

BUILD SOLUTIONS

ECOLOGICAL BUSINESS INTENSIVE COURSE, REPORT

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1 – FOREWORD

Building Urban Intelligent Living Design Solutions

Cities currently host more than half of the world population, which is projected to increase up to 70% by 2050 (UN, 2014). Already, cities account for 70% of global CO₂ emissions (C40). With the expected population growth, cities would hence be the source of an estimated 85% of global GHG emissions.

There is a growing recognition and awareness that nature can help to provide viable solutions by using and deploying the properties of natural ecosystems and the services that they provide in a smart and 'engineered' way (EC). These living solutions provide sustainable, cost-effective, multi-purpose and flexible alternatives for various objectives. Working with nature, rather than against it, can further pave the way towards a more resource efficient, competitive and greener economy. It can also help to create new jobs and economic growth, through the manufacture and delivery of new products and services, which enhance the natural capital rather than deplete it (EC).

With that in mind, the big question is, why are nature-based solutions not used more to address the global urban challenges?

The main answer would be that there's a distinct skill and financing gap in the biotechnology sector. While we currently have great researchers in biotechnology, too often the commercialization and hence the implementation of their discoveries stumble due to a lack of personal experience in entrepreneurship and cooperation with industry leaders (Fritsch, 2010).

And even when most of those skills are present in a team attempting to commercialize a technology, another obstacle rears its head: the lack of short-term funding available to biotech start-ups and spinoffs (Swamidass, 2008). Recently, the High-Level Group for the European Innovation Council published their first recommendations which state that funding for disruptive, market-creating start-ups with deep-tech solutions (like biotech) is severely fragmented and doesn't meet the needs of the start-ups for developing the technology (http://ec.europa.eu/research/eic/pdf/eic_recommendations_set-1_2017.pdf). The lack of funding can be attributed to multiple factors, chief amongst them being the perceived risk and the huge capital expenditures necessary to develop sound biotechnology solutions.

Building Urban Intelligent Living Design Solutions (BUILD Solutions) project aims to set up transdisciplinary cooperation among universities and business, engaging students, teachers and researchers and providing them with the necessary entrepreneurial skills and connections to bring intelligent living solutions to the market, by investigating biological systems, creating smart design prototypes, business plans, plans for start-ups and working with accelerators.

The project's objective is to develop an experimental transdisciplinary educational system linking biology, intelligent design and business through several kinds of activities, such as courses for students and trainers, symposiums, development of educational resources, the set-up of an accelerator programme, launching an international call for ideas and creating new networks.

The project is co-funded by the Erasmus+ Programme of the European Union.



Living design solutions provide sustainable, cost-effective, multi-purpose and flexible alternatives for several urban challenges.

2 – ECOLOGICAL BUSINESS Intensive Course, WU

2.1 Introduction

The Ecological Business Intensive Course was initially planned as a 3-day event in collaboration with the 'Sustainability Challenge' (<https://sc.rce-vienna.at/>) and 'Sustainable Entrepreneurship Course' (<https://boku.ac.at/wissenschaftliche-initiativen/zentrum-fuer-globalen-wandel-nachhaltigkeit/lehre-und-bildung-fuer-nachhaltige-entwicklung/unsere-lehrveranstaltungen/lva-sustainable-entrepreneurship>).



ECOLOGICAL BUSINESS
INTENSIVE PROGRAMME COURSE

UNIVERSITY OF VIENNA | October 2020-March 2021

Vienna University (WU) is conducting the first Intensive Programme Course of BUILDs during the months of January and February 2021. The Intensive Course is organized in the context of the development of two ongoing WU Courses ('Sustainability Challenge' and 'Sustainable Entrepreneurship'), and it aims at **setting businesses related to enhancing cities' sustainability and resilience**.

The objective of the WU Intensive Course is to **bring together BUILDs consortium industries and trainers** with the objective of **equipping the students** (a total of 15 start-ups teams) with needed knowledge and competencies to put their sustainable (business) ideas successfully into practice.

The Intensive Course includes lectures on the core elements of **sustainable entrepreneurship, customer segments, business plan writing, finances, pitch training, networking**, as well as close mentoring from the biology and design disciplines. In addition, the Course integrates peer-to-peer sessions where the different teams support each other in their joint ambitions to bring their sustainable (business) ideas to life and to contribute to sustainable development.

More info at
<https://www.build-solutions.org/ecological-business-intensive-course/>

Note
Due to COVID-19 situation in Austria, classes are taught online.

Organized by **WU** **BUILD S**

With the collaboration of: **Iaac** **UNIVERSITÉ DE LORRAINE** **CITY FACILITATORS**

Sustainability Challenge **fundacióErsilia** **econick** **Plant-e** **GREENTECH CHALLENGE**

Both courses are university master classes focusing on sustainable start-up education, training, and bringing together students with an entrepreneurial mindset from various master programmes and disciplines in Vienna. Both courses aim at setting up businesses related to enhancing cities' sustainability and resilience by supporting students in setting up their own sustainable (business) solutions.

However, due to the ongoing COVID-19 situation in Austria, both courses could not be realized as initially planned. The initial 3-day event itself got cancelled in the beginning of August and shifted to a new format: to a series of several separate onsite sessions, that potentially could also be realized as online events. In Autumn 2020, shortly after both courses started as in-person events, online teaching and training was re-installed due to rising numbers of COVID-19 cases. Therefore, the initial plan of involvement needed to be adapted for a third time and resulted in a mix of online lectures, online workshops and online mentoring sessions, as well as

the provision of working materials for the students. The sessions offered by BUILDs trainers were partly embedded in the curriculum of both university courses, partly carried out as voluntary extra-curricular activities.

2.2 About the Organisers

The Intensive Course Programme on Ecological Business was carried out by the RCE VIENNA, which is closely linked the Competence Centre for Sustainability Transformation and Responsibility (STaR) and situated at the Vienna University of Economics and Business. Namely, Laura Hohoff and Hannah Frost, who were involved as trainers in the previously carried out BUILDs start-up programme, organized the intensive course programme with the involvement of the other trainers of the consortium. Additionally, they closely cooperated with the tutors and mentors of the Sustainability Challenge and the Sustainable Entrepreneurship Course to ensure a qualitative and impact-oriented cooperation among the programmes and the inputs offered.

Laura Hohoff and Hannah Frost also offered several trainings and feedback sessions to the students, as well as training materials.

2.3 Main Topics

The setting of both courses consisted of two kick-off events that still took place in person, followed by several joint online sessions where start-ups and initiatives from both courses participated, and a few sessions that happened only within the setting of each course. Additionally to this pre-set and mandatory curricula setting, some of the inputs of the BUILDs trainers were realized as additional and non-obligatory sessions.

Whereas the Sustainable Entrepreneurship Course is officially lasting for only one semester and ended in February 2021, the start-up track of the Sustainability Challenge continued in the summer semester and officially lasted until July 2021.

The Sustainability Challenge is an established university programme in Vienna, which was realized for the 11th time in the academic year 2020/2021 and aims at a transdisciplinary mix of master students from all five big universities in Vienna. Among them are the Vienna University of Economic and Business, the University of Natural Resources and Life Sciences (BOKU), the University of Vienna, the Vienna University of Technology and the University of Applied Arts (Angewandte). The course consists of two programmes, one dedicated to service learning and one to the development of sustainable start-ups and business solutions.

Contrary to the Sustainability Challenge, the Sustainable Entrepreneurship course is embedded in the curriculum of the University of Natural Resources and

Life Sciences and is not exclusively limited to students aiming at founding a sustainable start-up, but also open to those trying to establish sustainable initiatives and projects.

Both courses aim to equip the students with needed knowledge and competencies to put their sustainable (business) ideas successfully into practice. This includes lectures on the core elements of sustainable entrepreneurship, customer segments, business plan writing, finances, pitch trainings, networking, and constant peer-to-peer sessions where the different teams support each other in their joint ambitions to bring their sustainable (business) ideas to life and to contribute to sustainable development in general.

2.4 Methodology

The courses refrain from pure lecturing, but combine inputs from experts and practitioners from the entrepreneurial field with interactive learning settings and put a great emphasis on the mutual support among the students.

The involvement of BUILDs trainers aimed at enriching the curriculum of the Sustainability Challenge (start-up track) and the Sustainable Entrepreneurship Course by 1) promoting nature-based solutions, 2) sharing practical materials and tools, as well as 3) offering valid and targeted hands on feedback to the participating start-ups.

Short overview of involvement:

The WU trainers have been involved in the kick-off sessions of both courses and offered team building exercises, as well as an intro on nature-based solutions. Furthermore, they provided materials to the students on how to pitch and participated in pitch trainings and individual feedback sessions.

The other trainers and company partners of BUILDs were involved through different formats of interaction and knowledge exchange in February and March 2021:

IAAC trainers provided a session on rendering and logo design, whereas trainers from Green Innovation Group and City Facilitators carried out workshops on pitching and sales.

Trainers from UL, Plant-e and Econick offered individual feedback sessions to selected start-ups. In addition, Green Innovation Group and City Facilitators also offered a joint session for a selected startup working in the field of solar energy.

3 – OUTPUTS

3.1 Programme

Detailed Overview of Involvement:

WU Vienna:

- Team Building & Intro to Nature-Based Solutions (October 2020, twice)
- Materials for Pitching (November 2020)
- Pitch Training & Feedback Session (7th of January 2021)
- Individual Feedback on pitch decks (not-mandatory) (January 2021)

The WU trainers have been involved in the kick-off sessions of both courses, both still happening as in-classroom-events, where the BUILDs project was introduced and team building exercises were carried out. Additionally, inputs on the potential of nature-based solutions in entrepreneurial contexts, as well as samples of already carried out projects and business solutions were presented to inspire the students to inspire them to think outside-the-box and shape their initial ideas even further.

In December 2020, the WU trainers provided training materials on how to pitch a start-up idea to different target groups, followed by a pitch training in January 2021 and individual feedback on afterwards handed-in pitch decks.

Green Innovation Group (GIG) and City Facilitator (CF):

CF: 2-hour workshop with pitching training, go-to market strategy and a course on how to test demand and product market-fit (planned for 11.02.21, cancelled due to unexpected illness)

It was planned to go through market feedback exercises (including constant iterative feedback loops) that were already carried out in the kick-off session with the BUILD students in the year before, as they were quite successful. Additionally, also exercises on sales and on rapport-building were envisioned. The workshop was not redone, as no replacement date could be found that could have fit in the student's curriculum.

GIG: 2-hour workshop on: How to get first sales meeting done? How to structure sales funnels? Including a mapping exercise that helps each start-up to pave their way to first sales.

Prep-task:

1. Write down a one-liner explaining your concept
2. Write down 5 potential client target groups
3. Identify 5 companies in each group, public institutions don't count

4. Identify a first point of contact for each company, write down their contact info with email and phone number

IAAC:

2-hour session on rendering and logo design (10th of March 2021, 11am – 1pm)

Topic: training on rendering and logo design

BUILDs training session will investigate how design, based on creativity, and new technologies, can help to boost participatory nature based solutions in the urban environment in a pro-active and productive way, and through diverse scales. We aim to develop innovative nature based solutions, sharing knowledge with students on how to communicate a solution digitally through Digital Rendering and Logo Design. Workshop participants will learn about digital rendering & logo design targeted at the creation of specific prototypes.

Training session program:
by Mohamad el Atab and Daniela Figueroa. (IAAC)

Rendering General Overview (Mohamad, 15 mins approx.)

- Rendering Tools
- Rendering Tips and Tricks

Logo Design General Overview (Daniela, 15 mins approx.)

- Logo Design Tools
- Logo Design Tips and Tricks

Q & A (10mins)

Individual feedback sessions with University of Lorraine, Plant-e and Econick

The individual feedback sessions with UL, Plant-e and Econick aimed at tailored feedback for those start-ups that are working in a field where nature-based solutions (could) apply and to strengthen their (business) ideas further by sharing personal hands-on expertise on nature-based solutions in practice and in theory alike, as well as valuable insights on what it means and takes when working with and aiming to apply nature-based solutions in a business context.

Additional individual feedback session with CF and GIG: with solar panel start-up, feedback on fundraising and types of capital relevant for hardware start-ups

3.2. Event pictures



Laura Hohoff and Hannah Frost at kick-off event of the Sustainability Challenge 2020/2021.



Pitch training session with Hannah Frost on January, 7th.



Frederik van Deurs • 1.

CEO at GREEN INNOVATION GROUP A/S

5 Monate •



Yesterday I was facilitating 3 different projects that work to address impact at 3 different stages.

1. Student entrepreneurship:

With a group of entrepreneurial students from the Technical University of Vienna we conducted a sales training workshop.

The student were practicing cold-calling via zoom - an exercise I usually do live, but as you can tell from the smiling faces, it worked splendidly online too.

2. Ecosystem Institutions:

In order to harness the untapped potential from forming more diverse entrepreneurial ecosystems, 5 different Nordic organisations have set a task-force to change this. I had the joy of facilitating a workshop to draft a statement of intent and a roadmap for action.

We need a more inclusive innovation ecosystem if we wish to realise the full potential.

3. Corporate innovation:

Working to help a major Danish industry company to integrate radical innovation from EU based green startups into the value chain. This is one of the kinds of assignments that excites me the most, I learn so much about acoustic whale-sensors, heat-to-electricity conversion, AI automation software, bio-plastics, insect-protein, PtX and everything in between.

I hope you have a splendid weekend ahead of you and get to enjoy your work.

LinkedIn post from Frederik van Deurs:

https://www.linkedin.com/posts/frederikvandeurs_yesterday-i-was-facilitating-3-different-activity-6765937958886375424-tDbW



Session with Frederik van Deurs and the
students

4 - CONCLUSIONS AND RECOMMENDATIONS

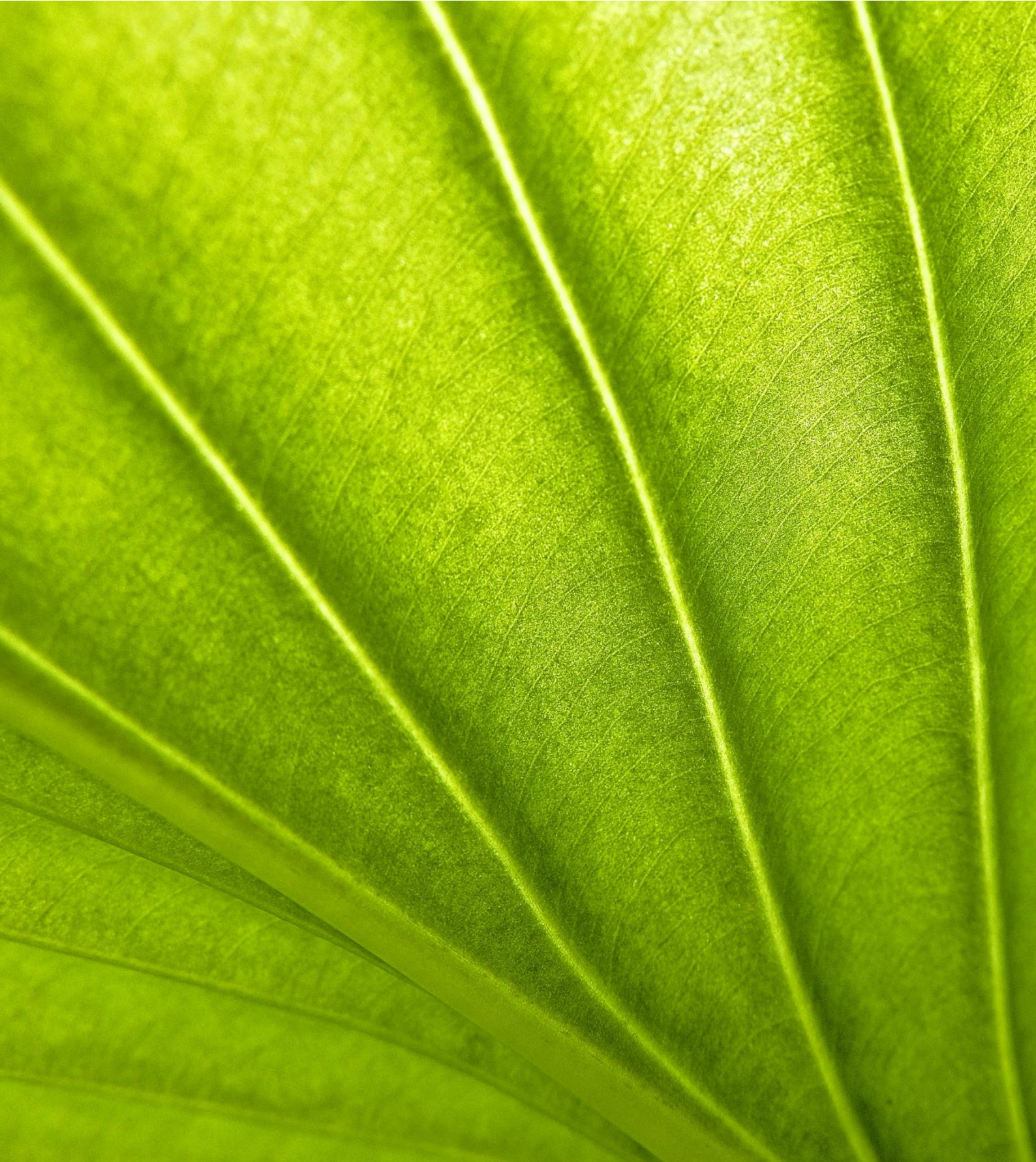
The ongoing Covid-19 situation and aligned restrictions resulted in several adaptations of the intensive course programme and required a high flexibility of all trainers, but also the students involved. Nonetheless, the Intensive Course programme was a great success and enriched two established master classes with the insights from trainers and mentors with a broad international experience.

Working with a variety of different sustainability-dedicated start-ups and initiatives calls for ongoing adaptation to the specific needs of the teams, and the current stage of their development. Therefore, a mix of inputs and feedback that are more general and personalized were chosen, which worked out very well.

Also, including the Ecological Business Intensive Course in the settings of two already established university master courses allowed to 1) reach the proper target group, 2) increase the impact of both classes and 3) enable mutual learnings among all the programmes and teams.



IAAC Valldaura Labs: taking nature as an inspiration for the design of responsive buildings and resilient urban spaces!



Building Urban Intelligent Living Design Solutions, 2018-2021

