

The logo features the text 'BUS' in a bold, white, sans-serif font on the top line, and 'GoCircular' in a white, sans-serif font on the bottom line. A large, teal-colored circular graphic is positioned behind the text, partially overlapping the 'O' in 'GoCircular' and extending upwards and to the left. The background is a dark blue gradient with abstract teal circular shapes.

- How did our efforts advance circular construction skills certifications and practices?
- Learn how to apply our outcomes and fuel meaningful circular transformations in your field

Introduction

Welcome to the final report of the BUS-GoCircular project. As you explore the following pages, you will embark on a journey through the world of circular construction skills and practices.

This report is not just about showcasing our achievements; it is about sparking inspiration and driving change in the construction industry. Whether you are an **architect** looking for ways to enhance sustainability in your designs, an **SME** eager to cut costs through circular strategies, a **training centre** seeking the latest educational resources, or a **public authority** aiming to promote circular construction practices in your community, this report has something for you.

Let us join forces to inspire action and contribute to a greener building environment, shaping a sustainable future, one building at a time.

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The story of BUS-GoCircular

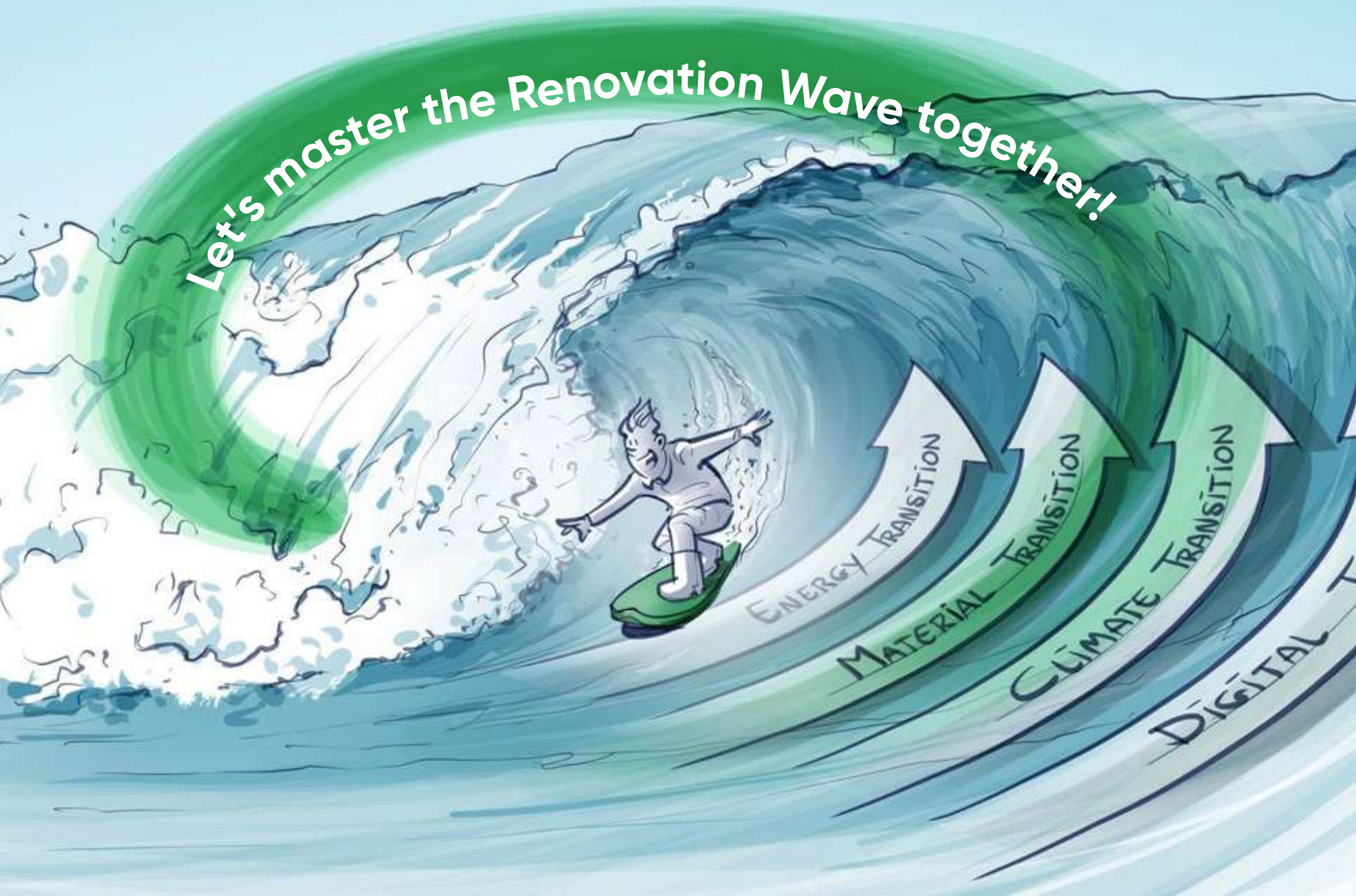
The BUS-GoCircular project, part of the BUILD UP Skills initiative, aims to enhance the construction sector's capacity to address challenges like the Renovation Wave, promoting sustainability in buildings.

Recognizing the importance of a green energy workforce, our goal was to empower workers across the value chain with the skills needed for real change while also fostering demand for these skilled individuals in the green energy sector.

To achieve this, we analyzed the skills needed for the Renovation Wave, developed a Qualification Framework for circular construction, created training programs, and crafted an action plan for public authorities to boost demand for skilled workers.



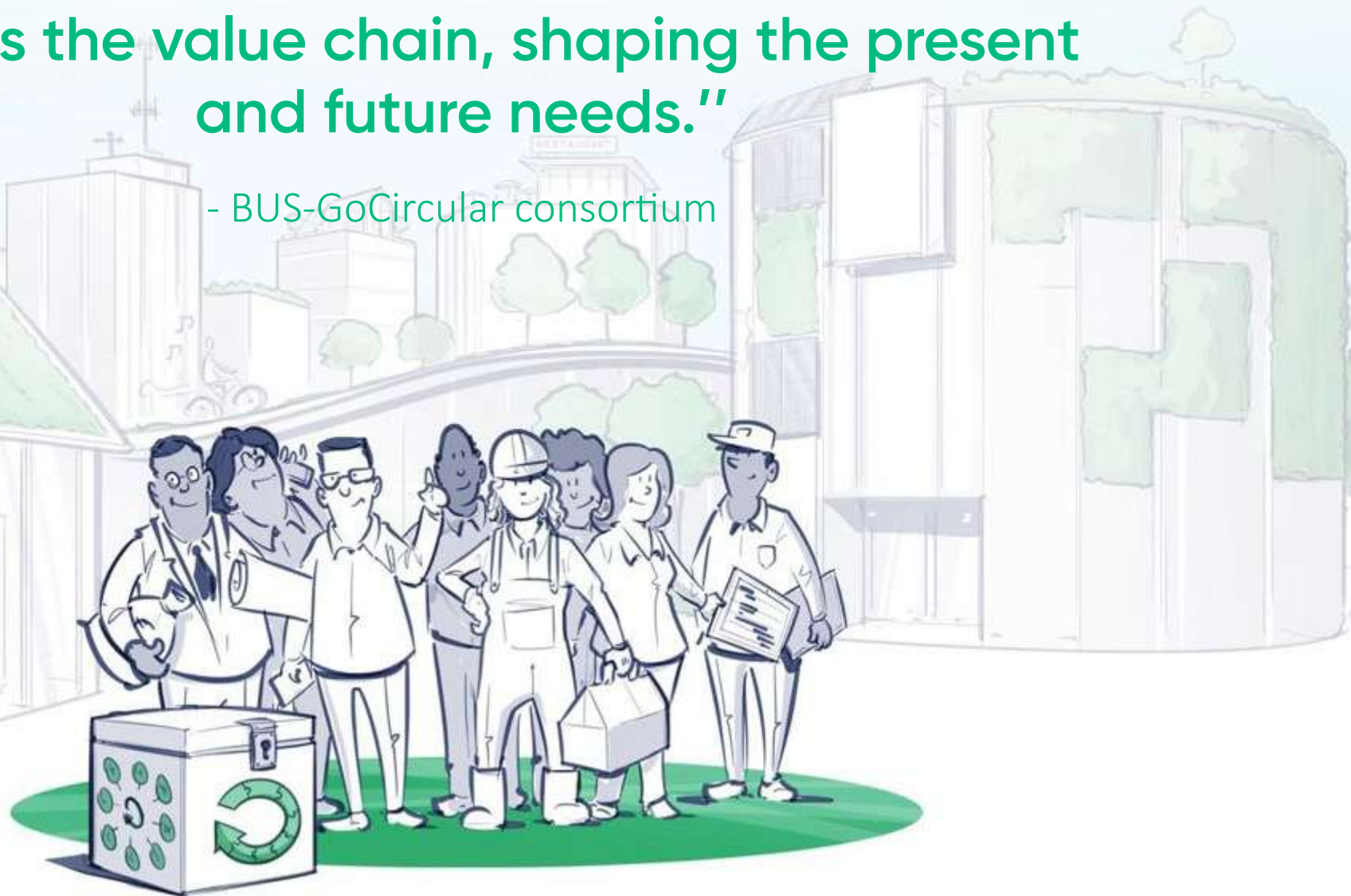
Let's master the Renovation Wave together!



Results

“Our results resonate with stakeholders across the value chain, shaping the present and future needs.”

- BUS-GoCircular consortium



Overview results

Below is an overview of the BUS-GoCircular results. The next page contains a summary for each result, followed by how they can be applied by SMEs, architects, training centres and public authorities.

Training resources

- [Train the Trainers' programme guide](#)
 - [Mentoring programme guide](#)
 - [Free training material for trainers:](#)
- [National training packs](#)
- [EU training pack](#)
- [Circularity Games by Circle Economy](#)
- [Ozone game in BUS app](#)



Qualification Framework

- [Framework for circular interventions](#)
- [Skill need-analysis](#)
- [Circular construction skills qualification framework](#)

Resources for the public sector

- [Guidance](#)
- [Training materials](#)

Results

Qualification Framework

With our different qualification framework resources we enable you to identify skilled professionals, facilitate upskilling training, and integrate circularity principles into building renovations. Read below what every resource entails.

■ **Framework for circular interventions:** Discover the key skills required for implementing circular building strategies across the construction value chain, empowering you to excel in sustainable practices and meet industry demands.

■ **Skill need-analysis:** Identify critical skills gaps in construction to tailor your upskilling efforts effectively and stay competitive in the industry.

■ **Circular construction skills qualification framework:** Learn to translate the principles of the Circular Economy into practical construction skills, enhancing your expertise and opening up new opportunities for professional growth

and recognition.

Below you can find reports that stem for this research.

■ **Application (of framework) to multifunctional green roofs, façades, and interior elements:** Discover how to apply circular construction skills to the development of multifunctional green infrastructure.

■ **Validation (of framework) by market stakeholders:** Gain market insights on the relevance of circular construction skills, ensuring your training aligns with industry demands and enhances your professional reputation.

Training materials

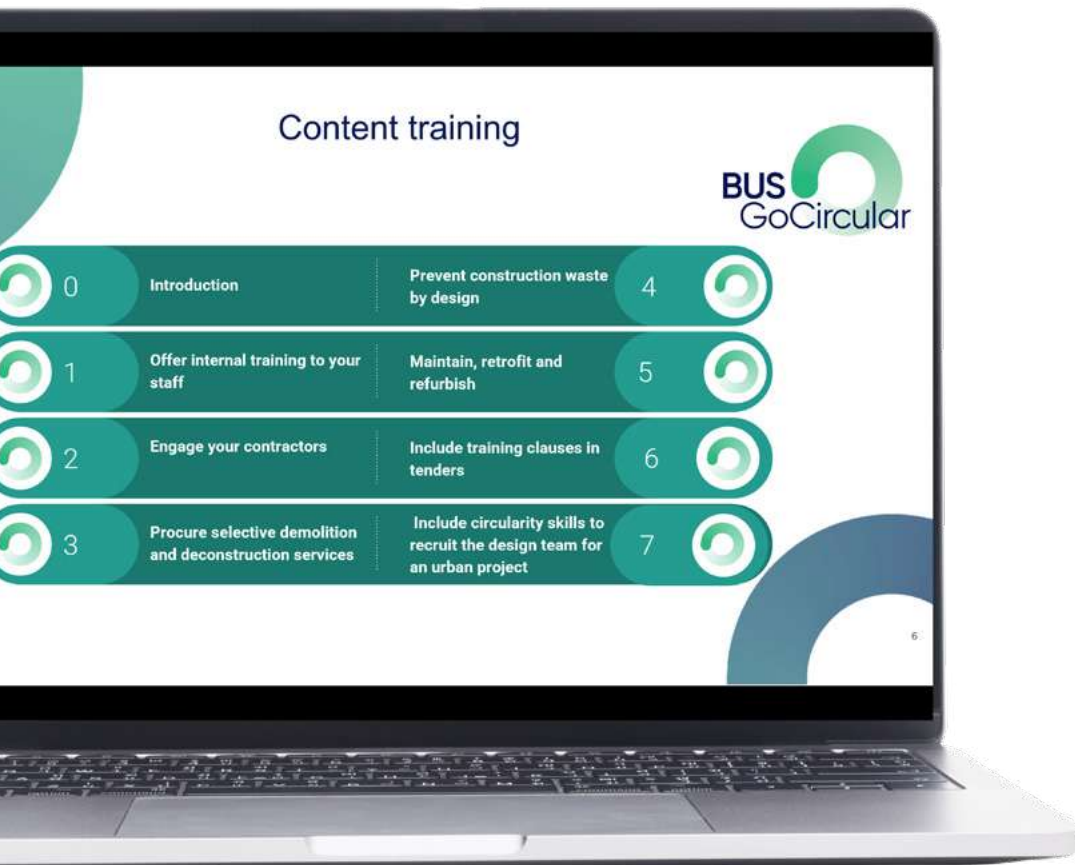
- **Train the Trainers' programme guide:** Gain expertise as a trainer in circular procurement and construction, accessing comprehensive training materials and methodologies to upskill professionals across the industry.
- **Mentoring programme guide:** Gain access to guidance on designing effective mentoring programs to foster skill development and enhance the construction sector's reputation, attracting talent to circular skills professions
- **Free training material for trainers:** Use and edit our training modules to upskill professionals in circular construction.
- **National training packs:** Access cost-effective and engaging training for SMEs in the construction sector to address critical gaps in knowledge and skills required for circular construction practices. Adapted to national contexts and languages specific to the Netherlands, Bulgaria, Czechia, Spain, Hungary, and Croatia.
- **EU training pack:** Unlock the key to navigating major European policies shaping the built environment, energy

efficiency, and decarbonization, empowering you to make informed decisions and seize opportunities for sustainable growth.

- **Ozone game in BUS app:** Discover essential circular skills and insights at your own pace through innovative e-learning modules on the Ozone platform, accessible via the BUILD UP Skills advisor app. Link to download BUILD UP Skills advisor app (available for [Android](#) and [iOS](#)).



■ **Circularity Games by Circle Economy:** Empower your circularity journey with a dynamic online training program, developed to introduce the concept, potential, and importance of a circular economy, while addressing challenges and opportunities for sustainable practices. Contact sreeja@circle-economy.com for developing a follow-up training on the Circularity Games platform.



Resources for the public sector

■ **Guidance:** Access a comprehensive guide to implement strategies for promoting circular construction skills and fostering sustainable practices in public procurement.

■ **Traning materials:** Discover the range of policy levers public authorities have at their disposal to stimulate demand for relevant skills.



Are you finding it difficult to navigate through all the outcomes we have shared? Do not worry, we conducted webinars to guide each expert group through the material. Choose your expertise to find out!

■ [Training centres](#)

■ [Public authorities](#)

■ [SMEs](#)

■ [Architects](#)

Apply the results

To make tangible change, we need to join forces to reskill and upskill the building sector workforce with circular skills. Curious about what this means for your field? Choose your expertise to find out!

Tools for training centres

As new insights into circular construction emerge annually, training centres encounter the ongoing challenge of aligning their curriculum with evolving industry trends. Explore the practical tools you can use to enhance your instructional material and empower learners for a sustainable future.

Training materials

- **Free training materials:** Enhance your training programs by using and customizing our modules to upskill professionals in circular construction.
- **National training packs:** Access tailored, cost-effective training to address critical knowledge and skill gaps specific to circular construction practices in your country.
- **EU training packs:** Navigate European policies shaping the built environment and decarbonization to empower informed decisions and foster sustainable growth in your training programs.
- **2B Collective games:** Foster interactive skill development for construction teams through collaborative circularity

experiences, enhancing engagement and learning outcomes in your training center. Contact j.cromwijk@isso.nl to play the game with a group.





■ **Train the Trainers' programme guide:**

Equip your trainers with expertise in circular procurement and construction methodologies to empower effective upskilling of professionals in your training center.

■ **Circularity games:** Introduce the concept and importance of a circular economy while addressing sustainable practices through a dynamic online game, enhancing engagement in your training center. Contact sreeja@circle-economy.com for developing a follow-up training on the Circularity Games platform.

■ **Mentoring programme guide:** Access guidance on designing effective mentoring programs to attract talent to circular skills professions and enhance skill development in your training center.

■ **BUILD UP Skills advisor app:** Access essential circular skills and insights at your own pace through innovative e-learning modules, enriching your training offerings with interactive learning experiences. (available for [Android](#) and [iOS](#)).

Qualification frameworks

Discover how our qualification frameworks can revolutionize your training programs, providing essential tools to identify skilled professionals and integrate circularity principles into building renovations. Developed through validated methodologies, they offer practical insights into required skills within the construction sector and ensure alignment with market needs. Check all our resources on page 8.

■ **Framework for circular interventions:** Mapping of skills needed to implement circular building strategies.

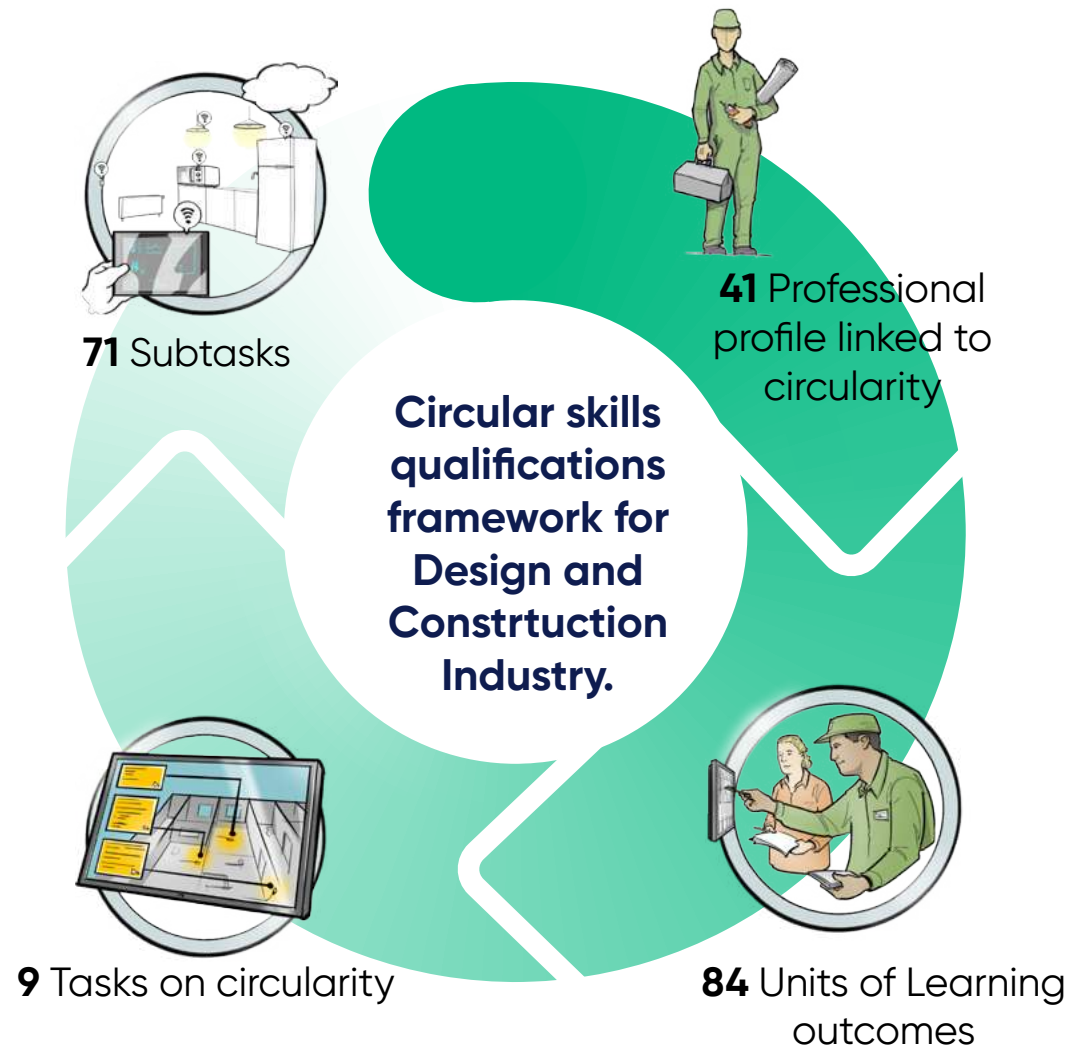
■ **Skill need-analysis:** Identification of skills gaps within the construction industry.

■ **Circular construction skills qualification framework:**

Practical interpretation of the Circular Economy's key elements applicable to the construction sector.

[See here](#) application to multifunctional green roofs, façades, and interior elements

[See here](#) validation by market stakeholders



Want to know more? Watch our [webinar](#) where BGC partners, actively involved in training centers, explain how to effectively utilize these resources.

Tools for SMEs

As entrepreneurs and small business owners in construction or architecture navigate the evolving landscape, they encounter the ongoing challenge of integrating circular economy principles into their operations. Discover how embracing circularity can optimize costs and efficiency in your company.

Learning resources

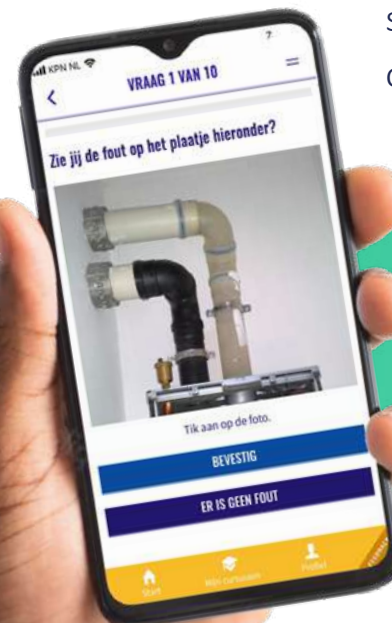
Gain insight into how our open-access training materials can assist you in navigating the integration of circular economy principles into your operations. Discover the array of practical tools available to enhance skills and foster the adoption of circular construction practices tailored to the specific needs of SMEs.

■ **National training packs:** Access tailored, cost-effective training addressing critical gaps in circular construction knowledge and skills specific to SMEs in your country.

■ **Free training materials:** Utilize and customize our training modules to enhance circular construction skills among professionals in your SME

■ **EU training pack:** Gain insights into major European policies, empowering your SME to make informed decisions and seize sustainable growth opportunities in the construction sector.

■ **BUILD UP Skills advisor app:** Explore essential circular skills and insights at your own pace through innovative e-learning modules, enhancing circular construction knowledge among SMEs (available for [Android](#) and [iOS](#)).



■ **Circularity Games:** Engage in a dynamic online training program introducing the importance of a circular economy and its application in SMEs, fostering sustainable practices. Contact sreeja@circle-economy.com for developing a follow-up training on the Circularity Games platform.

■ **2B Collective games:** Experience interactive skill development for construction teams, fostering collaborative circularity and enhancing SMEs' competitiveness. Contact j.cromwijk@isso.nl to play the game with a group.

■ **Mentoring programme guide:** Access guidance on designing effective mentoring programs to attract talent to circular skills professions and enhance skill development in your SME.

Qualification framework

Explore how our qualification framework can empower your SME in the construction or architecture sector to embrace circular economy principles. By leveraging this framework, you can identify the necessary skills to implement circularity effectively, ensuring competitiveness and sustainability in today's evolving landscape. Check all our resources in page 8 or [click here](#).



Want to know more? Watch our [webinar](#) where BGC partners, actively involved with SMEs, explain how to effectively utilize these resources.

Tools for architects

As architects navigate the dynamic landscape of sustainable design, they face the continuous challenge of integrating evolving insights into their practice. Explore how you can enhance your skills to drive the transition towards a low-carbon economy and circularly built environment.

Training materials

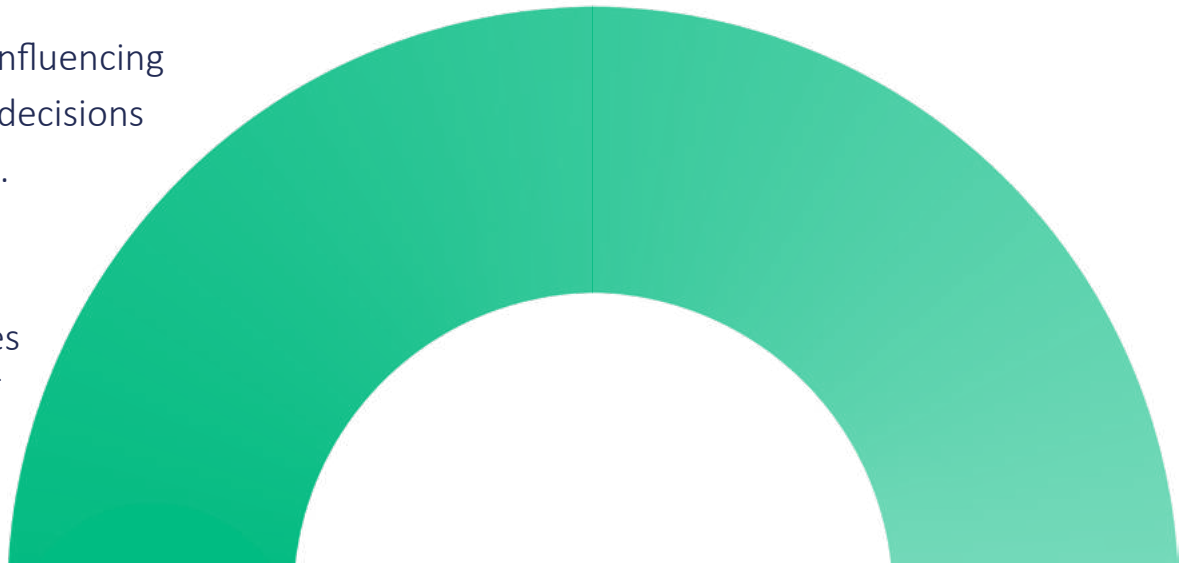
Gain insight into how our open-access resources can empower you to navigate the complexities of sustainable design by integrating evolving insights into your practice. Discover practical tools that enhance skills, enabling you to drive the transition towards a low-carbon economy and circularly built environment, aligning your work with contemporary sustainability goals.

■ **EU training pack:** Navigate European policies influencing sustainable architecture, empowering informed decisions and facilitating sustainable growth opportunities.

■ **National training packs:** Access specialized training addressing circular construction practices tailored to the unique contexts and languages of various countries.

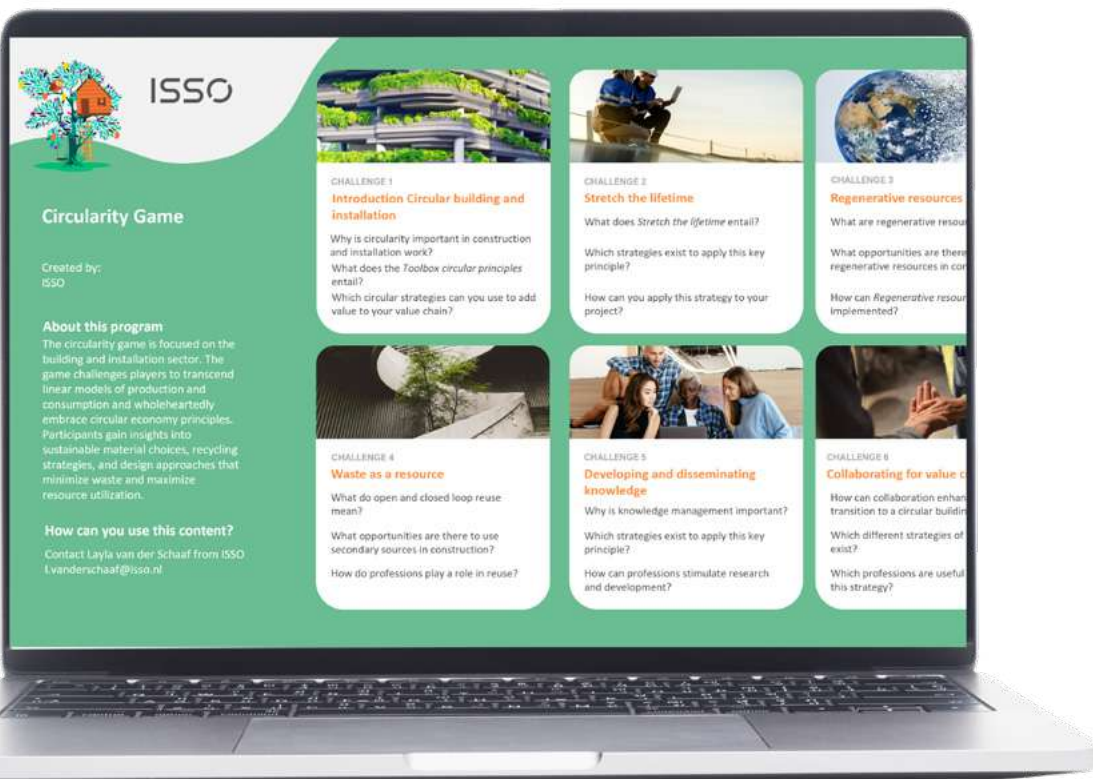
■ **Free training materials:** Enhance your expertise in circular construction through customizable training modules.

■ **Circularity games:** Engage in dynamic online training introducing circular economy concepts, essential for architects seeking sustainable design solutions. Contact sreeja@circle-economy.com for developing a follow-up training on the Circularity Games platform.



■ **2B Collective games** Experience interactive skill development in circular construction, fostering collaboration and enhancing architects' capabilities in sustainable design. Contact j.cromwijk@isso.nl to play the game with a group.

■ **BUILD UP Skills advisor app:** Explore essential circular skills and insights for architects at your own pace through innovative e-learning modules, enriching your understanding of sustainable construction practices (available for [Android](#) and [iOS](#)).



■ **Train the Trainers' programme guide:** Develop expertise in circular procurement and construction methodologies, vital for architects training professionals in sustainable building practices.

■ **Mentoring programme guide:** Access guidance on designing effective mentoring programs to attract talent and enhance skill development in circular design, strengthening the reputation of architects in sustainable construction.

Qualification framework

Explore how our qualification framework can elevate your practice in sustainable design. Gain structured guidance to seamlessly integrate evolving insights into your work, and empower your designs to align with the latest principles of sustainability, ensuring they meet the demands of the modern world while enhancing your professional skills for the future. Check all our resources in page 8 or [click here](#).



Want to know more? Watch our [webinar](#) where BGC partners, actively involved with architects, explain how to effectively utilize these resources.

Tools for public authorities

As policymakers, procurement professionals, and public sector actors navigate the complex terrain of sustainable construction, they face the ongoing challenge of leveraging public procurement to promote circular practices. Explore how to maximize the impact of policy levers and stimulate demand for circular construction skills in your jurisdiction.

Resources for the public sector

Discover how our resources can empower you to drive demand for essential skills in transitioning to a circular built environment.

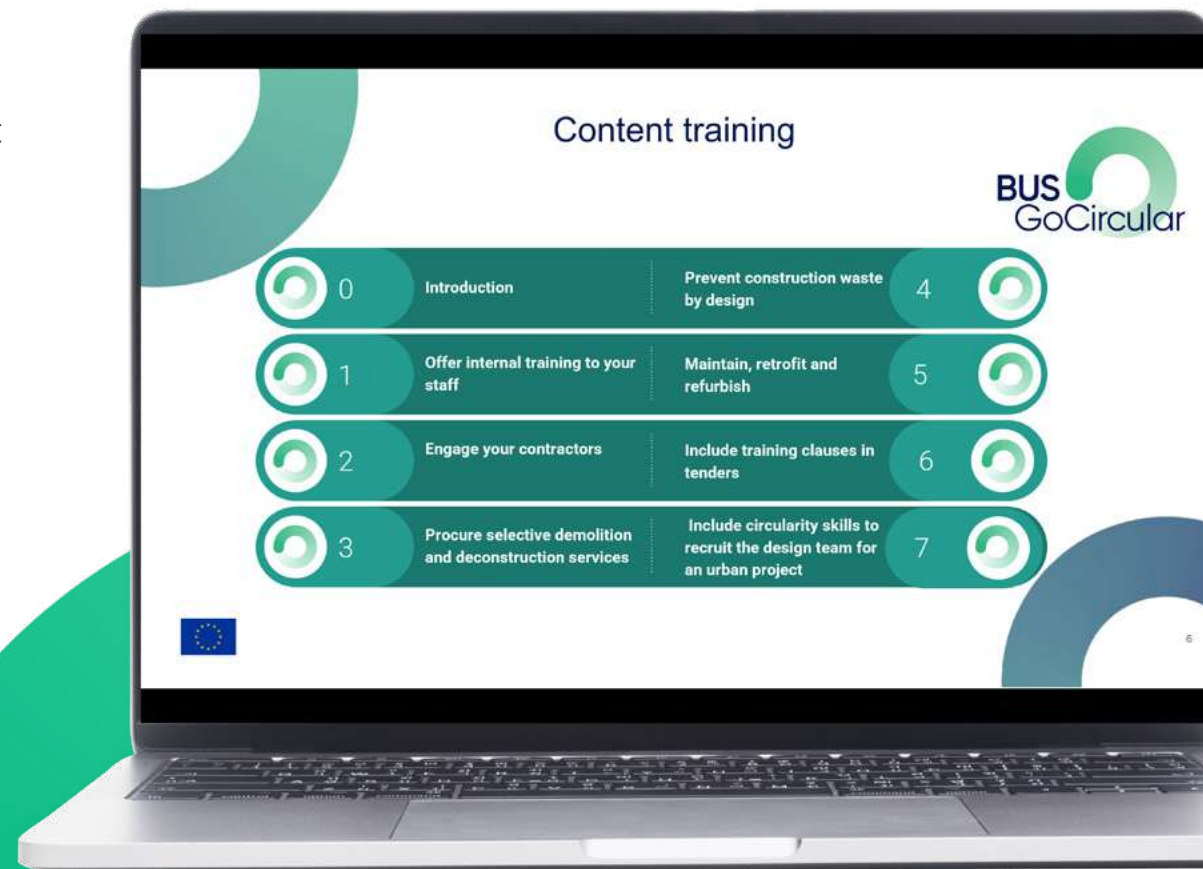
■ **EU training pack:** Overview of major European policies related to the built environment, energy efficiency, and decarbonization.

■ **Guidance:** Access a comprehensive guide to implement strategies for promoting circular construction skills and fostering sustainable practices in public procurement.

■ **Procure circular construction skills training:**

Gain access to specialized training to equip public procurers with the necessary skills to effectively procure circular construction practices, supporting

sustainable development initiatives.



Training materials

Gain insight into how our open-access resources can empower you to navigate sustainable construction challenges and leverage public procurement to promote circular practices, fostering a transition to a circular economy. Discover practical tools to maximize policy impact and stimulate demand for circular construction skills, aligning with sustainability goals in your jurisdiction.

■ **EU training pack:** Navigate European policies shaping sustainability in the built environment, enabling informed decision-making and promoting circular practices in public procurement.

■ **Circularity game:** Prepare for the transition to a circular economy through dynamic online training, addressing challenges and opportunities in policymaking and procurement for public authorities. Contact sreeja@circle-economy.com for developing a follow-up training on the Circularity Games platform.

■ **2B Collective games:** Engage in circularity learning with interactive skill development, fostering partnerships and promoting circular practices in construction projects. Contact j.cromwijk@isso.nl to play the game with a group.

Qualification framework

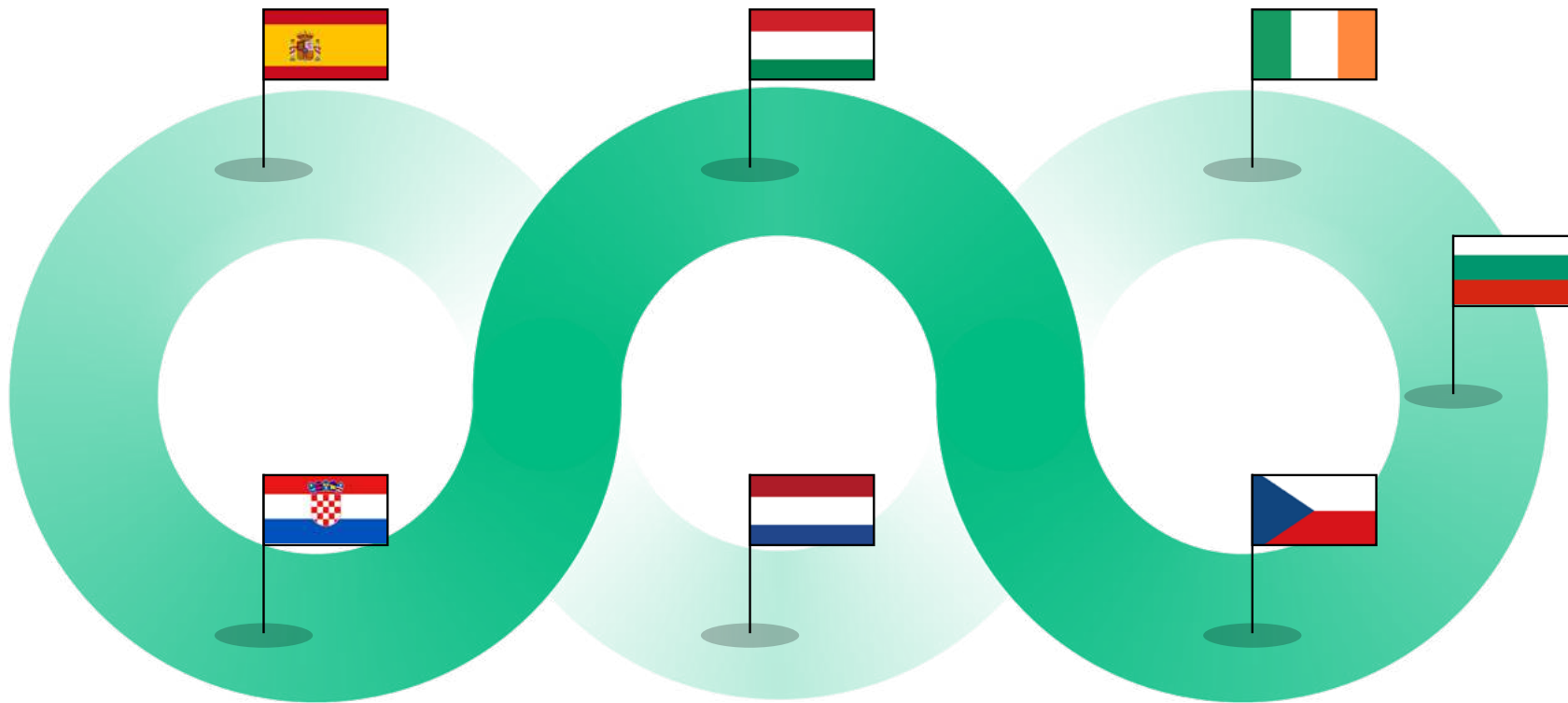
Discover how our qualification framework offer essential support for navigating the complexities of sustainable construction. They empower policymakers, procurement professionals, and public sector actors to leverage public procurement effectively, promoting circular practices. Explore how to maximize policy levers' impact and stimulate demand for circular construction skills, aligning with sustainability goals and fostering a circular economy in your region. Check all our resources in page 8 or [click here](#).



Want to know more? Watch our [webinar](#) where BGC partners, actively involved with architects, explain how to effectively utilize these resources.

National implementations

How did the 7 national BUS-GoCircular teams stimulate demand for circular construction skills and strengthen the supply of these skills at the local level?



Bulgaria implementations

The role of circular economy in the transition of the construction sector towards decarbonization is not well understood in Bulgaria. Therefore, the focus of the Bulgarian team was to increase awareness about the socio- economic and ecological benefits of circular construction along the building value- chain and to engage key stakeholders in the process. In addition, it attempted to introduce circular principles into education and training schemes for young and experienced building professionals.

Circular Education Outreach

Through the work on the project, the Bulgarian team trained university professors and professional high school teachers across the country how to integrate circular criteria into architecture and engineering curricula. It also developed an elective course on Circular Models in Construction and taught (more than 20) students and professionals on the topic in the last two winter semesters. The team also trained around 100 representatives from different stakeholder groups about application of the key elements of Circular Economy in construction and engaged producers of sustainable products into the process.



Stakeholder Capacity Building

The Bulgarian team has introduced knowledge and skills among key stakeholders on how to successfully integrate circular economy principles into education and building practices and has triggered further interest into developing sustainable construction methods. This is reflected into collaborations with Institute for Circular Economy (BG) and businesses and contributes to capacity building and stimulating of market demand for sustainable solutions in construction.



Our main findings

There has been genuine interest shown by participants in the training events about the application of sustainable practices in construction, which is promising for increase in demand for professional qualifications in this subject. To successfully integrate circular models into construction there is a need for institutional support, which is addressed in the BUS BG 2030 roadmap. Manufacturers and producers of circular building solutions are key to a driving transformational force and will be actively engaged into further activities to stimulate energy and resource efficient construction.

Questions or comments?

ira.ivanova@eneffect.bg

Spain implementations

The demand for skilled professionals is significantly influenced by specialized training, alongside climate awareness, government policies, technological advancements, and the green market. Collaboration between sectors and evolving perceptions of value also shape professional development, with international standards adding pressure for advanced practices.

Community outreach

The BUS-GoCircular project has made significant strides in networking and building collaborative partnerships. In Spain, it organized and joined 14 stakeholder events focused on circularity, held meetings with the learning community, including higher education and vocational training institutions, and facilitated dialogues between public authorities and value chains. Additionally, the project established partnerships with 41 stakeholders and participating organizations, enhancing its impact within the community. Furthermore, the project signed 5 Memorandum of Understanding with industrial partners and training centers. These agreements formalize commitments and collaborations, strengthening relationships and setting the stage for impactful joint initiatives. These partnerships

highlight the project's commitment to fostering long-term cooperation and driving sustainable change in both the industry and educational sectors.



Circularity training actions

The BUS-GoCircular project has achieved significant success in its training objectives, benefiting both trainers and professionals alike. Through four training courses designed to educate trainers, twelve individuals have been equipped with the necessary skills to impart knowledge effectively, with three courses conducted at a European level and one in Spain. Additionally, 247 professionals have been upskilled through seven training sessions, utilizing the materials developed within the project. Furthermore, the project has developed a specialized Training Pack tailored for Spain, which has been disseminated to small and medium-sized enterprises (SMEs) to facilitate cost-effective, rapid, and easy training for their employees. These initiatives have not only enhanced the skills and knowledge of trainers and professionals but have also contributed to fostering a culture of continuous learning and development within the industry.



Online tools for designers

As part of the Spanish NIP, three tools have been developed to assess the circular aspects of building projects, elements, and materials. These tools are tailored for designers, encompassing architects and engineers. They provide valuable insights into the circular aspects of their projects, facilitating comparisons between alternative designs and aiding decision-making processes.

1. Circular Building Assessment: RE10 Tool

RE10 is an online tool developed by IVE, based on the Spanish standard ISO 20887:2020, which assesses the circularity of a residential building after renovation. More specifically, “RE10” evaluates the efficient use of natural resources and the building’s capacity for disassembly, flexibility and adaptability, in order to favor its reuse and recycling. [More information.](#)



2. Environmental Project Assessment: TURIA Tool

TURIA is an online tool developed by IVE that provides an “Environmental Assessment Report” of your project. It includes indicators on Toxicity, Resource Use and Environmental Impact of building elements and products, as well as a list of building materials and their reuse potential. [More information.](#)



3. Construction Budget Streamlining: BDC 2023

BDC 2023 is a database and operates as a “Construction Materials Price Bank”. It is used to estimate the total measurements and budget that the construction/renovation work will cost. This new version “BdC 2023” incorporates functional units for circular solutions such as bio-based products, wood-based building systems or products with high recycled content. This addition streamlines the budget calculations for construction sites that incorporate circular solutions. It reduces uncertainties for developers looking to invest in innovative and sustainable practices boosting the market demand. [More information.](#)

The logo for BDC IVE 2023 is displayed in white text on a dark red rectangular background. The text is arranged in three lines: 'BDC' in a large, bold, sans-serif font, 'IVE' in a smaller, bold, sans-serif font, and '2023' in a large, bold, sans-serif font. The logo is positioned in the lower-left area of the slide, partially overlapping a light green curved graphic element.

BDC
IVE
2023

Our main findings

In this project, we have learned the fundamental importance of training to implement circular economy principles in construction effectively. Organizing courses and training trainers proved essential for disseminating knowledge. Moreover, engaging with certification bodies demonstrated the potential to influence industry standards. By advocating for circular economy criteria in certifications, we can drive sustainable practices across the sector. Additionally, collaboration with various stakeholders, such as trainers, industry professionals, and certification bodies, is vital for project success. This experience has taught us the need to consider long-term impact and the importance of maintaining ongoing engagement with stakeholders to drive lasting change in the construction industry.

Questions or comments?

pesparza@five.es

Dutch implementations

Building on many preceding initiatives that are already pushing the circular transition forwards in the Netherlands (e.g. CB'23, Het Nieuwe Normaal), the BUS-GoCircular project has strengthened the skills perspective, shifting the discussion from buildings to people.

Our structured approach to circularity is already helping both individual companies and industries within the built environment to get a grip on how to identify and train for the most urgent circular skills gaps.

Introduced trainings

In February 2023, we introduced the BUS-GoCircular methodological approach to a frontrunner group of trainers in the Dutch Train-the-Trainer training, with participation from across the entire built environment industry, e.g. architects, builders and installation professionals.

We worked closely with TVVL, knowledge and training organisation for Installation professionals and delivered a inhouse Train-the-Trainer program as well as a dedicated skills gap analysis workshop and analysis.



Networking

We introduced our structured, skills based approach to the Dutch Green Building Council and Het Nieuwe Normaal, to embed to skills perspective into the wider national discussion on circularity.

Training packs

We delivered a national training pack on the role of Sustainability Managers.

Circularity games

Lead by Circle Economy, we developed and introduced the [Circularity Games](#) as a accessible, engaging way to introduce circular concepts.



Our main findings

In the Netherlands we discovered that the best way to identify skills gaps for people is to have them identified by those same people. We started of with a pan-European analysis of skills gaps across all countries and built environment industries. However, the real strength of that analysis was its process, more than its outcome. We then used that process to coach and mentor individuals and groups. People are not motivated with a report that shows them their skills gaps, but they are motivated when you get them involved in a process where they discover their skills gaps themselves. So the essence of the BUS-GoCircular legacy in the Netherlands is this structured approach that helps the participants to discover their own circular skills training needs, and act upon it.

Questions or comments?

sst@buildingchanges.nl

Czech implementations

The focus of implementation work in Czechia was on establishing stable partnerships with construction sector stakeholders and cooperating with them on disseminating the project results to a wider audience. Main partners were architects, designers, construction suppliers, innovation and research centers and academic partners from the CTU.

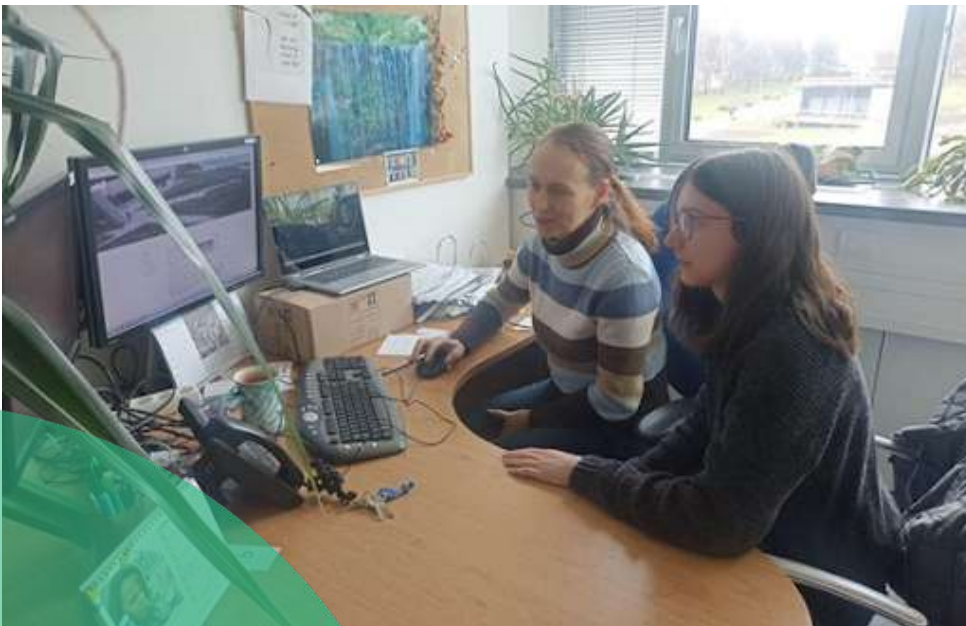
Networking

During the project, we built a network of partners who are interested in the project results and resonate with the project's mission. This was confirmed by the signature of MoUs. The project results are also planned to be implemented in higher education, specifically in two semester-long courses at the Faculty of Civil Engineering CTU in Prague.



Mentoring programmes

Besides that, the mentoring programmes provided support for students tailored to their individual needs. In addition, in total 8 trainers were trained in the Kickstarter rounds of the Train the trainer and they managed to train 387 new professionals with the help of BGC training materials during the implementation period of the projects, with plans for future courses.



Our main findings

It is important as part of the replication plan to maintain stable partnerships and keep the project results updated accordingly, to further disseminate them with any possible interested parties. The trained trainers should be motivated to share their knowledge in further pilot training with the focus on university students and direct construction workers. We learned the importance of in person meetings as compared to discussions which take place entirely in the online space.

Questions or comments?

zuzana.hejlova@incien.org

benjamin.hague@incien.org

Ireland implementations

In Ireland, the commencement of BUSGoCircular was widely welcomed as circularity in construction is generally acknowledged as vital in order to meet climate action targets. However, the knowledge, competencies and skills in this area are limited, with a stronger focus over the past decade on energy efficiency skills development. The engagement of key stakeholders in the BUSGoCircular process, primarily through the External Advisory Board but also through the various components of the project, was seen as a crucial requirement in order to roll out the project results once developed.

Mentoring

Successful onsite mentoring carried out in Ireland through BUSGoCircular meant hands on practical advice for a range of mentees including clients, tradespeople and main contractors culminating in circularity actions applied onsite and changes in behaviour leading to meaningful, impactful and replicable interventions. The importance of focusing our work across the value chain from client to construction worker to designer and even funders meant that we have not only increased the skilled workforce but also stimulated demand for future circular interventions.



Skills mapping and Train the Trainer programme

TUS led on the BGC project's initial research to determine the skills gaps in circularity across the construction industry, an intensive piece of work which included collaboration with a range of construction professionals in Ireland.

Once the gaps were identified and presented in workshop format to our stakeholders and validated, work began on the preparation of a comprehensive train-the-trainer programme to upskill trainers in Vocational Education and Training (VET), higher education, continuous professional development and lifelong learning.

The train-the-trainer programme was hugely successful

with 11 Irish trainers upskilled and receiving BUSGoCircular digital badges. Following on from this, trainers have incorporated the new BUSGoCircular training modules into their existing programmes adding value and enhancing the student experience. We are thankful to each and every one of our trainers for taking the time and believing in the value of teaching circularity.



SME training

Building on work of Dutch partner ISSO and Spanish partner FEVEC, TUS designed 4 new SME training modules tailored to the Irish situation on how circularity applies to renovations and retrofits of traditional buildings, which makes up a significant 16 % of our housing stock in Ireland. The training packs consisted of 4 modules; a case study of a recent renovation of an 1880s convent building repurposed for community use in Tulla Co Clare, traditional buildings regulations and an SR54 Introduction (an explainer on the NSAI Irish guidelines relating to traditional buildings), Traditional Buildings Defined- built before 1945 and an EPBD update of Building renovation passports and how this will relate to traditional buildings. SMEs were invited to follow the self-directed learning modules and afterwards they gave comprehensive feedback, which has been incorporated; the modules are now available on the BUSGoCircular and TUS websites.

Our main findings

Through our work on BUSGoCircular in Ireland, the engagement on circularity with stakeholders and the opportunities we have been presented with, it has been noted that there is an appetite not only for supports for green procurement and incorporating circularity principles in design, build and operation but also a marked increase in demand for training content in circularity. Content which needs to be added to all construction courses as advised by the Build Up Skills 2030 project which has identified this as one of its core actions in the National Upskilling Roadmap. Making sure we have the right skills to decarbonise Ireland's built environment- [BUSI2030- Irish Green Building Council \(igbc.ie\)](https://www.igbc.ie/)

Questions or comments?

gloria.callinan@tus.ie

Croatia implementations

During the implementation phase, our focus centered on promoting circularity in Croatia's construction sector, addressing challenges such as limited awareness, lack of knowledge, regulatory hurdles, and the need for development of training courses at different levels (VET, HEI, CPD) to support implementation of sustainable practices.

Community Outreach and Education

Conducted extensive community outreach and education campaigns to raise awareness about the benefits of energy efficiency and circular practices. By increasing public knowledge and engagement, we contribute to BGC's mission of stimulating demand for green energy solutions and building a skilled workforce capable of implementing them.



Introducing CPD Training for Green Building & Energy Renovation

Developed and implemented a comprehensive HEI courses focused on green building and energy renovation, enhancing the skills of civil engineering students. Integrated 1 new training programme into the CPD scheme of the Croatian chamber of Civil Engineers. Education module titled “Affirmation of green building”; 3 new training programs integrated into the CPD scheme of the Faculty of Civil Engineering (Sustainable materials in construction, Energy renovation of buildings up to NZEB level, Designing and constructing NZEBs); integrated 1 new training programme into the CPD scheme of the Energy Institute Hrvoje Požar on Multifunctional green roofs. This directly contributes to BGC’s mission by addressing the need for a skilled workforce in the renewable energy sector, thus stimulating demand for green energy solutions.



Collaborative Partnerships with Industry Leaders

Fostered partnerships with key industry players to facilitate knowledge exchange and capacity building in energy efficiency and circular technologies. By leveraging expertise from industry leaders, we empower individuals to acquire the necessary skills and contribute effectively to the circular economy, aligning with BGC's mission to increase the skilled workforce across the renewable energy value chain.



Our main findings

Our main findings underscored the importance of targeted education and training programs to address the skills gap on the circular topics in the construction sector. We learned that enhancing workforce skills is essential for advancing circular practices and promoting sustainable resource management. To further BGC's mission, we believe ongoing collaboration between stakeholders, investment in innovative training methodologies, and a focus on practical, hands-on experience are crucial. Additionally, fostering partnerships with industry and educational institutions can facilitate the development of tailored programs that meet the evolving needs of the workforce, driving progress towards a circular economy.

Questions or comments?

bojan.milovanovic@grad.unizg.hr

Hungary implementations

Currently Hungary is going through a circular transition which requires a complex and holistic approach. Circularity and acquiring relevant skills are started to gain significance in the past couple of years. ÉMI is in collaboration with several training institutions and is committed to foster enhancing circular approach and introducing circularity to the curricula in Hungarian HEI and VET institutions.

Community Outreach and Education

ÉMI implemented 4 mentoring programmes for university students and flat roof installers focusing on circular economy aspects for flat roofs / multifunctional integrated roof business, LCA, prefabrication and modular construction, best practices in circular construction, biobased materials and other circular economy aspects.



Partnerships for Circular Education

ÉMI signed Memorandums of Understanding with 5 different institutions to share the developed circularity modules and to collaborate in training their employees in the future. Furthermore ÉMI experts and 2 representatives of the manufacturing companies who signed the MoUs also teach at universities and started to integrate the developed modules in their curricula and are open to the other modules created in BUS-GoCircular.



Circularity Basics Training Courses

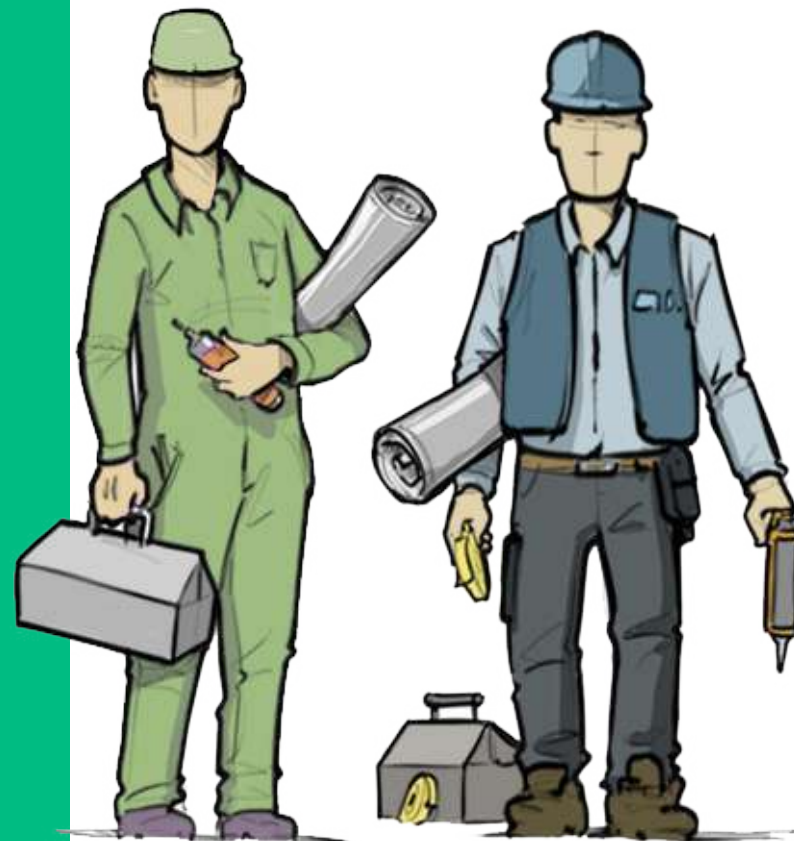
We organized a Train-the-Trainer course and 3 pilot courses for university students, architects and engineers where along introducing the basics of circularity the 2 modules (Build to close the loop of materials and Digitization) developed by ÉMI were presented.

Green Energy Workforce Promotion

ÉMI put emphasis on dissemination as well to stimulate demand for green energy skilled workforce by presenting BUS-GoCircular at various events including IFD conferences. With the trainings and continuous collaboration we support the capacity building to increase the number of skilled workforce across the value chain in Hungary.

Our main findings

During the implementation of BUS-GoCircular it became more obvious that the circular transition is a priority in Hungary, however several challenges remain related to our relatively low performance in circular materials use, resource productivity and waste recycling. Some challenges are difficult to tackle (lack of adequate policy measures, increase in green house gas emissions or effective circular economy practices), but raising awareness and upskilling the workforce is a great start and is essential for long-term success. After the lifetime of BUS-GoCircular, education focusing on circularity will definitely continue, hopefully along with adopting a comprehensive circular economy policy framework in the near future.



Questions or comments?

vkelemen@emi.hu

Thank you for being part
of our journey.

Let's work together to
tackle the challenges
and boost the skilled
green energy workforce.



Colophon

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