



BUILD UP

The European portal for energy efficiency
and renewable energy in buildings

WEBINAR

Local authorities' policy toolkit to promote circular construction skills

17th October 2023 / 11.00H – 12.30H CET

BUILD UP

The European portal for energy efficiency and renewable energy in buildings

AGENDA

Presentation

Speaker(s)

Project and overview of the main outcomes

- Leslie Petitjean Senior Expert in Circular Economy at ICLEI

Poll #1

- Leslie Petitjean Senior Expert in Circular Economy at ICLEI
- Helena O'Rourke-Potocki, Expert in Procurement at ICLEI

Training materials for local authorities

- Helena O'Rourke-Potocki, Expert in Procurement at ICLEI
- Leslie Petitjean Senior Expert in Circular Economy at ICLEI

The Fundamentals Training Packs for SMEs

- Empar Juanes, Architect and Technical Project Manager at FEVEC

Poll #2 and Q&A #1

- Leslie Petitjean Senior Expert in Circular Economy at ICLEI
- Helena O'Rourke-Potocki, Expert in Procurement at ICLEI

“How could a local authority stimulate circular skills in the construction sector?”: an example from Toulouse Metropole with Life Waste 2 Build project

- Noga Raviv, Employment Project Manager at Toulouse Metropolis
- Julie Verrecchia, Circular economy and materials reuse project manager at Envirobat Occitanie,
- Jeremie Bernard, Project manager at Toulouse Metropolis

Poll #3 and Q&A #2

- Leslie Petitjean Senior Expert in Circular Economy at ICLEI
- Helena O'Rourke-Potocki, Expert in Procurement at ICLEI

Thank you from BUILD UP

BUILD UP



Shaping a Circular Sustainable Future

Local authorities' policy toolkit to promote circular construction skills

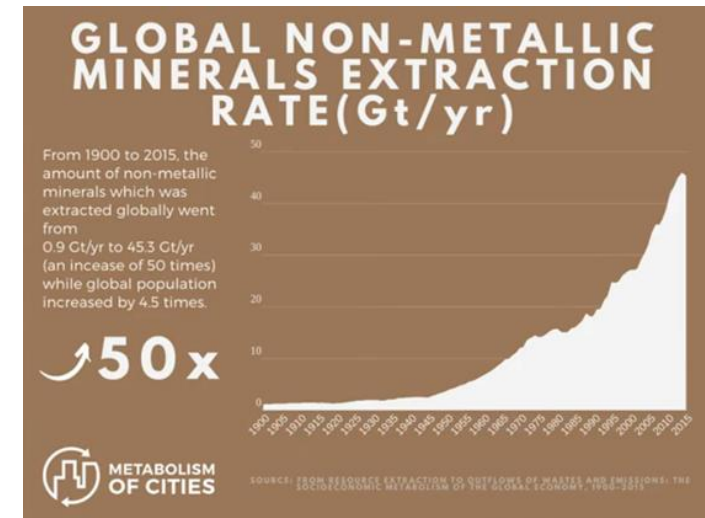
BUS-Go Circular Webinar series
17th October 2023



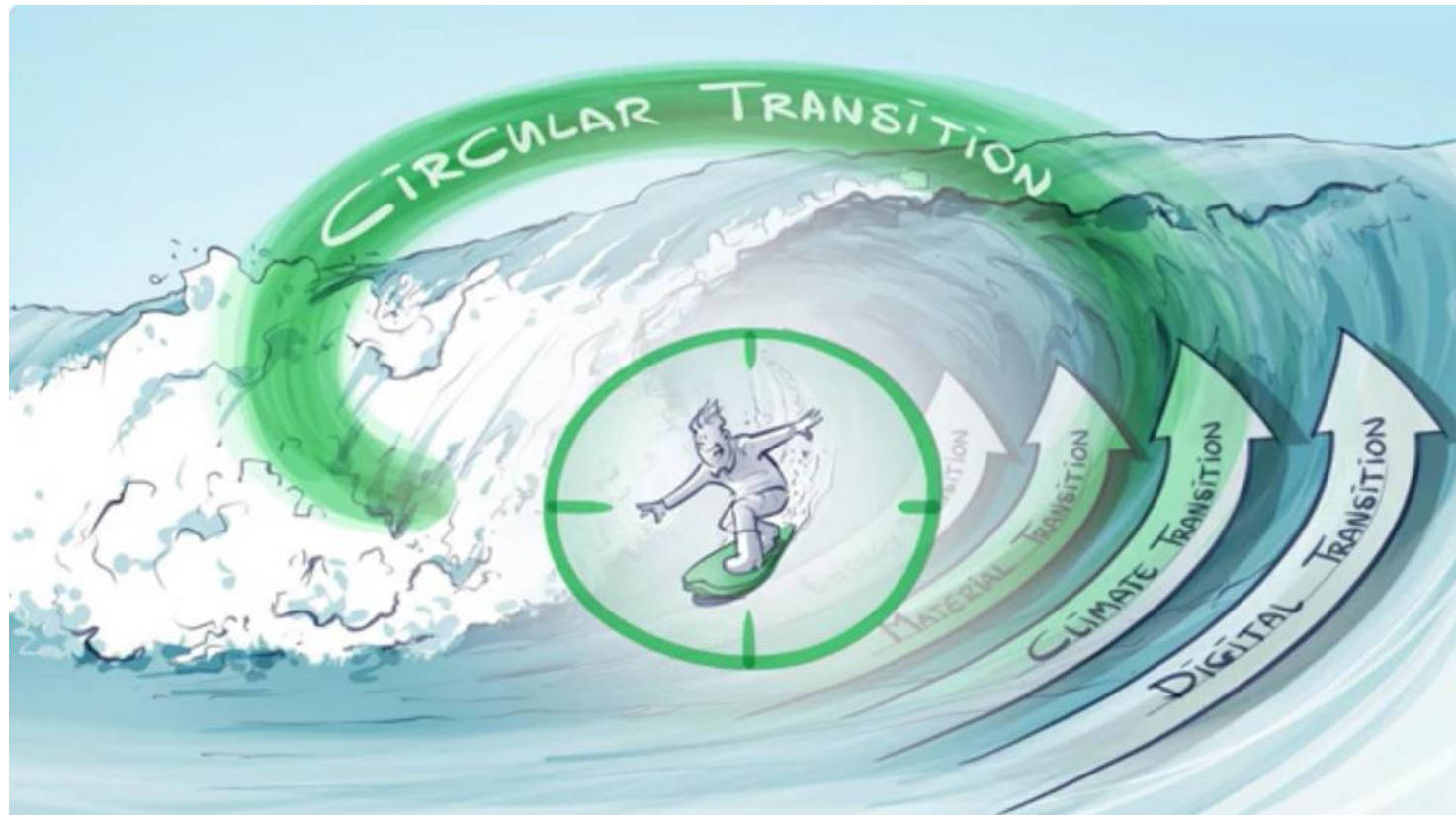
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101033740

Why circular construction?

- The construction sector is responsible for more than **40% of the primary energy consumption** in Europe, and **36% of CO2 emissions in Europe** (Eurostat, 2020).
- A circular approach in construction can significantly **reduce the embodied emissions of building materials and material consumption**, since the construction sector is high-intensive material user.
- **Like any transition, we need a skilled workforce to make it happen.**



Presentation of BUS Go Circular



BUS Go Circular's outcomes

BUS Go Circular's outcomes	Webinar to know more about	Date
<ul style="list-style-type: none"> - Training materials for local authorities - Guide for public authorities "Stimulating demand for circular construction skills" 	<p>Local authorities' policy toolkit to promote circular construction skills</p>	<p>17th of October</p>
<ul style="list-style-type: none"> - Circular Construction Skills framework - Fundamental training packs for SMEs 	<p>Unlocking the potential of SMEs: A holistic framework to train SME-workforce in circular construction</p>	<p>14th of November</p>
<ul style="list-style-type: none"> - Continuous Professional Development framework for Circular Construction Skills - Train the Trainers session 	<p>Are architects ready for circular transition? Continuous Professional Development tools for Europe</p>	<p>28th of November</p>
<ul style="list-style-type: none"> - Units Of Learning - Fundamental training packs for SMEs - Circular Construction Skills framework - Train the Trainers session 	<p>New Training Materials and Methodologies for Up-Skilling in Circular Economy in Construction for Training Centres</p>	<p>14th of December</p>



Share your thoughts!

What are the main barriers you are facing regarding skills in the construction sector?



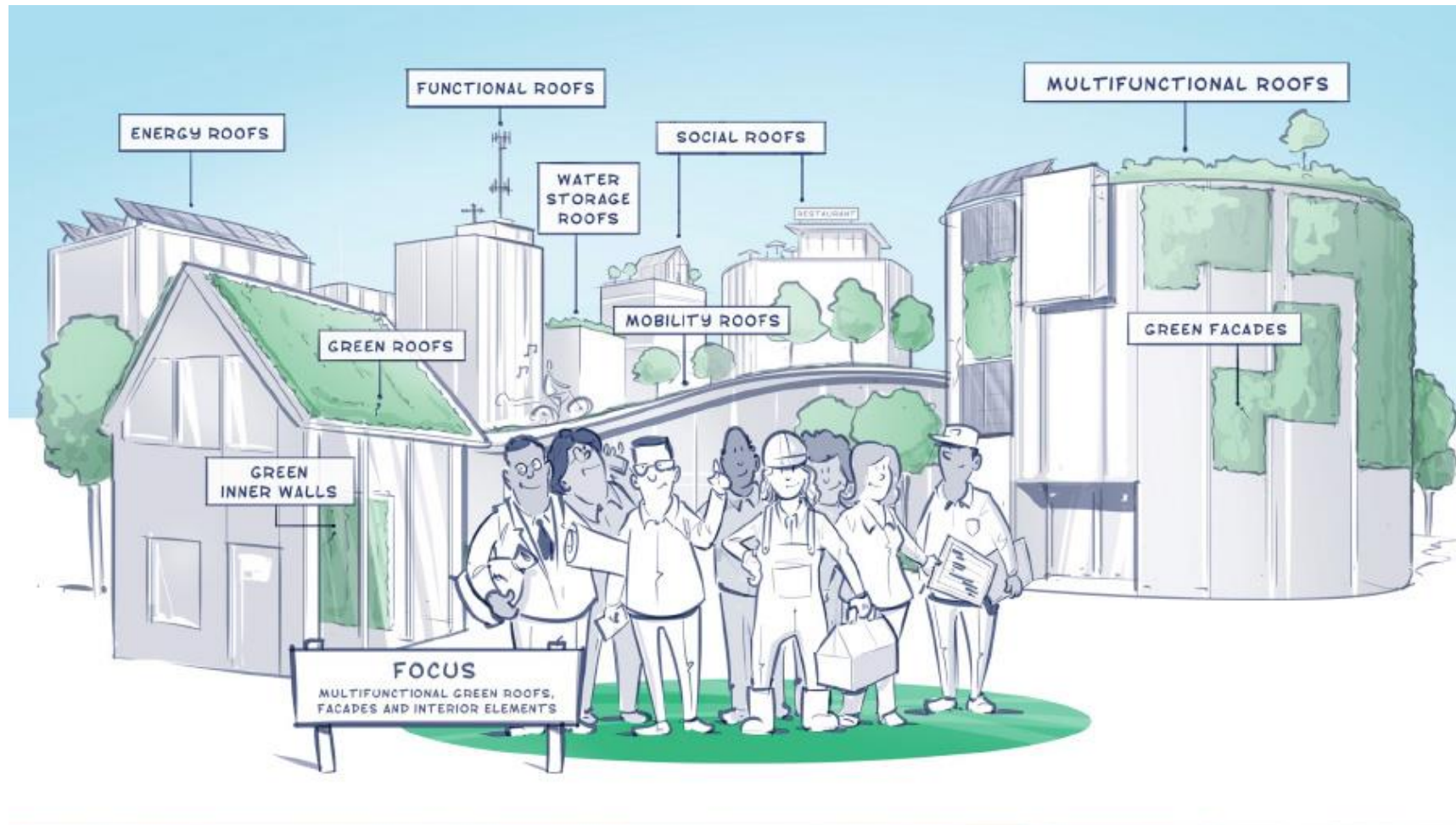
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How can public authorities stimulate construction skills?



Why public procurement?



- Representing **14% of the EU's GDP**, public procurement is a powerful market force that public authorities can use to stimulate circular construction skills.
- Public authorities are **owners of large building assets**, **big buyers** of construction and demolition services, and **employers** of practitioners responsible for building programmes and urban project managers.
- Public purchasers can **send a signal to the market** and promote the growth and acquisition of circular construction abilities by including requirements for certain building standards, certificates, or credentials in tenders.





Shaping a Circular Sustainable Future

Training material for public procurers

How to procure circular construction skills?



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Offer internal training to your staff



Provide internal training for public procurers and relevant staff



- Providing training on the circular economy, circular construction and renovations, and circular procurement can help ensure that **procurers and other relevant staff** have the knowledge and skills required to embed circular criteria in tenders and to follow a circular construction project.
- The **training can be done in-house**, or provided by an **external consultant**.





Engage your contractors

Engage your contractors



- **Market dialogues, fairs, and other events offer an opportunity for public authorities to engage and communicate to potential bidders the circular objectives of upcoming construction projects.**
- **Make potential contractors aware of the municipality's strategic and organisational objectives and goals** and how potential contractors could support these.
- **Understand what challenges businesses face**, what standards they can realistically meet, and what skills they already possess.





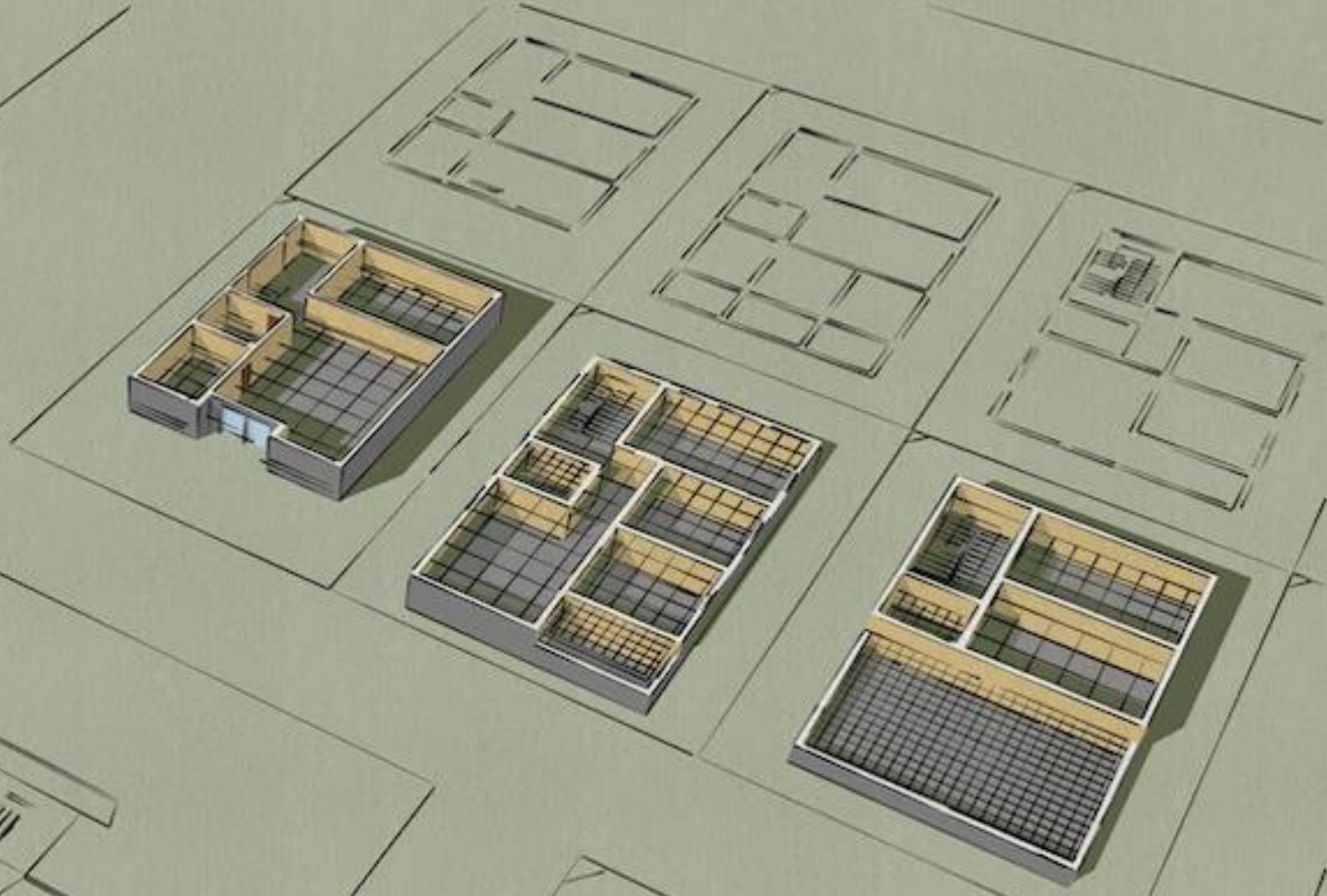
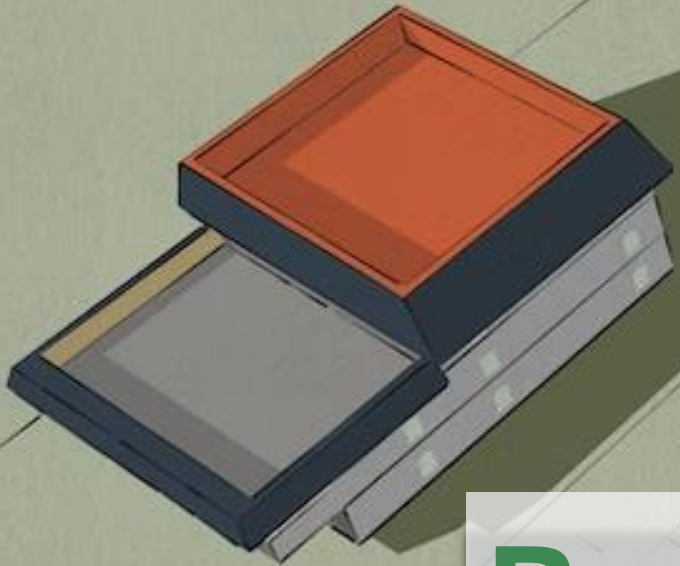
**Procure selective demolition
and deconstruction services**

Develop a selective demolition and deconstruction action plan



- For the buildings that cannot be renovated or retrofitted, ensure that these are **selectively demolished and deconstructed**.
- **Map out the buildings across the city** that have reached the end of their functional-life.
- Develop a **policy or action plan** to prioritise the selective demolition and deconstruction of buildings that cannot be renovated or refurbished.
- Procure **pre-demolition inventories and material audits** to identify building components and materials with the highest reuse or recycling potential
- Provide trainings on **how to conduct a pre-demolition audit**.





**Prevent construction waste
by design**

Prevent construction waste by design



A building with a circular design considers the end-of-life phase from the planning phase and limits resource consumption by using secondary or bio-geo-sourced materials.

Public procurers can procure buildings with:

- A modular design;
- Designed for multiple purposes;
- Designed for durability;
- Include green roofs and facades;
- Integrate reused or recycled materials.

Integrating requirements for circular building design and preventing the extraction of virgin materials is also a way to **boost demand, for materials but also for skills.**





**Maintain, retrofit and
refurbish**

Maintain, retrofit, refurbish



- Retrofitting and refurbishment works can help to reduce the energy consumption of buildings and upgrade them to new building standards.
- **Fast-track permits for renovation projects** that meet certain circular standards.
- It can also encourage construction **workers to upskill and be competent in the latest refurbishment and retrofitting standards.**



A photograph of two construction workers wearing hard hats. The worker on the right is pointing upwards with his right hand. The worker on the left is wearing glasses and a yellow hard hat. The background is a bright blue sky with white clouds. A semi-transparent white box with green text is overlaid on the bottom left of the image.

Include training clauses in tenders

Include training clauses in tenders



- Including training clauses in tenders can have a **direct impact on stimulating demand for circular construction skills**. When the winning contractor is awarded a contract, they **commit to training their staff during the project on a specific topic**.
- Contractors have to dedicate some time, budget, and means to train their employees (construction workers and site supervisors), possibly directly on-site.



A guide for public authorities

Stimulating demand for circular construction skills - a guide for public authorities

February 2023 - ICLEI Europe - Local Governments for sustainability



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101033740. The contents of this report reflect only the author's view and the Agency and the Commission are not responsible for any use that may be made of the information it contains.

AS A MASTER PLANNER

Embed in roadmaps, plans or strategies objectives and measures to encourage the upskilling and reskilling of the construction workers

AS BUILDING OWNERS AND PUBLIC PROCURER

Use public procurement to stimulate demand for circular construction skills at each step of a building's life

AS AN ECONOMIC DEVELOPER

Support training organisations and companies which are adopting more circular business models to develop their activities, influence market trends and promote job creation

AS A FINANCIAL PARTNER AND REGULATOR

Use financial grants, subsidies, and tax incentives as leverage to develop a new economic sector and to encourage workers to upskill

AS A NETWORK FACILITATOR

Encourage local stakeholders to change their practices by developing tools, such as digital platforms, training sessions, and storage platforms

AS AN URBAN PLANNER

Embed circularity requirements in urban planning regulations to have an impact in the long-term

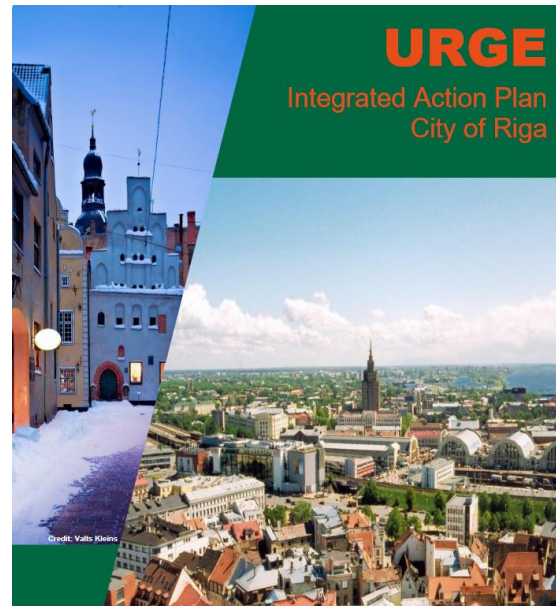


As a master planner

How?

Embed in roadmaps, plans or strategies objectives and measures to encourage the upskilling and reskilling of the construction workers.

Inspiring example



Riga has incorporated an introduction to a circular economy course in higher education and master's programmes in its circular economy action plan.

As an economic developer

How?

Support training organisations and companies which are adopting more circular business models to develop their activities, influence market trends and promote job creation.



Inspiring example

The municipality of Amsterdam has launched a tender to build a new hotspot, De Ceuvel hub, on sustainability and circularity, by allocating land to pioneer companies which focused on sustainability and circular urban development.



As a financial partner and regulator



How?

Use financial grants, subsidies, and tax incentives as leverage to develop a new economic sector and to encourage workers to upskill

Inspiring example



The program Skillnet Ireland is running by the business support agency of the Irish Government. Through its sector-specific Construction Professionals Network, it provides partial funding for construction companies that train and skill their workers in circular construction



As a network facilitator



How?

Encourage local stakeholders to change their practices by developing tools, such as digital platforms, training sessions, and storage platforms

Inspiring example



In line with its strategy for circularity and efficient-building renovation, the City of Brussels has launched in 2020 Build Circular.Brussels, an initiative that gives access to free training on circular construction to Brussels companies, particularly targeting SMEs and VSEs.



As an urban planner



How?

Embed circularity requirements in urban planning regulations to have an impact in the long-term

Inspiring example

The city of Brno is planning to build a "Smart District" called RE:Špitálka that will serve as a pilot district to test fulfilment of the city's environmental goals for 2050, based on the principles of redesign, rebuild, reuse, resource, resilience, responsibility and responsiveness.



Find out more in our resources



Training materials
for public procurers



Guidance for
policymakers



Fundamentals Training Packs for SMEs

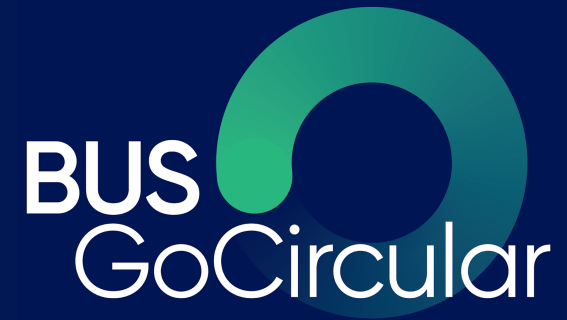


BUS GoCircular

Incentivizing SME's to upskill their
workforce



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Shaping a Circular Sustainable Future

Module 1

INTRODUCTION TO CIRCULAR ECONOMY IN CONSTRUCTION

Circular Economy in the Construction Industry Summary



Click here to discover the module! You will need internet connexion.

MODULE 1 - P1



**Duration
4 hours**



TP - [NAME OF TRAINING PACK] IN [COUNTRY]



M1-Introduction to Circular Economy in Construction

In this module, we will introduce you to the principles of circular economy in the construction industry: the Circular Key Elements to guide you through the opportunities and challenges of making the built environment sustainable in a circular way, learning from real-life national and European case studies.

Circularity has become an important issue in solving the scarcity of materials and non-biodegradable waste management. Circularity has a wide range of other valuable aspects so the applications can be very diverse. What can circularity mean for your work in the built environment? **This module guides you through what actual and new opportunities exist when applying circularity.**



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GoCircular



The 8 Key Principles of Circularity

So, what circular strategies are there and how can circular strategies be implemented? We have to find a common language. To achieve a circular economy, actions can be implemented at different levels of intervention as we saw before (e.g., national, regional, sector, company, product, process, or material). Here we are dividing the main strategies to achieve circularity in your projects into 8 so-called key principles. Then, this principles will be divided into direct actions you can detect and incorporate in your company.

The smallest circle shows the 3 core/key principles; the outer circle, the 5 enabling principles.

- **Core principles** deal directly with how physical materials and products can be included in circular system.
- **Facilitating principles** is about creating the conditions or removing obstacles to a circular transition. Some of the main obstacles to achieving the transition are that economic incentives largely rely on traditional, linear ways of creating value. A lack of systems that track which materials have been recycled; recover materials from existing products, and a general lack of awareness of and knowledge about the circular economy all hinder the transition.



Key principles in circular economy by [Circle Economy](#) You can see a lot of examples of this principles applied to all sector in this [Hub of CE](#)

Core elements

Some examples of the **core elements** will be:



PRIORITISE REGENERATIVE RESOURCES

Regenerative means renewable, reusable, recycled resources always trying to reduce in first place the demand of these resources. The resources are not only building materials & waste but energy and water that we need in the building operational stage. Renewable materials includes bio-based or recycled. In some cases, you will not be able to use them so look up for at least low impact resources!



STRETCH THE LIFETIME

An example of Stretch the lifetime by timely maintenance is, for example, regular maintenance of installations. This keeps rotating parts good longer, so that they are less likely to need to be replaced. And when they do need to be replaced, the cogs are still good enough to be reused.



USE WASTE AS A RESOURCE

When a building reaches the end of its useful life, the material is often considered waste. Building materials and used installations then end up in landfills, while they often still have value and can be reused. Therefore, waste is not waste but secondary materials to clean, treat and reuse or for recycling. On a secondary order, to use for energy production.

Facilitating elements

The **facilitating elements** are those that remove obstacles for core actors, facilitate the core principles to implement and accelerate uptake of circularity.



Design for the Future

Design for durability, disassembly, adaptable to future use and ease of repair to extend lifespan. Also the right materials.



Rethink the Business Model

Create greater value and align incentives that build on the interaction between products and services



Incorporate Digital Technology

Use digital platforms and technologies that provide insights to track and optimise resource use and strengthen connections between supply chain actors.



Team Up to Create Joint Value

Work together throughout the supply chain and communities to increase transparency and create joint value.

PRIORITISE REGENERATIVE MATERIAL

Bosco Verticale (Milan)

(for more info click in the tittle)

Using biological materials, such as wood, to build skyscrapers can support biodiversity and improve air quality in densely populated cities. In this case study, we look at an example in the city of Milan called Bosco Verticale.

The aim of the project was to create a vertical densification of nature and increase biodiversity in the urban environment. This was accomplished through the extensive implementation of green balconies, incorporating more than 700 trees and 13,000 plants on the building's facade. Local cooperation played an essential role in the success of this project.

In the circular economy, we distinguish between biological and technological cycles because biological materials are generally renewable and technological ones are generally not. This makes it more important to keep technological materials in the cycle. Therefore, we need to keep these two flows separate. Biological materials must be incorporated into products in such a way that they can safely re-enter the biosphere, while technological materials must be used in such a way that they remain in circulation at a high value - without entering the biosphere.

When applying biological materials, it is therefore important to pay attention to ensuring that the materials are well maintained, as well as properly stored.



Digital techniques

BIM to design and install a product

Digital transformation process of the Arumani plant production factory. Arumani previously manufactured and assembled the installations on site. Now, the design and process is carried out in the factory, thus reducing material wastage, waste and improving the process and quality control. It also tends to be safer to work in the factory. The phases of the process are divided into the design phase, the cutting phase, prefabrication and assembly of the skids or modules. Once on site, with the layout plan, they are placed in place and connected to each other. By having everything planned in the factory, they have calculated the exact resources and hours in each module, by task cards and so your deadlines and costs are guaranteed for the customer.

All the process starts with the Scanning which is the massive data collection to have real and precise information of the place. It allows accurate design and to obtain improvements on the manufacturing volume. The previous Modelling of the facilities allows them to assemble them digitally, obtaining the dimensions and shape of the finished equipment, as well as being able to verify with the client changes in the constructive design, at the same time as the installations are designed. Another benefit is that from the Modelling, we can get the list of materials and quantities needed to make the purchases. This is a competitive advantage over other companies. You can see this in the following video.

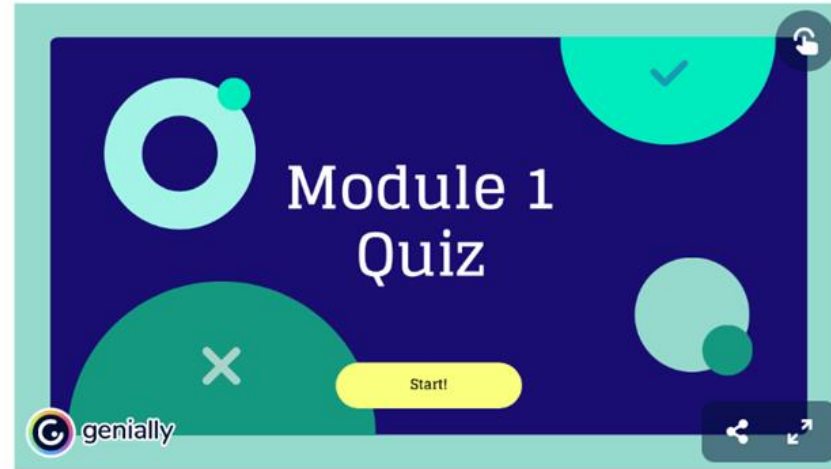


The audio of the following video is in Spanish. To add subtitles in other languages, you must click on the subtitles icon, then on the settings icon. Inside, click on subtitles > translate automatically and select your language.



THE [NAME OF TRAINING FACILITY] IN [COUNTRY]

FINAL QUIZ MODULE 1





Duration
2 hours

Module 1

WORKSHOP

Exercise 1 and 2

WORKSHOP MODULE 1

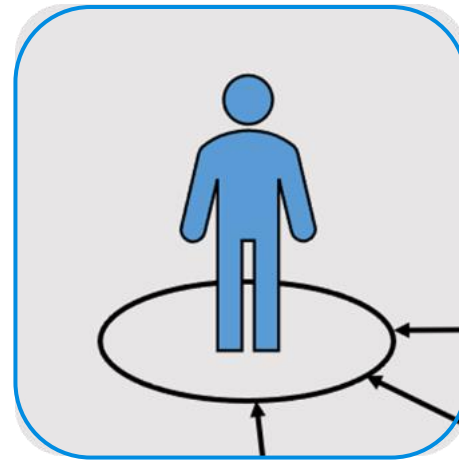


This workshop serves as a summary and evaluation method of what has been learnt in Module 1 - Introduction to the Circular Economy: Basic strategies to implement circularity in your company. It can be carried out in three modes:



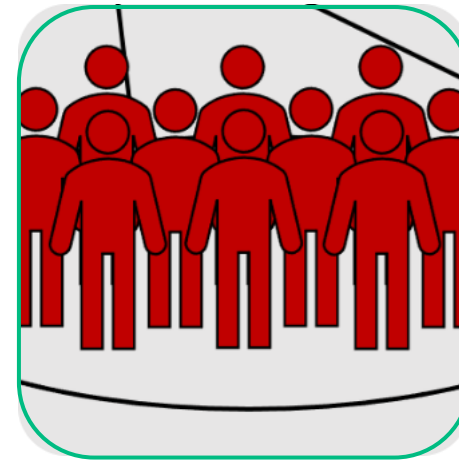
In groups

Divide in groups of 3 or 4, depending of the participating people and realise the workshop. Then, share your ideas with the others teams and debate with one's are the more complete and accurate for the same project.



Individual

Also can be implemented individually and then be shared each exercise with the manager and/or partners to compare ideas and learn from other's partners creativity.



All the team

Another idea is to conduct this workshop together, choosing a team leader to write down or draw all the ideas shared in common by the whole team, generating more discussion.



Exercise 1: Find out where the opportunities are for your organisation

Here is an overview of the different principles. They are not limiting, you can find or create more strategies based on these principles. Take a look around.

Then, are there any principles in which you see opportunities? How can the different key principles be applied in your project? Sketch out at least one of the five reflections below on a building, product or system develop in your company:

Roadmap

- Take a new (or existing) project in mind (has to be the same for all the people implementing the workshop or by groups)
 - Read the five reflexions to start the debate of how this project can be designed/build to be fit for the future?
 - Develop your ideas (don't be afraid to draw!) of one of the five reflexions
- TIME: 90 minutes



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Key principle	Strategy group	Description
	Regenerative materials	Use of bio-based, reusable, non-toxic and non-critical materials for products.
	Regenerative water	Replace fresh water with rain water or sea water and take measures for efficient water use.
	Regenerative energy	More efficient use of energy, preferably renewable and electric.
	The lifespan of products in use maximize	Upgrade, repair, and maintain products while they are still in use.
	The lifespan of products after use	Return of products, products and parts a second life after the end of their useful life.
	The lifespan of organic products maximize/ optimize	Ensuring that organic products are properly managed and stored.
	Value waste streams- closed loop	Reuse, repurposing and recycling of waste streams within the same industry.
	Valorize waste streams- open loop	Reuse, repurposing and recycle waste streams within other industries.
	Recovery energy from waste	Recovering energy from waste or generating fuels and energy from waste streams.
	Design from waste	Designing products to reduce waste (material, water, energy) during production and use.
	Cyclable design	Designing products to allow multiple uses and lifecycles of a product and its materials.
	Design for sustainability	Designing products that are built to last and to ensure longer use.
	Collaboration with the industry	Collaborate with industry peers to create shared value and identify synergies.
	Cooperation between customers and consumers	Involving and guiding customers and consumers to ensure circular use of products.
	Cooperation between governments	Collaborating with the government on circular policies and programs
	Internal cooperation	Collaborate internally to guide employees and share more knowledge between internal departments
	Cooperation in the community	Involving the local community where facilities or offices are established.
	Product business models	Delivering products to consumers through business models that require a guarantee maximum value
	Business models for services	Delivering services to customers through business models that ensure maximum value.
	Data and insights	Use technologies to collect and analyze data to understand resource use
	Digital platforms	Using online platforms to connect stakeholders and improve information sharing.
	Education and learning plans	Integration of the beginnings of circularity into the primary, secondary and tertiary curriculum and providing training in the workplace.
	Knowledge management	Establish definitions and create frameworks to support the understanding of circularity in different contexts and maintain coherent systems for sharing, processing and storing data.
	Research and development	Research and facilitate new technological developments to support the transition to a circular economy.
	Communication and awareness-raising	Awareness raising and information campaigns on circular economy strategies and impact in different contexts.

Think about the extraction of materials. What materials/construction solution are needed? Where do they come from? Can its origin be renewable and low-impact material? Can you include reused materials or recycled content?



1

2

3



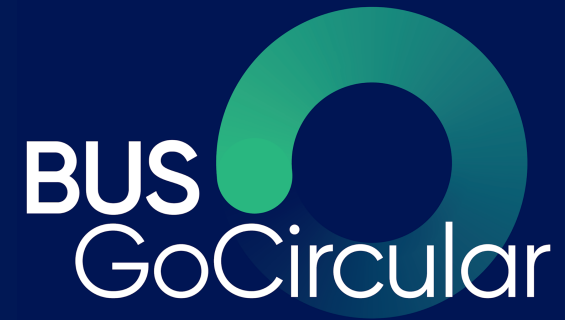
Exercise 2 about your organisation's circular targets



- ▶ How is circularity included in your organisation's strategy? For example, is it a general theme briefly mentioned or is it woven into the objectives? Look it up!
- ▶ What is your organization's overarching circular ambition?
- ▶ How do you feel about the objectives? Can you contribute to the objectives in your work? Are the objectives being acted upon enough?
- ▶ What should your organisation still focus on? Can you translate to specific actions?

TIME: 30 minutes





Shaping a Circular Sustainable Future

Module 2

Overview of EU Policy framework to the building sector

European Policy Framework in the context of design and construction industry and circularity



This module aims to provide a brief overview on the European policy framework most related to the built environment, energy efficiency and decarbonization. The overview provides general overview of the policies development in the last decades. Follow by a brief explanation of the European Green Deal, the European Climate Law, Fit for 55 package. The module covers the three main directives related to the building sector: Energy Performance of Buildings Directive (EPBD), the Energy Efficiency Directive (EED) and the Energy Renewable Directive (RED). It is highlighted the main updates proposed for the on-going revision of EPBD. Finally, the module closes with an overview on the New European Bauhaus initiative.



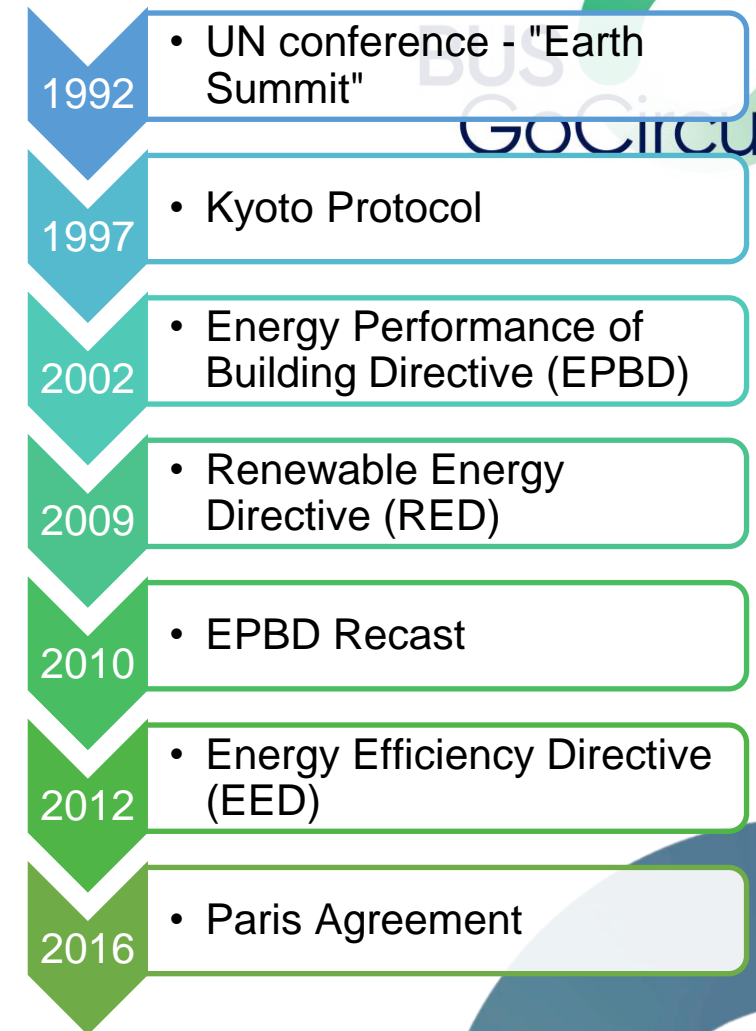
Green European Policy Framework in the design and construction sector

The international political discussion on the topic of the environment, development and climate have been evolving for some decades now. In 1992, the United Nation conference on environment and development hosted in Rio De Janeiro was the first step to develop a political agenda that considered the balance between the social, economic and environmental dimensions fundamental to maintain human life in the planet.

In 1997, the discussions have progress and the Kyoto protocol was agreed under the United Nations Framework on Climate Change. The protocol required the adoption of policies to limited and reduce the greenhouse emissions to agreed individual targets for industrialised countries.

In the framework of the building sector in Europe, European Commission have established a set of directives such as the Energy Performance of Building Directive (EPBD), Renewable Energy Directive (RED) and the Energy Efficiency Directive (EED). The directives aims to improve the European building stock by reducing the 36% contribution of the annual EU greenhouse gas (GHG) emission and the 40% of the annual EU energy consumption by the sector.

In 2016, another international political milestone was achieved in the Paris Agreement under the United Nations Climate Change Conference (COP21). The legally binding international treaty main goal is to refrain “the increase in the global average temperature to well below 2°C above pre-industrial levels” and pursue efforts “to limit the temperature increase to 1.5°C above pre-industrial levels.”



Green European Policy Framework in the design and construction sector

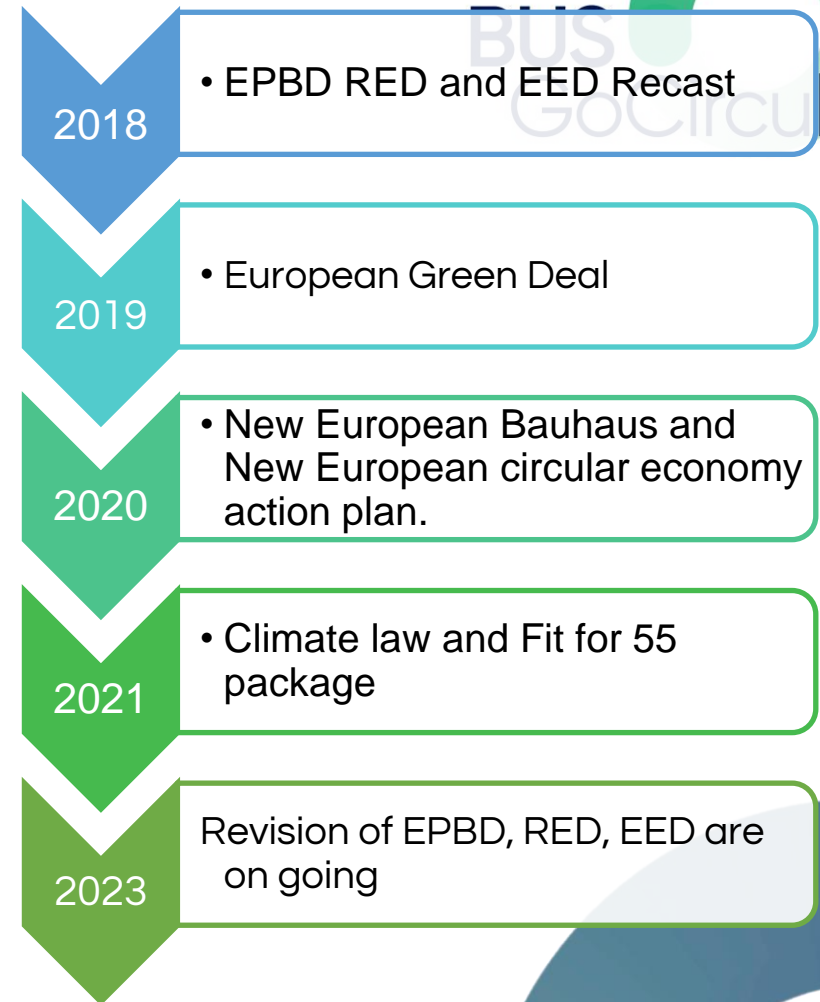
In 2018, the EPBD, RED, EED were revised. The directives moved from achieving nearly zero energy buildings and efficient use of renewable energy to decarbonization of the building stock.

In 2019, the European Green Deal was introduced by the European Commission aiming to make Europe the first climate neutral continent in the world. The ambition was translated into the European Climate law in 2021 and the reduction of EU emissions by at least 55% by 2030 became a legal obligation.

In 2020, the New European Bauhaus initiative called European citizens to imagine a built environment that is sustainable, inclusive and beautiful.

The Green Deal and the climate law brought a wave of revisions in directives and plans. In 2020, the Circular Economy Action Plan was revised to monitor the EU policy and measures effectiveness on circular economy goals.

In 2021, the Fit for 55 package is launched as a set of revision and updates proposed to the EU legislation. Currently, EPBD, RED and EED revision were presented by the European Commission and negotiation are on going for their approval.



European Green Deal

The European Green Deal presented in December 2019 aims to make Europe the first continent to achieve climate neutrality by 2050, meaning that all 27 EU members are committed to reduce emissions by at least 55% by 2030, compare to 1990 levels.

This initiative aim to drive Europe to a green transition in all sectors of the economy addressing not only the emission reduction but also creating jobs and growth, energy poverty, reducing external energy dependency and improving the citizens health and well being.

Considering the design and construction sector, the European Commission encompasses an increase of 40% of renewable sources in the EU energy grid, the potential creation of 160.000 additional green jobs in the construction sector, potential renovation of 35 million buildings by 2030. The proposal also requires that public buildings lead by example by having at least 3% of the total floor area of all public buildings annually renovated, 49% of renewable in buildings adopted by 2030 and a increase of 1,1 % each year in renewable energy for heating and cooling by 1.1% until 2030.



European Climate law

The European Climate law make the European Green Deal target of net zero greenhouse gas emissions by 2050 is legally binding. The law also aims to ensure that all EU policies are aligned with this target bring all sectors of the economy and society to participate.

The law establish that

- Reduction of greenhouse gas emissions by at least 55% net emission target for 2030 compare to 1990 levels.
- EU-wide climate neutrality target for 2050
- the establishment of a European Scientific Advisory Board on Climate Change
- the use of an emission budget for setting a 2040 target

The European climate law entered into force on the 29th July 2021.



Renewable Energy Directive - RED

The Renewable Energy directive is a legal framework to support the adoption of clean energy across all economic sectors in Europe.

The proposed revision of the RED as part of the “Fit for 55” package raise the target for renewable energy in the European energy mix from 32% to 42.5% by 2030 aiming to achieve 45% in a provisional agreement reached at the beginning of 2023.

In the framework of the building sector, the main proposals are the setting of a benchmark of 49% of renewables in buildings, the increase by 1.1% every year of the use of renewable energy in heating and cooling, raise by 2.1% every year the use of renewable energy in heating and cooling districts and encouraging circularity and energy efficiency by facilitating the use of waste heating, for example.



Share your experience!

Do you consider using those tools to help your organisation moving forward on this topic? What could be useful?



Join at
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<https://admin.sli.do/event/oR3WtSp4KzeNeNw4kehx2t/polls>

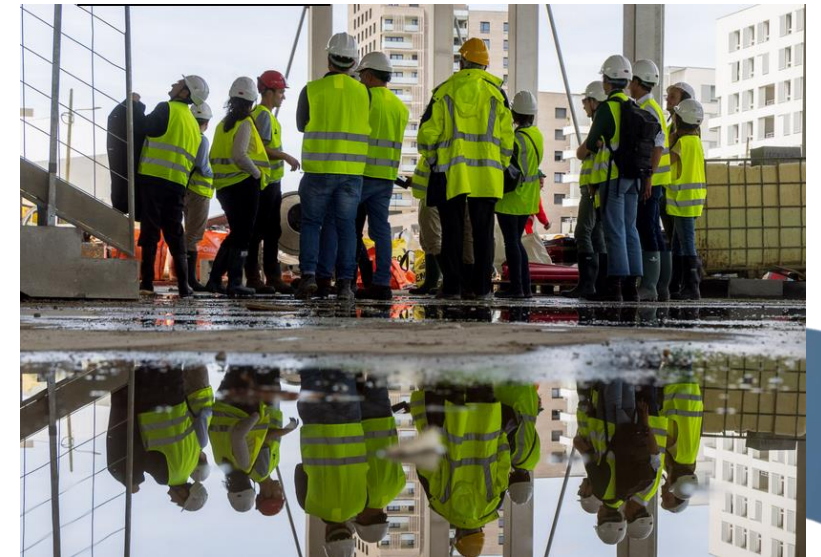


Q&A SESSION 1

BUILD UP

The European portal for energy efficiency and renewable energy in buildings

“How could a local authority stimulate circular skills in the construction sector?”
An example from Toulouse Metropolis



WEBINAR

How to support the skills development of the circular construction sector?

The case of the **LIFE WASTE2BUILD** project

October 17th

BUS GO CIRCULAR



THE LIFE WASTE2BUILD PROJECT
HAS BEEN FUNDED
BY THE LIFE PROGRAMME
OF THE EUROPEAN UNION

Our speakers



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Employment project
manager

Toulouse Metropolis



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Coordinator of the Life
Waste2Build project

Toulouse Metropolis



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materials reuse project
manager

Envirobat Occitanie



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SCHEDULE

INTRODUCTION

Circular economy in the construction sector, why is it a challenge for Toulouse Metropole ?

PART 1

The LIFE WASTE2BUILD project and the evolution of skills in the construction sector

PART 2

Feedback from the LIFE WASTE2BUILD project partners



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INTRODUCTION

Circular economy in the construction sector, why is it **a challenge** for Toulouse Metropole ?



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* Toulouse is the regional capital of Occitanie region

Toulouse metropolis, a dynamic economic hub



1.3 MILLION
INHABITANTS



4th FRENCH
URBAN AREA



POPULATION
GROWTH
+65,000 HAB (5 years)/
+33% in 20 years



ECONOMIC
GROWTH
+2.9%/year GDP
per capita



2nd METROPOLE
FOR JOB CREATION
+10,800 jobs by 2021



R&D LEADER
2nd city for patent
applications (3,762
vs. 1,892 for the 3rd)





Toulouse Métropole

French local authority - 37 municipalities with a common planning and development project.

Areas of expertise :

water and waste management,

- environment and sustainable development,
- development of gardens and green areas,
- mobility,
- urban planning,
- economic development
- international outreach.

Sustainable development : Environmental and ecological transition is expressed in local strategic planning documents (Air Energy Territorial Climate Plan and **Strategy for Circular Economy**) and at the European level (Covenant of Mayors).



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THE EUROPEAN CALL FOR PROJECT LIFE



In mid-May 2021, Toulouse Métropole won the European call for projects of the Life program by proposing its Waste2Build project. The aim is to build a sustainable economy to meet the social, economic and environmental challenges of today and tomorrow.

Project duration: 4,5 years (2021 – 2026)

Total budget: €2,757,842

Budget of Toulouse Métropole: €1,150,209

(including European co-financing of 55% of expenses)



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ACTORS OF THE PROJECT



Toulouse Métropole – Coordinator: Management, political strategy of the project

Synthetic, association: Ensuring territorial synergy to extend the circular economy approach in construction and public works

French Institute of Circular Economy: Ensures dissemination and communication at European level

French Federation of Building and Public Works of Haute-Garonne: Ensures the link with companies and employees and the trades of tomorrow in the construction industry

Envirobat Occitanie, association: Articulation between the different physical platforms of the territory

Toulouse Business School: Creation of the business model of the platform

Scientific and Technical Center for Building: Inventory of protocols by type of materials and sites

toulouse
métropole



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CHALLENGES



85% of waste recycled in the Toulouse metropolitan area



80% of public contracts in the metropolis that include a circular economy criteria



60% of companies responding to public contracts are aware of these issues



360 FTE/year created by 2026

OPTIMIZING resources and VALUING construction waste on a local and regional scale

Reduce by 20% the impact of the construction industry on resource consumption and waste production

Structuring the sector of circular construction

Implementing more circular purchasing policies

Supporting the rise in competence of the circular construction sector

58 EXEMPLARY SITES to develop local loops between resources and needs

Quantified objectives :

- 85 % material valorization in dismantling buildings
- 5% of reused materials in construction

Some examples:



REHABILITATION GROUPE
SCOLAIRE BENEZET



NOUVEAU CAMPUS



DÉCONSTRUCTION GLUCK



REFECTION LYCEE BELLEVUE



DÉCONSTRUCTION N°26
MENTON



DÉCONSTRUCTION
GYMNASÉ - ZAC EMPALOT



DECHETERIE HALL 9 -RAMIER



REHABILITATION LOGEMENT
RUE DENFERT ROCHEREAU

Today : **46 exemplary projects** selected

Some figures:

- ✓ 230 million € of works concerned
- ✓ 24 different contracting authorities
- ✓ 13 private operations 33 public operations
- ✓ Projects from €50K to €70M
- ✓ 11 construction projects
- ✓ 17 demolitions
- ✓ 10 renovations
- ✓ 4 development operations
- ✓ 2 demolition and construction
- ✓ Already **2 projects completed**
(balance sheets available on our website)



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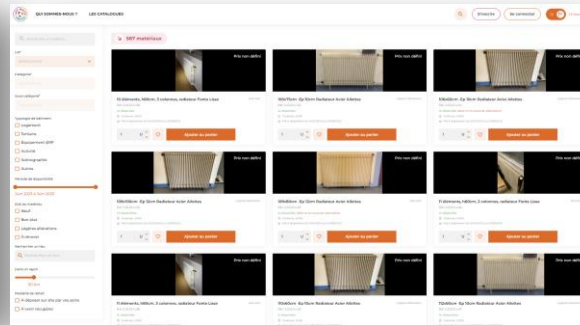
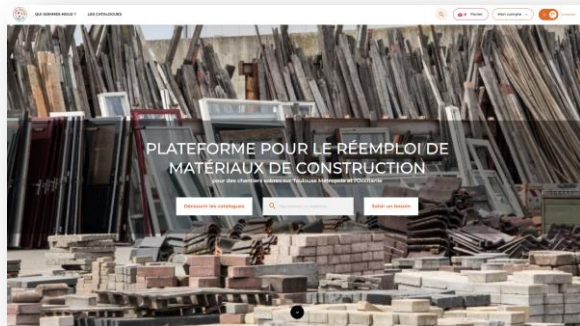
TOOLS TO DEVELOP CIRCULAR ECONOMY



Connects professionals for reuse projects in Toulouse and the surrounding area

- By providing resources
- By indicating needs

To encourage the use of second-life materials in construction, renovation and landscaping to build in a circular economy approach



[plateforme-
lifewaste2build.com](https://plateforme-lifewaste2build.com)



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PART 1

The **Life Waste2Build** project
and the evolution of skills in
the construction sector



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PRESENTATION OF THE EMPLOYMENT/TRAINING PART

Presentation of the Employment Working group

1

Measure the employment impact



2

Offer training programmes to develop the sector



3

Raise awareness of this sector and make it known to the public



4

Ensure an inclusive approach in the development of this sector



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PRESENTATION OF THE EMPLOYMENT/TRAINING PART

1 Measure the employment impact

By evaluating the results of the Waste2Build project's actions

Conducted from the beginning of 2024

By measuring the progress of the sector in our territory



91 companies



4 770 employees

38 employees on average



32 million euros in median turnover

43 % are less than 6 years old

75 % are localized in Toulouse

Most of them in B2B and International



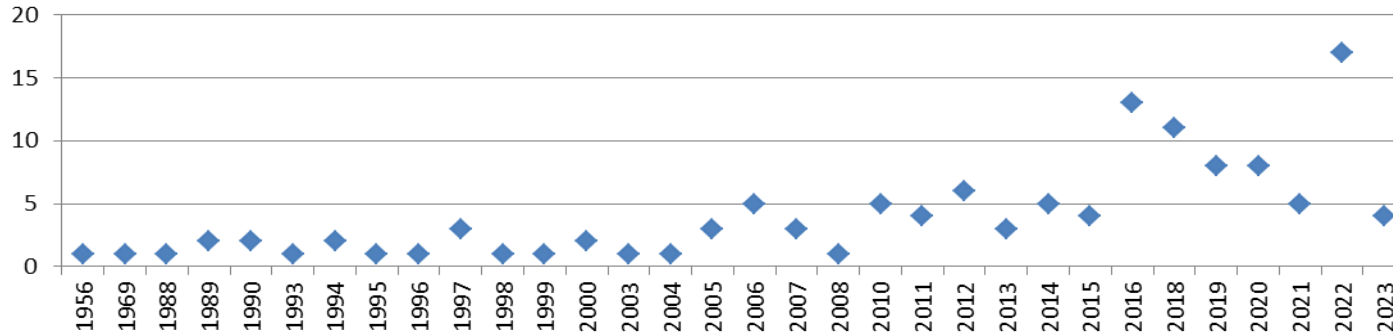
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PRESENTATION OF THE EMPLOYMENT/TRAINING PART

1

Measure the employment impact

Number of companies created by year



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PRESENTATION OF THE EMPLOYMENT/TRAINING PART

2

Offer training programmes to develop the sector

By creating or promoting new training courses in the territory

- Training by Envirobat
- Training by Urban Vitry High school, accompanied by synethic

By implementing the market of training PEMD diagnosticians (Products, Equipment, Materials and Waste)

- Linking the training organization with the funding organizations & Pôle Emploi, the state organization for job seekers support.
- 10 people trained in PEMD diagnosis training
- 4 job seekers

PRESENTATION OF THE EMPLOYMENT/TRAINING PART

3 Raise awareness of this sector and make it known to the public

By integrating the project into various employment actions



09/02/2023

Professional career discovery day, based on escape game

14/12/2023

Forum of ecological transition professions



PRESENTATION OF THE EMPLOYMENT/TRAINING PART

4

Ensure an inclusive approach in the development of this sector

By building and following pathways for the integration of job seekers

By raising awareness among companies of an inclusive approach

10 careers will be followed of those who have integrated the various actions offered by the project



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PART 2

Feedback from the **Life**
Waste2Build project partners



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TRAININGS



4 modules

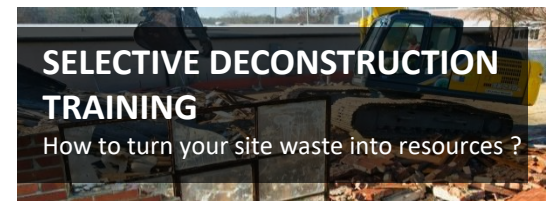
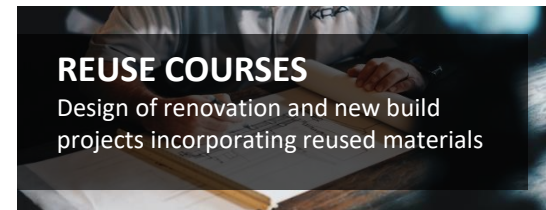


7 sessions



64 attendees

Organize the raising of
competence of professionals
and future professionals of the
building sector



OTHER TRAININGS



Creation of a **FCIL course** in the **management and development of resources from building deconstruction**

Features :

- **Duration:** 1 year
- **Final level of studies:** Bac + 1
- **Type of diploma:** local initiative training
- **Organisation:** full-time



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HACKATHON



Define a 100% 2nd hand materials tiny house

1 semaine interdisciplinaire avec les étudiants en urbanisme, design, architecture, ingénierie !
La mission : Concevoir un module léger multi-usage à partir de matériaux de réemploi.

Venez découvrir les travaux des étudiants le jeudi 10 novembre à 15h dans les locaux de l'ISDAT !

Hackathon LES AGILES #2
DU 7 AU 10 novembre à l'ISDAT
5 Quai de la Daurade, 31000 Toulouse

Life Waste2Build : et si on ré-utilisait les déchets des bâtiments pour développer l'économie circulaire sur le territoire ?



4 schools and universities
UT2J, ENSA, INSA, ISDAT

55 students
1 week



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A SPECIFIC COMMISSION



FFB 31 circular economy commission



20 construction contractors



It meets once a month



Objectives :

- To involve professionals
- To support them in their responses to local calls for tender



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MODELING TOOLS

Public and private procurement

- Insurers
- Control offices
- Architects
- Construction and deconstruction companies



Raise awareness of workers on construction sites



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AN ESCAPE GAME



Immersive training module
on the circular economy in
construction sites



- Recycling
- Short circuits
- Use of recycled
- Materials
- Zero waste sites
- Choice of materials and implementation methods
- In-situ reuse

1 hour of play

Team of 6 peoples

+ Debriefing

+ Educational booklet

Awareness of :

- Workers on construction sites
- Students
- Job seekers



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Thank you for your attention !



More on the Life Waste2Build project:

lifewaste2build@toulouse-metropole.fr



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Share your thoughts!



How could your organisation enhance skills in the circular construction sector?

Join at
slido.com
#1381 330



<https://admin.sli.do/event/oR3WtSp4KzeNeNw4kehx2t/polls>



Q&A SESSION 2

BUILD UP

The European portal for energy efficiency and renewable energy in buildings

Thanks!

For more information about the BUS Go-Circular project, [visit our website](#)

Share your thoughts about this training through [our contact form](#)

And check out our other [training programmes](#)



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Colophon

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