

CEED

CIRCULAR ECONOMY INTO ART THROUGH
ECO-DESIGN



wonderland
magazine

Content

chapter 1: introductions	4
circular economy into art through eco-design	5
background of the project	7
what is CEED?	9
the trainings objectives	10
the participants	11
the partners	12
 chapter 2: sustainability layers	 16
introduction to sustainability aspects in this project	17
material sustainability	18
financial sustainability	20
social sustainability	22
organizational sustainability	24
what is circular economy?	26
definition of popular models	28
linear economy	30
circular systems	31
cradle to cradle approach	32
circular advantage concept	33
what is eco-design?	34
 chapter 3: national layers	 44
the context in the partners' countries	45
AUSTRIA	46
national events in austria	48
ALBANIA	54
national events in albania	59
KOSOVO	62
national events in kosovo	70
NORTH MACEDONIA	72
national events in north macedonia	75
ITALY	78
MONTENEGRO	82
national events in montenegro	84



THE CIRCULAR CITY WE WANT



HOW TO TURN WASTE INTO PROFIT

chapter 4: international trainings	86
international trainings	87
the circular city we want	88
how to turn waste into profit	90
 chapter 5: inspiring cases	 94
being light on systems	95
too good to go austria: circular economy in food industry	96
circular economies	98
recover from interruptions	100
local and bottom up initiatives with impact	102
re-activating dormant resources	104
repair – an urban example	106
circularity in construction	108
from ruins to creative-culture zone	110
circular reuse of properties	112
cradle to cradle products	113
upgrading the value and meaning	114
re-cycle and re-use differently	116
reduce waste and emissions	117
 summary	 118
earth overshoot day	119
references	120
mastead	121

“Human beings don’t have a pollution problem: they have a design problem. If humans were to devise products, tools, furniture, homes, factories, and cities more intelligently from the start, they wouldn’t even need to think in terms of waste, or contamination, or scarcity. Good design would allow for abundance, endless reuse, and pleasure.”

**William McDonough
and Michael Braungart
- The Upcycle**

chapter 1:

introductions

circular economy into art through eco-design



CEED – Circular Economy into Art through Eco-Design was a two-year education program designed for young people to get a better understanding for waste management and help them putting innovational ideas into action. The pan-European partnership was formed of 6 partner organizations who decided on the urgency and content of the trainings. Two online trainings were offered in order to motivate young people and enable business ideas that follow a circular business model.

This manual is the intellectual output of the program. It is a collection of knowledge, tools and best practices in the field of circular economy.

Regulating light bulbs within the EU happened in many stages and not at once¹. Have you ever changed a light bulb? Did you ever struggle in finding the right bulb for your lighting needs? Have you ever thrown away an item because it simply wasn't lighting as needed anymore? There is a fair chance that the product was designed that way. We've possessed the knowledge of how to design light bulbs for more than a century. The world's oldest light bulb has been continuously on for 119 years, without a break. Since 1901, a light bulb has been shining in the local fire station in Livermore, California (USA). The so-called "Centennial Bulb" has never been switched off. The bulb, with 4 Watts of power, emits a shimmering amber-yellow light from a glowing carbon filament. The view from below reveals or reads a characteristic "ON" sign. What has happened during these 119 years, and why are we still discussing light bulbs, when we have examples of bulbs running for over a century? We are constantly reworking and improving our legacies, often in the name to protect our environment.

There might be different reasons for this, which are not the subject of this publication. But one important element from the complex developments of the last century is how things are produced, consumed and disposed, which is a reflection of our approach to material and life style. We be-

www.ceed-erasmusplus.com



¹<https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:076:0003:0016:DE:PDF>



lieve that the healing of our system relies on the capacity of every single citizen on this green earth. Therefore, we created this collaboration between different organisations in Europe, to enhance everyone's capacity for sustainability. CEED – Circular Economy into Arts through Eco-Design – was a two-year education program designed for young people, providing a better understanding of waste management, creation of new business opportunities and helping them launch innovative ideas into action. The pan-European partnership was formed with 6 partner organisations, jointly deciding on the urgency and content of the

trainings. The project aimed at personal exchange among partners and young trainees, but due to the unexpected COVID-19 outbreak, the planned trainings had to be adapted to ongoing regulations and moved online.



© bhkw-infozentrum.de

background of the project

by Fahmi Osmani



Circular economy is an alternative to linear economics in which resources are used for as long as possible to maximize their value through the recovery, reuse, regeneration or recycling of end-of-life materials. "The transition to a more circular economy, where the value of products, materials and resources is maintained in the economy for as long as possible, and the generation of waste minimized, is an essential contribution to the EU's efforts to develop a sustainable, low carbon, resource efficient and competitive economy. "... A circular economy starts at the very beginning of a product's life. Both the design phase and production processes have an impact on sourcing, resource use and waste generation throughout a product's life[i]. Going beyond the current "take, do and delay" extractive industrial model, circular economy is based on a regenerative circu-

lar model, which builds economic, natural and social capital. Relying on system-wide innovation, it aims to redefine products and services through waste-free design while minimizing negative impacts. It is based on three basic principles:

Several terms are used related to the end of product life: Sustainable Development UN Platform, Agenda 92 Circular Economy, Green Logistics, Reversible Logistics, Cleaner Production, Sustainable Production, Eco-Design, Eco-Innovation.

In order to promote circular economy, The Republic of North Macedonia focuses on strategic goals related to the catalysis of green industry and green production in its industrial policy at home and in the region, which is included in the new industrial strategy (2018-2027).

The Ministry of Economy emphasizes that

- Waste and pollution free design
- Retention of products and materials in use
- Regeneration of natural systems



investments in the transformation of green economy and green energy are key priorities of Northern Macedonia; and this year, despite the economic crisis caused by the pandemic, maximum efforts are being made to increase and promote circular economy in the country to contribute towards more sustainable use of resources, increased sustainable production, more sustainable consumption and better waste management.

All industries, regardless of sector, size or location, are continuously increasing their environmental performance. This includes efforts to reduce the environmental impact of processes and products by using resources more efficiently, eliminating toxic substances, replacing fossil fuels with renewable energy sources, upgrading the digital age, low carbon industry, innovations, investments and internationalization, and in the National Program for Competitiveness, Innovation and Entrepreneurship. The Ministry of Economy supports companies in developing projects that evaluate the company and introduce the concept of circular economy, looking at the entire product life cycle, waste reduction and modern waste management and recycling. "In this sense, we have started organizing awareness-raising and capacity-building activities to promote the green economy. The intention is to better understand the challenges and importance of introducing a new concept into functioning at all levels, starting with the companies themselves." In the field of energy, the Ministry points out that Northern Macedonia is taking important steps to produce electricity with renewable sources in order to reduce de-

pendence on greenhouse gas emissions. replacing fossil fuels with renewable energy sources, upgrading the digital age, low carbon industry, innovations, investments and internationalization, and in the National Program for Competitiveness, Innovation and Entrepreneurship, the Ministry of Economy supports companies to develop projects to evaluate the company and introduce the concept of circular economy, looking at the entire product life cycle, waste reduction and modern waste management and recycling. "In this sense, we have started organizing awareness-raising and capacity-building activities to promote the green economy. The intention is to better understand the challenges and importance of introducing a new concept into functioning at all levels, starting with the companies themselves." In the field of energy, the Ministry points out that Northern Macedonia is taking important steps to produce electricity with renewable sources in order to reduce dependence on greenhouse gas emissions.

what is CEED?

by Bahanur Nasya & Yilmaz Vurucu



CEED is a strategic partnership of organizations from several European countries, funded by Erasmus+. The main purpose of CEED is collecting best practices in terms of waste management and the circular repurposing of waste by means of eco-design. In two trainings Selected trainees were trained on how to become a "Waste-preneur" and turn waste into profit during the two intense training sessions. The skills and competences that were being trained helped participating youth establish "Action Plans" that transform the way in which we deal with waste and adapt a circular approach.

Additional aims beyond CEED are promoting the development of circular economy principles and capacities, more particularly in the recycling of various sorts of waste. Emerging from its potential as a driver of youth employability and environmental sustainability, these goals also have the purpose of promoting recycling with a dimension of social sustainability. The project aims to solve the problem of waste (or vacancy in terms of built environment) with a social innovation approach. Business opportunities arising from circular economy applications are enormously beneficial to startup businesses, and gain more popularity with the deliverance of real solutions to the waste problem of our societies. CEED displays ways in bringing recycling innovation or recycled eco-design products into the market and thereby creating jobs and incomes.

In this partnership, a special focus was given to Western Balkan countries. In the

Western Balkan area waste is mainly seen as having no use and being a problem, since adequate treatments of waste are not yet available everywhere. Waste is generally seen as simply being "materials that have no more use." Yet the storage (land-fill) of waste is a huge problem, not only in terms of land-use but in terms of pollution of the ground as well. Unfortunately, not enough information on how waste can be used as a raw material to unlock business opportunities exists, especially for young people. Vacancy in built environments or old yet still functional items are treated in the same way as waste.

We identify shared stumbling blocks that hinder the participating countries from having a booming circular economy sector in this project. The lack of technological know-how and labor skills to utilize waste in a circular manner is the main challenge in Western Balkan countries. We researched successful and inspiring practices and prepared cases for inspirational purposes to empower youngsters to come up with their own ideas. This kind of Non-Formal-Education content will promote circular economy to unleash the recycling potential for the participants and partners of this project. The international collaboration and exchange is fostering new opportunities on multiple levels (young entrepreneurs on the individual level, as well as the institutional level and municipality level).

Wonderland - platform for European architecture collaborated with 5 partner organizations from different European countries in this program to raise awareness in the



field of circular economy, entrepreneurship and eco-design among young people. The partners described the status quo in their respective countries in terms of eco-design and circular economy, which helped the consortium to identify common paths for the training.

the trainings objectives

The training program is organized around a series of real-world problems, which breaks conventional ways of thinking and combines various fields such as the sciences, arts and design, technology, the social sciences and the humanities. CEED partners adopt and merge their methods and bring different disciplines and different

backgrounds closer together. We think holistically and out of the box in CEED, with the purpose of creating new thinking patterns, new solutions and new expertise.

The activity program focuses on providing participants with inspiration, knowledge, methodologies and non-formal education tools to spread skills and attitudes necessary to eco-design and crafting methods. Participants received information on the life cycle of products as well as the best methods for reuse, recycling or repurposing a product. The trainings also aim to provide the participants with information on how to handle all these factors and inspire them to take action.



© wonderland/Hannah Breit



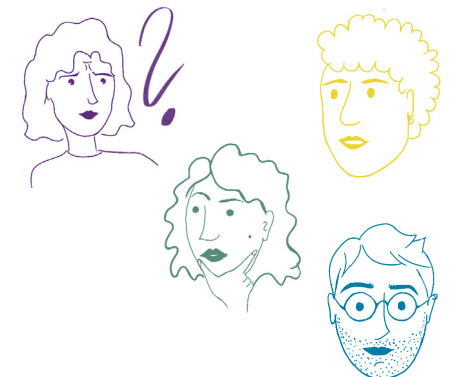
the participants

Young people have an enviable ability: to look at the world and truly believe everything is possible. This is the reason why the target group of this project consists primarily of young people. We refer to them as “emerging experts” because we see their potential to become the needed experts of tomorrow. In a way, every individual is already an expert, with a set of skills, experiences and ideas. We believe that activating everyone’s creativity to fix current and future problems is the only effective path to follow. Therefore, this Erasmus+ project and the training sessions combine workshops with an online project or idea gallery. Elaborated content, inspiring stories and much more will give the participants space to develop ideas, exhibit them to the world of circular economy and eco-design, and see them through into activation and reality.

Keen to see what would happen when young minds were given free rein to create, we viewed the training session in this project as a seed to start a joyful journey. Contemporary societies have many problems and challenges, and we need to encourage more inventive thinkers to solve them as opposed to idly waiting for someone to save us or find a solution for us. We are an essential part of the process and are creating proactively solutions collectively to solve our collective problems.

The participants of this program were

young people between 18-35 with special interest in and motivation for circular processes and sustainability. They were chosen on the basis of their knowledge about environmental management, circular economy and sustainability as well as their motivation to do something about it. With their already existing knowledge and the newly gained knowledge and skills they garnered, the participants are now well prepared to implement their own ideas into projects, businesses and become experts on circular solutions.



© wonderland/Hannah Breit

the partners



This project builds on a balanced collaboration between partners from different European countries. Their context, expertise and experience allow them to create an impactful project and fruitful collaboration.



ETMI is the leading organisation and boasts significant experience in the capacity building of young people through other projects initiated and carried out within the framework of the Erasmus plus program, embassies, and national agencies. The lead organization will play a key role in project management and coordination with other partners, in providing training and contributing towards the preparation of outputs that are required to be delivered. Moreover, the lead organization will keep contact with project partners and inform them of each project step. In addition, the organization is responsible for financial arrangements and reporting to the donors.

Wonderland – platform for European architecture – is reviewed as the technical partner with the most amount of experience on the subject. The network considers itself to be an open network, where information and know-how is shared. They are an assembly of both a core network, defined by the 'active teams,' and a larger, loose network in which exchange takes place. Wonderland supports architects, urban or regional planners, artists and all sorts of designers in their creation of solutions and positive impact. A special attention is paid to facilitate emerging practitioners with lectures, publications, events, trainings and similar to enhance their outreach throughout Europe.

www.etmi-al.org

www.wonderland.cx



The NGO Novi Horizon was founded in 1999. Some of the goals and objectives of this organization are to increase the participation of children and young people in the community's social life, to help improve the situation of minorities and marginalized groups, to encourage active citizenship and volunteering at the local level and beyond, to contribute to the continuous improvement of interethnic dialogue in Ulcinj and beyond, to develop cross-border dialogue and cooperation, and to promote European and Euro-Atlantic Integration.

www.ngo-horizonti.org



The Mine Vaganti NGO is a non-profit organization established in Sardinia in 2009. MVNGO has 4 offices in Sassari, Uri, Olbia and Tempio Pausania, covering all the North of Sardinia with other branches in the rest of Italy. MVNGO promotes intercultural dialogue, social inclusion through Sport and environmental protection using Non-Formal-Education. MVNGO is part of 3 international networks: YEE, ISCA and MV International.

www.minevaganti.org

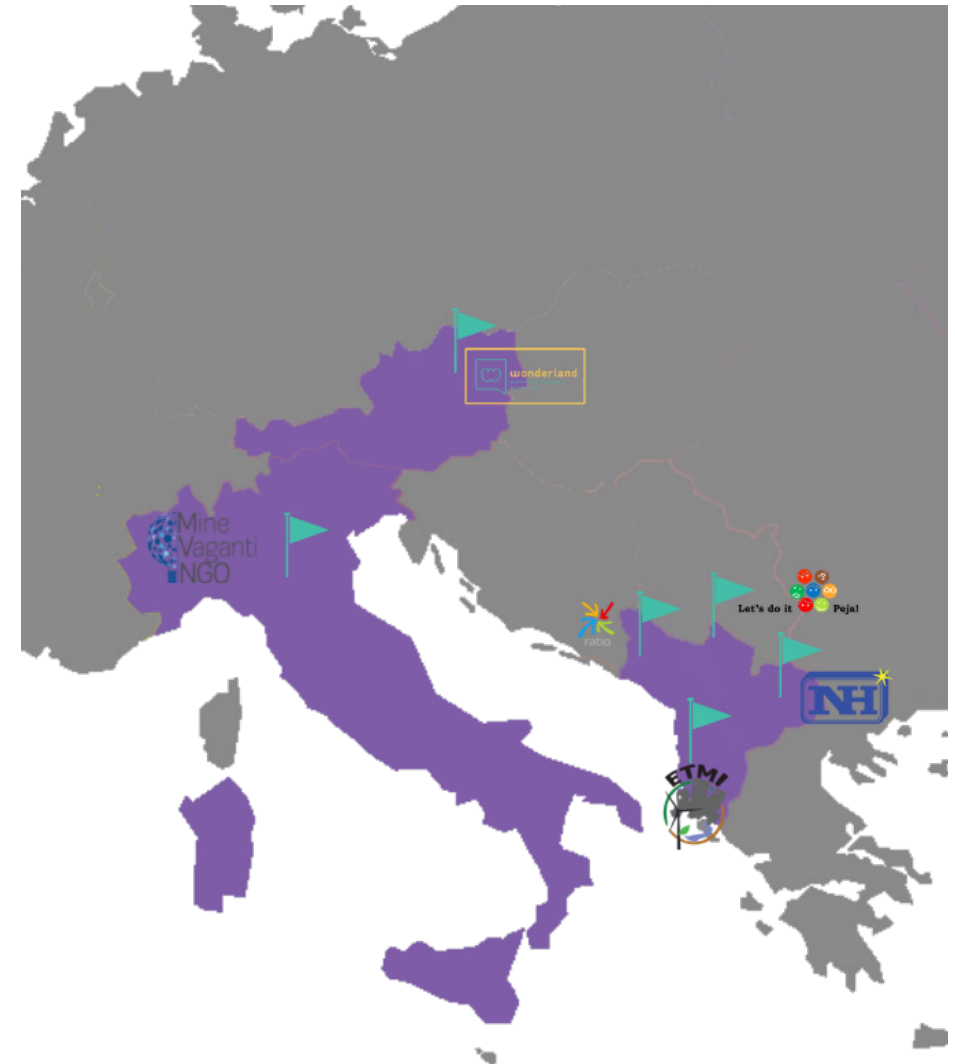


The Let's do it Peja (LDIP) is a grass-roots environmental organization founded in 2012 by a group of citizens passionate about the environment. They were involved in various environmental projects as volunteers for years in and around Peja, prior to the formation of the NGO. The aim was to implement the Ta Pastrojmë Kosovën – Clean-up Kosovo campaign, a Kosovo-wide activity. For this project, LDIP was awarded the Best Organized Site in Kosovo.

RACIO is a youth association established in 2009, located in Skopje. Since then, the association has attempted to organize different activities in the field of education and culture. The organisation has trained numerous people on different topics such as communication, leadership, economy, sociology and more. Their main target is high school students and they also work with minority youth in the 18-25 age group.

www.letsdoitpeja.org

www.facebook.com/ngo.ratio



“If it can’t be reduced, reused, repaired, rebuilt, refurbished, refinished, resold, recycled or composted, then it should be restricted, redesigned or removed from production”

Pete Seeger

chapter 2:

sustainability layers

introduction to sustainability aspects in this project



by Bahanur Nasya

Sustainability is a term used often. The word itself basically means to sustain something. Obviously however, everyone understands and envisions different concepts and imagines varying realities with mention of the word, making it necessary to have more than one definition when explaining sustainability as a term. In an ecological context, one could suggest that it means to act in a way that allows nature to regenerate itself. Therefore, it actually doesn't only concern the environment, but also individuals who use the environment for economic or social reasons. This means sustainability is the point of intersection for environmental, economic and social issues, and the way of dealing with these layers. For this reason, we make an attempt to coin different sections of sustainability, such as material, financial, social and organizational sustainability. These key concepts work together and build the

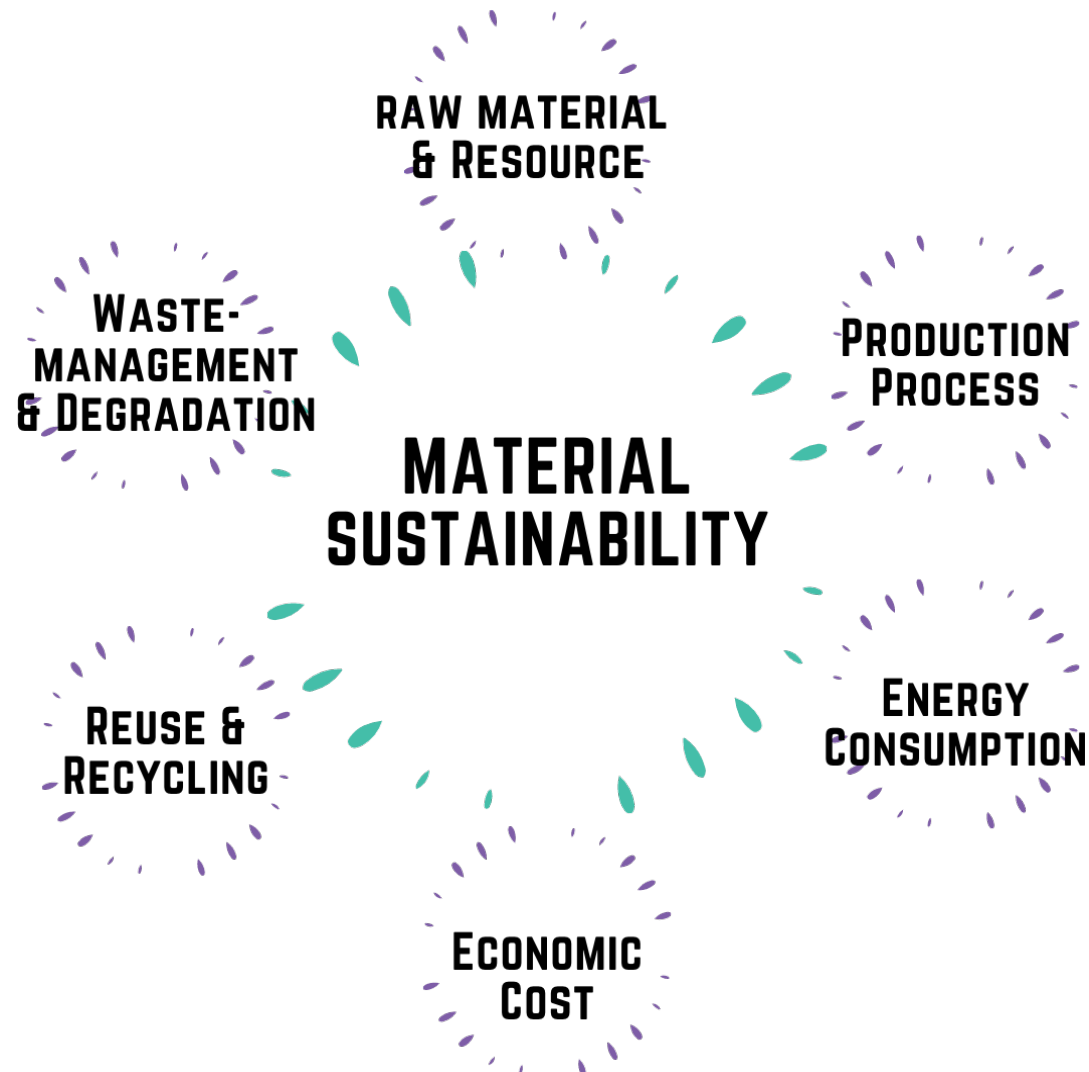
base for creating the best conditions that enable circularity in business and everyday life. We need to see sustainability in light of all its complex and multi-faceted layers. The concept needs to be situated in society with sustainable development and circular industrial economy being placed at a focal point. Sustainable design needs to adopt a collaborative systems approach towards satisfying real societal needs in an environmentally, socially, ethically and economically responsible way. This will require confronting widespread culture of global consumption patterns, making it necessary to have business and full stakeholder collaboration and behavioural change. Citizens can pressure the process with purchasing decisions, while educational institutes and governments need to ensure right mechanisms are in place to enable a truly responsible, fair and just economy.





material sustainability

Sustainable materials and material sustainability are slightly different aspects, which make a huge difference when used in business. Sustainable materials are about choosing materials manufactured from resource-efficient processes such as selecting materials of a low embodied energy content using locally provided and renewable energy sources, as well as selecting materials that contribute fewer amounts of emissions to the atmosphere. Further aspects are renewable materials, which contains all sorts of materials which can re-grow. Where else, the sustainable use of materials over and over again, will reduce the extraction of new raw-materials.



Material rule

Design desired and wanted products and services



SUSTAINABLE MATERIALS
without the hot air
Making Buildings, Vehicles and Products
Efficiently and with Less New Material

Julian M. Allwood
Jonathan M. Cullen

Julian M. Allwood and Jonathan M. Cullen, the authors of *Sustainable Materials*, have engineering backgrounds, and that allows them to discuss an area that doesn't receive enough attention—making buildings and goods more efficient by making their component materials more efficient. Though the authors have expertise in their subject, and it shows, they also write engagingly, explaining production methods and yield analysis in a way that a general audience can understand, and that will hopefully inspire industry to put these ideas into practice.

© wonderland/Hannah Breit



financial sustainability

Financial schemes of our times are very complex and difficult to break down in such a small publication. But for the sake of the overview we can define financial sustainability as a three-dimensional equation. The three interrelated dimensions consists of revenues, expenses, and value. The revenues and expenses are discussed and well-known, but the value aspect is difficult to pinpoint and differs from one organization to another. For an entrepreneur translating his or her desire into a business model, the value could consist of inner satisfaction, for an innovator it might be the luxury of obtaining the capacity to reinvent, and for someone who wants to sustain a well-functioning team, it very well might entail the power to maintain and re-engage individuals.



Business planning and strategy
 Getting started
 Going public
 Dealing with mistakes
 Making competitions
 Getting specialised



MANUAL FOR EMERGING ARCHITECTS
 Wonderland, Silvia Forlati, Anne Isopp

How can emerging architects manage their start-up? Where should they set up the business, which are the diverse factors they need to consider, how does the team achieve the desired public awareness and how can it prevent mistakes? In the recently published Manual for Emerging Architects, Wonderland, the platform for European architecture, answers these and many more questions.

The book comprises contributions by Tore Dobberstein, Hans Ibelings, Michael Obrist, Kari Juhani Jormakka, Tatjana Schneider and many more as well as interviews with Tomas Sieverts or Dickon Robinson.



social sustainability

Social sustainability requires identifying impacts on people, with businesses having to design and manage their impacts in a sustainable way. Among the impacted people are employees, workers in the value chain, customers and local communities. A socially sustainable business manages its impacts proactively. The premise is to live and to let live, to grow together, to maintain together etc. Adaptation of such a concept requires opposing exploitation methods and practices.



Social rule

International
collaboration
& Fairness



DIY Development, Impact & You
Practical tools to trigger & support social
innovation

This is a toolkit on how to adopt or adapt ideas that can deliver better results. It's quick to use, simple to apply, and designed to help busy people working in development. Draws on study of many hundreds of tools currently being used - here they have included only the ones practitioners found most useful.

© wonderland/Hannah Breit



organizational sustainability

Organizational sustainability needs to ensure having the means to remain in business for a long time. It addresses the leadership and individual talents, global insights and change or adaptation strategies to face challenges of all sorts and to overcome them as an organisation or team. The organisation therefore acts like an organism, which reacts to the context and pursues the goal to remain functional through innovation and adaptation.



Develop ideas constantly



BECC-Toolkit
for cultural centres professionals
European Network of Cultural Centres

How to start my first international cultural project.
The BECC Toolkit intends to support the mobility of cultural leaders and guide their learning experience. Once you decide going abroad for your cultural project, this toolkit will guide you in planning it and achieve a successful professional story. It will help you identify the essential skills that will allow you to better respond to current and prospective new dynamics. Local contexts are at the moment intensively influenced by global factors and societies are constantly changing in this context. Cultural institutions play a crucial role in this therefore cultural managers are required to learn constantly. This guide is a support for the people working in intercultural projects and professions.

what is circular economy?



by Bahanur Nasya & Daniela Patti

Circular economy has been around as a concept for a few decades. It refers to the decoupling of economic growth from the extraction and consumption of constrained natural resources, where dependency creates a competitive disadvantage over time. Wasted resources are materials and energy that cannot be continually regenerated, but instead are consumed and forever gone when used. There are four different forms of wasting in the current economy model. Wasted lifecycles concerns products where there is still demand from other users, but for a reason, the product is made unavailable. Wasted capability is targeting the unused resource, for instance a car, which is often 90% of the times not used but parked. Wasted values are components, materials or energy which is not recovered from the disposal. Instead, keeping resources in productive use in the economy for as long as possible is proposed². Circular economy models offer solutions for a greener and smarter economy that includes not only economic aspects but also social and environmental aspects. Companies are advised to build their business upon the principles of reuse, resource conservation, and by doing so closing the loops of the circle.

„To become more sustainable, companies need to go from traditional, linear business models based on “take, make and dispose” to circular business models, based on reuse, resource efficiency, the sharing economy and closed loops. This can counteract resource depletion, reduce pollution and be a source of cost reductions, new reve-

nue streams and better risk management for companies.“

Circular economy is built upon the idea that a clever designed economy has to restore social and material resources, while tremendously increasing environmental responsibility and providing economic sustainability. The drivers of the economy are resource constraints, technological development and socio-economic opportunity³. Clever design of materials, methods and process should lead to abundance and welfare as well as wellbeing for everyone. In this sense, the economic activities of a circular model follow regenerative aspects and increase the focus on preserving social and environmental resources. Many projects and researches confirm the untapped potentials of circular economy. Studies have shown that changing from a linear economy model to a circular model can help reduce greenhouse gas emissions by 70%. Not only that, but there is also a potential for businesses that take part in such a transition to tremendously increase their profit.

Circular Economy means thinking in cycles. Cycles of reuse and recycling materials, products, buildings and other resources. It is the contrary of the linear value chain, which is basically built on the concept of “take, make and dispose”. Circular economic thinking stands for the repeated usage of materials, products, buildings, spaces and resources in order to reduce or eliminate waste. That approach prevents valuable resources that are used only once from

leaving the cycle and ending up as waste of all sorts. In circular economy, each resource should be utilized in a way in which it can be re-used and recycled – in theory – indefinitely. This includes natural resources such as water, biomass, gas, described in the biological cycle, as well as non-natural resources such as plastic, metals, wood, textiles, glass etc. described in the technical cycle.

Many of the resources used in production are non-renewable, such as metals, minerals and fossil fuels. They are not only exhausted, but will be completely used up in the long run. Therefore, a more balanced usage of these resources needs to be included in business models, while ensuring the restoration of such resources are enabled. The circular economy model provides 3 different solutions to the problem of the harmful ways the linear model impacts the environment.

The initial and first step would be to constantly consider the reuse of all kind of goods, which in turn will deliver the first kind of solutions within the circular approach. As part of this process, the reuse of materials and already produced products have to be enforced and facilitated, so we can heal the damage caused through previous practices to our resources and environment.

Next to these solutions, to heal the linear economic model, companies and entrepreneurs need to rethink their design. The design of products, services and processes needs to be shaped in a way in which it leads to a circular loop of uses, delivering

a sustainable outcome. This would mean the designed good already has a recipe and blueprint of how the journey would continue following its primary use leading to its re-use. The after-use of a product needs to be considered in the designing and resolved in order to create products that can be reintegrated in the cycle and kept in the loop as long as possible.

The third solution is the creation of a circular business model. This offers the maintenance of the quality levels for as long as possible. If a product or item is designed and produced to stay at a high-quality, it can be reused many times, and remain in the cycle for a long time. That is why circularity rather prefers the “upcycling” of products over “recycling”, which most of the times is the gradual and slowed down degradation of a product until it becomes waste.



²Lacy et al (2015), p. 17

³Lacy et al (2015), p. 18

definition of popular models



by Bahanur Nasya & Hannah Breit

When we were working on sustainable solutions and design 2-3 decades ago, the common perception was, that a) sustainability costs a lot, b) that we do not have the solutions and methods to be sustainable, c) sustainable products are only for the wealthy few. We witnessed tremendous progress on these prejudices. To give an example, when wonderland was founded in 2002, passive houses would cost -depend-

ding on the country- approximately 25-30% more when compared to other houses. The difference can be today as low as 7%-15%. In the meanwhile, the Austrian Government even has an embassy building in Jakarta, Indonesia, built as a passive house.

The point is that the perception, the costs and the approach is rapidly changing. We are also witnessing the so-called "green-

washing" of goods and services. Therefore, we would like to have a quick look on common models, in order to identify which model works how and to better argue the innovation aspect. Is it possible for waste to build capital, rather than reduce it? Yes. By re-thinking and re-designing products and components, and rethinking the source of packaging by using renewable and compostable materials. Alternatively, instead

of owning stuff, a company may also license them from the manufacturers.

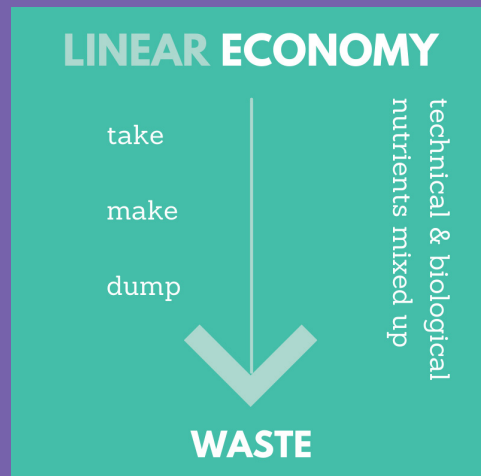
The circular economy is not only about resource supply and use efficiency, but indeed about evolving company business models to transform the nature of resource demand from the customer's point of view. The "circular advantage" lies in the competitive edge these companies gain.



linear economy

Linear economy has a „take, make, dispose“ mode of production, which has served modern companies well in the last 250 years. Yet on the precipice of permanent climate change and facing the exhaustion of our natural resources, this model has become increasingly impractical. For instance, we will eventually run out of gas. The current dependancy on fossil fuels is not only using up resources but also creating waste, pollution and emission problems. Since the economy is based on partial actors in the linear system (resource provider, transporter, production, merchandise...) none of the actors are responsible for the problems created problems, nor are they accountable for providing solutions. The impact on the environment and societal health for instance, is currently being financed by the community (e.g. through taxes financed waste collection). Rapid urban and industrial growth in recent decades has placed tremendous pressure on the world's natural resources. Our current linear economy system is leading to threats of resource scarcity, price inflation and degraded ecosystems⁴. Historically, we have become accustomed to having, for a 1% increase of GDP, a 0,4% rise in the resource usage. But the end of the last millennia has accelerated this equation. From 1975 to 2010, the GDP has increased to 225%, while the population has grown 64%, accompanied by a 120% increase of material use⁵. Nothing currently points to a break in the contingent relationship between growth and resource consumption. Is it possible to reverse the planet ex-

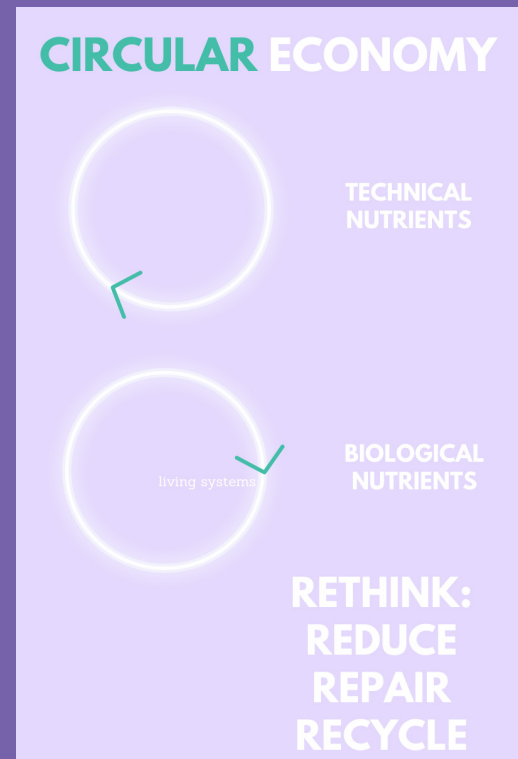
haustion with the linear model? No. Even if we consider technological improvements. The core flaw of the linear growth model is it's inability to extend a product's lifecycle. Currently the value is lost, squandering material, energy and labor.



© wonderland/Hannah Breit

circular systems

Circular systems are based on reusing, sharing, repairing, refurbishing, remanufacturing, and true-recycling activities to create a loop system, which can reproduce the activities through only a minimal amount of additional resources. The creation process, the use and the afterlife after the use is designed in a way that waste, pollution and emissions are minimized. Since the repair and reuse activities are a part of the business, these activities are financed by individual consumers. The circular economy aims to keep products, equipment and infrastructure in use for longer, thus improving the productivity of these resources. Circular business models can be as profitable as linear models, allowing us to keep enjoying similar products and services while reducing their impact on our environment. There are five business models for circular growth, which free companies from the constraints of the linear economy. Circular supply chain, recovery and recycling, product life extension, sharing platform and product as a service⁶. New designs and approaches in the circular systems are necessary in order to change our modes of production and consumption and transform the way in which we deal with our environment.

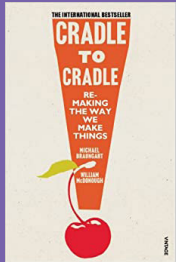


© wonderland/Hannah Breit

⁴Lacy et al [2015], p. 3

⁵Lacy et al [2015], p. 5

⁶Lacy et al [2015], p. 5



CRADLE TO CRADLE

Remaking the way we make things
Michael Braungart & William McDonough

In this visionary book, chemist Michael Braungart and architect William McDonough challenge this status quo and put forward a manifesto for an intriguing and radically different philosophy of environmentalism.

„Reduce, reuse, recycle“. This is the standard “cradle to grave” manufacturing model dating back to the Industrial Revolution that we still follow today. In this thought-provoking read, the authors propose that instead of minimizing waste, we should be striving to create value. This is the essence of Cradle to Cradle: waste need not to exist at all. By providing a framework of redesign of everything from carpets to corporate campuses, McDonough and Braungart make a revolutionary yet viable case for change and for remaking the way we make things.

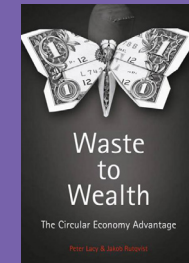
cradle to cradle approach

All „waste“ should become „food“ for another process: either a by-product or recovered resource for another industrial process or as regenerative resources for nature (e.g., compost). This regenerative approach is in contrast to the traditional linear economy. The cradle to cradle approach looks into the whole loop of products, beginning with the excavation of virgin material excavation, then the whole process of production and emissions, and then use and re-use. The term was introduced by Michael Braungart und William McDonough in their book “Cradle to Cradle”. By looking into production process, byproducts, wastes etc. they created a valuable impact in sustaining resources for various industrial sectors. Through this approach, the optimization of the process and material loops, the costs of production can be improved significantly, which allows producers cost-efficiency through optimization.

circular advantage concept

Models of circular economy require companies to become highly involved in the use and disposal of products; figuring out how to move revenue generation from selling the physical commodity to providing access to it, and optimizing performance along the entire value chain. For instance, a powered tool such as a drill is typically used for less than 20 minutes during its entire life cycle, given that a person needs a hole in the wall a few times throughout this timeframe and creates the hole him/herself. If, instead, users had convenient access to a high-quality tool only when needed, money and time could be saved while the product could be optimized for longevity, component reuse, recycling or many other features. At the same time, the efforts spent in selling the same product over and over again could be utilized to create jobs with meaning and which require further and in-depth expertise. The circular advantage is especially supported with technology and the digital edge. Circular economy leaders power their success in three categories: digital (information technology), engineering (physical technology), and hybrid (a blend of the two). These technologies are offering new ways for companies to be resource sensitive and to connect better with customers⁷.

⁷Lacy et all [2015], p. 132



WASTE TO WEALTH

The circular economy advantage
Peter Lacy & Jakob Rutqvist

Waste to Wealth proves that ‚green‘ and ‚growth‘ need not be binary alternatives. The book examines five new business models that provide circular growth from deploying sustainable resources to the sharing economy before setting out what business leaders need to do to implement the models successfully.

what is eco-design?



by Bahanur Nasya & Hannah Breit

The production and manufacturing industry run on a linear economy system based on the concepts of “take, make and dispose,” despite the fact that there could be tremendous potential to change to a more circular and sustainable system. Therefore, the process of production needs to be re-defined and a new way of designing should be established and promoted among producers. Not only is it the economic value of a product that needs to be considered, but also the ecological and social value. Eco-Design is a way to do so by realizing eco-techniques in the designing process. The idea behind it is to implement “eco-efficiency” and integrate it into the lifecycle of products.

Eco-Design is an attempt at reducing ecological destruction through the production of products. It is a method of approach for the design process, and integrates special consideration for the environmental impacts of a product during its whole lifecycle, into the phase of designing. The life cycle of a product is usually divided into stages of procurement, manufacture, use, and disposal. Eco-Design focuses on these aspects and improves a product to the effect that the consumption of materials and energy as well as waste disposal should be reduced. Ideally the disposed waste would be re-useable for a different cycle in the next phase. These ideas are integrated into the design process as well as servicing process. New and innovative solutions, communication about the effects and the impact lead to more awareness among consumers, redefining consumer values through eco-design. At the current stage,

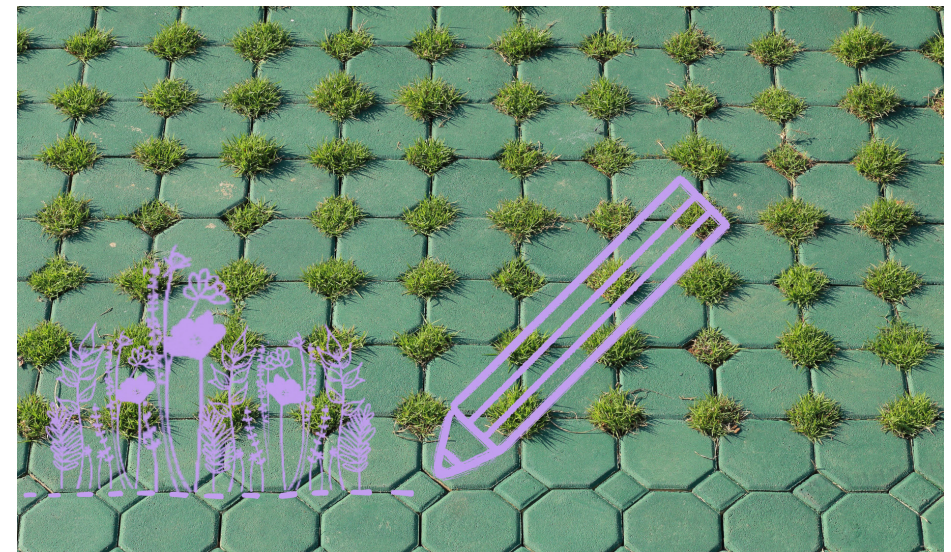
there seems to be no end for these cycles and creativity. The people working with eco-design have the added value of their work for creating positive impact.

Studies have shown that by changing the way products are designed, the impact on the environment can be drastically improved. About 85% of the negative environmental impact can be related to the design of a product. The designing in itself - of course - does not bare the sole responsibility however, the malfunctions in the design process is what leads to the creation of products that cannot be integrated into a circular model. The impact of a product needs to be considered as part of the design process in order to change the ecological footprint of a product. Eco-Design wants to change the process of designing in a more sustainable way. This approach creates the necessary linkages between the impact and the role of design, and helps establish a new balance leading to a more sustainable way of production. Research indicates that eco-design practice in the electronics sector remains largely the same as in the 1990's, even having regressed for some companies. Many companies are just hiding behind the rhetoric of circular economy without making any significant changes, and promoting “circular wash” to deflect from irresponsible business practices. There are innovative technologies and materials, access to renewable energy, improved data and communication tools and we move to a service based economy. Regardless, it is difficult to justify why circular economy is not happening quicker⁸.

In order to ensure a significant impact, Eco-Design needs to be systematically integrated into more and more businesses in their planning of production. When done so, Eco-Design can lead to a more circular way of design, production and consumption in the long run, given that it considers environmental, social and economic aspects of the businesses that implement it.

Consumer values through eco-design. At the current stage, there seems to be no end for these cycles and creativity. The people working with eco-design have the added value of their work for creating positive impact.

⁸Charter [2018], p. 87





by Bahanur Nasya

Given that there are many other models and definitions out there, we tried to concentrate on the most known. As designers and creators however, we try to follow certain rules when producing or creating, also formulated in the “biosphere rules”. These rules are useful for all kinds of sectors. They can offer a solid base on how to ground the decisions. “The biosphere rules” is a framework used to implement closed loop production in all sorts of business. The framework adopts principles from the nature, interprets and translates them to industrial production systems. The aim is to establish businesses that are economically and environmentally sustainable. The closed-loop manufacturing system relies on 5 basic rules; we utilize similar ones in the design of all projects, regardless of it being in the design of a product or a service or a process. For all these layers, there are different frameworks to help understand the impact. EMAS⁹ for instance requires the reporting of six key indicators to help understand the sustainability. Energy efficiency, material efficiency, water consumption, waste generation, land use and emissions of gases are the six fields to aid in capturing the impact of our production. We have to keep in mind that technology succeeds because it manages to obtain an early foothold in the market. But none of the existing technologies can be considered

⁹EMAS is the Eco-Management and Audit Scheme (EMAS) which was introduced by the European Commission in 1995. It is a scheme which is constantly updated and is a voluntary tool to help companies to evaluate, manage and improve their environmental performance.

red to be the best. Meaning, for a newcomer, there is plenty of space for improvements and discoveries. The following rules help in the decision making process.

Rule #1: Use single materials

The starting point for circular and ecological design is among the most crucial steps, even though we’ve managed to break through on most of the design principals we’ve previously known and are now able to use plastic gadgets for cooking in a microwave for instance, or create wooden bikes etc. Despite the availability of such technological opportunities, we still have to consider: “Does it make sense to use this material and these ingredients?” A designer is often enticed to use one of the nearly infinite palette of specialty materials, colors, finishes, gadgets, chemicals etc. For many it seems to be silly or foolish to not to take full advantage of them all. However, there is one overriding reason to emulate nature’s parsimony: It makes recycling and reuse significantly easier. Furthermore, nature’s simple palette results in products

far more advanced than those produced by human industrial science. Industrial production uses over 100.000 chemicals at present and we understand the toxic reaction of only a fraction of those chemicals¹⁰.

“Minimize the types of materials used in products, with a focus on materials that are life-friendly and economically recyclable.”

The biosphere relies on the elements carbon, hydrogen, oxygen and nitrogen. 99% of all living things on the planet have these four basic elements plus traces of sulphur, phosphorus and calcium. The whole living ecosystem is based on such a small choice of elements. The designing principle is: The more perfect a design is, the less means it will need in operation and reuse. The material parsimony approach seeks to design products from a single material.

Step 1: Use fewer materials.

¹⁰Allwood et al (2015), p. 22

Rule #2. Cycle up

When a product is used, then the circle starts once more. This has to be designed as part of the product in the first place, but also give an opportunity to change plans or adapt them, after use. Nature does not produce wastelands. A dead organism gives its material freely and the ecosystem uses them in the new products and process. Nature repeats this concept, day after day. To increase our chances of covering all possible options, we need to have a good look on the key materials we’ve integrated into our modern life. The challenge is, how do we keep the value of the products high, and how can we maintain it in the cycle as long as possible?

The most used key material in our modern lives is steel, and the second most utilised is aluminium. These two metals created from raw material, require some of the most energy consumption heavy processes during their extraction and making. Yet they are used for various kinds of products,





some are replaceable and some are not. Modern industry has been busy focussing on the selling of products made of metal, but given that we need to decrease our emissions, simply and solely improving the production process can't be the only cure. That's why "sales" need to focus on the "material services" as well. Since the demand is growing and the availability of raw materials are shrinking, since production process releases too many emissions, the focus now has to lay on requiring less material production. This is the challenge and the opportunity for the newcomers of our times. Responses lay in the way in how we do things. We can use less metal through design. That means for instance: we can support multiple loads with fewer structures where possible; or not over-specifying the loads and aligning loads with members to avoid bending if possible. If bending is unavoidable, optimizing the cross-section along the member to choose the best material is a clear solution¹¹. Another principle is to use less metal to make the same things. For instance, imagine a car door. The design of a door with integrated windows requires more than double the amount of metal: the door and the door addition in which the window projects upwards¹². Basic forms and surface relationship analyses can help in the design process to upcycle materials and minimize, if not eliminate, losses. For this second rule of cycling up, the most important design suggestion is to create other uses before engaging in the process of recycling via melting, which requires further energy and therefore releases emissions. Therefore, the re-use of metal components without

melting is another strategy. The design of the single metal parts can be done in a way in which they can be used over and over again. It is possible to reduce the global metal production by 30% by only applying these better design principles while keeping in line with the final service goal of delivering a metal product¹³. The third key material is cement. Also known as concrete, it is already a very old and developed product. There are many opportunities for energy efficiency in cement production. But the emissions release in production is not improvable. Plus the use of cement is, in some cases and countries, so poor (poor quality or insufficient maintenance), that the buildings may only last for 20 to 30 years. Therefore, the conclusion has to be to live well with less cement, while making sure that the created buildings and units have a long life span¹⁴. The fourth key material in our times is the very complicated and complex material of plastic. In order to decrease the emissions by plastic, we need to reduce and limit the variety. Simplified recycling will increase the recovery rates. The use of plastic (as well as other materials) in packaging has to be 100% long-life-packaging, which can be continuously used. Disposal plastic packaging should be the norm¹⁵. Wood or consequently paper, is the number five key material of our

¹¹Allwood et al (2015), p. 173

¹²Allwood et al (2015), p. 200

¹³Allwood et al (2015), p. 189

¹⁴Allwood et al (2015), p. 299



modern world. We are looking back to an already pretty energy efficient production. The recycling practices could be better though, because we could save up to 40% of emissions if we were to increase our recycling rate to 80%¹⁶.

"Recover and reincarnate materials from end-of-use goods into new value-added products."

Up-cycling ensures keeping the the value of materials without loss of quality or performance. In contrast, the manmade recycling methods created are mostly down-cycling methods. For instance, we take plastic computer casing, melt it, and produce out of it a speed bump on our streets. This is not re-cycling as it is not used for the same kind or valuable use. It's also not up-cycling, because the created value is no longer inherent in the produced product. It's not sustainable, given that the odds that the material receives something valuable back from the streets is pretty low. Those downcycling methods destroy the original value of the material.

Step 2: Rethink design and increase the value of your designs with each alteration

Rule #3: Sustaining the needs

The architecture of life has been enhanced over and over again to create the planet's incredible biodiversity. The strategy includes, next to surviving and reproducing, various methods of adaptation. This strategy is so successful that life can exist anywhere on the planet, in various contexts. The reuse of produced items is also a very powerful approach. We need some key developers, designers and lead users who want to create, through the circular use of items, an outstanding advantage. The supply of reused items will follow the demand placed on it, which in turn can in fact change the practices of use and demolition or waste management. While thinking about the durability and re-use of items, we also

¹⁵Allwood et al (2015), p. 311

¹⁶Allwood et al (2015), p. 323



need to keep in mind future transformations and changes. For instance, we have tightening goals for the type and amount of energy we need. How can our product be useful in the future and the futuristic supply of fuel? Also, how can we ensure a longer life to products which dramatically delay the replacement? The purchaser will choose upgrades when the product is longer viable. For the product provider this means, that they need to replace their incomes from sales with costs for servicing, maintaining and upgrading¹⁷. This field gives newcomers great opportunities to have great impact in their context.

"Maximize the power autonomy of products and processes so they can function on renewable energy."

However, the industrial logic, which is based on producing an indefinite number of exactly the same product (mass production), requires the same kind of input and creates in return, the same output. This approach not only results in the exhaustion of materials, but that of the energy put into the production and re-use as well, given that most products are thus mostly not "fuel-independent" for future uses. This is the complete opposite of the biosphere rule, in which the created output, including the byproducts that we would call "waste", is immediately repurposed and brought in the cycle again in nature.

Step 3: Design for changing needs and possibilities

Rule #4: Sustainable scenarios

Millions of species in nature rely on solar power and a parsimonious material pallet at their disposal. Scaling our economies according the example of species population (growth and degrowth) can help us to better harmonize ourselves with the environment and context of things. In today's fragmented economies and industries, it's

¹⁷Allwood et al (2015), p. 253



hard to keep an overview when numbers are being utilised in a way that that supports personal interests. Mostly however, the material used as well as the impact of its use is packaged and commented so different, that it is hard to find a common ground for comparison. There are many fields where the numbers can be presented in a more "Green" way, making understanding one's handcraft the key for any improvement. Therefore it is hard to find a reliable source, to decide what solutions and measures might have a positive impact at all. To eliminate all of such confusion, we need to use the primary energy consumption concept in our work. Use of this method will serve as a tool helping us compare and better understand our impact. But even this rule has exceptions, where it is better to refer to the emissions instead of the energy use. For instance, in manufacturing cement, half of the emissions arise from the energy use and the other half from the chemical reactions. The release of these emissions can't be avoided, regardless of the energy source utilized¹⁸.

"Leverage value cycles as product platforms for profitable scale, scope, and knowledge economies."

In traditional communities, people had to adapt to local conditions and develop methods of survival, despite the harsh conditions. But with the success of methods, including wars and exploitation techniques, we created an imagined independence from local conditions (in our mind), since in the modern world, we possess the ability to ship and fly materials and products wherever we want. Most of our models are based

on (economic and technological) growth. We have to harmonize our practices and create cycles that allow us more flexibility in moving in all directions (growth, degrowth etc.).

Step 4: Scale right the economies

¹⁸Allwood et al (2015), p. 23



Rule#5: Function before form

Nature has produced an innumerable amount of species in an effort to take advantage of every ecological opportunity. Classes of organisms – producers, predators, pollinators, parasites – serve specific ecosystem functions. The form and its function are encoded in the genes to fulfil needed ecosystem functions. But for us, the change of ongoing procedures and process requires lots of invention, and the problem is, the potential cost savings are relatively small. Therefore, we need a reforming power to change the dynamics. What if the governments stimulated the market, by supporting those who decrease emissions? This should be the outlook for any business and any governing body to base their decisions on¹⁹. Another problem for the industries and companies is that they still focus on the sales of a product. But this old fashioned orientation brings forth great opportunities for newcomers with fresh-ideas. By looking into the service revenue, one can create more meaningful jobs, a more local economy, and

have the advantage of providing high quality service. To increase efficiency, a greater collaboration between individual organisations is needed. The saving of costs is yet a smaller incentive to change the way things are done. By changing the ways and means, we first of all (still) need to establish a positive impact, which can create an advantage for us on the long run. There are many co-benefits, but we need collective, national and international incentives²⁰. To create real opportunities, we need to have greater motivation and passion to address real needs, so matching true products with servicing and needs can be a good driver in guiding us to rethink our ways and create true innovation.

"Fulfill customers' functional needs in ways that sustain the value cycle."

Implementing 'Biosphere Rules requires that engineers and designers shift their design thinking. The main goal of the design should be a desired function and after use. This approach naturally leads to service thinking and is more concentrated on all phases, instead of single stages or products. Plus, such an approach connects the creator of the design to the user of the design, which gives the necessary loops of information to improve and adapt the design to occurring changes.

¹⁹Allwood et al (2015), p. 329

²⁰Allwood et al (2015), p. 336



Operations Strategy

The Biosphere Rules

by Gregory Unruh

From the Magazine (February 2008)

The Biosphere Rules
Gregory Unruh
Harvard Business Review

Sustainability is more than an endless journey of incremental steps. Rules from the biosphere can teach companies how to build ecologically friendly products.

Step 5: Rethink the greater goal

“Even if you are only interested in dollars and cents, we can see that conserving and restoring nature is now very often the best bet for human prosperity”

Professor Andrew Balmford

chapter 3:

national layers

the context in the partners' countries



The context of circular economy and eco-design differs from one society to another. Each country and community have their own circular economy and eco-design journey. In this chapter, we will provide an overview of the general situation in the participating countries, followed by selected inspiring practices.

Each of the six partner countries researched and reflected on the circular economy situation of their countries, including

analysing awareness among various segments of their societies. Their research includes a variety of initiatives, regardless of whether they are a result of government funding and support or originating out of the efforts of civic society; thus providing us with an overview of how circularity is thought, experienced and lived in Europe.



AUSTRIA



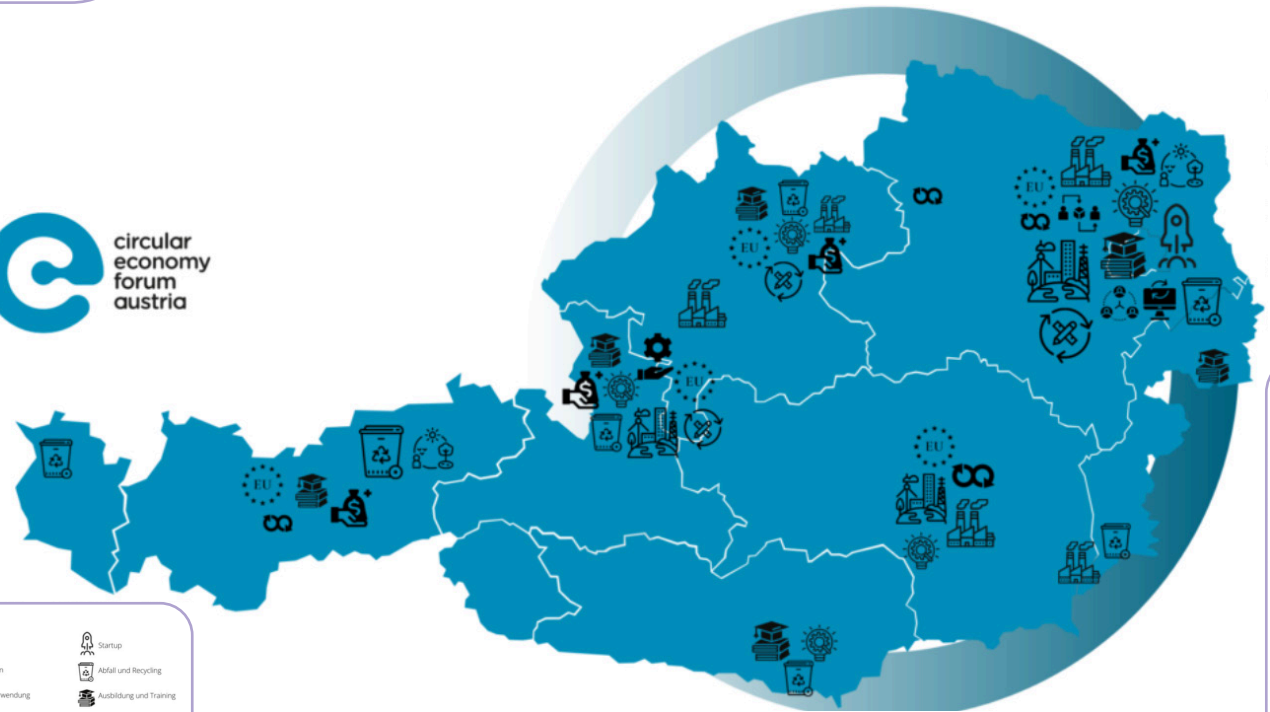
by Bahanur Nasya & Hannah Breit

Even though Austria is relatively small, one can still come across numerous bottom-up initiatives that combine ecological arts, design and production with the principles of circular economy. Next to various professionals in the field of recycling, reusing and eco-design, many young creators reflect on ecological issues and purposefully attempt to work on them with new and inspiring ideas. Young people especially possess a desire to change the way recycling and reuse is seen and perceived. For them, the crux of the topic or issue is about creating something with a completely new artistic value. Circularity needs such initiatives to gain popularity among the society in general. The inspiring actors in the field of circular economy in Austria show how “easy” it is to live circularity; they also emphasise the importance of establishing new ways of thinking, starting with the design process. Including circularity from the beginning helps create products that can be reused and recycled many times over, ensuring they thus stay in the cycle. Circular economy enthusiasts slowly organise themselves in clubs and lobbies to have a greater impact in the country. The individual measures and progress can be aligned with the long-term global ambitions such as the Paris Climate Goals and the UN Sustainable Development Goals (SDGs). As long as the initiatives and ideas provide contributions to these overall goals, the people will find support of some sorts. This is because international agreements and set goals are integrated in the national plans. The driving force to implement or change something is a very dear topic to the actors in this field and the



above-mentioned support helps facilitate the realization of ideas. Organisations, action plans and networks continue to grow and expand and we merely a few are mentioned here to offer an overview, help with individual search.

The Circular Economy Forum aims to unite circular economy actors and facilitate exchange. They are the collaborative effort of 5 different institutes. Bertalanffy Center is a Knowledge hub which uses the knowledge of system science. Circular Futures is the platform for circular business. design-



Austria brings people together through knowledge exchange while promoting their interests. respACT is the Austrian business council for sustainable development. The Circular Economy Forum is therefore embedded in science, politics, economy and design. The policies and supports are synchronous with the aims and goals of the European Green deal and ensure the national attainment of these goals via support of local actors and their efforts in ensuring these goals are met.

The Circular Innovation Eco-System in Austria can be seen, displayed in this growing

map. The organisation invites relevant initiatives, business models and projects to be included and visible in this map as part of the Austrian Circular Innovation Eco-System. At the same time, the map creates an opportunity to find potential cooperation partners while promoting exchange among them. All relevant initiatives, business models and projects as part of the Austrian Circular Innovation Eco-System can thus be made visible

© <https://www.circulareconomyforum.at>

national events in austria



Creating National Events in times of Covid-19, with the lockdowns and limited possibilities at our disposal, demanded creative solutions. The team of wonderland therefore decided to create a library of inspiring stories made available to all participants, partners and future entrepreneurs. The Project Space Interview Series kicked off with this project as a result, and will be followed up with other projects to assist in compiling a database of inspiring projects. For this initial phase, we set up three webinars with different players in the field of circular economy. The webinars were created in the format of direct dialogue and exchange and are easy to follow, regardless of the level of the participant. We feel these webinars are a must watch for social entrepreneurs, designers, handcrafts people and anyone else interested in taking action in the field of circular economy. Selected best practices and projects are explained, how the entrepreneurs or initiators work in the field is explained together with suggestions and outlines on how to get started in this field. The selected actors also pass on insights and know-how from their work and approach. The series aims to be inspirational for newcomers.

Webinar 1 – recycle architecture

In the first episode of the project space interview series, Peter Kneidinger from Materialnomaden discusses their approach towards upcycling and reusing materials in construction. Peter delves into how they pick and utilize the materials they use, and find new ways of including them as part of a fashionable and sustainable design. Materialnomaden are well known for their work in the field of circular architecture. Not only do they recycle materials and make it a part of their process, they also create new and unique designs and uses from recovered building materials.

Webinar 2 – wastelessness

In the second episode of the project space interview series, Daniela Hinteregger from Zero Waste Austria discusses ways to eliminate waste and rethinking wastemanagement in the Austrian hotel industry. Daniela discusses how they created a guideline for hotels to foster wastemanagement and ensure waste prevention. In this guideline, they promote new sustainable design and ideas for different sectors of the hotel industry. Their approach is based on bringing both, hotels and customers closer together to handle waste. Zero Waste Austria are well known for their mission to make Zero Waste better known in Austria and Europe, and promoting a Zero Waste culture in all areas. For them, Zero Waste means rethinking daily habits harmful to the environment. This needs re-invention of simple tasks and out-of-the-box thinking. In their experience, this creates a field in innovation, as part of which, waste can be made use of as creative, economic and sustainable resource.

Webinar 3 – circularity

In this episode of the Project Space Interview Series, Andreas Ellenberger from Circonnect discusses circular design and innovation. Andreas discusses the many ways in which circular economy can be applied. Circonnect aims to empower people in businesses and cities to create sustainable and regenerative solutions with circular economy. They address economic, social and environmental challenges with a circular, systemic and nature-inspired approach in projects they support as consultant or mediator while looking into the process.





Workshop at Jobfabrik

When during the summer of 2021, COVID19 restrictions were briefly loosened, we chose to work with very young people between the ages of 14-17. Most of them had left school and were still in the orientation phase. Jobfabrik is an institution commissioned by the Ministry of Social Affairs in Austria, funded by the ESF. It focusses on providing young people who need support or orientation before beginning vocational training or further school education. The common goal is to achieve a specific „training fitness“ (the individual training maturity) for these young people. Trainers work with young people in different working environments (e.g. office field, gardening or handicrafts), to provide them with a sneak

preview on what kinds of jobs are available in their preferred field and to offer them unique perspectives and insights for their future.

We specifically targeted the young people at jobfabrik because we view them as being potential implementers of circular economy principles in all areas of professional life in the future. Through this event, we were able to introduce them to some initiatives and discuss inspiring applications. We deliberately chose to utilise the medium of short films to bring in ideas and assist them in getting creative about circular solutions in their working environments. The event was hosted by the Jobfabrik, which allowed different groups to participate, with the whole event becoming an integral part of the local work. We arrived in the morning with fruits, juices and fresh pastries. Following a small introductory round, we began with a discussion on the



© wonderland/Bahanur Nasya

Earth Overshoot Day. Some of the young people in attendance knew about this unique day and exhibited interest on the topic and the circumstances surrounding this special day of July 26th, 2021. A brief explanation of linear and circular economy led us to a presentation of the CEED project. This was followed with a viewing of interactive films, proceeded by a discussion. We wanted to hear the opinions of young people on these associations as well as their visions on the topic of circularity. We asked them how they could relate to the chosen case, and whether or not they could adapt the presented idea in their field. Sometimes the initiatives were known to them, while other times, the trainers stepped in to actively discuss the issues and draw correlations between their program and the event.



© xsentriksarts/Yilmaz Vurucu

the shortfilms

Begegnungsorte: Handgedacht

Located in 8th district of Josefstadt on the Hernalser Gürtel, the company was established by Martin Aigner, Moritz Schauler and Benjamin Sodemann. Benjamin, Moritz and Martin are down to earth carpenters and designers, with unique goals for their business: less working hours, more family time, and establishing bonds with their clients that goes beyond strict business oriented relationships. They prefer to be involved with their communities, play a role in shaping it, and develop meaningful relationships. The business shares resources (the workshop) with other carpenters and actively involves young people in their business. They also welcome youngsters from Jobfabrik for experimentation days or trips.

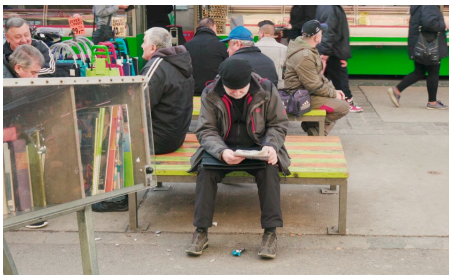
www.begegnungsorte.at



Begegnungsorte: Offener Bücherschrank

Located in 16th Viennese district of Ottakring on the Brunnengasse, also the site of the famous Brunnenmarkt, the Offener Bücherschrank is project initiated by NGO Offene Bücherschränke. The Brunnenmarkt is a vibrant and active open-air market offering all sorts of items, from foods to clothes. It is also one of the most active streets of Vienna, and claims the title of the longest open air market in any European city. The bookshelf stands in public space and is noticeable, despite being surrounded by a heavy pedestrian traffic, stalls and the vibrant pace of the street market. Serving as a testament to the use of community space, it ensures the residents of Ottakring and Brunnenmarkt stay connected, exchange and share more than just a space.

www.begegnungsorte.at



© xsentriksarts/Yilmaz Vurucu

Begegnungsorte: Ameisen-stärke Kooperation

Located in 17th district in Hernals, the little shop is a passion project of Margit Ulm and offers locally produced products and small lunch dishes. Margit, the shop owner tells us how she took some gastronomy classes back in the day, and it is this love for food and people that resulted in her seeing a dream come to fruition: the small yet inviting grocery shop that offers unique local products and a smile worth having a coffee with. She's there from open to close, busy with customers, providers, deliveries, or even cooking in the back for the limited lunch service.



© xsentriksarts/Yilmaz Vurucu

Plastic Love: The Julian Jankovic Story

We take a peek into the world and work of Austrian recycling artist Julian Jankovic. Visiting him in his atelier in Vienna (Floridsdorf), we discuss how and why he does what he does. Julian encourages the shop owners of his area to collect plastic and hand it to him. With all the plastic waste he gathers, he produces furniture and art. Julian designed his own method and pattern of plastic melting and creates something completely new out of waste. He then hands the pieces of furniture he produced out of the recycled plastic to the shop owners of his area, promoting public involvement in recycling.

The participants

The young participants were, at the time, in job training to obtain insight into various professions and gather first hand experiences. We had a gardeners' group, retail salespeople, IT workers and a creative workshop group joining us. The young people seemed to be a bit shy in expressing their opinions, but the trainers overseeing the working groups supported the discussion by relating the themes to their work and offering their perspectives. They also wanted to reflect on our inputs in the smaller groups later on. At the end of the event, every participant was handed a wonderland certificate for completion of the workshop and event, with half the group breaking their timid reservations and coming forward to collect their certificates. An exchange with the trainers following the event confirmed to us that the format, the length of the films as well as the variety was beneficial for the youngsters.

www.wonderland.cx



© wonderland/Yilmaz Vurucu



by Mevis Struga

The concept of „circular economy“ is still at an early stage in the Republic of Albania. The concept of circular economy has been used earlier in the draft Strategy of Integrated Waste Management (2018-2023), elaborated in January 2018 and revised with having the vision or perception of the concept of „zero waste“ in mind. The aim is to collect and treat waste as raw material. The waste management will be done in accordance with the concept of circular systems, and will reduce the use of virgin raw materials and preserve resources. The main principle for waste management is the waste treatment hierarchy, consisting of prevention, reuse, recycling, recovery and disposal. The draft strategy takes into account the importance of waste management according to the principle of the current economy to enable the fullest protection of natural resources and increase the efficiency of the use of products. The current legal framework, including national regulations and national strategic documents and action plans, does not provide the basis for implementing the concept of the circular economy in the country. Therefore, there is an urgent need for improvements in the current legal framework that will increase the country's ability to better utilize its resources and improve the life-cycle of materials, products and services. Meanwhile, civil society organisations, researchers, and the media, but ultimately the ministry of tourism and the environment have expressed their interest in this issue by organising conferences, meetings and publishing articles in the media. However, their level of knowledge and awareness among all stakeholders is still at a

low level.

Circular Economy Initiatives in Albania

During the recent years, several business companies in Albania have shifted their business activity towards the circular economy concept, by applying efficient waste management practices and turning waste into resources. This trend has not only benefited their revenues but has also had a positive impact on creating local jobs and preserving the environment. The following paragraphs will detail some of the companies that have embraced the concept of sustainable waste management and treatment.



© ETMI

I. N. C. A. Nordfish Sh. p. k.

Established in 2004, the company is known for processing products of animal origin (cattle intestines). It was presented as the only producer of natural casing and animal byproducts in Albania. As the only company of its kind in Albania and the Balkan region, it supplies products for large regional and national companies specialized in the treatment of meat and sausage products. A considerable part of the revenues are invested in the development of treatment technology, which in return has increased the volume of production. Currently, the company is employing about 110 workers, which will be doubled in the near future. However, to avoid the economic loss from products not meeting the clients' requirements, faulty products are further recycled through technological processes. After being processed, the products are exported elsewhere in Europe as food for animals under the EU standards. From 2008 to 2015, they had a linear approach about manufacturing and distribution of natural casing through importing raw materials. From 2017, they shifted towards a circular approach, investing in casing cleaning machineries and collecting and processing 5 tons/month of Albanian casing for the Albanian market. During this time, 5% of organic waste disposed by the slaughterhouse was reduced. Further on, from 2017 to 2018 they started to collect and recycle the entire intestinal tract and export Alba-

nian products to various European countries. After 2018, they went to a fully circular system by investing in a new pet chews production facility, new mucosa treatment plant destined for the pharmaceutical industry, recycling 40-50% tons/month of organic animal by products. They reduced the organic waste disposed of slaughterhouses and their own company by 30% and continue exporting to EU countries and other countries worldwide. In 2020, they invested in the only rendering plant in the Western Balkans area, recycled 200 tons/month of organic waste created by the food industry and reduced all organic waste disposed in Albania by 98%.

Agrimona

An environmentally friendly initiative (organic shop), Agrimona carries the mission of contributing towards social impact in a financially sustainable way, with all profits dedicated to the social mission. Their social goals include promoting the development of high quality local and traditional Albanian food products; supporting smallholder products in remote areas; promoting customer education on healthy nutrition and environmental protection. They aim to reduce waste and pollution by short term inventory, reduce food waste, paper packing and unpacked products, promote natural production techniques, promote reusable shopping bags, and buy back used jars and bottles.





City Tex

The CityTex garment factory was just an idea in January 2016, a plan by March, and, during April through June, made its first investment, registered as a new business, and trained their employees. In July, the factory tested products and conducted advanced training. By August, the factory had hired 60 women from the community, all with new skills and salaries designed for the long term. Like a traditional business, the company produces a product or service that meets a need in an identified market, and then sells it for a profit. As a social business, though, it not only makes a profit, but invests back into the community or works to lift a marginalized sector. Ideally, there are prospects for future growth and shared profitability (actually they helped more than 50 rural women working in the textile industry). USAID's support of CityTex is part of its Growing Social Businesses in Albania project, which is designed to promote entrepreneurship and the development of social businesses in vulnerable and underserved communities in order to generate lasting and positive social, economic and environmental impact in a financially sustainable way.

KeBuono

KeBuono is the only confectionery in Fier where the quality and tradition of Italian confectionery meet the values of legality and social inclusion. KeBuono is an initiative promoted by the ENGIM associations and the Murialdo Social Center. It is the first social enterprise in Albania rebuilt on a property confiscated by the property administration agency, building a strong bridge against organized crime. Through various activities where the subject is involved, the aim is to inform young people and citizens about violence, the law against violence, addressing it in relevant institutions. Banners, flash mobs, symbols are used to convey messages against violence and to show support for the victims affected by violence, but also to raise awareness about other sensitive causes for the society.

Kinfolk Coffee Library

Kinfolk Coffee Library is a social enterprise, an initiative undertaken as a measure to prevent the involvement of young people in crime in the city of Durres. The first social enterprise set up in the city of Durres on a property confiscated from organized crime, this enterprise also works as a so-

cial gathering facility for young people in Durres Municipality, offering them a possibility to express themselves and be part of awareness campaigns.

Albkalusyan

As a leader in the market, the company is specialized in the field of medicinal herbs treatment. The company collects about 26 kinds of medicinal herbs and processes oil extractions, which are exported abroad. However, at the end of treatment process, a vast amount of plant wastes such as stems and sludge are left behind. In order to make use of wastes, the company has embraced the 'turning waste into resources' approach; through technological investments, plant wastes are carefully treated to generate steam, which meets the company's energy consumption requirements and needs.

Aiba Company

Established in 1993, Aiba Company is a leader in the field of cattle food production, breeding and growth of chickens for meat consumption and eggs production. The amount of eggs produced annually reaches around 100 million per year, which in

turn generates about 40 tons of waste due to excessive moisture. Nevertheless, Aiba Company has invested in technology that reduces the moisture and benefits about 20 tons of soil fertilizers per day.

The end product is compressed in packages and sold to farmers for the production of agricultural products. Also, Aiba company is investing in creating a new system that will make the drying of waste possible. It will improve the quality of fertilizers, ensure better environmental conditions and a higher quantity of products for selling.

GER.ARD Sh.p.k.& IB Recycling

The main focus of the activity of GER.ARD Company is on the dismantling of old or damaged vehicles, trading of spare parts as well as import and export. IB Recycling, in partnership with GER.ARD Company, offers recycling services of vehicles parts and electronic devices. Thanks to its advanced technology, the company can turn waste into resources for the manufacturing of other products. Computer devices and catalytic parts of vehicles are efficiently recycled and then exported to EU countries.





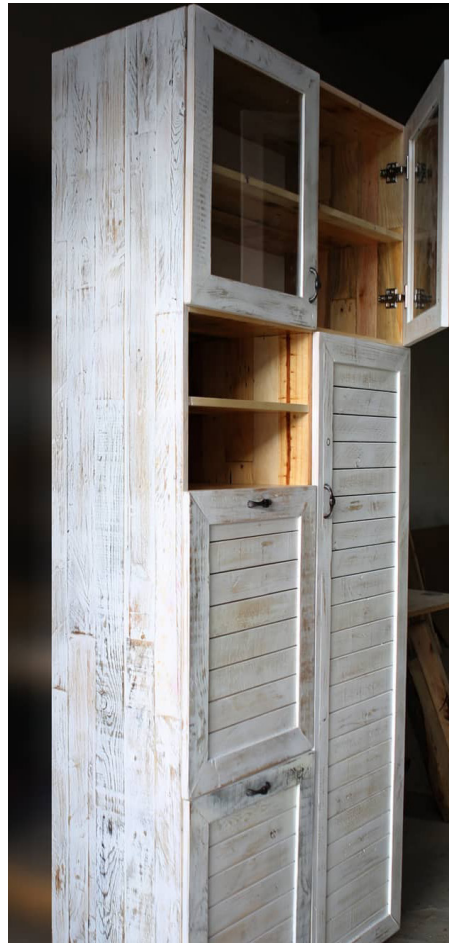
Soap production

Soap production is a project initiated by the EU, which takes place in the city of Roskovec located in the south central part of Albania. The city is known for being rich in olive trees, generating large amounts of olives and extracted oil for trade purposes. However, the oil extraction process leaves behind considerable amounts of organic sludge. The project aims to refine organic waste into organic soap, which benefits both the environment and the social economy of the region.

Pana – Storytelling Furniture

Established in April 2013, the company focuses both on the design of furniture via Architecture and Furniture Industry, and the social integration of craftsmen that can contribute to the development of the company. The company operates through two business processes, projection and production. The former takes place at "Pana Studio", where potential clients are assisted to shape their ideas into conceptual projects; while production is realized at "Pana Storytelling furniture", which enables bringing project designs into life. Based upon client needs, be it restaurants,

bars, shops, etc., the company offers products through the reuse of wood material, which is already on the market either disposed as waste or wood for burning, and iron skeletons to frame the furniture.



© Pana Albania

national events in albania



students were introduced to the main processes that they had to follow in product design. The materials used during the workshop were cardboard, wood, textile waste, tiles, etc.

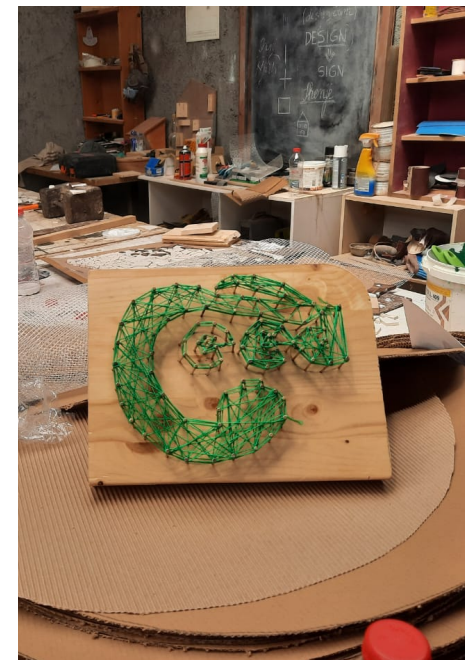
In the following days, all participants designed different products such as: cardboard armchair, lampshade, wooden boat, table, etc. One of the most special designed product was the logo of the project „Circular Economy into Art through Eco-Design- CEED“, which was designed using twine and wood.

The purpose of the Workshop „Design for a circular economy“ was to engage young people in designing products by using waste of different materials to promote the circular economy. The workshop was organized in the frame of the project „Circular Economy into Art through Eco-Design“ and was organized in two phases.

Design for a circular economy – Phase 1

Date: 1-7 June 2021

The first phase of the workshop was held on June 1-7, 2021. During the first day of the workshop, the participants were introduced to the concept of circular economy, the difference between line economy and circular economy, the benefits of circular economy, also learned about life cycle of products and how they can use waste materials to design products. During the second day of the workshop, 10 young



© ETMI



Design for a circular economy – Phase 2

Date: 10–20 October 2021

The second phase of the workshop was held on 10–20 October 2021. The workshop was created not only to learn and create products but also to have fun together in what we were doing. During 10 days the group had to design, learn to use the materials and create useful products.

On the first day the group had to spend

some time knowing each other, learning about the materials were going to use (wood, glass, stones, colors, varnish etc.) and expressing their fantasy into designs. The impacts of the first day help the entire group to work together as a team with small tasks. Every day we had the chance to learn about the products we were using, their impact in the environment and how they can be reused. A group of 10 students created tables, paints on wood, candela-bra, home décor, lamps and jewelry. This group designed and creates products that can be sold or gifted, learning this way that reusing eco-friendly materials you can make a small business and create collabo-

rations with other companies.

The biggest achievement of this workshop was the willing of all the participant to have a network supporting each other and the desire to create more products using wasted materials.

The materials

The materials used in the workshop were wood, glass, stones, paper, rope, tree small branches, water varnish and colors. The use of these materials was done cause

of the fact that they can be reused many times and all are eco-friendly to the environment. The group had to learn how to choose carefully each material to the use they were doing. During this process all was important the knowledge gained about the waste of the big production companies and how this can be an opportunity to create small businesses in the function of the community.





by Kushtrim Shaipi

Circular economy initiatives are scattered within the initiatives of some private sector companies in Kosovo. The theme emerges in superficial discussions by non-governmental organizations, and with a deficient vision from the government to develop this system in the country. Economic development initiatives appear to be focused more on building a more competitive economy by focussing more rapidly on the construction of a linear economy, rather than on creating an environment that will enable sustainable economic development through circular models. In addition to the lack of familiarity with the terminology of this concept by the masses, it also lacks, in meaning, the deep essence of the circular economy, as well as the building components that enable its development. As long as an awareness and a kindness for the environment is seen, it is lacking holistic understanding of how different business operations, and personal choices interact with the holistic human well-being and environment that enables existence. It is also seen that there is a lack of individual confidence that can change the direction of the economy and a dependence on support for stimulation by state bodies.

In relation to this, one of the main obstacles that slow down the development of the circular economy in Kosovo is the lack of public awareness of the benefits they may derive from the circular economy as well as the lack of state financial support that stimulates the circular economy in the country. Kosovo is still dealing with a lot of problems with illegal landfills but has some very good examples of good practice

which could serve as an inspiration for other regions of the country. There is no confirmed data on the number of illegal landfills in Kosovo. According to the Let's Do It campaign in Kosovo, there are more than 1,600 illegal landfills identified. The majority of these illegal landfills are located in villages not covered by public waste management companies.

Legislation

Circular economy is not included in the legislation or any other policy paper in Kosovo, neither as a notion and terminology nor as a method and practice. Currently approved legislation does not address the concept of circular economy and, consequently, makes it difficult to implement this process in practice. For this reason, new legislation needs to be drafted to ensure the inclusion of the relevant concept and terminology of the circular economy, providing facilities to individuals and entities (for -profit and non-profit) that are contributing or planning to contribute towards the stimulation of the circular economy in the country. The main obstacles for shifting from a linear to a circular economy model is the lack of legislation at the national and local level. Secondly, there is a need for awareness raising campaigns to educate the public on how to treat waste, reduce it, and benefit out of it.

The law on waste management allows the liberalization of the waste sector by opening the market to private operators in waste management. However, public enterprises

still function, and de facto provide waste management services to municipalities. In Kosovo, there are seven public companies, which cover seven regions of Kosovo. Their main purpose is to collect waste and transport it into sanitary landfills. The companies are registered and operate as joint stock companies. A municipality or a number of municipalities own shares in these companies.

Laws on social enterprises, economic zones and foreign investment currently do not provide facilities for incentives for entities that promote the circular economy in Kosovo. Although the law on waste handling provides for the elimination, reduction and prevention of the negative impacts of waste on the environment, it does not focus on the complete elimination of the concept of waste and does not mention circular economy. The law on strategic investments needs to provide facilities for investors and investments that would help stimulate the circular economy in the country.

Circular economy in Kosovo

In Kosovo, the origins of the circular economy can be founded on the individual initiatives and companies in the private sector, in superficial discussions by non-governmental organizations, and rarely in national or local policies. While there is a growing public awareness of the environment, there is a lack of holistic understanding of how different business operations and personal choices interact with holistic human well-being and the enabling environment. Citizens of Kosovo currently consider

the circular economy as a good idea but without economic interest, while waste as an expense and not a profit opportunity. Kosovo produces tremendous amounts of organic and inorganic waste, which are disposed of in public and illegal landfills. Among the organic waste types discharged to landfills are paper, food, glass, plastic, textile etc.

Financial support from the government can have greater impact and a positive effect on increasing the participation of citizens in recycling in Kosovo, thereby increasing household income and at the same time eliminating long-term environmental pollution. Up to today, there are no public investments in this sector and no incentives for supporting the private sector to be strong and developed in the country.

In Kosovo, currently, there are only four certified public landfills under the Kosovo Landfill Management Company operating in Prizren, Gjiilan, Prishtina, and Podujeva, as well as one transfer station in Ferizaj, while yet not certified public landfill in Peja and Transfer Station in Gjakova established within United Against Pollution project implemented by Let's Do It Peja, supported by the EU commission. Nevertheless, the number of illegal dumpsites surpasses the amount of those that are legal.

In terms of managing the recycled waste, there are approximately 23 companies that deal with their treatment. Among the materials that get recycled in Kosovo are paper, metals, batteries, cans, organic matters, rubber, plastic, second hand





clothing and footwear, etc. These companies mainly collect and separate waste and export most of the collected waste to neighbouring countries. Kosovo companies increasingly find profitable solutions to the visible waste problem in the country. Some companies have found ways to recycle Kosovo's waste into useful products, which are exported. The informal waste collection is mostly pushed from the level of poverty and socioeconomic situation in Kosovo. For these reasons, poor families, lacking any other choice, go out onto the streets to seek and collect recyclable materials, so that they can gain some income by selling them to small private companies with whom they normally are not in a contractual relationship.

The selection of waste at the source still remains a challenge for institutions in Kosovo and ordinary citizens. Organic waste continues to be treated according to the linear method of treatment, collection and disposal.

Kosovo institutions have failed to provide institutional and financial support to waste recycling and recycling initiatives. Neither have they managed to create opportunities or find a suitable market for these few new recycling initiatives in Kosovo. For these reasons, Kosovo recycles less than 5% of the recyclable waste by 2020. With this approach and in this manner, it is impossible to reach the 50%; a target set by EU on reducing the waste generation and encouraging recycling. However, there are some positive and inspiring initiatives, which try against all odds to have a positive impact

and contribute to the circular economy.

Kosovo Initiatives

SEREC

Although the concept of circular economy is new, there are several initiatives from the private sector and civil society. A concrete example of one of Kosovo's initiatives is project SEREC led by Let's Do It Peja. The project focus is not only on the reduction of textile waste pollution, but also helping with increasing the employment of marginalized groups through social enterprising. One of the main activities of the project is textile waste collection, a second hand clothing and footwear shop, redesigning and repurposing textiles by turning it into products for interior design. In addition, project promotes a large scale development of social entrepreneurship and the circular economy.

Plastika

PLASTIKA Company is the first company in Kosovo, Albania and Macedonia that recycles foil, bags and plastic waste as a raw material for the production of foil for agriculture and construction, as well as the production of Thermo foil and Stretch foil. In December 2017, the company started with the new modern line, 5-layer extruder. This state-of-the-art machinery can produce high quality Stretch Hood, Stretch Film, Hood, Agricultural Film.

Terra Crawlers

TERRA CRAWLERS is a new friendly waste management concept for organic waste. This company turns small amounts of organic waste into a natural fertilizer for plants by recycling it. This improves plant growth and soil fertility and reduces the need for pesticides which helps with unnecessary waste and over pollution of landfills.

Kosovo Glass Recycling

Kosovo Glass Recycling company established in Gjakova, collects all types of glass in Kosovo and repurposes them further into decorative and artwork products.



© Kosovo Glass Recycling



Izomi Plast

IZOLIMI PLAST has found success in recycling plastic waste and using it as insulation material. The company uses plastic bags and foils, turned into clean granulates needed to produce a special kind of foil that is used in agriculture and construction.

Orient Kosovo Mosaic

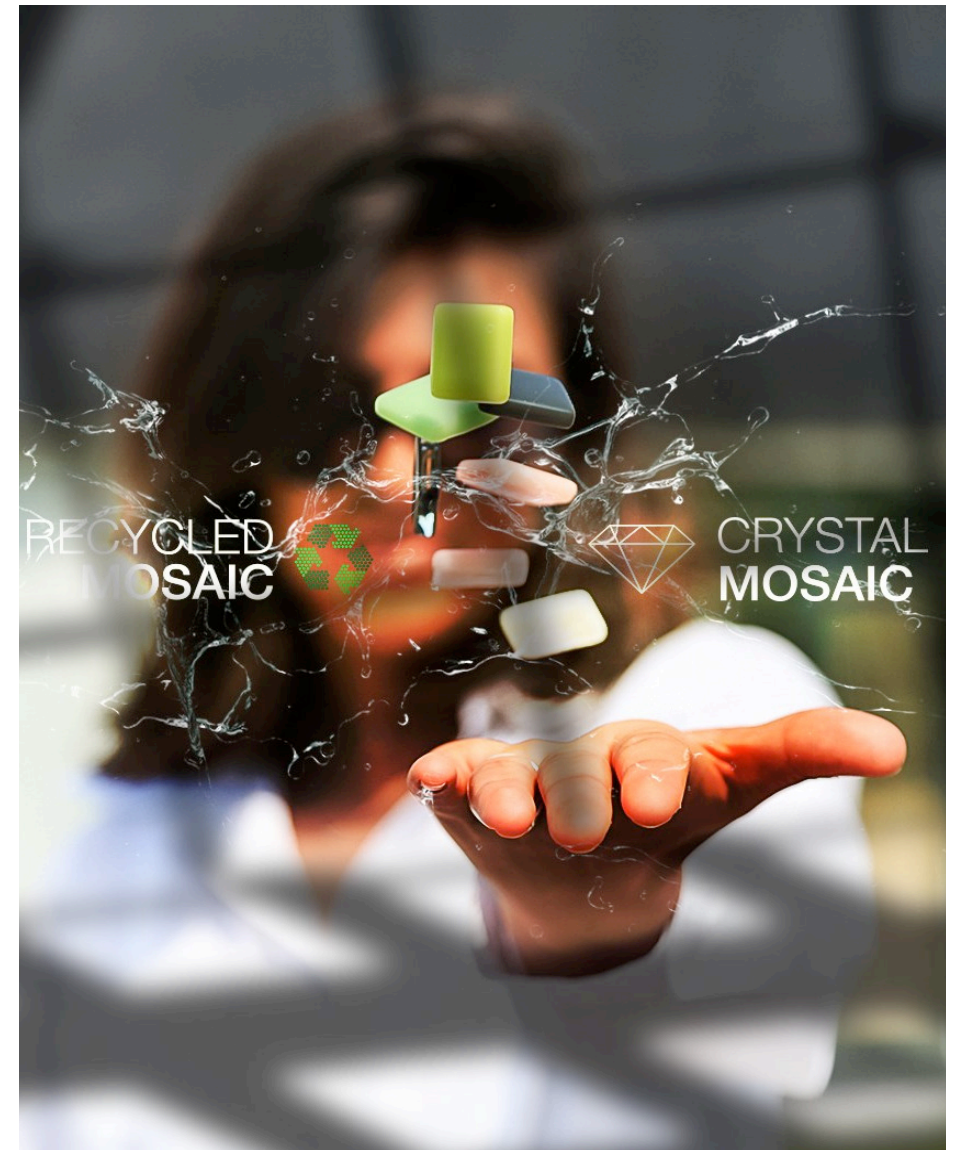
ORIENT KOSOVA MOSAIC Orient Kosova Mosaic, is a joint venture with a Turkish company that transforms clear glass waste into high-end decorative wall tiles.

Komposista

Kompostia is established in 2019 with the vision for healthier soil and less waste through turning organic waste into compost. Company collects leaves and branches from the trimming of public trees and parks.

TIKI Mosaic

TIKI MOSAIC collects glass waste from all over Kosovo and recycles it into beautiful and colorful mosaic tiles. The company successfully presented their mosaics at the first Green Festival that took place in Pristina





Hairnbeatyrks

Hairnbeatyrks deals with the repair of broken screens of all types e.g. Smart Phones, TV, Desktops and laptops.

Riciklojme Kafe

Riciklojme Kafe, the coffee grounds are simply mixed with the other waste and thrown in the landfill. Our idea is to collect coffee grounds and transform them into coffee pellets.

Dyvolab

DYVOLAB concentrates on transforming residue materials or other existing products like plastic to turn them into new materials such as fashion items. This company is inspired to give plastic a second life.

Riciklimi

Riciklimi company is mainly dealing with vehicle scrap recycling



Decotransks

Decotransks, Tire Recycling Center, is a licensed company for collection and physical treatment of used tires. Physical treatment involves removing the wire from the tires, shredding tires in pieces, depending on customer size requirements.

Oleum

Oleum established recently works on collection and recycling of frying oils.



national events in kosovo



circular economy, How the process of circulating materials happens in circular economy, Benefits of circular economy, Benefits for environment, presenting best examples worldwide for circular Art through Eco-Design, learning process how to design products with textile waste.

Through training, sharing experiences, examples provided and with the workshops all participants have been trained and prepared with information to improve their capacities for circular economy and environ-

This report is prepared for training "Circular Economy into Art through Eco-Design". The main objective of this training was to train youth participants for circular economy with the specific interest in Art through Eco-design.

Training were organized in Peja/Kosovo on dates 13.09-2021 up to 17.09.2021 based on the topics for circular economy and it was mostly oriented in elaboration of methods and possibilities how circular economy will be integrated in Art through Eco-Design.

These training/workshop took place at SE-REC social enterprise. The Training was for building capacities of youth generations for circular economy where 16 youth had the opportunity to learn and design product with textile waste.

During the training main training topics were: Closed cycle in circular economy, Differences between linear economy & cir-



© Let's Do It Peja!

ment protection.

All participants were engaged through workshops and they had to design products. By the end of the training all participants have designed unique clothes such as: shirts, dresses, etc.

All participants had high interest in information and due to the fact that circular economy is a new topic they have been intrigued and presenting them examples gave the idea for better consideration of

environmental impact in the future.

It should be noted that trainings for circular economy are more than welcomed from youth generations and they must be more often and in other municipalities of Kosovo.



© Let's Do It Peja!





by Fahmi Osmani

The Republic of North Macedonia prepared the National Energy and Climate Plan 2021-2030, which adopted the five dimensions of the Energy Union, i.e. decarbonisation, energy efficiency, security of energy supply, internal energy market and research, innovation and competitiveness. About 63 specific policies and measures are proposed in this plan to achieve set goals for each of the five dimensions. "North Macedonia has already ratified the Paris Climate Agreement, contributing to the global effort to reduce greenhouse gas emissions from fossil fuels by 30%, which is a tendency 36% higher by 2030. ... during the Summit in the Western Balkans, the region adopted the Declaration of the Green Agenda. With this, the region commits itself to following the process of transition from a linear to a circular economy, fully aware of the need for a research and innovation system to support this transition, as part of a common regional market." An action plan with roadmaps has not yet been prepared for the implementation of this Declaration of the Green Agenda. There is also not an effective and efficient monitoring system established yet. For the process of transition of the economy into a circular one, it is assessed that it is a long process and not only the finances are important, but also a change of the mental structure is needed, and that is essentially investing in changing the way of thinking and understanding things. The Ministry of Environment and Physical Planning (MoEPP) is revising the Macedonian Nationally Determined Contributions (NDCs) under the Paris Agreement of the United Nations Framework Convention on Climate Change

(UNFCCC), supported by the United Nations Framework Convention on Climate Change (UNDP) Climate Promise Initiative (UNFCCC, 2015). The waste sector is the second largest source of greenhouse gases in North Macedonia, encompassing the following categories: solid waste disposal, biological treatment of solid waste, incineration and open burning of waste, and wastewater treatment and discharge. Uncertainly levels in the greenhouse gas (GHG) inventory for the waste sector are high due to difficulties in obtaining accurate data on waste generation and disposal. Solid waste disposal is the category with the highest share of GHG emissions in this sector. In 2016, approximately 384 kg per capita per year of municipal waste was generated, and most of the collected residual municipal waste (99.4%) is disposed in landfills. The Drisla Landfill, which serves the Skopje region, is the only sanitary landfill in Macedonia. Composting is still at a very early stage. The 2 other operational composting units in Probistip have a volume of 60 tonnes/year of biowaste per unit. The composting plant in Resen is not currently operational. Finally, many Macedonian mining and processing industries that generated hazardous waste have closed down, abandoning their on-site waste dumps with little or no information on the history of these dumpsites. Other key issues include a lack of implementation of existing legislation (new legislation developed, but not yet adopted) and the absence of waste separation and recycling facilities, including an absence of facilities for vehicle recycling and automotive waste management. During the preparation of its

second and third Biennial Update Report (BUR) to the UNFCCC, the country explored the impact of ongoing, planned, and potential measures for climate change mitigation. Waste sector measures include landfill gas flaring, Mechanical and biological treatment (MBT) in new landfills with composting, waste selection and improved waste and materials management at industrial facilities. The Republic of Macedonia is a party of the United Nations Framework Convention on Climate Change (UNFCCC) (Official Gazette of RM – 61/97), has ratified the Kyoto Protocol (Official Gazette of Republic of Macedonia - 49/04) and has associated itself with the Copenhagen Accord (2009). The country has also signed (in 2015) and ratified (in 2017) the Paris Agreement. Under the Paris Agreement, the country became twenty-third in the world to submit its Intended Nationally Determined Contributions for Climate Change (INDC) as per the Decision of the Government No. 42-17/91 of 28 July 2015.

The Ministry of Environment and Physical Planning (MOEPP) has been designated as the National Focal Point to the UNFCCC and as a Designated National Authority (DNA) for the implementation of the Kyoto Protocol. Other ministries that have responsibilities related to climate change aspects are the Ministry of Agriculture, Forestry and Water Economy, the Ministry of Economy, the Ministry of Transport and Communication, the Ministry of Health and the Ministry of Finance. The Office of the Deputy Prime Minister for Economic Affairs is responsible for the achievement of the Sustainable Development Goals (SDGs), and it is also a National Designa-

ted Entity for the Green Climate Fund. The Office of the Prime Minister for Economic Affairs also supports the implementation of climate and energy-related projects in the country. As an EU candidate country, North Macedonia is in the process of transposing the acquis and will be obligated to comply with the Waste Directive and with EU requirements in the area of circular economy. In summary, policies and measures for the waste sector must meet three requirements: 1) They must address urgent economic, social, and environmental issues in the waste sector; 2) They must support the move to a low-carbon society and international commitments to the UNFCCC and the Paris Agreement; and 3) They must support the bilateral process of EU accession.

Social Entrepreneurship

The topic of social entrepreneurship is relatively new in the context of North Macedonia's policy. In official government strategies, the concept of social enterprise is first introduced in more comprehensive strategies for cooperation with the civil society sector (2012-2017). As of today, a clear definition and the ecosystem in which the social enterprises operate in the Republic of N. Macedonia is underdeveloped. Numerous mechanisms and actors that will enable the recognition and continuous development of social enterprises are lacking. There is no clear overview of the actors active in the ecosystem, the type of services, and the support they offer. The adoption of the Law for Social Entrepreneurship is still delayed.





The EU Green Plan

The European Commission in December of last year presented the European Green Plan, the so-called „Green Deal“, with which Europe should become the first climate-neutral continent by 2050, and at the same time, should strengthen the economy, improve health and the quality of life of European citizens. The plan, which is considered as not being easy to implement but feasible and timely, envisages measures to boost resource efficiency by moving to a circular economy, halting climate change, and reversing the trend of losing biodiversity and reduction of environmen-

tal pollution. The plan covers all sectors of the economy from transport, energy, agriculture and construction to industries such as steel, cement, textiles, chemicals and more. For the process of transition of the economy into a circular one, it is assessed that it is a long process and not only the finances are important, but also the change of the mental structure is needed, and that is essentially investing in changing the way of thinking and understanding things.



national events in north macedonia



On 19th, 20th, 21st and 22nd August 2021 in the high school "Zef Lush Marku" Skopje, was realized activity by the Center for Educational and Cultural Development "Racio". It is about the project "Circular Economy in Art through Eco-Design CEED" which is organized within the European Program "Erasmus +" The target group were students from 14 to 20 years old. There were a total of 20 participants from different secondary and high schools student. The project in question was extremely welcomed by the students as well as by the positive reviews in which they received from social networks. The whole project was managed by Fahmi Osmani who on the first day of the activity spoke about the importance of this topic and the state of the economy circulating in our country. The presentation of the project activity was also present by Mr. Abil Baush the teacher (lecture) of subject Management and Business and Entrepreneurship in High Schools.

This presentation aims to improve understanding of the circular economy concept as well as its various dimensions and expected impacts. Based on an extensive

literature review, the paper first reviews the different available definitions of the circular economy and identifies two main categories of definitions/interpretations: resource-oriented definitions/interpretations, emphasising the need to create closed loops of material flows and reduce the consumption of virgin resources and ii) interpretations that attempt to move beyond the notion of management of material resources and incorporate additional dimensions. It then identifies eight circular economy processes that are further classified into three different categories, namely using less primary resources, maintaining the highest value of materials and products and changing utilisation patterns. The eight circular processes are: recycling; efficient use of resources; utilisation of renewable energy sources; remanufacturing, refurbishment and reuse of products and components; product life extension; product as service; sharing models; and shift in consumption patterns. Drawing on this categorisation, the paper then presents examples of how these processes can be applied in different sectors, illustrating the expected effects. This is followed by a presentation of the main economic, environmental and social impacts at the EU and national level of the circular economy transition according to the existing evidence in the literature.

Our main conclusions are the following:

- The circular economy has achieved a broad appeal among the academic, policy and business audiences, but its interpretation and application have been very diverse.



- The available studies adopt different approaches when calculating the impact, which makes the comparison of results from different sources challenging.
- There is a need at the EU level for more clarity about the areas and sectors that fall within the scope of the circular economy. This can help avoid confusion as well as support the preparation of studies that will provide consistent messages about the potential effects.
- In order to avoid simplistic messages, in each case of applying a circular economy process to a sector, one must carefully consider all the parameters that can play a role in the overall sustainability of the circular process replacing a linear one.
- It is important to provide clarity about the expected net employment impact on employment across different sectors. This would also help policy-makers design well-targeted transitional policy measures to manage any negative impacts.
- While the employment impacts of the circular economy in terms of the number of jobs have been analysed in various studies,



© RACIO

assessments of other social and employment impacts appear to be less present in the literature.

- There is a need to understand the indirect effects on the economy (e.g. impacts on the value chain and/or changes in consumption spending patterns) in order to estimate the overall impacts at the EU or national level.

Based on an extensive literature review, this presentation has provided a reflection on the concept of the circular economy, an overview of the main circular economy processes, their applications in different sectors and their economic, environmental and social impacts. The breadth of interpretation of the circular economy concept at the academic and policy levels and the wide range of aspects and priorities it encompasses are reflected in the diversity of definitions presented in section. While some definitions and interpretations focus on physical and material resource aspects, others go further and discuss a major transformation of the economic system involving various sectors and issues that go beyond material resources and waste. This is also evident in the available studies that adopt different approaches when calculating the impacts, which makes the comparison of results from different sources challenging. The circular economy is a complex concept and it is unlikely that in the short term there can be an international consensus on its meaning. Still, at the EU policy level, there is perhaps a need for more clarity about the areas and sectors that can fall within the scope of the circular economy. This can help avoid confusion as well as support the preparation of focu-



sed studies and impact assessments that will provide consistent messages about the potential effects. Also, we described different circular processes that can be implemented by businesses. As indicated by the literature, these processes have significant potential to deliver economic, environmental and social benefits. Although the message conveyed in the literature about the net benefits of these processes is generally positive (see for instance Ellen MacArthur Foundation, 2013a; Lavery et al., 2013; Oakdene Hollins, 2011), there are also studies pointing out that their net environmental impacts depend on their careful design and implementation (see Tukker & Tischner, 2006; Intlekofer et al., 2010; Demailly & Novel, 2014). Thus, in order to avoid simplistic messages, in each case of applying a circular economy process to a sector, one must carefully consider all the

parameters⁵⁸ that can play a role in the overall sustainability of the circular process replacing a linear one.

It is important to emphasize that students with great enthusiasm expect this activity seeing in our country almost for the first-time trainings on this topic are held. Practical work respectively practical products were realized on the fourth day respectively on 22.08.2021.

After the realization of the final products, all the students felt satisfied because they felt that each of us has creative capacity and that they should develop them, as well as the issue of the topic for which they worked by taking small items and which instead of to be thrown in the trash, to be rationally exploited and to create products with special emphasis on art.



© RACIO



by Mine Vaganti NGO

Per capita urban waste production in Italy in 2019 was stable at 499 kg per inhabitant, compared to a European average of 502 kg per inhabitant. The decoupling of waste production and GDP has constantly been increasing since 2011, reaching a significant gap in recent years: while waste production remained unchanged, GDP increased by 4.3% in the period 2015-2019. According to ISPRA (Institute for Environmental Research and Protection), urban waste recycling in Italy reached 46.9% in 2019, in line with the EU average; Italy thus ranks second behind Germany. The overall recycling rate for all types of waste is 68%, the highest among the main European economies and significantly above the EU average (57%).

The material circular use index reached 19.3% in Italy in 2019, above the EU average, with

Netherlands, Belgium and France performing better than Italy (28.5%, 24%, and 20.1%, respectively), and Germany performing lower than Italy, at 12.2%. On the other hand, Italy has the lowest number of patents filed among the main EU economies. As per the employment in the repairing, reuse and recycling sectors, Italy ranks second, behind Poland, but above France, Germany, and Spain.

It should be remembered that Italy has not yet adopted a National Strategy for circular economy. There is only, as a preliminary act, the document titled "Towards a model of circular economy circular economy for Italy," elaborated in 2017 by the Ministry of the Environment and the Ministry for Economic Development. Based on the provi-

sions of the PNRR (National Recovery and Resilience Plan), the strategy will be proposed by the Ministry of the Environment and must in particular be aimed at:

- reduction in the use of non-renewable raw materials;
- reduction in the volume of waste;
- reuse and recycling of waste, through the introduction of systems of traceability of the flow of materials;
- technological innovation;
- dissemination of best practices;
- adoption of tools to promote synergy between the public and private sectors;
- planning infrastructure to close the waste cycle.

Regional and local governments manage a number of key sectors to promote a circular economy. The Green City Network operates in the whole country and has produced guidelines to promote circular economy initiatives in cities and, also as part of the activities of the ICESP - Italian Circular Economy Stakeholder Platform (www.icesp.it), in particular in the Working Group (WG) Cities and Territory, numerous initiatives and good practices on the circular transition in urban and peri-urban areas have been recorded. In this context, several Italian regions have already developed and implemented policies and regulatory tools on the subject.

The Circular Economy and Art

PREVIEW 2019

The Circular Economy and Art - PREVIEW 2019 project stems from a vision that sees the Circular Economy as an essential resource for society and the planet.

Circular Thinking becomes a pivot for a new movement of opinion and a model for the life of the future, which includes science, art and daily living.

The project with which the city of Turin has applied for "Torino Capitale dell'Economia

Circolare - Arte Circolare 2020" has involved the most authoritative representatives of the international economic and scientific world by creating conferences, workshops, exhibitions and installations.

The Foundation participated in Preview 2019 - Circular Economy and Art, proposing two installations by the artist Nunzio (Cagnano Amiterno, L'Aquila 1954), Untitled (2004) and Untitled (2005).

Among the most significant experiences within the processes of reworking the language of sculpture, Nunzio's work constantly resorts to the presence of pure, essential forms, archetypes of the dialogue between man and the environment, be-





arters of a discourse on time and becoming entrusted to their rigorous physicality and the material that embodies them. The decision to place one of the works in the public space of the Chiribiri garden adjacent to the Foundation, intends to signal the taking into account of the instances and needs that this common space expresses, becoming an opportunity to activate a fruitful dialogue between the residents, the City and the Foundation that will also be developed through a pact of collaboration as the regulation of the Common Urban Goods of the City of Turin provides.

Green Engineering and Product Sustainability

The project (36 months long during 2015-2015) coordinated by the Università Politecnica delle Marche aims at developing a software engineering platform, called G.EN.ESI for eco-design and product sustainability of electronic and mechatronic products. G.EN.ESI is realized through a set of new tools that support designers'

choices from an environmental point of view. These tools allow the evaluation of technical solutions in the early phases of design and their impact on the whole product life cycle.

The platform is the physical implementation of a eco-design methodology that aims at three objectives: speed, diffusion, and usability. First, it allows a rapid environmental assessment of design choices from the early stages of conception and design. Second, it promotes both the diffusion of the principles and instruments of the eco-design and their usability in technical design departments. This is possible through the simplification of analysis technologies and their integration with traditional tools used in the process of product development.

The industrial field of reference, where the methodology and the tools are tested, regards small and large appliances. In terms of environmental impact, all the phases of the product life cycle are important and the parameters to be controlled at design time are several.

The ultimate goal is to stimulate designers in the application of the Life Cycle Design paradigm, in order to extend the view beyond the company boundaries, considering the entire product life cycle. This requires the development of a new generation of design tools in which environmental aspects are directly considered when design parameters are set and not only afterwards as it happens in current practice.

I Laboratori del Cigno

I laboratori del Cigno is a series of manual workshops offered by LEDA (Legambiente of Parma). The workshops range from the realization of original artefacts made of recycled paper to the creative use of common objects easily available at home, such as plastic bottles or old CDs. The workshops, which normally took place in the toy libraries of the city of Parma and were facilitated by the volunteers of LEDA since 2011, have been transformed into a series of small tutorials dedicated to children during the pandemic, available in the online

space of LEDA, in which different methods of creative recycling to be used with common objects that can be found easily at home are explained. The tutorials, in addition to having an educational and environmental awareness purpose, also served as entertainment for families during the lock down, as well as inspiration to spend time at home with the kids in a different and creative way.





by Rina Kovači

The concept of circular economy is pretty new in Montenegro. The first analysis regarding circular economy in Montenegro was done in 2014 by the UNDP (United Nations Development 7 Programme) in the document: Resource efficiency and sustainable human development. According to the above-mentioned document, an analysis of national policies concludes that the concept of a circular economy is far from being implemented in Montenegro, and that the efficient use of resources has not been directly integrated into Montenegrin policies and regulations. However, it is written in this document that there are some positive developments: issues such as stimulation of innovations and productivity, mitigation of the impacts of economic growth, sustainable management of natural resources and governance improvements are integrated into National Sustainable Development 8 The National Strategy for Sustainable Development by 2030, which fully transposed the UN Agenda 2030, recognized the importance of the transition to the circular economy. One of the main goals of this Strategic document is: "Improve waste management applying the circular economy-based approaches" as priority one. In order to achieve this goal it is necessary to apply the following measures:

Strategy (NSDS) 2007 – 2012.

Encourage activities aimed at the reduction of waste generated in the territory of Montenegro,

Apply primary selection of waste as effi-

cient as possible, as a prerequisite for the achievement of clearly defined goals in the area of re-use and recycling of discarded materials (which implies considerable investments into the separate collection systems in the coming period, followed by appropriate awareness raising programs)

Establish efficient waste selection and recycling (collection, separation, treatment, re-use of recyclables, as well as system for prevention of waste – include incentives for the development of recycling activities, stimulate secondary raw materials market and demand for recyclables)

Develop a system for management of special waste streams (e.g. used batteries and accumulators, used tires, end-of-life vehicles, waste electric and electronic equipment, packaging waste, construction and demolition waste), biodegradable waste, sewerage sludge, veterinary waste, animal by-products, medical waste, industrial waste

The gradual introduction of circular economy approaches into the waste management system (shifting from a "landfill system" to a circular waste management system), applying measures for the encouragement of resource-efficient use of raw materials in production, enabling reduction of waste generation, especially of hazardous waste generation and use of waste as alternative fuel, applying the approaches based on recognition of econo-

mic and environmental importance of waste, establishing macro analysis and sector material flow analyses – MFA, and introducing related circular economy indicators)

Improve the application of penalties in waste management, and raise awareness about the importance and advantages of sustainable waste management (ecological knowledge, ecological behaviour, ecological situation valuation) .

The beginning of industrialization and the transition towards a market-based economy brought an unsustainable model of economic growth to Montenegro, which is similar to many other developing countries "take, produce, consume and discard"; it is a linear model resulting from the assumption that the quantities of materials extracted from nature are inexhaustible.

According to the 2013 Report on the implementation of the Ministry of Sustainable Development and Tourism, estimated quantities of generated waste amounted to 243,941 tons, and in the period between 1990 and 2011, emissions of gases from waste had been reduced by only 20%. Taking into account that the linear economic growth model turned out to be unsustainable and that the competition for use of scarce raw materials has become ever stronger, transitioning to circular zero waste economy has become one of the prerequisites for sustainable development and increased resource efficiency. Beside the National Strategy for Sustainable Development by 2030, the concept of circular economy is recognized in the proposal of

the Law on Waste Management (Official Gazette of Montenegro, 64/2011) In the new proposal of the draft of Law on waste management are partially transposed the amended directives, which are in circular economy package, spatially in terms of percentage of recycling rate. Preparation of the new Law on Waste Management was planned for the end of 2018 but the Law still has not been prepared and adopted. The new Law on Waste Management will transpose amendments directives, which are part of the Circular Economy package.



national events in montenegro



Ulcinj Montenegro, 23.-26. Sep 2021

The purpose of the four day training was to get students acquainted with the circular economy which is not very current in the Western Balkans. Our objective has been to raise the awareness of students about enormous opportunities offered by the circular economy, the benefits people may have, both businesses and consumers, as well as the nature, by reducing environmental degradation and prioritizing biodiversity, while also delivering on future competitiveness.

Topics & methodologies

The first workshop was used to get students familiar with the topic: „Circular Economy – Save the Planet“. During this workshop, we used a PPT presentation and also explained everything in detail ab-

out what we were going to do in the next three days. During the second workshop students used old newspapers to design pencil holders. On the third day we reused cardboards thrown in the trash, in order to make a nightstand for books. During the fourth workshop we planned to reuse discarded plastic bottles and old wires and design a beautiful home décor which could be used as a vase for flowers. In this way we extended the lifecycle of the materials mentioned above.

Major achievement: One of the biggest achievements was the will of the students to continue reusing and recycling the waste they have at their houses. They were curious and willing to continue raising awareness among their peers about the circular economy.

The participants received the knowledge of how waste can be used as a raw material and how to convert waste into profit, they got the information about the life cycle of the product and which are the best methods for reusing, renovating, recycling products and making them usable again. During the workshop plastic bottles, cardboards and old newspapers didn't become a waste we kept those materials and products in use, and we made products that can be used again.

“Economic benefits of protecting nature now outweigh those of exploiting them!”

Fred Lewsey

chapter 4:

international trainings

international trainings



by Bahanur Nasya & Hannah Breit

The topic of waste now has an urgency, which is in dire need of collective action. Our partners paid particular attention to encouraging young people towards engaging with an international exchange. The incubation program was composed of two training courses, with young entrepreneurs developing local activities and action plans fitting their local context in between. We made it mandatory for participants to take part in the training courses while also contributing towards local activities as part of the mentoring program. During the training program, there were 24 young professionals from Albania, North Macedonia, Kosovo, Montenegro, Italy and Austria who shared their ideas on circular

economy and how to translate waste into profit through innovative business models applied to EU countries and their local contexts. The trainings were conceived as two units, with two different focal points. The first training session focussed on the topic of “the circular city we want”, while the second one concentrated on business models, with the discussion evolving around the topic of “how to turn waste into profit.” The trainings were designed in a way to ensure that the participants received the opportunity to both attend the trainings and continue to develop a business model for their project ideas - stemming from the first training session and being elaborated on during the second one.



by Meivis Struga

The international trainings of the CEED project were designed to create a moment of exchange among the participants from various European contexts. But unfortunately, due to the outbreak of the COVID-19 pandemic, the meetings had to take place digitally to ensure preventing exposure to the virus. The first training took place online from November 9-17, 2020, and was organised and implemented by ETMI, the project leader. The Environmental and Territorial Management Institute stands for sustainable development, environmental justice, territorial management, transparency, participatory democracy. As, it promotes the clean, healthy and sustainable environment and was therefore the perfect fit for our first training.

During the first week, ETMI prepared daily online sessions on circular economy, the EU principles and ideas on circularity, and strategies to boost circular economy. The training gave space to collective discussions on questions such as "How to re-active waste into the cycle?" and "How to improve the Environmental Performance through eco-design". Information was shared through presentations and visual illustrations. Group discussions and feedback rounds allowed knowledge transfer in multiple ways. The participants could gain insight through non-formal education methods and intercultural exchange. The input sessions were developed to allow participants to place their own ideas into an action plan.

A week of „the Circular City we want“

First Day

During the first day, the trainer presented the main components of the circular city in general. The urgent challenges cities face were discussed: urban sprawl, climate change, environmental degradation and pressure to act fast but not having good models to replicate. Following the presentation, the participants were split into groups to brainstorm on the challenges, their local contexts and how to transform into a circular economy. Each participant shared personal opinions on the concept of circular economy. They also explained to which extent the concept is applied in their own context. In the second part of the workshop, participants discussed the concept of city assets, consisting of city infrastructure, city services and other city resources. Each of the city assets were divided into different categories. The presentation was linked with case studies and best practices from EU and non EU countries on circular economy. The first day was concluded with a set of questions. The participants collectively elaborated the answers in groups.

Second Day

The session started with main concepts of the bulky waste as furniture waste, electronic waste etc. The participants were invited to look on the entire life cycle of the bulky waste, how they are treated in the European Union countries and Balkan countries. In addition to that, the trainer shared best practices on re-using bulky waste and what the main benefits of re-use are. Also, the concept of vacant spaces as a good example of circular city was presented and discussed. The inputs allowed participants to easily identify and analyze the situations and see the importance of vacant space management. Each participant was very active during the workshops and engaged with questions, comments and discussions.

Third Day

The third day started with a discussion round on the environmental performance of different products, beginning with the design of the product, elements that must be used for production of different materials, recycled materials or easily separable

components. Participants were introduced to methods on "improving the environmental performance through Eco-Design". After the presentation, participants had to work in groups on subtasks as part of the action plan.

Fourth Day

On the last working and elaboration day, the participants were guided on how to structure an action plan, which includes starting from objectives, timeframe, actions, risk mitigation, as well as SWOT analyses. In groups, the participants worked on their collective actions plans.

Fifth Day

One person from each group presented the action plan following the methodology that was introduced. The partners came together to elaborate on the following topics: vacant spaces in Ulcinj (Montenegro), Reusing agricultural waste for biogas (Albania), Recycling of plastic waste into new products (Italy), Circular solutions for concrete (Kosovo).



by Kushtri Shaipi

The second training of the CEED Program took place between February 22-27, 2021. Due to the Covid-19 situation the training was also designed as online sessions. In this training session, the same 24 participants taking part in the first week from Albania, Kosovo, North Macedonia, Montenegro, Austria and Italy were invited, to ensure continuity of their work.

The training involved youth workers and leaders selected from partner organisations with a focus on exploring business models of circular economy, as well as the instruments and strategies. The examples were to be employed to lower the environmental impact of rural and urban business. With ecologically operating communities, societies can open innovative market niches, e.g. in the recycling industry. A main difference from the first session was that the second training round contained discussions on how youth can capitalize on their recycled products or start their own project. A series of inputs covered the topics of how to do such projects.

First Day

The participants were introduced to the overall policy and trends regarding the de-carbonization agenda, circular economy concepts and opportunities expected in the future. Following an introduction to the key terms, participants were separated into groups to discuss their initial business concepts and ideas. In the proceeding steps, they reviewed how they could implement the project idea and improve it. A final reflection round gave participants an opportunity to share their comments and obtain feedback for their project ideas.

Second Day

In the second day, the participants were introduced to the concept of vetting business ideas and analyzing the cost and incomes. The participants were divided into groups. By using the business-plan-canvas they had to further develop and clarify their business ideas as identified on the first day. Following the instructions, they managed to state the problem, identify the solution to this environmental issue, resolve the key metrics and unique value proposi-

A week of „Turn Waste into Profit“

tion, and discuss the channels and customer segments of their business model. In the second part, the cost structure and revenue streams of the business model were analyzed, discussed and presented by each of the groups.





Third Day

The following day, the competition analysis and strategy development technics were introduced. The participants used SWOT analysis to evaluate their business models. The SWOT framework helped participant groups to evaluate the internal and external factors that could impact their business. The groups gained, through systemic exploration of the strengths, weaknesses, opportunities and threats, a valuable insight into how these factors could affect their business in future. The groups were instructed on how to manage their business more effectively. The participants learned how to start up their business idea with valuable recommendations such as searching for government grants, preparing and practicing sales pitches, searching for private investors etc.

Fourth Day

On this day, the participants received information about the marketing of circular economy projects and the 4 P's to further develop their project ideas. They learned how to design the balance between product, price, place and promotion. The symbiosis of these four elements are a vital aspect of the business ideas, and acted as

the basis for the promotion and branding strategy. The groups exchanged observations on how to promote their business idea and create the best products in terms of ecology, with reasonable prices.

Fifth Day

The day started with an introduction on how to organise the administration and human resources for the business idea. The participants learned about the skills matrix and how to match tasks and personnel. In group work, the participants filled their potential future organisation, starting from the staff position, key skills and competences covered. Each group explained in a clear and detailed manner the members of the staff that would implement the business plan, while following the vision of the company.

Sixth Day

The last day of the training was reserved for a pitching session. In groups, participants presented all the material they produced throughout both the training units and practice work. They designed a pitch for their business idea. The topics of the business models were about reusing of food waste - fruit T-shirt (Italy), re-textile

(Albania and Kosovo) and water reusing (North Macedonia and Montenegro).

During the week, the participants were introduced to the circular business model design by considering the main key drivers of circular economy. They were informed on how to develop and clarify the business idea through the business plan canvas matrix, competition analysis, strategy development of the business, finance acquisition, marketing and completion of staffing structure with skills matrix. The training was a composition of presentations, group discussions, guidance for independent work and an elaboration of an own action plan. Included was information about the green economy conditions in participants' countries, marketing and sustainability in a business plan as well as the EU Green Agenda for the Western Balkans.

The participants contributed in the development of a "circular business model" for their own cities or countries.

The topics of the business models were:

- Reusing of food waste – Fruit T-shirt (Italy)
- Re-textile (Albania and Kosovo)
- Water Reusing (North Macedonia and Montenegro)

The partners had researched local examples and best practices for this project. Businesses and organizations implementing circularity and circular design were examined based on certain points such as their intention, impact, process and future plans as well as advice for young people



and starters in circular projects. The gathered information provides creative solutions for businesses and organizations as well as for consumers towards a more sustainable way of living. An overall topic of the CEED Project was to enable the local implementation of circular solutions. The participants were guided through the EU action plan for circular economy. They also learned how to implement the mentioned guidelines and advices. The best practices and local examples are an illustration of the work the young people were encouraged to do themselves, as it is often motivated and creative people who seek solutions for a more sustainable future.

*"Teaching is more than imparting knowledge,
it is helping change."*

William Arthur Ward

chapter 5:

inspiring cases

being light on systems



by Bahanur Nasya & Yilmaz Vurucu

We live.

We work.

We enjoy - or at least attempt to obtain as much satisfaction as possible as we make our way through our days. And in doing so, we often overlook the footprint we leave behind; a footprint created through an accumulation of our acts in all areas of living. Our behaviour mostly follows regulations and is often obviously limited by opportunities we are presented with. Fact remains however, that both regulations as well as opportunities are created by people, and not so surprisingly, often by lobbies and industries. They repeatedly manifest themselves in the shape of a reaction to certain patterns. To achieve change and transformation, and to heal the tremendous burden currently faced by our system, we need to ensure we have the right impulses, so that regulations and opportunities can follow suit. To put it more bluntly, we need to act in all areas of daily life based on the natural rules described in this publication. We need to implement these principles of sustainability and consideration, not to mention thought and intent, on a daily basis, whether it be when we work, shop, create and relax; when we are on holidays, or even when we find ourselves in a position to make decisions for other such as children or the elderly. Consequently, our actions need to be responsible, sustainable and enriching for local communities and ecosystems. While there is a growing number of emerging solutions and good practices, channeling all revenues of our actions into meaningful initiatives and solutions goes a long way.

Informed readers of this book and participants of the trainings might have caught on to the internal memorandum: to act in a thoroughly responsible way, with the most positive footprint possible. Each act and revenue generated through positive acts and affirmations will serve as an indication that we care and are ready to support accurate and appropriate initiatives. In other words, we should probably seriously consider practicing what we preach, or in the very least attempt to eradicate from our daily lives, as many contradictions as possible. A further step would be to inspire and involve others so they can become a multiplier of the positive footprint lifestyle. Regardless of the path we follow, there are abundant ways of becoming a positive member and proverbial card-bearer of the circular economy, regardless of our profession or position. Purchasing the right product as a consumer, applying a sustainable pattern as a business owner, improving our workflow and environment in favour of sustainable principles as an employee or inventor: an abundance of options and steps are at our disposal, waiting to be picked up and implemented.

Among the unlimited number of possible actions, we selected and curated a few diverse applications to serve as an inspiration in this chapter. Some are approaches, some are product ideas, some are process ideas and some are business models and service examples. The variety will surely support you in your decision making process and offer hints on how to progress with your ideas.

too good to go austria: circular economy in food industry



by Too Good To Go Austria

Too Good To Go Austria have an ambitious goal: to inspire and empower everyone to fight food waste. The problem is simple: too much food is being thrown away. It happens at restaurants, at the retail level and in households, from fresh sandwiches sitting in rubbish bags behind cafes, to uneaten vegetables tipped into bins at home. It's all delicious, made to be enjoyed - but it's wasted instead.

This is where Too Good To Go comes into play. Too Good To Go is a social impact company driving a movement against food waste. They created an app that is also Europe's largest B2C marketplace for surplus food. It connects users with businesses that have unsold food, so that it can be enjoyed instead of wasted. Users get delicious meals in a surprise bag at a great price, businesses reach new customers and recover sunk costs, and the planet has less wasted food to deal with.

Social media design as circular economy enabler

It is estimated that a third of all food is wasted globally, which is alarming on many levels, but not least because it's something we can all help tackle on a daily basis in our own homes. Often, it's just about reminding ourselves about the importance of preserving food and being more conscious of our habits - having visually appealing reminders and cues every day in our company channels is a great way to achieve that.

"We see on our social media that when we post about seasonality of food or how to store items correctly, we get a really positive response. Our customers were keen to have a reminder to do the right thing and if it looks great, that's even better!"

[Too Good To Go]

Too Good To Go's intention was to use the latest technology to connect with people so everyone could be encouraged and have the possibility of taking action to prevent food waste. The idea of using technology to connect people and empower them to reduce food waste was shown in 2016 in Denmark, and it was rapidly adopted by several entrepreneurial minds around Europe. Austria was launched in August 2019. Today, they are available in 14 European countries and recently also in the USA - and have big plans to continue the journey in other countries as well.

"We want to create awareness about the issue, educate and inspire people to change their habits. Food waste is a global issue and it's our mission to help solve the issue globally. We have a solution that can be applied across borders and so it's natural for us to keep opening up new countries."

[Too Good To Go]



www.toogoodtogo.at/de-at

circular economies



by Zero Waste Austria

Zero Waste Austria advocates circular economy as an important tool for resource conservation and waste prevention; and on this topic they follow the definition of the European Parliament: "The circular economy is a model of production and consumption in which existing materials and products are shared, leased, reused, repaired, refurbished and recycled for as long as possible."

It's essential for them to maximize the life cycle of products (through durable materials, smart product design, repair). Their philosophy rejects circular economy exclusively in the sense of seeing it merely as a recycling economy, as this perpetuates a throwaway mentality and is not the most ecologically sensible solution due to energy expenditure and material waste.

Zero Waste Austria supports a circular economy in the sense of a regenerative system in which resource use and waste production, emissions and energy waste are minimized by slowing down, reducing and closing energy and material cycles; this can be achieved through durable construction, maintenance, repair, reuse, remanufacturing, refurbishing and recycling.

"Rethinking" is an important component of such a circular economy model. Zero Waste Austria calls for a move away from a consumption-oriented economy to a service-oriented one keep resource consumption as low as possible, even in or within a circular economy. Design and reparability of products are decisive factors here.

In order to reach the goals it set forth, Zero Waste Austria promote their work in diffe-

rent sectors and with different people. In this publication, we focus on the guideline Zero Waste Austria established to eliminate waste in the Austrian hotel sector. They cooperated with different hotels in Austria to create more circular solutions in hotels. In Austria, a lot is being done to recycle waste. Hotel certifications motivate hotels to remove individual packaging from their product range or to reduce food waste in hotel kitchens. Beyond these measures, this project would like to encourage hoteliers and guests to go one step further in the direction of waste prevention.

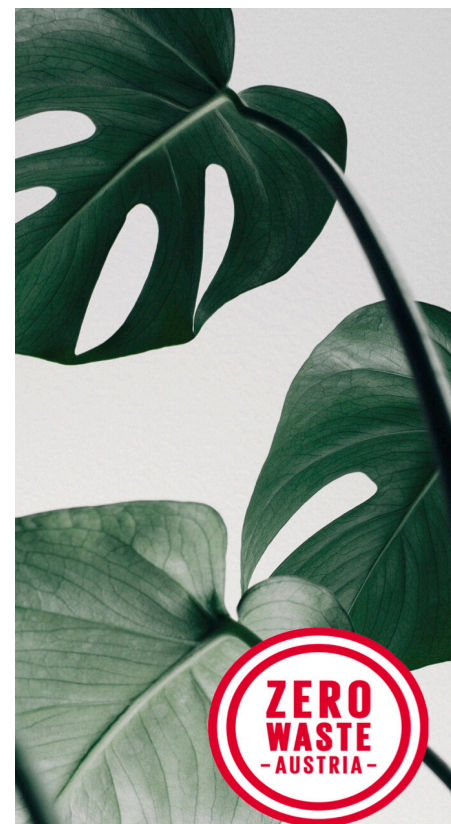
What happens to hotel furniture that is thrown away in large quantities should it ever need to be replaced? Or with hairdryers that need to be changed every five years or so? Can more recycled materials be used in the furnishings? To what extent is a paperless hotel industry feasible?

You can download the guideline (in German) on their website and read more about the implementation of circularity in the hotel industry.

How to get started in circular economy? An advice from circularity experts Zero Waste Austria:

"Basically, you don't need any special training, for example on the subject of resource conservation. However, what counts is the interest and the will to implement or start such projects. As a tip, it can definitely be said that you need a lot of endurance, interest and a positive mindset."

(Zero Waste Austria)



www.zerowasteaustria.at/

© Zero Waste Austria

recover from interruptions



by Bahanur Nasya & Yilmaz Vurucu

Caring for ecosystems and dynamics that allow us to recover from negative impact is something we almost never learn at school. Nevertheless, various people do show us it is possible, in all fields. Establishing the mindset to care about people, animals, plants and all living forms is something that is ever-changing and evolving, together with an abundance of good practices and examples. The diversity of care-givers and taking collective initiative plays a significant role in ensuring a more positive impact when faced with gradually decreasing environmental values and shrinking resources and opportunities for humankind. Practicing concern on the ecosystem we have already destroyed al-

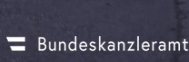
ready and diligence in repairing the damage requires developing after-uses for already created materials and improvement of the current and ongoing processes. What if we looked at a current challenge with careful consideration on what can we contribute, regardless of our expertise and skill level, towards improving and repairing it? Apply the biosphere rule: Rule & Step 2: Scale up. What can design do about interruptions and disasters and create added value? How can the interaction with the community create adapted and improved solutions? How can we reactivate dormant spaces and create new opportunities for residents?



in cooperation with



movies in wonderland is supported by



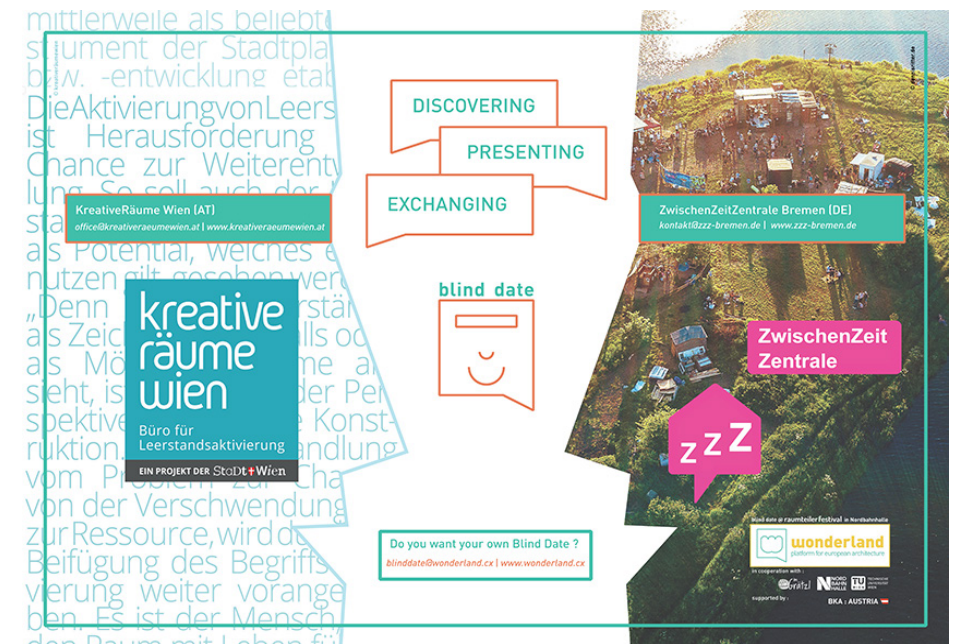
© wonderland



Hacer mucho con poco (Do More with Less), EC/ES 2017, 86:00 min, D: Katerina Kliwadenko & Mario Novas
Young architects in Latin America are bringing about a paradigm shift by providing a new understanding of how their work interacts with society. The film explores ways that architecture can contribute to a better future for the region and support an alternative economic model.

Blind Date: vacant space agencies
In a blind date between Kreative Räume

Wien and ZZZ Bremen, the agents of vacant spaces discuss how valuable the empty, unused and underused spaces are. Those spaces do not merely fail to bring rents to the owners, but they are mostly wasted resources for production, encountering and creation. No matter how the activation process is organized within the community (top down or bottom up), they always need to work closely with people who need space and this close collaboration can follow the rules of the biosphere.



local and bottom up initiatives with impact



by Levente Polyak & Daniela Patti

The reuse of vacant properties has become an important topic in the regeneration and development of European cities, as well as in the debate about sustainability. From the mid-2000s onwards, city governments have begun engaging with the development of policies to facilitate the circular reuse of vacant properties (SenStadt 2007). In the early 2010s, when the impact of the economic crisis on European cities became evident, many civic, professional and public initiatives established new means and methods for the circular reuse of vacant spaces. European cities in the past years have developed a number of policies to facilitate the circular reuse of vacant properties, to develop new uses and functions for vacant and underused areas, as well as to give visibility to development projects. Such projects increase transparency in public and private real estate management, mediating between property owners and potential users, designing incentives for the reuse of vacant spaces, relaxing regulations and granting permissions, or providing funding and guarantees for loans. The single projects contributed over time to acknowledgement on different levels and their specific contexts. But meanwhile also policies react and involve such practices. Those emerging actors create a better connection between citizen and community initiatives and owners of unused public and private properties. Several cities in Europe have created temporary use agencies that act as facilitating bodies to connect public and private property owners, support initiatives with legal advice and project development, as well as with start-up funding.

The economic crisis brought about a new paradigm in architecture and planning. Instead of serving large-scale investments and targeting fictional customers, the new development logic gives preference to the reuse of existing buildings and spaces by helping them to gradually adapt to new functions and accommodate new users. Dutch practitioners were at the forefront of experimenting with new approaches to vacant properties and community-led urban regeneration. By pioneering innovation in design, policy and management to address the problem of vacancy, they established models that inspired like-minded initiatives across the world. Between 2012 and 2015, the KÉK – Hungarian Contemporary Architecture Centre invited to Budapest a dozen Dutch practitioners, whose work is organized around the reuse of vacant buildings and areas. Vacant City is the result of these encounters, assembling the key thoughts and experiences of the program's 3 years.

VACANT CITY

Experiments in inclusive urban transformation
Netherlands / Hungary

© cooperativecity.org

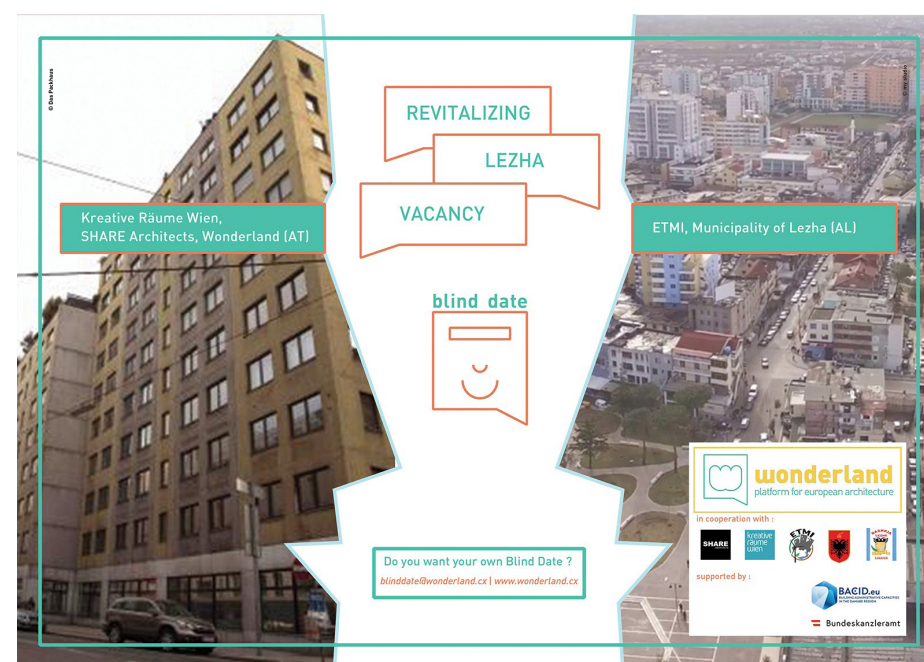
Blind Date: Reactivating Lezha's vacancy
In a blind date exchange project between Austria and Albania, Austrian experts analyzed the patterns of vacancies in Albania's Lezha town and developed a roadmap with local partners coordinated by ETMI, for the activation of the vacant spaces in the town. The project resulted in a publication and can be accessed by everyone and used for other towns, cities and communities.

Neighbourhood transition
towards collective use of vacant spaces

ROADMAP FOR LEZHA



© wonderland



© wonderland

103

re-activating dormant resources

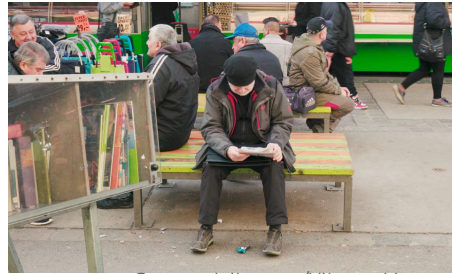


by Yilmaz Vurucu

Vacant Buildings, sites and places reactivation
Multipurpose use

In some contexts, the necessary act is to create variation and diversity. That is the challenge for most commercially used areas. Regardless of it being a shopping centre, a street market or housing complex. The use of space is inherited and has a price tag, so much so that despite the need for more social space, hardly any owner or investor finds it desirable to commit space to social use. This is not only because they are personally not open to or even against diverse uses, but also because they are often afraid of attracting financially unprofitable inhabitants that occupy the space or place. This leaves the application of diverse functions in urban spaces to the users and citizens. It would be in defiance of the overburdening of such significant an issue onto the shoulders of private citizens that artists themselves took on the task of creating an open access public library on Vienna's multi-cultural street market "Brunnenmarkt".

By creating an art piece open 24/7 and acting simultaneously as a public library promoting the exchange of non-monetary resources such as books and to our surprise, even non-perishables such as canned beans, they somehow tapped into an essential communal need for the residents of this active area. The place now also includes sitting arrangements and allow people to encounter each other and exchange, surrounded by the market stalls and shops.



© xsendriksarts/Yilmaz Vurucu

Small shops with a select inventory of items or offering a limited variety of goods for our daily needs are very often challenged by our new shopping behaviours and preferences; with supermarkets, shopping centres and the convenience of online shopping creating the biggest obstacles. Local shops and local supply chains are broken, facing more difficult times and having to adapt to the challenges. In the case of "Zur goldenen Ameise" an shopkeeper with an academic background decided to apply a fresh new approach. Through "Grätzelladen" she chose to cater to the needs of the locals in the neighbourhood and personally curate a selection of fresh, local products in small amounts. The shop offers vegetables and fruits from local producers and communities, distributes locally brewed coffee, honey from the forests of Vienna and many other products from vicinity. She is supporting local producers, offering them a meeting room to talk to the customers, and cooking daily lunches for people working in the area.



© xsendriksarts/Yilmaz Vurucu

We all know starting any initiative can be challenging. Especially if you're full of ideas, even have interested clients, but lack a production space and the opportunity to produce your product. That was where three young carpenters found themselves at the beginning of their journeys, as they

were experimenting and receiving inquiries for bigger projects. Instead of rejecting the commissions, they offered their collaboration to existing carpenters in the vicinity. They found the right match after a while, and have since been sharing a wood-shop located in a workshop underneath Vienna's subway overground subway line U6, along with the expensive machinery to boot. This co-sharing of space and resources is what helped them kick-start their own label. This story has a positive spin, as they now find themselves as established wood-shop with social values and innovation in their structure and management as well as production methods, while creating new opportunities for many young people.



© xsendriksarts/Yilmaz Vurucu

repair – an urban example



by Bahanur Nasya & Yilmaz Vurucu

When discussing the concept of repairing, broken products are often what comes to mind. The word evokes an image of a broken piece of electronic equipment, or household item. What generally doesn't come to mind is the process, dynamics and systems involved. Fixing merely a single product is a drop in an ocean, hardly capable of solving the issues we're destined to face in the near future: we have to repair much more than just products. One aspect of repairing is the ongoing power structures. In terms of built environment, we have to look into schemes of how things are built, who builds for what reason, and for whom, and what can be done with the built product after it's use. In architecture, the power often

lays with those in possession of investment capital. This is the same in building infrastructures such as roads or buildings like shopping centers. What if, we could change the system and apply the biosphere rules: Rule & Step 4: Scale right the economies. What if the buildings we create, are built on the basis of the needs of the persons and the capital would not matter. There are already many projects in Austria, which leave out the traditional investors and puts the needs of the people in the center and gives them space and time to self-organise their own housing project.

Der Stoff aus dem die Träume sind, AT 2019, 75:00 min, D: Michael Rieper & Lotte Schreiber

With five milestones of self-organised and self-administered housing development in Austria, the documentary takes a multifaceted approach to various topics related to cooperative planning processes from 1968 until the present day. We visit the pioneers of the Kooperatives Wohnen passenger car project in Graz-Raaba, meet the architects and original residents of a split-level housing estate in Graz, explore the Gärtnerhof eco-settlement and the Lebensraum estate in Gänserndorf, Lower Austria, talk to residents of a Vienna housing project ab-

out the development and planning process, and let the Linz-based WillyFred project activists explain how homes can be bought back from the property market.

Bikes n' Rails: Solidarität schafft Raum, AT 2019, 7:00 min, D: Filmgruppe RPL
Building an entire apartment building without capital — how does that work? The Bikes and Rails construction group is building a house in Vienna's Sonnwendviertel that belongs solely to itself. The basis is provided by the legal and financial model of habiTAT, which promotes solidarity with a network of self-organised housing projects in Austria. Instead of profit, affordable rents and lifestyle freedom.



circularity in construction



by Materialnomaden

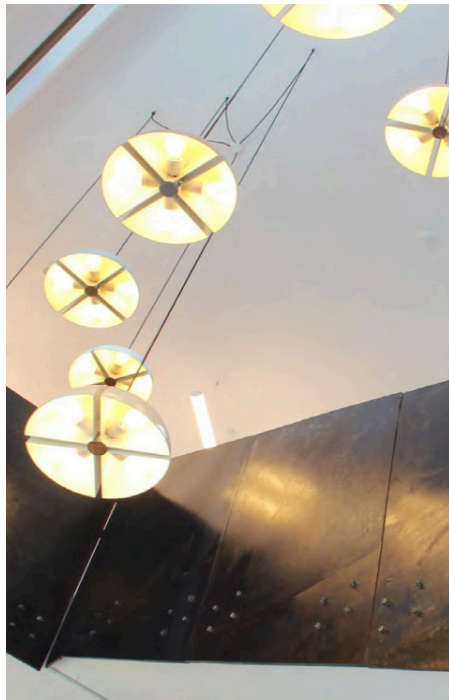
„Our main objective is to raise awareness and proof the workability of the reassembling of re-use materials and dismantled building components. Each future project should contemplate to include secondary material.“

(Materialnomaden)

Materialnomaden offers expertise in architecture, urban planning, construction and restoration, art and design, as well as structural planning and guided self-construction. With their pioneering work, they are taking important development steps to advance circular processes in the construction industry. Their work consists of services for the evaluation of material and building components and creating feasibility studies & component catalogs to evaluate the reuse potential. They develop limited edition products based on environmental products declaration values.

They also provide professional support for construction projects from design to implementation. Among other things, they advise on the determination of reuse potential and provide suitable components in the „re:store“ – their online marketplace & platform.

Their knowledge on evaluating and harvesting materials and building components derives from their experience in many different fields such as architecture, construction work and design. To see the built environment as an existing resource is a main aspect of their philosophy. This means that for them as a co-designer of building culture, the ability to fall back on potential is important, which they adapt to permanently changing needs and uses. With the help of concrete implementation projects, consultancy activities, the creation of prototypes and the procurement of reuse components, they show the structural, architectural and artistic added value of projects in which the focus is on the area



© Materialnomaden

of found footage material.

The integration of Art into Eco-Design Circular handling of material requires a creative-artistic process, as well as manual skills. It enables an appreciative approach and establishes perspectives to deal with the current development on profit orientation and consumption of resources. By taking countermeasures and by integrating digital methods, it may be possible to open the scope of action. In order to do so, a certain process is required. Materialnomaden see it as a trans-

formation of content-related intention with a socio-ecological task, into a business model for a green economy within the building industries and culture.

This approach is as part of an overall transformation process within the building sector. The impact on the clients and customers to reshape their businesses via the integration of circulatory capacities is one step towards a more sustainable and modest future.

www.materialnomaden.at

Materialnomaden's advice for getting started yourself:

“Whenever acting as a pioneer double your energy source, raise your patience level as well as strengthen your persistence to give people time to adapt to your incentive you are offering. Your creative spirit and self-conviction help to invent a game changing idea.”

(Materialnomaden)



© Materialnomaden

from ruins to creative-culture zone



by Maryam Shah

Abandoned architectural structures have the opportunity to become something new. The identity of the abandoned building gives it a new identity and brings with it new promises of community connections. Bringing something new to life from the remains can mellow down the negative associations with the process of abandonment of a building. An example of such a case of conversion, from ruin to a new space for community strength is the LaFábrica de toda la Vida in Spain's rural area of Extremadura. An industrial ruin that was converted to a creative space, with community involvement on every step.

The "Factory of a Lifetime" or "La Fábrica de toda la Vida" in Spanish, previously known as "The Asland cement factory,"

was an abandoned factory. The factory is a result of linear development and production manners. The factory supplied cement for many construction projects in the surroundings over 18 years, and when the projects finished the building was left to decay, abruptly ending the business as well as the employment of many people for 25 years.

New beginnings and meaning to the factory site were given by the youth of the local population. They took the abandoned factory and its ruined state as an opportunity and gave it a new function for its existence and a new life to the people.

DIY construction and using recycled materials was a conscious decision to prove, for example, the many ways in which cons-

truction can be used to educate, engage and build the community. This restoration and reconstruction method ensures social capital, which is equally important as economic capital. In the process of renovating the factory space together, the exchange of knowledge, labor, and time spent collaborating and problem-solving end up strengthening the community bond. LaFábrica de Toda la Vida has given the younger generation of the town, who had left to seek better opportunities, an opportunity to come back and actively take part in not just a new space to interact, but in the process of creating this space. Every member of the community has their part in recreating this space and hence creates a sense of ownership.

From the beginning of the idea, this project has promoted the involvement of the community in every step of the process, whether it be taking suggestions or the involvement of the youngsters in renovation works. LaFábrica de toda la Vida has transformed into a space that is owned by its users through their contribution at present, or their association with it in the past. It stays sensitive to the building's history and the identity it has gained as a ruin. It has become an example of the birth of something creative from the very ruins, that holds on to the building's past while marching into the future.

www.openheritage.eu



circular reuse of properties



by Levente Polyak & Daniela Patti

Buildings are often left to decay because they seem to not be attractive enough for investors. Many vacant buildings in Europe remain empty or underused because of prohibitive renovation prices. But in many cases, there is an invisible attachment or meaning behind the buildings which motivate people to come together and try extraordinary methods. In this context the rent-to-investment schemes support the initiatives by having accessible space and taking away the burden of investment from the municipalities or other property owners. This scheme brought new life to the decaying Market Hall Bratislava, the capital of Slovakia.

The project allowed private and civic initiatives to access public buildings, develop viable economic models and reinvest their profit into the renovation of the building. The Old Market Hall in Bratislava had previously closed down in 2008 after years of unsuccessful attempts by the municipality to keep the market alive. The reopening of the market hall in 2013 was due to the NGO Old Market hall Alliance that made a financial proposal to the municipality to reopen the building. Their concept is combining a food market every Saturday with cultural events on other days, as well as two cafés, a grocery shop, a cooking school and a soda water manufacturer. Rethinking the opportunities of the Old Market Hall allowed the organisation to run the building in an economically sustainable way, while gradually renovating it and creating a new event venue and meeting space in the heart of the city. The Alliance pays a symbolic 1 euro rent per year to the municipality and

has to invest 10.000 euros per month in the renovation of the market hall. Each item of investment is overseen by a supervisory board that includes municipal officers and members of the association. Allowing the tenants to pay rent in the form of investment into the building, this model assures the gradual renovation of the building, covered by short-and long-term rental arrangements. The impact of the rent-to-investment scheme used in the Old Market Hall goes beyond the scale of the building: the Alliance helped a variety of initiatives across Slovakia, including the team regenerating the Rožno Monastery, Kino Úsmev Kosice, or Nova Cvernovka in Bratislava. The Alliance has also been involved in establishing Lucerne terrace in Prague as well as in the regeneration of the Cloister in Brno. Politically, the model of the Old Market Hall served as a well-functioning example of the rent-to-investment model, instrumental in convincing politicians and property owners to open up their buildings for civic uses.

cradle to cradle products



Creating items out renewable resources is a key approach in the cradle to cradle cycle. By the end of the use, the item should easily be returned to the cycle. This is true for organic materials, but using organic materials for transportation is not so common. My Boo bamboo bikes are produced in Ghana out of the very fast-growing plant Bamboo. The plant can reach 20metres in every three years, which is very sustainable for the production of the resources of those bikes. Ghana provides the perfect conditions to grow very stable and lightweight bamboo. Those attributes are very useful for the bicycles – which result in durable and light bikes.

With a social program, the initiators involve handcrafts in Ghana to produce the frames of the bikes. The partners enhance education capacities, provide secure job opportunities and social security locally. They also invest in scholarships and microcredits to increase their positive impact. The rest is assembled and refined in Germany, where my boo is also active. Through workshops, they involve people with and without handicaps in northern Germany in their concept.



www.my-boo.de/

© My Boo

upgrading the value and meaning



by Precious Plastics Vienna

The Idea behind Precious Plastics
Precious Plastics Vienna is an association working on plastic recycling. By collecting all kinds of plastics and processing them into secondary raw materials, they act as Circular Economy enablers.

The aim beyond their association is first of all, recycling plastics of course, but also the transfer of research and knowledge on the topic of plastic prevention and recycling. Precious Plastics Austria work and engage locally through their members and partners and draw their inspiration and input globally from a growing network of plastic recycling enthusiasts. They collect, process and build with plastics, educate through workshops and provide artists and craftspeople with open accessible machineries.

Their work consists of collecting post-consumer plastic waste from private households as well as from small and medium sized companies happy to collaborate with Precious Plastics as otherwise, they would need to pay for recycling services. As they are not processing major amounts of plastic waste compared to bigger industries, their main focus is raising awareness on the topic of recycling plastics.

By showing how recycled plastic can be used and transformed into beautiful long-lasting materials they open new ways for artists and crafts people. Their recycled plastics can find application in various fields such as furniture, jewellery or architecture.



© Precious Plastics Vienna

The importance of recycling

Precious Plastics Vienna attempt to raise awareness among the general society on the importance of recycling. Through workshops, they try to offer an insight on the process of recycling and make the issues of plastic pollution a subject of discussion. The workshops help people understand the problems plastic pollution cause, while exhibiting the possibilities for creation and design of recycled plastics. The workshops are also a way to make complex topics such as plastic pollution and the process of plastic recycling more accessible to a larger interested public. Precious Plastics elaborate these topics in their workshops through applied research and hands-on projects.

"Enabeling Eco-Design"

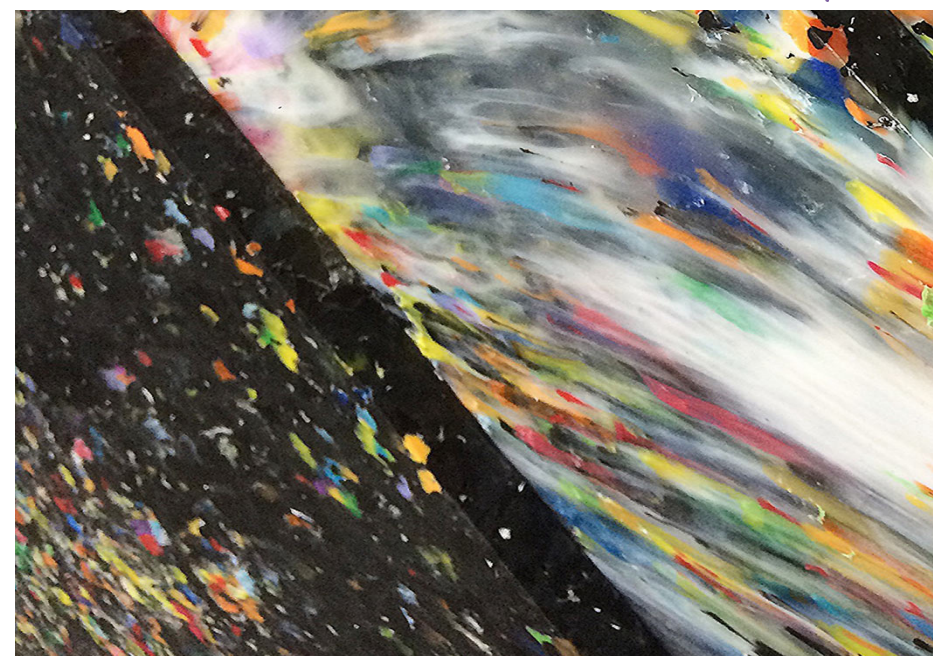
For Precious Plastics recycling, a sustainable attitude and a high aesthetic standard are not contradictory. This shows in their collaboration with architects, interior designers and artists. The collected plastics are partially washed and granulated in order to make them usable again for the production of mainly sheet materials that can be applied in product and interior design and in architecture. The enable Eco-Design as they produce secondary raw materials for artists and crafts people.

Why recycling?

"We show that recycling and a sustainable attitude and a high aesthetic standard are not contradictory. We make the complex topic and processes of plastics recycling accessible to a larger interested public through applied research and hands-on projects."

[Precious Plastics Vienna]

www.preciousplastic.wien/



© Precious Plastics Vienna

re-cycle and re-use differently



Steel Warriors are using surrendered blades by melting down confiscated knives and turning them into outdoor calisthenics parks in London and beyond. The project started with the fact that the police was confiscating over a tone of surrendered knives every month. The project initiators created out of this disaster, many responses which act on material, emotional and symbolic level.

The parks enable people who do not have access to gyms to exercise and keep healthy. So the team is strategically installing the calisthenics parks in areas affected by high levels of knife crime. Aside from the honourable effort to reuse something so harmful, the act of creating public and free

workout-areas allows youngsters the physical confidence that might allow them to walk the streets unarmed as well.

The calisthenics combines parkour and gymnastics, involves regular training to build up strength, honours regular activity with increased physical capacity and it is one of the world's fastest-growing fitness disciplines. The project became so successful that a diverse audience is showing up at Steel Warriors' first fitness park in Poplar, east London.

www.steelwarriors.co.uk



© Steel Warriors

reduce waste and emissions



The city department of Department 48 is responsible for waste and recycling in Vienna and has recently begun reducing waste by reselling them in the so called Tandler Markt. "Tand" was the term used to describe beautiful things that no longer have any "value" but that someone may very well still need. This also reflects the idea for the 48er-Tandler.

The 48er-Tandler is a second-hand market, which aims to reuse products and protect the environment. Even the furnishing of the new Tandlermarkt is made of used materials: old pallets turned into room dividers, wardrobes or mobile tables, books into stools, bathtubs converted into sofas

invite you to browse through the second-hand market. Various upcycling businesses can exhibit their goods here and thus advertise their products. A private person can use the bulletin board to give away or sell items. School classes, clubs or groups of senior citizens use the premises outside opening hours for information events on waste prevention.

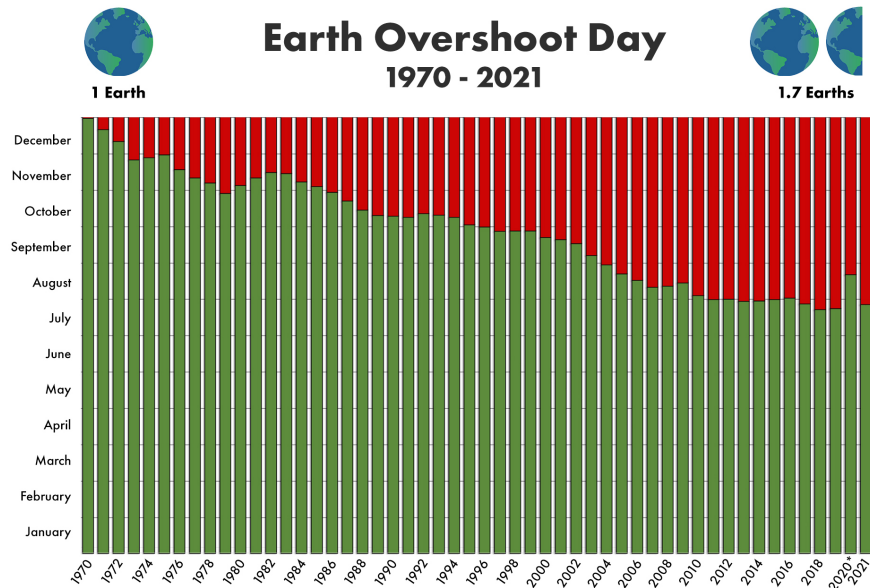
By selling the attractive old goods saves an estimated 300 tons of waste per year in Vienna.

48ertandler.wien.gv.at



© 48er Tandler Wien

summary



www.overshootday.org



*The calculation of Earth Overshoot Day 2020 reflects the initial drop in resource use in the first half of the year due to pandemic-induced lockdowns. All other years assume a constant rate of resource use throughout the year.

Source: National Footprint and Biocapacity Accounts 2021 Edition
data.footprintnetwork.org

© earthovershootday

earth overshoot day



by Hannah Breit

„If we need reminding that we're in the grip of a climate and ecological emergency, Earth Overshoot Day is it.“

(Susan Aitken, 2021)

The Leader of Glasgow City Council, Susan Aitken, announced on behalf of Global Footprint Network and the Scottish Environment Protection Agency, that the crisis is here and we have to face it now. Earth Overshoot Day occurs every year on the day when humanity has depleted all of the biological resources that Earth regenerates over the course of the year. Currently, humanity consumes 74% more than the planet's ecosystems can renew, or "1.7 Earths." Humanity operates on ecological deficit spending from Earth Overshoot Day through the end of the year²¹. According to the National Footprint & Biocapacity Accounts (NFA), based on UN databases, this spending is among the highest since the globe entered ecological overshoot in the early 1970s²².

The CEED Project took this alarming news as an initiative and designed within this project a concept for young people on how to deal with this crisis. In this publication

we have collected the experiences, ideas and innovations of all the people that were part of the project. The partnerorganisations, the Erasmus+ participants and initiatives on local levels that act as inspiring examples. From 2 years of research, training, knowledge transfer and international exchange we hope to create input and inspiration for many people. As the climate crisis is a problem we all have to face at some point, the pioneer projects and initiatives in this manual can guide us through questions of feasibility, design and the process of creation. Not only we as consumers should be aware of the environmental problems that come along with consumption of all kinds but we as designers, producers or developers need to pay attention to the scarcity of resources and the waste-production.

²¹ Global Warming Focus [2021]

²² Global Warming Focus [2021]

references



Allwood, J./Cullen, J. 2015. Sustainable Materials Without the Hot Air: Making Buildings, Vehicles and Products Efficiently and with Less New Material. UIT Cambridge Ltd

Baungart, M./McDonough, W. 2009. Cradle to cradle: remaking the way we make things. London: Vintage Books.

Charter, M. 2018. Designing for the circular economy. Routledge: London

Global Warming Focus: Earth Overshoot Day creeps back to July 29. 2021. IN: Global Warming Focus, 2021-06-14, p.289 - NewsRX LLC.

Jorgensen, S./Pedersen, L. J. T. 2018. RESTAR:T Sustainable Business Model Innovation. Palgrave Macmillan.

Knight, P./Jenkins, J. O. 2009. Adopting and applying eco-design techniques: a practitioners perspective. IN: Journal of cleaner production. Volume 17, Issue 5, March 2009. P: 549-558

Lacy, P./Rutqvist, J. 2015. Waste to Wealth: The circular economy advantage. London: Palgrave Macmillan.

Pfister, T./Schweighofer, M./Reichel, A. 2016. Sustainability. Routledge: London

Unruh, G. 2008. The Biosphere Rules. IN: Harvard Business Review. February 2008.



mastead



Coordinator of the project & partners:

ETMI (Albania)

Wonderland (Austria)
Minve Vaganti NGO (Italy)
RACIO (North Macedonia)
Let's do it Peja! (Kosovo)
Novi Horizon (Montenegro)

Coordinator of the publication:
Bahanur NASYA (Wonderland, Austria)

Project Assistant:
Hannah BREIT (Wonderland, Austria)

Authors & Contributors:
Bahanur NASYA (Wonderland, Austria)
Yilmaz VURCU (Wonderland, Austria)
Levente POLYAK (Eutopian, Austria)
Daniela PATTI (Eutopian, Austria)
Maryam SHAH (Eutopian, Austria)
Hannah BREIT (Wonderland, Austria)
Rina KOVAČI (Novi Horizon, Montenegro)
Kushtri SHAIPI (Let's do it Peja, Kosovo)
Meivis STRUGA (ETMI, Albania)
Fahmi OSMANI (RACIO, North Macedonia)
Mine Vaganti NGO (Italy)
Zero Waste Austria (Austria)
Too Good To Go Austria (Austria)
Materialnomaden (Austria)
Precious Plastics Vienna (Austria)

Graphics & Layout
Hannah BREIT (Wonderland, Austria)

Supported by:



The information and views contained in the present document are those of the partnership and do not reflect the official opinion of wonderland nor those of the partners. Wonderland and the partners do not guarantee the accuracy of the information contained therein. Neither wonderland, the partners, or any person acting on behalf may be held responsible for the content and the use which may be made of the information contained therein

Finished December 2021

Project Space – an urban work shop with an international call. In this format we bring international experts and local actors together. The aim is either finding or developing/targeting the qualities of a built area and/or social impact of an intervention. The workshops have always public events or are entirely open to the public. The aim of the Project Space workshop is to ensure exchange between local and international experts.

get in touch with us



www.wonderland.cx



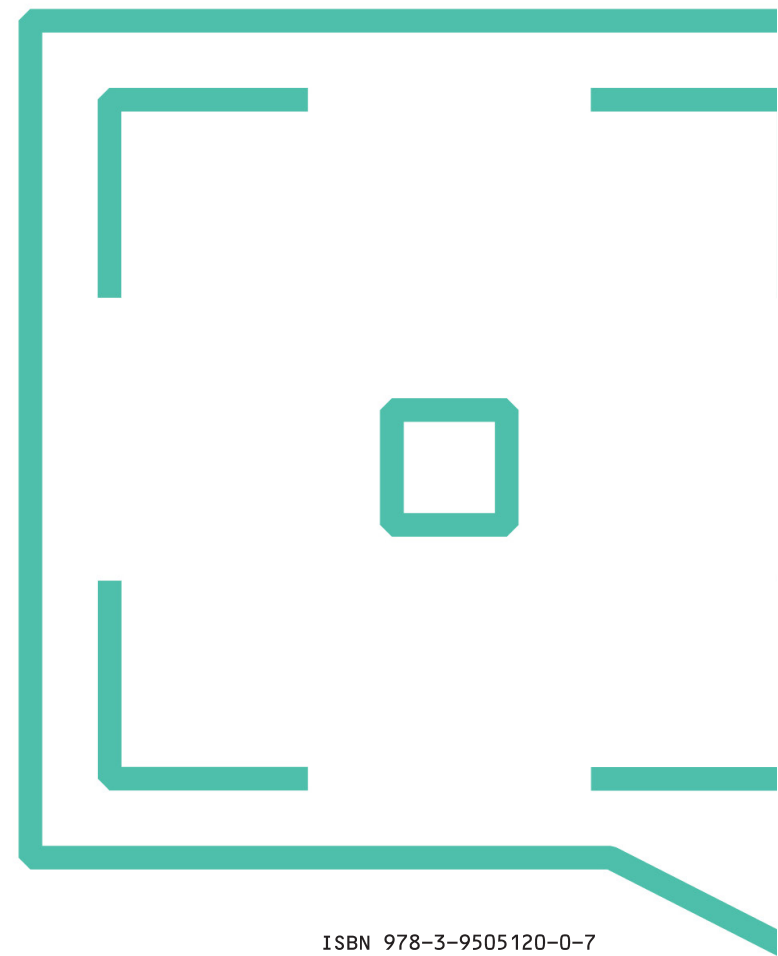
projectspace@wonderland.cx



[wonderland_platform](https://www.instagram.com/wonderland_platform)

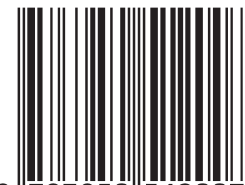


[wonderland - platform for european architecture](https://www.facebook.com/wonderland-platform-for-european-architecture)



www.wonderland.cx
projectspace@wonderland.cx

ISBN 978-3-9505120-0-7



9 783950 512007