's understanding of the site's historical and cultural layers, making the project process both educational and inspiring.

Participants:

Shavi Arviv
 Noa Bukai
 Iakovos Kalli
 Evangelia Kampouta
 Aria Theodoridou
 Theodora Theodorou



PLAY TIME

The workshop explored the abandoned tobacco factory and planned to create a new spatial intervention using only materials found on site. The group chose to work with metal window frames, large industrial pipes, and steel mesh — elements that once served the building's function and now offered structural and aesthetic potential.

The group began by constructing large circular tube slides that spanned between the building's upper floors and the ground level of the central patio. Using pipes and window frames, the group created sculptural connections that reimagined the way people might move through the space — not only vertically, but playfully and intuitively. These elements were both func-



tional and symbolic, adding a sense of joy and momentum to the heavy, static architecture of the abandoned factory.

Another key gesture was the decision of the group to open parts of the inner walls that faced the patio. These new cut-outs allowing the team to insert interior balconies, framed by the reclaimed window structures and enclosed with mesh

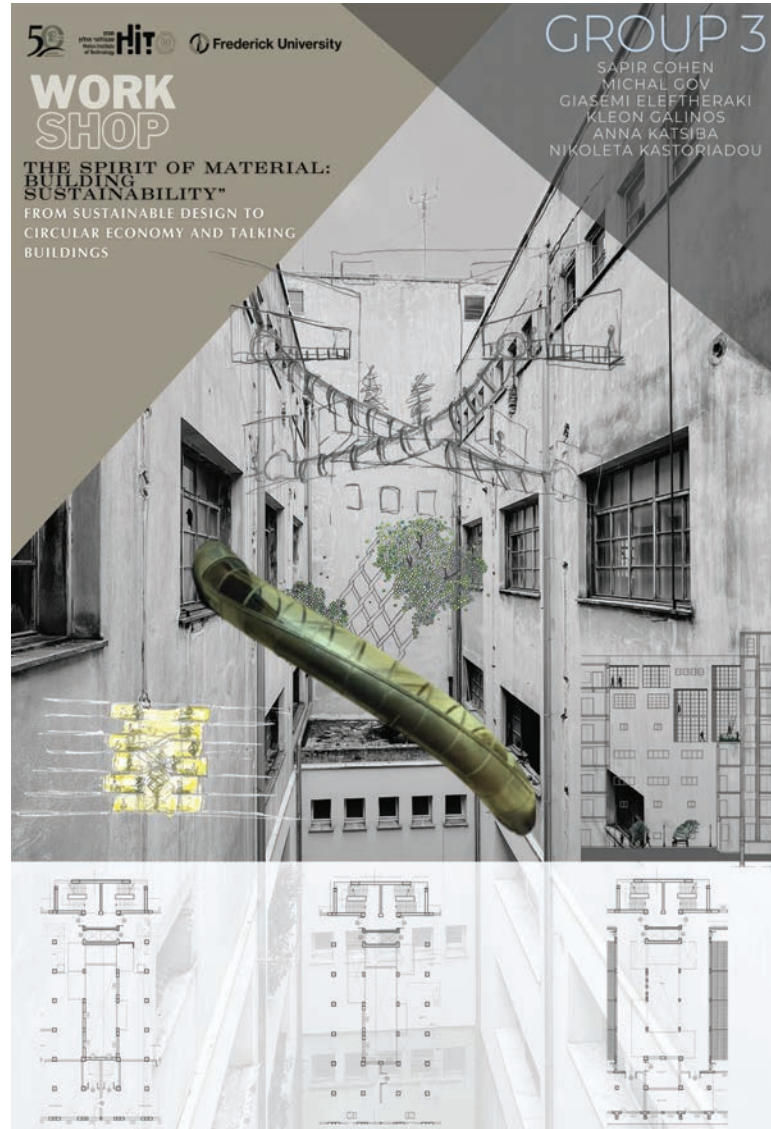
as railings. The result was a series of light, layered additions that overlooked the patio and opened up new lines of sight and interaction between the building's interior and its open core.

The group approach to sustainability focused on adaptive reuse: repurposing what was already there rather than importing new materials. Through minimal but intentional interventions,

the group revealed hidden possibilities within the existing structure. The project evolved through collaborative decision-making. Each team member brought their own strengths — whether hands-on building, conceptual thinking, or spatial visualization — allowing the process to remain flexible, inventive, and grounded in shared curiosity throughout the workshop.

Participants:

Sapir Cohen
Giasemi Eleftheraki
Kleon Galinos
Michal Gov
Nikoleta Kastoriadou
Anna Katsiba

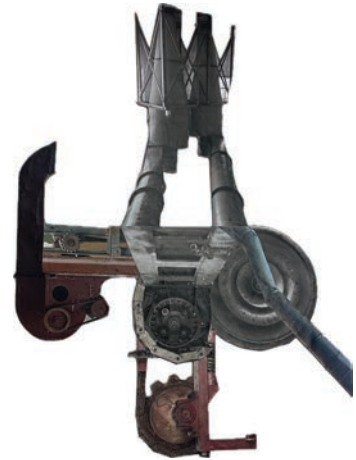


REVIVING TRADITION

Reviving Tradition is a project focused on revitalizing the EOK tobacco factory in Kavala. Once part of the city's thriving tobacco industry, the building now stands as a significant cultural and historical landmark. The aim was to transform the entrance of this former industrial site into an open, inviting public space, one that tells the story of the place while preserving its original identity. The new installation functions as an "urban lobby," inspired by the machinery and industrial elements once found in the warehouse. Materials such as raw steel, iron mesh, metal beams, and wood were deliberately chosen to emphasize the building's industrial character and to create a dialogue between past and present. The entrance was selected as the



location for this intervention because it marks the symbolic and physical threshold between the public street and the inner world of the former factory. It now serves as a welcoming space that invites both locals and visitors to engage with the site in a meaningful way. Sustainability played a key role in the project: through the reuse of existing structures and the selection of durable or recycled materials, the design follows the rules

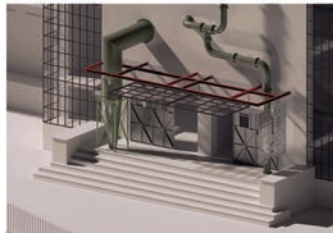


of circular design, protecting the environment and honoring the building's legacy. Throughout the process, the team worked collaboratively, each member contributing according to their strengths and interests—whether in conceptual development, historical research, architectural design, or visualization—resulting in a rich, layered, and impactful project that bridges memory and modern urban life.

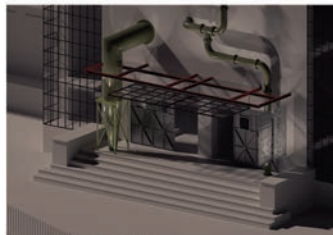


Reviving Tradition | An Outdoor Installation at EOK Warehouse

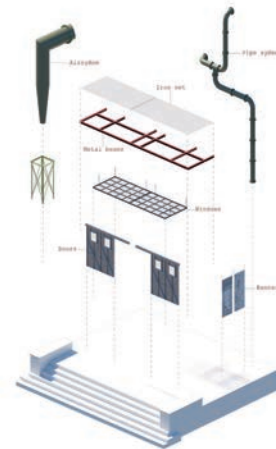
An innovative entrance design that transforms a former industrial site into a public space with a distinct identity. By preserving the spirit of the place and projecting it outward, the design invites passersby to engage with its story. Machine-inspired forms, raw steel, wood, and iron mesh come together to create an urban lobby that bridges past and present—turning a once-private factory into a civic threshold.



BIRDS EYE VIEW (MORNING)



BIRDS EYE VIEW (NIGHT)



AXONOMETRIC DIAGRAM (EXPLODE)

Participants:
 Elisavet Keskini
 Foteini Makrystathi
 Gabby Raveh
 Eleni Rousou
 Dimitris Tsoukalas
 Rwnak Watted

BEYOND THE FRAME

Beyond the Frame is a collaborative exhibition project that explores the layered history of a former tobacco factory through the reuse of its original architectural elements. At the heart of the project are old iron window frames, characteristic of the building's modernist style, which were removed during renovation. Instead of discarding them, the group reimagined these frames as active tools for spatial storytelling.

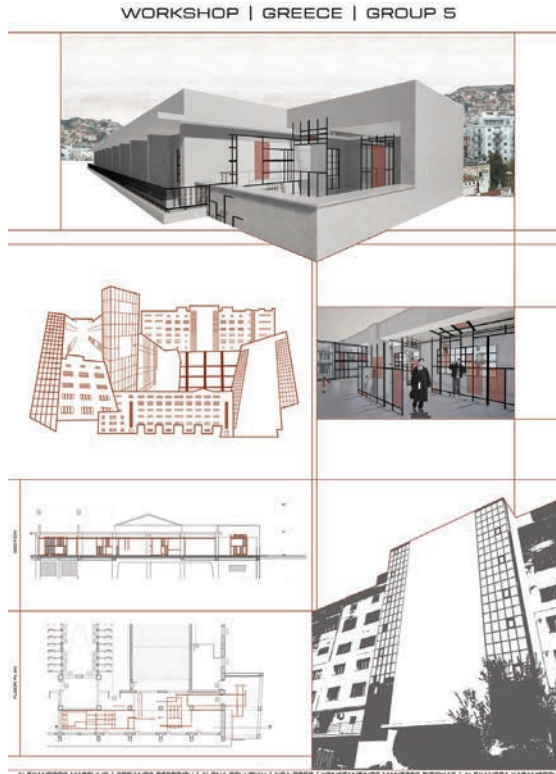
The group worked primarily with iron and glass—materials that reflect both the building's industrial past and its potential for transformation. The reused frames were arranged within the space as windows, doorways, and structural dividers. Some frames were doubled to define stronger boundaries, while others were left open

to invite movement and reflection.

A core conceptual insight that guided the design process was the dual role of the window frame: from the outside, it restricts and directs the viewer's gaze inward,

while from the interior, it opens outward and frames the surrounding landscape. This duality between containment and openness became a central motif, influencing both the spatial composition and guiding





the curatorial logic.

Another key feature of the exhibition is the integration of technology. Original glass panes were carefully cleaned and reinstalled within selected frames, then printed with archival photographs, texts,

and diagrams that reveal the history of the tobacco factory, its materials, and its former production. The juxtaposition of old material and new digital content highlights a productive tension between preservation

and innovation.

The modular path that the group created, composed of frames and printed glass, was installed along a transitional axis within the building, allowing visitors to move between preserved and renovated zones. This placement emphasizes the conceptual passage between memory and renewal.

The group sustainable approach focused on material reuse, minimal intervention, and architectural storytelling. The process demonstrated the power of adaptive reuse not only as a design method, but also as a cultural act of respect for the past.

Participants:

Noa Dror
Sofianos Georgiou
Alona Golubikh
Alexandra Karamerou
Kon/nos Mantzos Bitsikas
Alexandros Maroulis

PHOTO ALBUM



❖ INTERNATIONAL STUDENT WORKSHOP - XANTHI 2025



Photo by Gil Lupo



Photo by Gil Lupo

❖ FREE-HAND ARCHITECTURAL SKETCHING SESSION



Photo by Gil Lupo



Photo by Gil Lupo



Photo by Gil Lupo



Photo by Gil Lupo



Photo by Gil Lupo



Photo by Gil Lupo



Photo by Noa Dror

Photo by Noa Dror



Photo by Elias Messinas



Photo by Noa Dror



Photo by Noa Dror



Photo by Maria Grigoriadou



Photo by Maria Grigoriadou



Photo by Noa Dror



Photo by Noa Dror



Photo by Noa Dror

Photo by Sapir Cohen



Photo by Maria Grigoriadou



Photo by Maria Grigoriadou



Photo by Gil Lupo



Photo by Gil Lupo

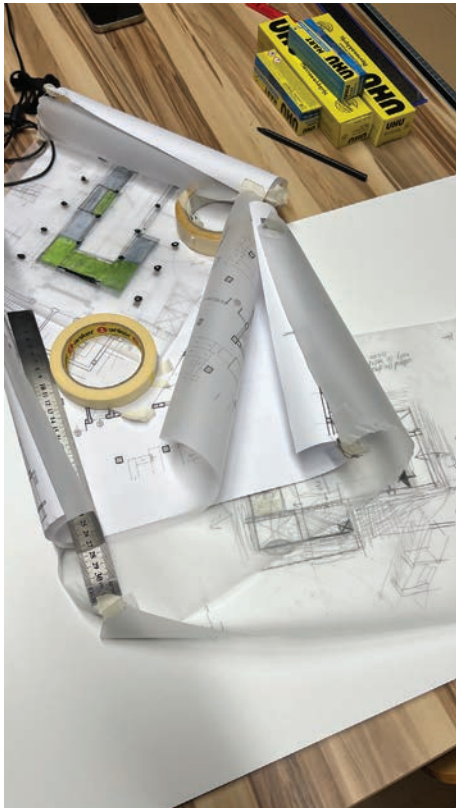


Photo by Gil Lupo



Photo by Gil Lupo



Photo by Gil Lupo



Photo by Gil Lupo

❖ THE WORKSHOPS



Photo by Gil Lupo



Photo by Gil Lupo



Photo by Gil Lupo



Photo by Gil Lupo

❖ THE PRESENTATIONS



Photo by Maria Grigoriadou



Photo by Maria Grigoriadou



Photo by Maria Grigoriadou



Photo by Maria Grigoriadou



Photo by Maria Grigoriadou

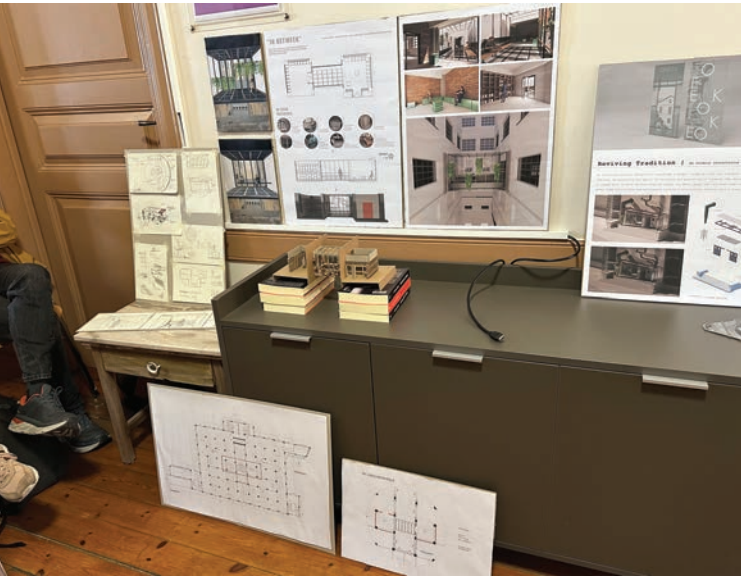


Photo by Maria Grigoriadou



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❖ THE PRESENTATIONS



Photo by Maria Grigoriadou



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Photo by Gil Lupo

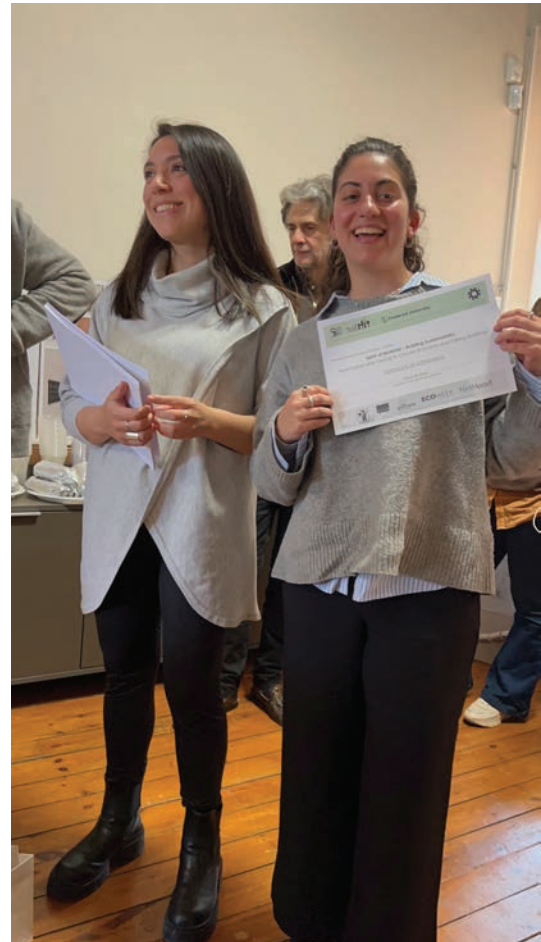


Photo by Gil Lupo



Photo by Gil Lupo



Photo by Gil Lupo



Photo by Gil Lupo

Photo by Gil Lupo



Photo by Gil Lupo



Photo by Maria Grigoriadou



Photo by Elias Messinas



Photo by Elias Messinas

WORKSHOP PARTICIPANTS

Team from Greece

**Democritus University
faculty**

Dimitris Polychronopoulos
Maria Grigoriadou
Natasia Kapandriti
Christos Koutelis
Eirini Tsetine

Team from Israel

**Holon Institute of Technology
faculty**

Ehud (Udi) Cramsky
Elias Messinas
Zameret Harel Kanot
Asher Elbaz
Michal Sarfaty
Tanya Saroglou

Team from Cyprus

**Frederick University
faculty**

Byron Ioannou
Gregoris Katnis

**Democritus University
students**

Margarita Gianni
Nikoleta Kastoriadou
Anna Katsiba
Theodora Theodorou
Anni Georgiadou
Elisavet Keskini
Alexandros Maroulis
Kleon Galinos
Dimitris Tsoukalas
Eva Kampouta

**Holon Institute of Technology
students**

Noa Lea Ben Simon
Noa Bukay
Sapir Cohen
Michal Gov
Gabby Raveh
Alona Golubikh
Rwnak Watted
Noa Dror
Shani Arviv
Amit Mali Brucker

**Frederick University
students**

Kalliopi Gerapetriti
Alexandra Karamerou
Giasemi Eleftheraki
Eleni Roussou
Olga Violari
Aria Theodoulou
Iakovos Kalli
Sofianos Georgiou
Foteini Makrystathi

