



Urban Shift for green innovations

Itinerant Exhibitions – Round 1

July 2024

Institute for Advanced Architecture of Catalonia

Work Package	6
Task	T6.3 MS07
Due Date	31 July 2024 (M23)
Responsible Beneficiary	IAAC
Version	1
Author(s)	Fiona Demeur, Chiara Farinea, Marie-Sophie Attems, Laura Hohoff, Rudolf Kottbauer, Joachim Almdal, Viktoria Heinzl, Adam Greene, Peter Praschinger



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Foreword

Urban Shift (UShift) is an experimental, impact-based, and transdisciplinary education programme that focuses on creating lasting change by bringing together students from Higher Education Institutions (HEI), a Vocational Education Institution (VET), urban experts, and business partners. This is to be achieved by combining intersectional environmental education, knowledge exchange, transdisciplinary collaboration, and sustainable innovation.

By providing the learners with the necessary GREEN LABOUR MARKET SKILLS (digital, green, business and transdisciplinary/resilient skills), UShift is creating a LIVING ECOSYSTEM for 80 learners from diverse backgrounds (urban design, environmental engineering, media and business) that fosters the development of solutions to pressing urban challenges. The learners, divided into two batches, will create 10 startup teams working on urban challenges linked to urban heat islands (UHI)/cooling, and food waste/circularity, or climate/extreme weather predictability and mobility/circularity. Thus, the project allows students to successfully transform into change makers and EU GREEN DEAL AMBASSADORS by equipping them with the knowledge and experience needed to become green entrepreneurs and/or future employees of green jobs on the global market.

The culmination of this education programme are two sets of LIVING EXHIBITIONS (8 separate exhibitions) spread across Barcelona, Genoa, Copenhagen, Stuttgart, and Vienna. Their purpose is to showcase the solutions and success stories that flourished from the UShift project lifetime in order to raise public awareness for humanity's biggest challenges (i.e., pressure on planetary boundaries, resource scarcity, persistent poverty, social injustice, exponential population growth, urbanization boom, global pandemics, etc.) and interest in the UShift LIVING LABS curricula, the European Green Deal, and the United Nations (UN) Sustainable Development Goals (SDGs). This will be done through an interactive exhibition programme made up of panel and roundtable discussions, media discourse, artistic events, workshops and knowledge exchange via the exhibition of the developed courses and start-up prototypes. The goal is to inspire individual stakeholders such as NGOs, consumers, green start-ups, policy makers, and incubators to take part in the global Urban Shift as active change makers.

Even after the project's lifetime, UShift will continue to have a positive impact via the establishment of an easily adaptable LIVING CURRICULUM template and OPEN ONLINE TRAINING sessions that will be made available on YouTube to inspire future transdisciplinary collaboration. Furthermore, the establishment of an ALUMNI NETWORK serves as a tool to foster sustainable project outputs and the continuation of the start-up teams, as well as serves as a channel for peer-to-peer learning, support, knowledge and expertise exchange, collaboration, co-creation, and mentorship between the learners, start-up teams, business partners and urban expert during and after the project.

Urban Shift is a project developed by Wirtschaftsuniversität Wien - WU (Austria), Institute for Advanced Architecture of Catalonia - IAAC (Spain), Hochschule Der Medien - HdM, (Germany), Wirtschaftskammer Österreich - WIFO (Austria), Multicriteria- MCRIT (Spain), Terra Institute - TERRA (Italy), Pretty Ugly Duckling - PUD (Denmark), Green



Innovation Group A/S - GIG, (Denmark), and co-funded by the Erasmus+ Key Action 2 Partnerships For Innovation Alliances For Innovation 2021 Programme of the European Union.

Introduction

The itinerant Living Exhibitions are a series of exhibitions that take place across Europe in 4 locations each year showcasing and promoting the results of Urban Shift and the EU Green Deal. During the first edition of the Living Exhibition, participants in Vienna, Barcelona, Stuttgart and Copenhagen will have the opportunity to learn more about Urban Shift and the EU Green Deal. The exhibitions will include an official opening with artistic performances, as well as workshops and creative brainstorming sessions. Our Green Deal Ambassadors will actively participate in the exhibitions, sharing their experiences and start-ups and promoting their work.

This report outlines and shares the result of the first edition of Living Exhibitions 2023/2024, as well as key considerations and learnings for the next edition.

Objectives

- Promotion of the EU Green Deal – what it is about? What are the goals? What are the initiatives?
- Share the results of the Urban Shift Project, especially, the start-ups developed by our learners.
- To target stakeholders associated with sustainability and citizens.
- To share other success stories from initiatives / start-ups / professionals working towards the EU Green Deal.
- For the exhibition to be adaptable as it travels around the world.

Call for Projects & Start-ups

The Call

In April 2023 the Call for Green Innovations was launched. The call asked for innovative start-ups and projects to submit a poster and abstract, explaining their work. In addition, the submissions had to address the EU Green Deal. The purpose of the call was to promote the work of individuals beyond the Urban Shift project working, towards the same goals of the EU Green Deal.

The call was open for 1.5 months and the submissions were evaluated by the Urban Shift Consortium. To maximise participation, the call was shared by the consortium, such as the IAAC newsletter, as well as online platforms like ArchDaily.

The selected participants have been part of the Living Exhibition and promoted on the Urban Shift online platforms.

Judging criteria:



- How innovative is the project or start-up?
- Feasibility
- Does it address the EU Green Deal?

Participants

In total, there were 28 submissions from across the world. The level of submissions varied greatly; however, there was a wide range of exciting projects and start-ups submitted. Most of the submissions came from the architecture field, but the scale of the work varied from the urban scale to that of a building element.

Selected Entries

Out of all the wonderful and inspiring projects submitted, 9 projects and start-ups were selected to be showcased as part of the Living Exhibition. This included university projects, innovative material systems and products, a tech start-up, and patent pending work.

Project/Start-up Name	Team Members	Affiliation
Blue Garden	Tanvi Khurmi, Alexa Cam, Man I Che	Bartlett School of Architecture Bio-Integrated Design
Casadelavida.tech	Roman Pomazan, Kyrylo Dzhyhomon	
ForestGuard	Muhammed Ali Örnek, Suat Batuhan Esirger, Kadir Can Yakut, Umut Erkal, Nur Örnek, Rana İmam, Sheida Shakeri	ForestGuard
Hygroflex	Yifan Shi, Satyam Gyanchandani	
Living Facade	Kaan Servi, Miguel Pena Menudo	
Probiogenesis	Hana Cvelbar, Sharifunnisa Mynasabgari, Mounika Maddipatla	University College of London
Phyta Biodesign - APIA	Dana Molzhigit, Arnav Kele, Zain Ansari	University College London
Sponge Building	Patricia Leandro Reguillo	
Vertical Grounds Design Lab	Mackenzie Van Dam	University College London

The selected participants have also been published on the Urban Shift website under the talents section: https://urbanshift.eu/?page_id=4879



Living Exhibition: Vienna

Description of the Opening Event: Vienna

Location: Chamber of Commerce of Austria, Wiedner Hauptstraße 63, 1045 Vienna

The living exhibition Vienna took place on June 20th, 2023, from 10:00-21:00, during the 21st Austrian Export Day, Austria's largest information and networking event on the subject of export and internationalisation under the motto: 'Inspiration - innovation - expert knowledge'. Urban Shift was located in the innovation area, called the 'Innovation Jungle', of the Austrian Export Day and had a 30 m² booth in the multi-storey car park to display all prototypes. The start-ups had the opportunity to meet potential cooperation partners, customers and investors. Overall, 2,000 visitors were in attendance during the Export Day.

Open Stage

The Open Stage of the Living exhibition featured a general introduction of the Urban Shift project by one of the project trainers. Thereafter, startup members had the opportunity to showcase their visions and innovations in front of a wide walk-in audience.

Innovation Jungle – An artistic performance

The Innovation Jungle was located in the garage of the Austrian Chamber of Commerce. The parking garage was transformed into a creative centre with palm trees, state of the art furniture and a DJ booth. To visit the Innovation Jungle, in which the Urban Shift booth was located, visitors had to "step in" through a neon-lighted aisle lined with palm trees and exotic bird music. The visitors entering the garage were transported into an innovative world, with the prototypes of the start-up teams were creatively placed on stands and tables right at the entrance of the Innovation Jungle. The booth also included posters with short abstracts of the startup ideas, an overview of the Urban Shift project as well as the best practice examples from the call for green innovations. Visitors then had the opportunity to wander through the prototype exhibition and physically engage with the carefully crafted prototyped. Visitors also had the special opportunity to engage in intimate conversations with the creative minds behind these innovative ideas.

Each startup also presented their prototypes under the moderation of the WIFI coach in an interview setting (LIVE aus Wien - Österreichischer Exporttag 2023 - on Twitch)

Event Agenda

TIME	DESCRIPTION
10:00 - 18:00	Urban Shift Prototype stand Innovation Jungle – Exhibition of all prototypes by the start-ups UrbanCork, Ovolo, Klimatile, Second Slice, Soller, Planterra and Sustainabite at the 'Urban Shift Booth' and best practice examples from the call for green innovations.

	Students were able to perform, pitch their ideas and demonstrate the importance of addressing urban challenges to the visitors.
14:30 - 15:00	<p>OPEN STAGE in the main building – startups pitched their ideas to an engaged audience</p> <p>Keynote and presentations by one trainer and members of the start-ups was held. This included a general introduction to Urban Shift project and a short presentation of the start-ups in front of an audience.</p> <p>Speakers:</p> <p>Rudolf Kottbauer – Introduction to Urban Shift and presentation of start-up ideas on behalf of Urban Cork and Ovolo</p> <p>Presentation by Werner Kössler (WIFI): Determination of CO2 emissions on scientifically based results and realization of the circular economy in the area of sustainability</p> <p>Presentation of Startups:</p> <p>Kyle Yong - Klimatile</p> <p>Olatundé Meme - Second Slice</p> <p>Carolina Pree - Soller</p> <p>Jonathan Leidel - Planterra</p> <p>Anesa Ališić - Sustainabite</p>
18:00-21:00	After Hours Networking with live DJ

Photos of the Living Exhibition Vienna

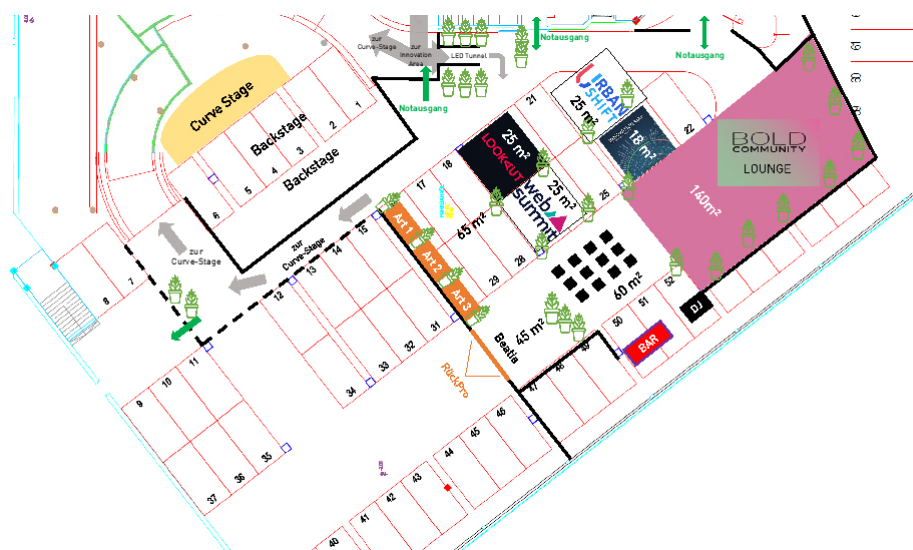


Fig.1. Location of the Urban Shift booth in the 'Innovation Jungle' section of the Austrian Export Day



Fig. 2. (Clockwise from top left) Entrance to the Innovation Jungle and Urban Shift Booth, View of the Urban Shift Booth before visitors arrived, Visitors engaging with the prototypes at the Urban Shift booth, Startups presenting their ideas and prototypes to visitors

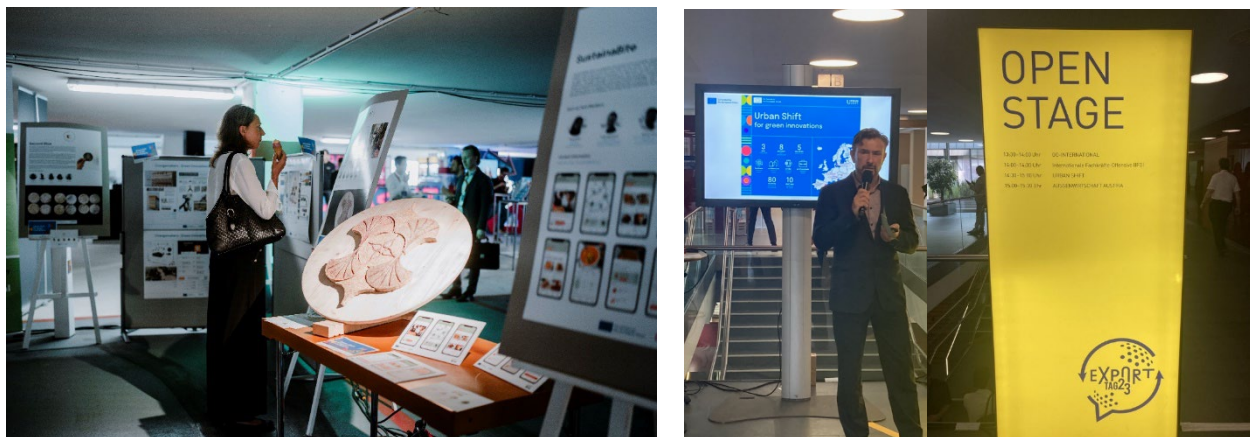


Fig. 3. (Left to Right) Jungle Fever making people curious and attracting them to the stands and engaging with prototypes, Rudolf Kottbauer Presenting Urban Shift, Schedule of the Open Stage



Fig. 4. (Left to Right) Walk-in audience at the Open Stage, Kyle Yong presenting Klimatile in front of the audience at the Open Stage.



Fig. 5. Trainers and startups in front of the Open Stage



Creative Brainstorming Session: Vienna

The session was held at the STEAM Transfer conference (28-29 September 2023), a dynamic event organized by the Knowledge Transfer Center of the Academy of Fine Arts Vienna. The STEAM Transfer conference serves as a unique platform where the realms of Science, Technology, Engineering, Mathematics (STEM), and creative, artistic, and Social Sciences, Humanities, and Arts (SSHA) disciplines converge and collaborate.

During the session, participants explored vital questions.

1. **Ecosystem for Start-ups:** The first question addressed the need for an ecosystem to support fresh start-ups after the program, ensuring their success. Discussions revolved around the critical components required to facilitate the growth and development of these emerging ventures.
2. **Sustainability of Programs:** The second question centered on the sustainability of programs similar to the one discussed. Participants explored strategies and mechanisms to ensure the long-term viability and effectiveness of such initiatives.
3. **Challenges of Interdisciplinary Cooperation:** The third question delved into the challenges associated with interdisciplinary cooperation, involving students and partners. Insights were shared on methods to effectively navigate and overcome these challenges, fostering collaborative success.

Location: Transfer Center of the Academy of Fine Arts Vienna, Lehárgasse 8, 1060 Vienna.
29. September 2023, 15:15-17:00

Event Agenda

TIME	DESCRIPTION
15.15 - 15.30	Pitch your Workshop
15.30 – 15.45	Intro to Urban Shift and transdisciplinary startup education
15.45 – 16.00	Presentation of startup prototypes'
16.00 -16.45	Creative Brainstorming
16.45 -17.00	Discussion and Synthesis of creative Brainstorming

Results & Photos



Fig. 6. (Left to Right) View of the Urban Shift Workshop Area, Peter Praschinger presenting



Fig.7. (Left to Right) Brainstorming Participants, Prototype

Recommendations of participants:

- Creating partnerships with existing successful companies to offer support to new ventures.
- Establishing a clear framework for roles, responsibilities, and expectations within interdisciplinary teams.
- Providing a supportive environment for risk-taking and experimentation, where failures are viewed as opportunities for learning.
- Incorporating mediation and team-building activities to facilitate collaboration and resolve conflicts within start-up teams.
- Clearly defining intellectual property (IP) rights and ensuring transparent communication of IP ownership and usage within the ecosystem.
- Implementing IP agreements and protocols that address issues such as ownership, licensing, and protection of intellectual property.



1 Day Workshop: Vienna

The one-day workshop in Vienna, 'Green Ideation Sprint', was held as a free crash course workshop dedicated to cultivating green ideation and essential design thinking skills. Through the application of design thinking methods, participants will gain valuable insights and engage in hands-on experiences: understanding a problem, empathizing with an end user, ideating, prototyping and pitching an idea. Giving participants the opportunity to shape innovative and sustainable solutions for a brighter tomorrow as well as putting the new tools acquired into use for their education/work/entrepreneurial journey. The overall content of the workshop can be summarized as:

- Introduction to Ideation Sprint Challenges: Mobility/Circularity and Extreme Weather Events
- Applying Design Thinking for Ideation
- Future proofness of idea: Market Validation and Pitching

Location: Climate Lab – Spittelauer Lände 45, 1090 Vienna. 9. October 2023, 09:30-15:30

Event Agenda

TIME	DESCRIPTION
08:05	Room Set up
	Check Room Setup, prepare material, facilitator briefing, tec set up
09:20	Arrival at Climate Lab
	Bring Participants to Lab
	Welcome and buffer time
09:45	START
09:45	Introduction
	Introduction to workshop
	Team Building activity : BINGO
	Intro to EU Green Deal
	Intro Urban Mobility
	Intro EWE
	Intro to Design Thinking Principles
10:35	Team formation & Ideation
	Intro to task
	Team formation
11:05	Team Building activity
	Team building: Intro: share each persons' superpower (existing or hoping). Create a mascot with one or more superpowers (can be from the ones you shared). This mascot is supposed to be able to overcome your challenge
11:15	Coffee Break
11:25	Problem Space
	Intro to Understand +Problem Canvas
	Intro to Persona+ Persona

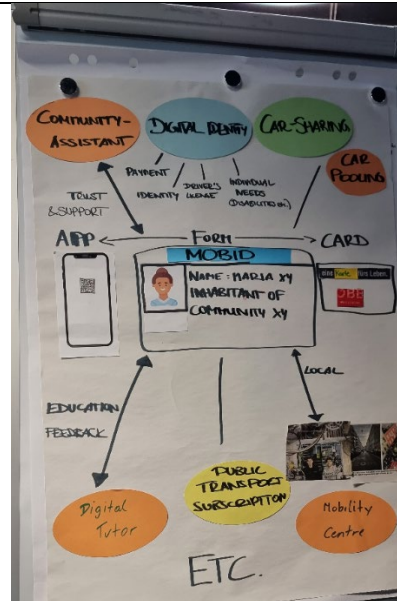
	Align on one Persona
	Share persona
12:20	Lunch Break
13:05	Ideation
	Energizer
	Intro brainwriting
	Brainwriting
13:35	Categorize Ideas
	Intro to Now How Wow
	Cluster now how wow, break down to 1 solution
13:50	Coffee Break
14:00	Prototyping
	Intro to prototyping
	Prototyping
	Intro Pitching
	Prepare
14:55	Pitching Ceremony, Closing
	Pitches
	Award+ Thank you
	Share Feedback Survey
15:30	END
	Debrief + record keeping + clean up

Results & Photos:

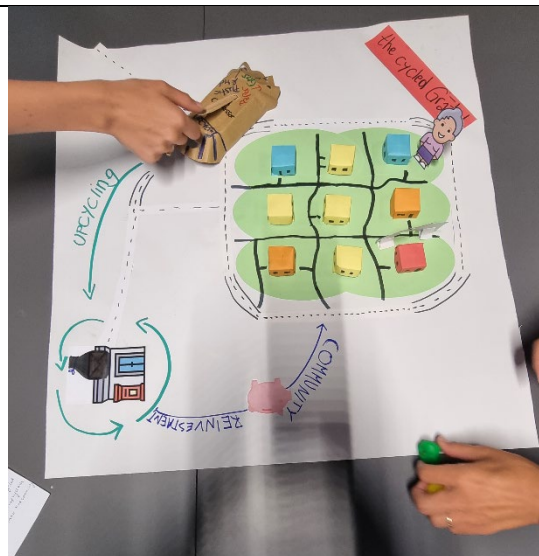
The successful ideation of three ideas was the output of this workshop:

DESCRIPTION	PROTOTYPE
<p>Beat the Heat</p> <p>Concept of idea: An app to show green and safe routes for elderly and vulnerable groups to take during a heatwave with integrated 'cooling zones'</p>	

MOBID (MObility IDentity)
Concept of idea: To centralized and digitalize all documents and information necessary for using public transportation via one system



The cycled Grätzl (Austrian for: city quarter)
Concept of idea: The idea is to create intermediary trash collection that are serviced by cargo bikes in neighbourhoods that are not built for cars anymore.
The first idea tackled Heat Waves as EWE, the other two mobility concerns in the city



Here are some highlights of the workshop:

Location: Climate Lab (pictured below) with prototype of 1st batch displayed for inspiration and information. The Climate Lab's interior is "based on human-centric principles and experimentation with circular practices. From leased furniture and carbon-neutral carpets to flexible work and event spaces, community kitchens and focus rooms, our space is designed to encourage connection, collaboration and creativity."¹

¹ <https://climatelab.at/en/about/>

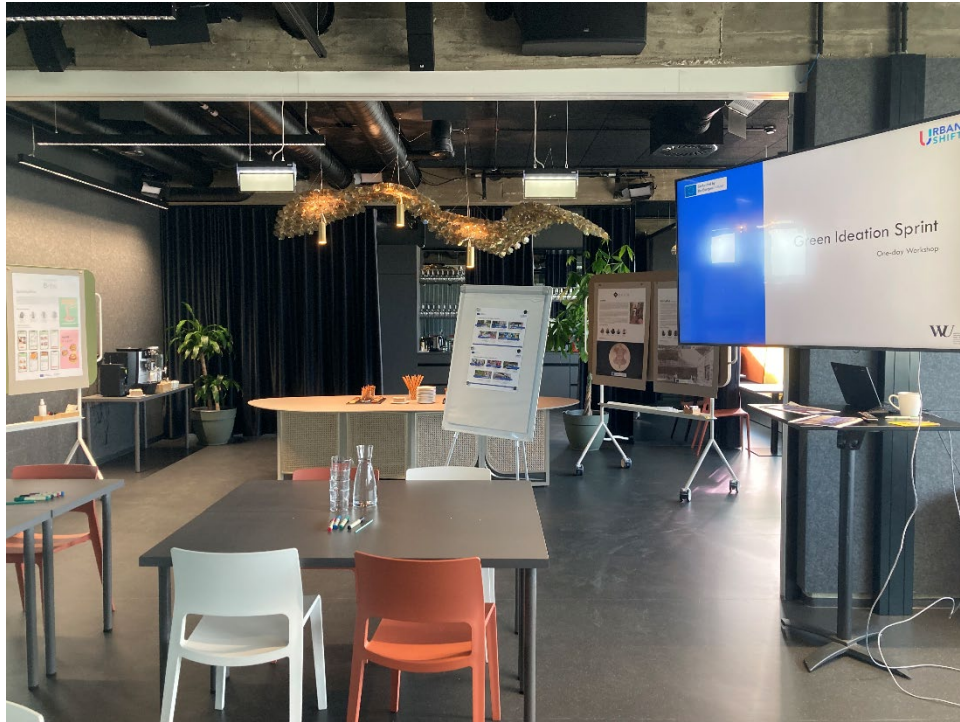


Fig. 7. Workshop Venue.



Fig. 8. Teambuilding activity - participants getting to know each other.

Reflection and Evaluation of Workshop

In total, 11 participants answered our Feedback Questionnaire.

The overall assessment of the quality of the workshop was excellent (n=10) and very good (n=1). 54% of the participants learnt something new about one of the two urban challenges, while 44% already had previous knowledge. Regarding new skills acquired in the field of design thinking, 75% gained new valuable skills and only 25% already had existing knowledge. This showcases the learning opportunity of this event. The moderation of the event was viewed most positively by the participants, 9 participants very highly satisfied overall, 2 participants somewhat satisfied.

All in all, this shows a very successful workshop which also gives the organizers new ideas and insights for the living labs itself.



Attendees & Participants: Vienna

EVENT	NUMBER OF PARTICIPANTS
Opening Event (Austrian Export Day)	2000
Creative Brainstorming Session	16
1 Day Workshop	22

Impact & Results: Vienna

- The Export Day received its highest ever attendance, with the Innovation Jungle a significant highlight of the event. The startups, entrepreneurs and their prototypes were received with great interest by the participants, which included potential investors and professional working in or with a connection to the sustainability field.
- Presentation by Werner Kössler on 'Determination of CO2 emissions on scientifically based results and realization of the circular economy in the area of sustainability' well received by the audience.
- The Export Day was not the end of the journey for the startups, rather the beginning for many new opportunities and contacts.
- The interactions with external stakeholders engaging with the entrepreneurs and prototypes provided strong affirmation, motivation, and important feedback for future product/service directions.
- The creative brainstorming confirmed the relevance and necessity of the project for a broader audience, as well as ideas for new approaches surrounding conflict resolution, framing 'failure', and business partnerships and IP.
- The one-day workshop attested to the value of using design-thinking tools in diverse groups of people to develop innovative solutions to contemporary problems. The hands-on approach gave the participants an insight into the Urban Shift tools and methods, improving their skills of ideation, prototyping and pitching.



Living Exhibition: Barcelona

Description of the Opening Event: Barcelona

Location: Institute for Advanced Architecture of Catalonia, Pujades 102, Barcelona 08005

The opening of the Living Exhibition was held as the closing event of IAAC's Biennale symposium Responsive Cities on November 28th, 2023. All the participants were invited to the opening of the exhibition including speakers, researchers, students, faculty, and professionals, which took place in the famous IAAC Main Hall. The exhibition showcased the work developed in Urban Shift, the selected projects from the Call for Green Innovations as well as other Green Innovative projects developed by the Advanced Architecture Group, and the Living Book. Live music was played by Nati Cerutti, adding to the ambiance of the evening.

Opening Event Agenda

TIME	DESCRIPTION 28 th November 2023
18:00	Arrival
18:30	Welcome
18:40	Keynote Presentations
	Chiara Farinea – Urban Shift & Green Innovations
	Andrea Conserva – The Case Study of URBiNAT
	Yerwant Megurditchian – Urban Shift from a Students Perspective
19:10	Roundtable Discussion Moderated by Fiona Demeur & Areti Markopoulou Participants: Chiara Farinea, Andrea Conserva, Yerwant Megurditchian, Marite Guevara
19:30	Live Music by Nati Cerutti, Networking and drinks
21:00	Closing

Living Exhibition in Barcelona

Prior to the official opening, the exhibition was hosted at IAAC for 4 days and was part of the Poblenou Open Night 2023 on November 24th. The doors at IAAC were open from 19:00 until 22:00 with citizens including adults and children, researchers, designers, students and professionals passing through the doors, and exploring all our Urban Shift start-ups. Many took photos and very intrigued by the prototypes, touching them and reading the posters. With more than 500 people passing through the doors, in a short period of time this proved to be a very successful night for the Living Exhibition.

In addition, Urban Shift prototypes were selected to be part of the InteriHOTEL 2023 Expo that took place from October 18th to October 20th. Find out more information on the IAAC website about the Expo [here](#). This is an annual event that brings together the hospitality and interior design sectors, showcasing leading products and solutions in the field.



Photos of the Living Exhibition: Barcelona



Fig. 9. Living Exhibition at IAAC Main Hall Opening Night.



Fig. 10. Keynote Speakers and Round Table Discussion – Opening Night.



Fig. 11. Living Exhibition part
of the Poblenou Open Night.

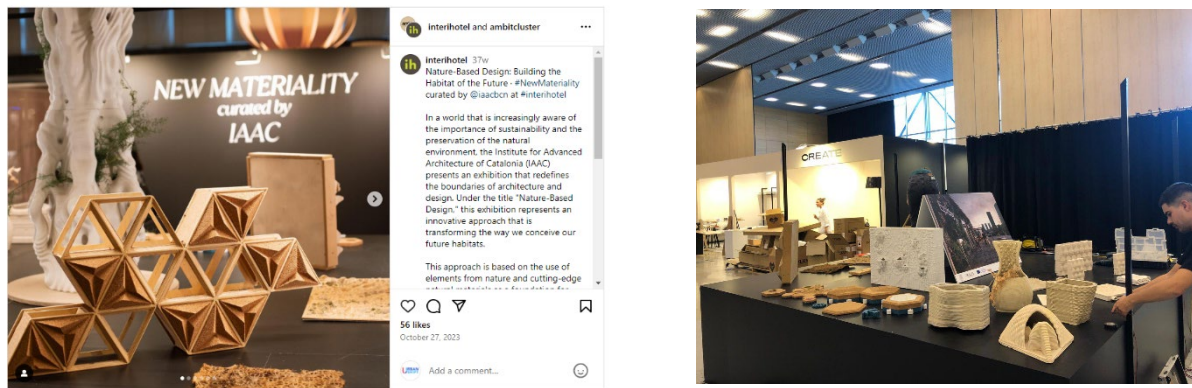


Fig.12. (Left to Right) Post from the InteriHotel of IAAC's Participation, Set up of the Exhibition Space

Creative Brainstorming Session: Barcelona

The Creative Brainstorming session was titled 'The Future of Green Innovation Education' and was hosted in the framework of Semanas d'Arquitectura, a seven-week architecture festival in Barcelona. Utilising the Three Horizons Framework, an activity was developed to map education as usual, where we hope education will go and how to get there.

Participants were encouraged to share their experiences and wishes, diving into discussions which took place in a series of focus groups. Participants included researchers, educators, and students from architecture, construction, engineering, and business backgrounds.

Event Agenda

TIME	DESCRIPTION
09:30	Room Set up
	Check Room Setup, prepare material, coffee, snacks
10:00	Arrival at IAAC
	Welcome & Workshop Introduction
10:30	Three Horizons of Education
11:15	Coffee Break
11:30	Discussion on Innovative Methodologies
12:00	Closing

Results & Photos

The decision to have smaller focus groups allowed for a more in-depth discussions and for the participants to engage deeply with the topic, as well as more detailed information to be recorded.

During the focus group sessions, it was highlighted the need to rethink the concept of the classroom by removing doors and opening up the classroom to more key experiences through fields trips. However, the engineers appreciated the structured classroom/lectures that allowed them to focus. Additionally, to have more freedom of choice to choose interesting classes from other disciplines, highlights the desire for transdisciplinary learning. The fact that Urban Shift is bringing in the different disciplines together already, demonstrates that the Living Labs Programme is already addressing some desires. The

concept of personalised learning was an aspect discussed extensively. Some felt that there was a lot of repetition, and in some cases, students were expected to repeat courses during higher education that they had already passed before going to university. Personalized learning would allow students to have more flexibility and to grow their skillsets rather than repeating. Independent learning should be further exploited and encouraged to allow students to grow their interests.

Participants imagine a future where education is more project-based bringing together different stakeholders to be part of the learning process as well as access to more industry collaboration. Having access to free/cheaper education was also a big discussion, as there was an understanding of the cost implications, but the high costs means that students may not get to explore beyond their discipline.



Fig. 13. Focus Groups & Results



One-day Workshop: Barcelona

The Green Ideation Sprint was held at IAAC on the 31st of May 2024 from 10:00 until 17:30, in the framework of the Semanas d'Arquitectura, a seven-week architecture festival in Barcelona. Hosting the workshop in this framework was a strategic decision to research participants beyond the IAAC students. This strategy was indeed successful as students from around Barcelona joined for the intensive one-day workshop. Using a structure developed by HdM and adapted by IAAC for the purpose of Urban Shift, the workshop focused on Urban Mobility and Extreme Weather Events.

Students engaged in Design Thinking strategies and activities to develop solutions, a prototype and a pitch. The aspect that drew participants to this workshop, was the integration of the business dimension coupled with design development. Students divided into five groups to develop their solutions and prototypes that can be seen below.

Event Agenda

TIME	DESCRIPTION
08:30	Room Set up
	Check Room Setup, prepare material, coffee, snacks
10:00	Arrival at IAAC
	Welcome & Workshop Introduction
10:30	Ice-Breaker: Two Truths & a Lie
11:00	Workshop Core Topics
	Intro to EU Green Deal
	Intro Urban Mobility
	Coffee Break
	Intro EWE
	Intro to Design Thinking Principles
12:00	Team Formation and Energiser – Equilateral Triangles
12:15	Problem Space
	Intro to Understand +Problem Canvas
	Intro to Persona+ Persona
	Align on one Persona
	Share persona
13:00	Ideation
	Brain Writing
	How Now Wow
13:30	Lunch & Continuing to Develop the Idea
14:30	Prototyping
	Intro into Prototyping
	Quick Prototyping Session
15:45	Pitching
	Intro into Pitching
	Developing the Pitch
16:30	Pitching
17:00	Celebration & Survey

Results & Photos

The results of the ideation can be found below:

DESCRIPTION	PROTOTYPE
<p>ME Mobility</p> <p>An application that will help urban planners and municipalities co-design mobility routes with the inhabitants of the city based on needs and frequency of routes utilised.</p> <p><u>Urban Challenge:</u> Urban Mobility</p>	
<p>Step Sense: An application providing an additional layer of information to existing platforms like google maps. For example, if there are potholes on the road.</p> <p><u>Urban Challenge:</u> Urban Mobility</p>	
<p>A transportation system utilising the existing train infrastructure and renewable energy to move goods from the peri-urban areas to the city.</p> <p><u>Urban Challenge:</u> Urban Mobility</p>	
<p>An application that helps to provide citizens with information on extreme weather events and how to upgrade their homes to deal with challenges such as flooding, tornados etc.</p> <p><u>Urban Challenge:</u> Extreme Weather Events</p>	

This system helps against flooding. Utilising floating devices, as the water seeps into the ground the floating devices are pushed up creating a barrier against flooding.
Urban Challenge: Extreme Weather Events



Fig. 14. Learners participating in the Workshop.



Fig. 15. Training and Pitching.

Reflection and Evaluation of Workshop

14 participants shared their feedback about the workshop which was very well received by all. Ten participants gave the workshop 5 out of 5 and four people four out of five. They highlighted the great dynamism between workshop participants which made the day very enjoyable, as well as the rapid prototyping being a highlight. The workshop was described as “*very well organised and informative*”. When asked, what could be improved, many suggested that they wanted more time, in the sense that this could be turned into a studio or one-week workshop. One commented on the fact that they would have liked to have more insights on business models. The positive reception of the workshop demonstrates the need for these rapid and fun workshops at all levels of education, to also break the business as usual in education.

Attendees & Participants: Barcelona

EVENT	NUMBER OF PARTICIPANTS
Living Exhibition Total	600+
Opening Event	90
Creative Brainstorming Session	15
1 Day Workshop	17 + 2 Juries
InteriHOTEL 2023 Expo (In addition Urban Shift Prototypes were selected for this in October)	7224

Impact & Results: Barcelona

- Having the Living Exhibition open with key events in the city helped to boost participation and targeted all the target groups from citizens to professionals.
- The success of the prototypes meant that Urban Shift prototypes were selected for the InteriHOTEL 2023 Expo, with people coming from across the world to showcase their products. This greatly increased exposure in Barcelona.
- The one-day workshop was very well received by the participants, with some wishing that it could have been longer or turned into a class. This highlighted the need for programmes like the Living Labs programme to address the needs and wishes of students.
- The discussion on the future of education is very relevant, as advances in technology and the way in which students learn is influencing the way in which we teach, as well as the need for more collaboration between different sectors. The feedback from participants from different fields showcased also the differences in learning amongst disciplines.



Living Exhibition: Copenhagen

The Copenhagen living exhibition took place in BLOXHUB - the sustainability urbanization hub, from January 12th to 21st. During that time, the exhibition was visited by architects, construction engineers, prop tech startups, regulators, and innovators in the urbanization space. Overall, +400 daily visitors were counted during the day, totalling +3,200 visitors as estimated by Christina Oppermann from BLOXHUB. Prior to the exhibition, the prototypes were received from Barcelona, before subsequently being shipped onto Stuttgart. A living wall was created at BLOXHUB with the prototypes and with the idea/travel book that follows the living exhibition to each location.

Description of the Opening Event: Copenhagen

The opening event of the Copenhagen Living Exhibition took place on January 17th, 2024 from 14:00-17:00. The goal of the event was to bring together innovators and subject matter experts in the urban sustainability space to explore new solutions and for the startups to present their businesses and prototypes. The start-ups had the opportunity to network and spar with potential collaborators. In turn, the startups presented their prototypes and how their business was doing. The participating startups were Klimatile, Planterra, Ovolo, Second Slice, and Soller. Three keynotes were held by Joachim Almdal, Ditte Lysgaard and Michael Ambjørn.

Michael Ambjørn:

Michael generally strives to bring people together, create connections, and enable change. With more than 20 years of experience in leading people, Michael has run organisations, chaired boards, and developed change-makers across five continents. As a former IBMer and as Urbantech, Rainmaking MD, Michael aims to help scale PropTech Denmark even further.

Ditte Lysgaard Vind

Ditte Lysgaard Vind is the author of the book Danish Design Heritage & Global Sustainability and Chief Innovation and science Officer at BLOXHUB, she propels urbanization towards actionable insights by embracing planetary boundaries as creative parameters

Event Agenda

TIME	DESCRIPTION
14.00-14.30	Networking, lounge, and snacks
14.30-14.50	Welcome and Keynote by Joachim Almdal Green Innovation Group
14.50-15.10	Keynote: Ditte Lysgaard Vind Chief Innovation Officer BLOXHUB
15.10-15.30	Keynote: Michael Ambjorn CEO Prop Tech Denmark
15.30-16.40	Start-up pitches + Q&A
	Klimatile - Yerwant Megurditchian
	Planterra -Neslihan Gulhan
	Ovolo - Emily Bishop

	Second Slice - Shehu Mass Oud Olatoundé Meme
	Soller - Carolina Pree
16.40-17.00	Mutual discussion and key takeaways

Results

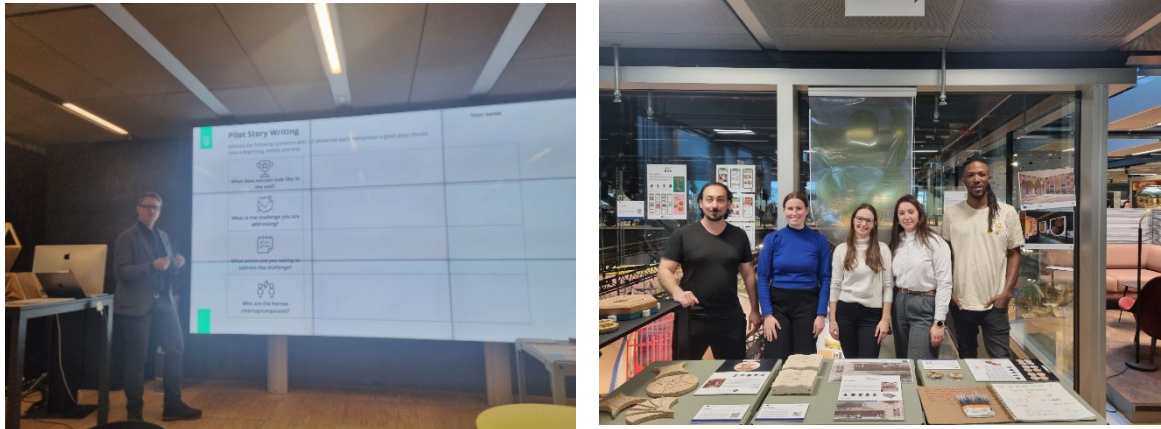


Fig.16. (Left to Right) Michael Ambjørn delivering keynote, Startup teams at opening event in front of the Living Wall

Art event Copenhagen

On January 17th from 19.00-21.00 the art event of the Copenhagen Living Exhibition was held at the Arena in BLOXHUB.

The lights were lowered and there was a lounge and dance sessions amidst the prototypes and design furniture of BLOXHUB and craft beer tasting with local brewed beers both with and without alcohol. The purpose was to celebrate the students' hard work and create awareness of sustainability issues in urban areas for the general public.

Creative Brainstorming Session: Copenhagen

The objective was to brainstorm and generate innovative ideas for enhancing sustainability in urban areas, particularly addressing challenges related to heat waves, flooding, and mobility. Joachim Almdal gave a short keynote explaining the importance of sustainability in urban areas and the focus areas of today's brainstorming session. The participants were then split into groups to generate ideas, and then the groups were rotated to refine the ideas before presenting them in the plenum. Then, Joachim facilitated a discussion on prioritizing the generated ideas. Subsequently, participants were encouraged to share additional ideas, insights, or perspectives that may not have been covered in the group sessions.

All in all, everybody contributed well, and there was an open vibe in the workshop.

Event Agenda

Date: 17th January 2024

TIME	DESCRIPTION
17:00 - 17:10	Welcome and Introduction
17:15 - 17:25	Icebreaker Activity
17:25 - 17:40	Presentation on Current Challenges
17:40 - 18:25	Rotating Group Brainstorming Session (2-3 people per group)
18:25 - 18:45	Group Presentations
18:45 - 19:00	Open Discussion and Idea Sharing

Results



Fig.17. Brainstorming workshop

One-day Workshop: Copenhagen

Leading up to the workshop, it was uncovered that the key issue for most of the start-ups had been to find product-market fit. None had made any sales, although some were close. As a result, most of the learners had looked for employment after graduation from university as the startup could not support them. However, the developed technologies and prototypes still held great promise in solving dire urban sustainability challenges. Therefore, the workshop directed the attention towards focusing on how to find the right business model and get the first customer.

Event Agenda

TIME	DESCRIPTION
09:00 - 10:00	Sustainability-focused architectural walk in Copenhagen
10:00 – 12:00	Business Model workshop focused on go-to-market strategies for the startups
12.00-13.00	Lunch
13.00-14.00	Brainstorming on potential go-to-market tests
14.00-15.00	Key takeaways and next steps for the startups

Results

Key takeaways from the workshop were:

- There was a need to lower costs of the products to be competitive in the market
- Business models whereby the user and the 'payer' are not the same (e.g. public vs cities) are more complex
- Ideally, they should sell the product before beginning to produce it in order to lower risk.



Fig. 18. One day workshop

Learner Feedback:

"Grateful !

Thank you for having us and sharing your inner space !

Very inspiring indeed - in many ways !

First experience in the nordics for me, and certainly not the last !

The culture, the people and the scenes ! hm hm ! will be back when it's warmer though 🤗

Godspeed, Ashè your way !

Olatundé"

"Hi Joachim,

Likewise! Thanks for having us and showing us around. It was very inspirational to be in Copenhagen!

All the best, Yerwant"

"Hi Joachim,

Thank you for your email. It was great to meet you and visit the BLOXHUB. We had a wonderful time in Copenhagen and the presentations were really inspiring, thank you!

Kind regards, Neslihan"



Attendees & Participants: Copenhagen

EVENT	NUMBER OF PARTICIPANTS
Living Exhibition	3200
Opening Event	17
Art Event	15
Creative Brainstorming Session	12
1 Day Workshop	7



Living Exhibition: Stuttgart

Description of the Opening Event: Stuttgart

Location: HdM Coworking Space "Playpark" & Foyer, Nobelstr.10, 70569 Stuttgart

Empower Greenpreneurs Opening Event

On February 16th, 2024, the official opening of the Living Exhibition took place during the 'Empower Greenpreneurs' event at the coworking space 'Playpark' at Stuttgart Media University (HdM). To open the Living Exhibition in a festive and thematically inspiring way, a closed opening event entitled 'Empower Greenpreneurs' was organised, to which regional representatives from politics, business, the creative industries, start-up scene, culture and education were invited. It was also a cooperation measure of the EU projects Urban Shift (Erasmus+) and Greenpact (Interreg CE), both of which aim to actively implement the Green Deal through transdisciplinary educational models. The event started with a welcome and presentation of the EU project Urban Shift by the HdM project manager.

Then, the stage was open for speakers and founders of the sustainable start-ups 'Spoonstainable' and 'P-Vision'. The co-founder of 'Spoonstainable', Julia Piechotta, started to tell their founding story on how to grow into a sustainable cutlery and crockery alternative, starting with edible ice-cream spoons made from food waste. Afterwards, the co-founder of 'P-Vision', Kai Ritter, continued with their founding story of how to become a local expert business for innovative drone solutions for various industries. They focus on analysing PV systems to support solar installers and electricians in their daily work and, therefore, prevent and/ or repair photovoltaic installations that were damaged through heat and further extreme weather events. Both speakers also reported on their successes and (daily) hurdles in the green design of their business idea.

Afterwards, the HdM project manager introduced the EU project 'Greenpact' (Interreg CE), provided a transition to the upcoming creative workshop, and explained the framework conditions for this workshop. Two creative workshops with the participants followed this to analyse and reflect on the pros and cons of sustainability and sustainable models in teaching and practice in greater depth with representatives from the education sector and industry. Finally, this event culminated in the opening of the Living Exhibition and the official appraisal of exhibited prototypes from Batch 1.

The Living Exhibition was open to interested visitors from the Stuttgart region and all HdM employees in the 'Playpark' premises until February 23. It attracted altogether around 200 visitors from the wider start-up scene in Stuttgart.

Closing of Exhibition @Sandbox Demo Day

The festive closing of the exhibition was moved to Stuttgart City Hall and took place on February 23rd, 2024. It occurred as part of the 'Sandbox Demo Day', an important event of HdM's Startup Center, which focuses increasingly on presenting sustainable start-up projects. This popular public event of the Startup Center takes place twice a year and marks the end of a start-up programme for sustainable and socially responsible start-ups. The

prototypes of Urban Shift's Living Exhibition perfectly fit this event's theme and were set up in the event room for the exhibition.

Additional Exhibition stand at "Fair Handeln"

After the Living Exhibition attracted so much attention as part of the week-long exhibition at HdM, an additional temporary exhibition of the prototypes was planned and implemented from April 4-5 at the sustainable trade fair 'Fair Handeln' in Stuttgart. This is a trade fair for all those who are committed to fair, globally responsible, and sustainable trade. The project manager, communication manager, and participating HdM learners took part in this fair for a total of two days to exhibit and discuss their prototypes to an interested audience and to explain the objectives and approach of the EU project. Some contact details of the green startups of the 1st batch were passed on to interested buyers or possible cooperation partners. On these two days alone, 28,500 visitors took part in 'Fair Handeln', many of whom regularly visited the Urban Shift stand.

Event Agenda (Living Exhibition Opening Event)

TIME	DESCRIPTION
16:00 -16:10	Introduction of EU-project 'Urban Shift'
16:10 - 16.50	Best-practice examples: Green startups
16.50 - 17.00	Introduction of 'Greenpact'
17.00 - 18.00	Empower Greenpreneurs Creative Talk
From 18.00	Opening of Living Exhibition & Networking

Photos of the Living Exhibition: Stuttgart



Fig. 19. Prototypes set up in the Stuttgart City Hall for Demo Day (23.2.24)



Fig. 20. Prototypes set up in the HdM Playpark for Opening Event (16.2.24)



Fig. 21. Prototypes set up in the trade fair 'Fair Handeln' in Stuttgart (4.4.24)



Creative Brainstorming Session: Stuttgart

As part of the 'Empower Greenpreneurs' event, participants from politics, business, the creative industries, the start-up scene, culture and education took part in two separate creative workshops (SWOT analysis), each of which focussed on one of the following questions:

1. Where lay the potentials and challenges in **education** and teaching to promote sustainable or circular economy teaching/ business ideas?
2. Where lay the potentials and challenges for **(young) companies** to act more sustainably or circularly?

Representatives of the cooperating EU projects moderated both workshops (approx. 45 min), and working groups, then briefly presented the results of their workshops to each other (approx. 15 min).

The **results of working group (1)** are summarised below:

Strengths (internal):

- Educational mission is there; we can just do & experiment (have a playground)
- Access to research is available
- Individual innovative & forward-looking approaches already implemented (e.g. formation of 'student startups')
- Early sensitisation in teaching takes place selectively
- Qualified teachers who create the right framework conditions (see also weaknesses/ internal)

Weaknesses (internal):

- Application of 'green', sustainable teaching & didactics/ methods without a proper understanding of this
- Different framework conditions at different types of educational institutions
- Some educators still lack the right understanding of values
- Teaching methods/ approaches not up to date
- Qualified teachers who create the right framework conditions (see also strengths/ internal)

Opportunities (external):

- Early involvement of experts in teaching sustainability topics (also in the early childhood phase)



- Testing of new teaching models/ methods possible through EU projects
- Closer integration with industry through 'hands-on' projects & cases
- Development of new degree programmes (with a transdisciplinary focus), initial best practice examples already exist
- Linking research - teaching - practice (see also external challenges/ risks)

Challenges/ risks (external):

- Lack of experts to impart sustainable knowledge
- No common consensus as a basis for different educational institutions (lack of a common 'background noise')
- Federalism
- Linking research - teaching - practice (see also opportunities/ external)

The **results of working group (2)** are summarised below:

Strengths (internal):

- Bringing ecology and economy together
- Building up communication expertise
- Creating major impact and social relevance
- Establish and expand innovation and agility, especially for young companies
- Willingness to take risks pays off

Weaknesses (internal):

- Too less or no money for expertise or new processes/topics, especially for young companies
- Communicative expertise not available
- Capacities not available

Opportunities (external):

- Communicative lever/ perception
- Legislation, new regulations regarding sustainability
- Change mindset / create new standards
- Create new markets

Challenges/ risks (external):

- Higher speed in company processes, difficult to 'stay on the ball'

- Credibility, reputation, transparency -> can be difficult for older companies, for example, to suddenly be perceived as a 'sustainable' company
- Brand management may have to be rebuilt
- Competitiveness
- Legislation, e.g. regulations that make processes more difficult

Event Agenda (Creative Brainstorming during opening event)

TIME	DESCRIPTION
17:00 -17:45	Creative Brainstorming: How to support more sustainability in education, research & economy?
17:45 – 18.00	Presentation of workshop results

Results & Photos



Fig. 22. Creative Brainstorming Session at HdM



One-day Workshop: Stuttgart

Location: HdM Workshop Room, Nobelstr.8, 70569 Stuttgart

This workshop took place as part of a 'Green Innostudio' on 30 April 2024 from 9 a.m. to 2 p.m. at the HdM. The 'Innostudio' is a teaching format that was developed by the HdM Startup Center and has been in existence for several years to raise awareness on 'entrepreneurship' among students (first semester) of all faculties. As part of this format, students are supported every semester in discovering, building and developing their entrepreneurial skills, because only those who have come into contact with entrepreneurship and innovation can decide to pursue this path further.

As part of the 'Green Innostudio', an attempt was made to awaken all participants' initial enthusiasm for sustainable urban innovation. The EU project Urban Shift was presented to the students right at the beginning and the most important problems in the context of the four urban challenges (food waste, urban heat island, mobility/circularity, extreme weather events) were then explained in more detail. Afterwards, the participants were given an inspiring and creative approach to the topic of 'entrepreneurial thinking and action'. In teams, they developed their own 'green' business ideas to solve one of the four urban challenges and applied the knowledge they had learnt in practice in alternating input and work sessions. At the end, each team had to present the business idea they had developed to the other teams in a short pitch and received feedback.

Event Agenda

TIME	DESCRIPTION
09.00 - 09.10	Welcome & process of the creative workshop
09.10 - 09.30	Introduction of Urban Shift & four urban challenges
09.30 - 11.00	Team formation & 1 st Ideation phase
11.00 - 12.00	Problem Identification & Validation
12.00 - 12.30	Quick lunch break
12.30 - 13.30	2 nd Ideation phase & Poster creation
13.30 - 13.55	Pitching & Feedback
13.55 - 14.00	Sum-up & Farewell

Results & Photos

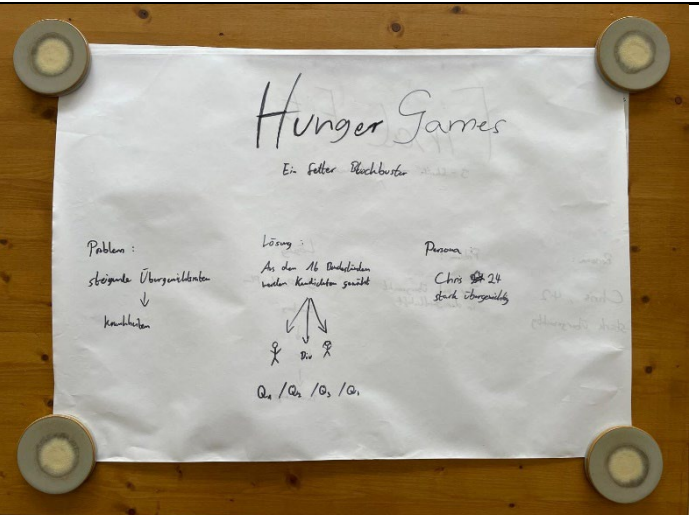
The results of this 'Green Innostudio' are presented below:

DESCRIPTION	PROTOTYPE
<p>Innophalt</p> <p><u>Urban Challenge:</u> Urban Heat Islands</p> <p><u>Solution:</u> Cooling asphalt pavement made from sustainable raw materials and heat-resistant, absorbed heat is to be converted into energy</p>	
<p>Core Climb</p> <p><u>Urban Challenge:</u> Food Waste</p> <p><u>Solution:</u> App to support healthy nutrition & sport training; healthy nutrition by utilising almost expired food</p>	
<p>Klimadrohne (= Climate drone)</p> <p><u>Urban Challenge:</u> Extreme Weather Events</p> <p><u>Solution:</u> Cooling drones equipped with powerful fans and cooling systems; lowers surface temperature -> heat load is reduced</p>	

Hunger Games

Urban Challenge: Food Waste

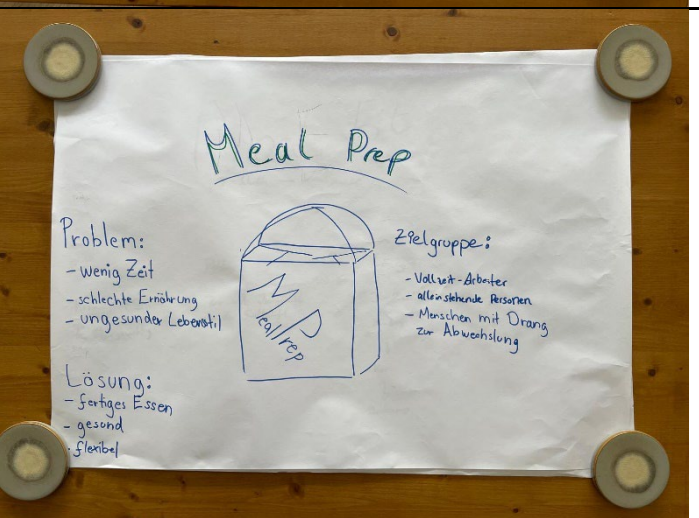
Solution: Game interventions to support healthy nutrition & sports training; healthy nutrition by utilising almost expired food



Meal Prep

Urban Challenge: Food Waste

Solution: Delivery service with ready-made food, sustainably & regionally produced, observing the right portions to counteract food overproduction



Plants on Top

Urban Challenge: Urban Heat Islands

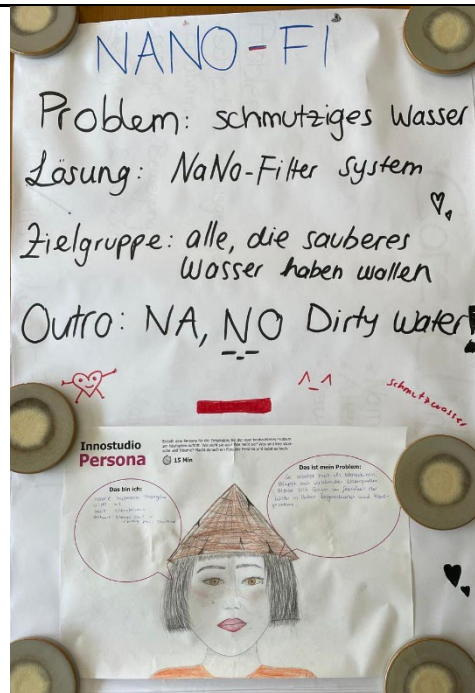
Solution: Garden service to implement more green spaces on roofs of buildings, growing plants & own food



NANO-FI

Urban Challenge: Extreme Weather Events

Solution: Nano filter system to efficiently clean dirty water from increasing pollution caused by extreme weather events



Data FIT

Urban Challenge: Food Waste

Solution: App for measuring blood values, offers nutrient analysis, creates recommendations for daily nutrition; supports customised and targeted nutrition and thus avoids overconsumption or throwing away the wrong foods



Attendees & Participants: Stuttgart

EVENT	NUMBER OF PARTICIPANTS
Living Exhibition (16.-23.2.2024)	250
Opening Event & Creative Brainstorming Session (16.2.2024)	25
Closing Event (16.2.2024 + 23.2.2024)	200
Exhibition stand at fair "Fair Handeln" (4.-5.4.2024)	Visitors Fair: 11.500 (4.4), 17.000 (5.4)
1 Day Workshop (30.4.2024)	35



Impact & Results: Stuttgart

- Having the Living Exhibition open with key events at HdM Playpark and the City Hall of Stuttgart helped to boost the importance of future urban green innovations through participation of different target groups from economy and society. Also, the interactions with external stakeholders engaging with the entrepreneurs and prototypes provided strong affirmation, motivation, and important feedback for future product/service directions.
- The participation at the trade fair 'Fair Handeln' (English = Acting Fair) was very important for the communication of the results of the 1st batch of Urban Shift on a regional to national level and increased its visibility immensely due to the high number of visitors (28.500). Potential buyers, co-operation partners and investors received the contact details of the participating start-ups.
- The project's necessity and relevance for a wider audience (e.g. politics, businesses, creative actors, entrepreneurs, educators) were validated by the creative workshop/ brainstorming. It also inspired fresh concepts for further collaborations and activities to support enabling urban green innovations on a national/ international level by relying on the EU Green Deal.
- The one-day workshop was very well received by the students at an early stage of their study programmes, with some wishing that it could have been longer or followed by another format to support entrepreneurship. Some currently participate in further formats offered by HdM (e.g., IDEA, ADVANCE) to continue working on their green business idea. This highlighted the need for programmes like the Living Labs programme, which addresses students' needs and wishes.

Conclusion

From the first round of Living Exhibitions a lot was learnt which will help to improve the results of the second round of exhibitions. With the number of activities associated with the Living Exhibitions, this proved to be a challenge to host all events within a short timeframe due to schedules of the institutions and so partners capitalised on other events in the city to boost dissemination of Urban Shift. In addition, the very short turn around between the closing of the Living Labs programme and first Living Exhibition resulted in the need for a simple yet effective approach to the overall set-up of the exhibition. Partners utilised resources in the institutions to help set up the exhibition, and thus they were curated according to the needs of each space. Partners were provided with guidelines, but also had the flexibility to adjust the sessions to better address the profiles of the participants.

Even though there were some challenges meeting all the expected KPIs in terms of participants, the workshops and Living Exhibitions were very well received by all participants. In addition, it was noted that smaller focus groups had a higher impact in some cases, as participants were more actively engaged and willing to share their ideas. Looking towards the next round of Living Exhibitions, each partner has a clearer understanding of the expectations and needs, and the consortium aims to learn from their challenges, to increase the impact next time round.

Recommendations for Round 2

- Capitalising on other events in the institution and/or host city can boost participation and help to reach a wider network.
- Where possible, host the workshop and creative brainstorming as close to the Exhibition opening as possible. If not possible, to pair them with other events in the city.
- Gathering a group of 30+ professionals for the Creative Workshop proved very challenging, as taking time out of their workday is not easy. A suggestion would be to host this session first thing in the morning or at the end of the day, to encourage a higher participation.
- Encourage more people to contribute to the Living Wall, which ultimately took the form of a Living Book.
- Have the students design their posters themselves for the exhibition with the given templates. This gives the students more autonomy over their work and how they present their start-up.

Disclaimer:

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