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Building Life Capacity Building

Report by GBC Slovenia



G R E E N
B U I L D I N G
C O U N C I L
S L O V E N I A

Slovensko združenje
za trajnostno gradnjo

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1.0 Capacity-Building Workshops Report

Overview

GBC Slovenia successfully organized and implemented three capacity-building workshops under the *Building Life – Capacity Building Project*. The primary objective of these workshops was to strengthen professional competencies and raise awareness of sustainable construction practices in Slovenia.

The workshops were held at the following dates and locations:

- **15 October 2025** – Secondary School of Civil Engineering and Grammar School Maribor, Maribor
- **5 November 2025** – Austria Trend Hotel, Ljubljana
- **6 November 2025** – Slovenian National Building and Civil Engineering Institute (ZAG), Ljubljana

Each workshop included a presentation of the Building Life project, its objectives, and the results of a national stakeholder survey conducted in Slovenia. The survey findings provided an important evidence-based foundation for discussions on the current state, key challenges, and opportunities related to sustainable construction and decarbonization of the built environment.

The workshops created a platform for dialogue among professionals from construction, architecture, engineering, education, government, certification bodies, and sustainability organizations.

Workshop Structure

All workshops followed a consistent and structured format designed to facilitate knowledge transfer and stakeholder engagement. The main components included:

- Introduction to the Building Life project, its goals, and the Capacity Building initiative
- Presentation of the five core pillars of the project:
 - Mindset
 - Technical Solutions
 - Government Leadership
 - Data
 - Finance
- Interactive sessions focusing on one or two priority pillars relevant to the specific audience and professional sectors represented

The interactive format enabled participants to share practical experiences, identify barriers, and propose concrete actions for accelerating the transition toward sustainable and zero-carbon construction.

Outcomes:

The workshops achieved several important outcomes:

- Identification of key opportunities, gaps, and priority actions across all five pillars
- Validation of the project's proposed milestones and sub-targets as realistic, relevant, and aligned with sectoral needs
- Strengthened stakeholder engagement and cross-sector collaboration
- Increased awareness of sustainable construction practices and decarbonization strategies
- Collection of valuable stakeholder input to support future project activities and national roadmap development

Participants expressed strong support for continued capacity-building efforts and emphasized the importance of coordinated action among industry, government, academia, and civil society.

Workshop Summaries

Workshop 1

Date: 15 October 2025

Location: Secondary School of Civil Engineering and Grammar School Maribor

Duration: 3 hours

Number of participants: 52

Represented sectors:

Construction companies, Educational institutions, Chamber of Trades and Crafts, and sustainability-oriented associations, NGO

Focus pillars:

Technical Solutions and Mindset

Key insights:

Participants highlighted the importance of strengthening practical education and training in sustainable construction. Emphasis was placed on interdisciplinary collaboration and the integration of digital tools, low-carbon materials, and sustainable methodologies into everyday construction practices. The role of education in shaping future professionals and fostering a sustainability-oriented mindset was identified as a key priority.

Workshop 2

Date: 5 November 2025

Location: Austria Trend Hotel, Ljubljana



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Duration: 4 hours

Number of participants: 13

Represented sectors:

Construction companies, certification organizations, architects, engineers and sustainability associations, NGO

Focus pillar:

Government Leadership

Key insights:

Participants emphasized the need for stronger policy alignment and clearer national decarbonization pathways for the construction sector. Improved coordination between regulatory frameworks and market practices was identified as essential to accelerate implementation. Stakeholders also highlighted the importance of predictable regulatory environments and long-term policy signals to support investment in sustainable construction solutions.

Workshop 3

Date: 6 November 2025

Location: Slovenian National Building and Civil Engineering Institute (ZAG), Ljubljana

Duration: 3.5 hours

Number of participants: 32

Represented sectors:

Construction and certification companies, architects, engineers, ministries, research institutes, and sustainability organizations, NGO

Focus pillars:

Data and Finance

Key insights:

Participants emphasized the importance of developing a national database of sustainable building products to support informed decision-making. The creation of innovative financial models, incentives, and funding mechanisms for zero-carbon construction projects was identified as a priority. Discussions also highlighted the growing importance of linking ESG reporting, energy efficiency standards, and building resilience to broader sustainability and investment frameworks.

Communication and Dissemination

All workshops were publicly announced and promoted through GBC Slovenia's official communication channels, including LinkedIn and Facebook. These efforts ensured broad visibility, encouraged stakeholder participation, and supported dissemination of project objectives and findings within the professional community and the general public.

The communication activities contributed to strengthening stakeholder engagement and increasing awareness of the Building Life project and its strategic importance for Slovenia's construction sector.

2.0 Outcomes by pillars - Analysis of Opportunities, Gaps, and Priority Tasks within the Building Life Project

6.1 Technical Solutions (T)

Opportunities Technical Solutions (T)

Slovenia presents significant opportunities to enhance the sustainability and efficiency of its existing building stock, particularly older multi-apartment structures. One of the most promising avenues is the integration of renewable energy sources, such as solar and geothermal systems. The country's extensive unused roof and façade surfaces offer considerable capacity for installing these technologies, which can reduce operational emissions and improve the energy self-sufficiency of buildings.

Another key opportunity lies within the education system. By shifting toward a more practice-oriented approach, the system can encourage collaboration among architects, engineers, contractors, environmental experts, and economists. Incorporating hands-on, project-based learning in real environments will better prepare professionals to address real-world challenges.

Continuous professional development is also vital. Introducing a mandatory annual credit system for construction workers—similar to those already in place for architects and engineers—will help raise the quality, safety, and professionalism of on-site work. Lifelong learning and licensing ensure that workers remain up-to-date on best practices and emerging technologies.

The multi-functional use of outdoor spaces is another area of opportunity. By repurposing outdoor areas of buildings and neighborhoods for urban gardening, recreation, and green spaces, local well-being and self-sufficiency can be improved.

These changes also contribute to urban cooling and the overall environmental quality of cities.

Promoting green façades and nature-based solutions, such as green roofs and walls, can substantially enhance urban microclimates. These interventions help reduce air pollution, lower ambient temperatures, and boost both the ecological and aesthetic value of the built environment.

Digital transformation in construction is rapidly gaining importance. The adoption of advanced digital tools—such as Building Information Modeling (BIM), digital twins, 3D scanning, and IoT sensors—enables more effective monitoring of energy and resource use. These technologies increase efficiency, transparency, and improve life-cycle management across construction projects.

Gaps Technical Solutions (T)

Despite these opportunities, several gaps remain in current practices. Energy efficiency measures are often fragmented, with initiatives acting in isolation rather than as part of an integrated, sustainable framework that connects building envelopes, systems, drainage, and water management

The incorporation of climate resilience strategies is limited. Risks such as heatwaves, floods, and other extreme weather events are not sufficiently addressed during the design and construction phases. Current strategies tend to focus on river management and landslides at a national level, frequently overlooking the resilience of individual buildings and construction materials.

There is also a low level of automation and industrialization within the sector. Limited adoption of prefabrication, robotics, and other industrialized construction methods leads to low productivity and inconsistent quality on job sites.

Workforce challenges persist due to high turnover rates and language barriers, which complicate quality assurance, safety, and effective communication on construction projects. The presence of closed interest groups and resistance to innovation further hinders progress, as these groups may protect narrow interests and slow the adoption of new sustainable practices.

Another gap is the absence of unified definitions and standards for sustainable or "green" construction. This lack of clarity leads to inconsistencies in how projects are evaluated and certified.

The extraction of raw materials necessary for renewable energy technologies, such as lithium and cobalt, also raises concerns about the social and environmental impacts of resource use.

Finally, poor water management and urban surface planning—including excessive use of concrete and insufficient green spaces—contribute to urban overheating, biodiversity loss, and decreased resilience.

Priority Actions Technical Solutions (T)

To address these gaps and seize available opportunities, several priority actions have been identified. First, enhancing the technical skills of the construction workforce is essential. This can be achieved through structured training and certification programs that promote high-quality, safe, and efficient construction practices

Second, increasing digital competence across the sector is crucial. Accelerating the adoption of BIM, digital tools, and data-driven management systems will improve project coordination and monitoring, leading to better outcomes.

Ensuring stable investment conditions for renewable energy is another priority. Establishing clear financial and regulatory frameworks will support long-term investments and encourage wider adoption of renewable technologies.

Aligning the education system with market needs is also necessary. This involves incorporating more practical content into curricula, strengthening collaborations with industry, and integrating emerging technologies into educational programs.

Fostering interdisciplinary collaboration and innovation will further accelerate progress. Strengthening partnerships between education, research, and industry will facilitate the co-development and implementation of sustainable solutions.

Finally, integrating Life Cycle Assessment (LCA) into standard practice is recommended. Making LCA a mandatory part of project documentation for major

construction initiatives will ensure that decisions are data-driven and that accountability is maintained throughout the project life cycle.

Overall Perceived Awareness – Technical Solutions (T)

Overall awareness of technical solutions for sustainable construction in Slovenia is moderate, with strong familiarity around energy efficiency and renewable energy integration, particularly in building renovation. Awareness of more advanced concepts—such as Whole Life Carbon, climate resilience, and integrated system design—is less consistent and largely limited to expert stakeholders. While there is broad recognition of the need for skills development, digitalisation, and innovation, implementation remains fragmented. Overall, the sector shows high awareness of individual measures but lower readiness for integrated, life-cycle-based application.

6.2 Mindset (M)

Opportunities Mindset (M)

A significant opportunity for sustainable transformation lies in the widespread adoption of a green and circular mindset across all layers of society. This shift must extend from individuals to institutions, emphasizing the importance of sustainability in every aspect

of daily life and organizational practice. Integrating sustainability and circular economy principles into educational curricula at all levels—from primary schools through universities—will ensure that future generations develop a foundational understanding of these concepts, both in theory and practice. Furthermore, it is essential that organizations, governments, and individuals accept responsibility for their carbon footprint. This involves making decisions based on verified data, transparent reporting, and evidence-based practices, promoting accountability and fostering trust in sustainable actions.

Gaps Mindset (M)

Despite the potential for progress, several notable gaps hinder the effective transition to a green and circular society. One major challenge is the poor public perception of the green transition, which is often exacerbated by inconsistent priorities and shifts in political or economic agendas. This uncertainty can undermine confidence and stall momentum toward sustainability goals. Additionally, the negative image associated with green transformation is sometimes fueled by reports of labor exploitation in developing countries during the production of products marketed as “sustainable.” These issues highlight the need for greater transparency and consistency in sustainable practices.

Priority Tasks Mindset (M)

Addressing these gaps requires transformative action across social, economic, and institutional systems. It is imperative to align these systems with sustainable and circular principles, ensuring a coordinated and comprehensive approach to change. Another priority is to deepen the collective understanding of the interconnections between energy, food, water, health, and social justice. By approaching sustainability holistically—rather than focusing on isolated sectors—stakeholders can create more resilient and equitable solutions that address the complex realities of society.

Overall Perceived Awareness – Mindset (M)

Overall awareness of sustainability and circular economy principles in Slovenia is moderate, with broad recognition of their importance but uneven depth of understanding and commitment across society. While sustainability is increasingly present in public discourse and education, it is not yet consistently embedded in

everyday decision-making, institutional culture, or personal responsibility for carbon impacts. Public trust in the green transition is weakened by inconsistent policy signals and concerns about the social and ethical dimensions of “green” products. As a result, awareness exists, but it has not yet fully translated into shared ownership, confidence, and behavioural change at scale.

6.3 Government Leadership (GL)

Opportunities Government Leadership (GL)

While numerous strategies and policies for sustainable construction exist, their true effectiveness is dependent on enhancing operational implementation. Several key actions can be taken to improve this process. First, establishing clear and mandatory targets provides measurable benchmarks for progress. Second, allocating dedicated budgets ensures that resources are consistently available to support these initiatives. Third, implementing strong monitoring and control mechanisms allows for ongoing evaluation and adjustment of efforts. European and national projects should be structured to include Phase II and III stages, which facilitate continuity and ensure that real implementation extends beyond initial planning phases.

Further opportunities lie in showcasing practical examples of sustainable construction and embodied carbon reduction. Demonstration projects are particularly valuable, as they can illustrate measurable results and tangible benefits of renovation measures. Examples include façade insulation, window replacement, heating system upgrades, and improvements in design detailing. By providing these real-world examples, stakeholders are better equipped to understand the advantages and feasibility of sustainable practices.

Gaps Government Leadership (GL)

Despite the potential for progress, several significant gaps hinder the advancement of sustainable construction. There is an insufficient number of pilot sustainable projects that could serve as reference models for future developments. Additionally, government bodies are often not involved early enough in the process of drafting laws

and regulations for the construction sector, which can lead to misalignment between policy and practice.

Another challenge is the prevalence of illegal buildings, which complicates efforts to harmonize environmental regulations with the existing building stock. There is also a lack of targeted subsidies for projects that directly reduce pollution, such as cycling infrastructure, compared with subsidies for electric bikes. Frequent changes in legislation create instability and uncertainty within the construction sector, while some legislative amendments may inadvertently undermine green investments and discourage long-term sustainable projects.

Priority Actions Government Leadership (GL)

To address these gaps, several priority actions are recommended. Strengthening the Measurement, Reporting, and Verification (MRV) system is essential; establishing or expanding a local carbon market would promote transparency and increase the effectiveness of climate and construction policies. Upgrading standards and certification systems is also critical, with an emphasis on aligning national regulations with recognized international standards such as LEED, BREEAM, and DGNB. This alignment would help accelerate the transition toward net-zero emissions in the construction sector.

Finally, integrating policy frameworks through stronger coordination between energy efficiency, decarbonization, and climate resilience policies would foster a more holistic and effective approach to sustainable construction, ensuring that efforts in each area support and reinforce one another.

Overall Perceived Awareness – Government Leadership (GL)

Overall awareness within government of the need to advance sustainable and low-carbon construction is moderate to high, with a solid strategic framework already in place. However, this awareness is not yet consistently reflected in implementation, continuity, or enforcement, and is weakened by frequent legislative changes and limited use of pilot projects as learning tools. While the importance of targets, monitoring, and alignment with international standards is broadly recognised, practical coordination across policies and early engagement in regulatory development remain

limited. As a result, awareness exists, but confidence in long-term, stable government leadership is uneven across the sector.

6.4 Data (D)

Opportunities Data (D)

One of the key opportunities for advancing sustainable construction within the Building Life Project lies in the development of simple, user-friendly digital tools designed specifically for private owners and investors. These programs would facilitate the tracking of compliance with environmental goals and relevant legislation, thereby accelerating the adoption of sustainability principles across the private sector.

Another important opportunity is the establishment of a comprehensive benchmarking system for buildings. By creating a robust framework that covers both operational and embodied carbon, it becomes possible to define clear reference limits and target values for different types of buildings. This would enable more effective monitoring and drive continuous improvement in environmental performance.

Currently, the certification rate of buildings in Slovenia remains low. There is significant potential to increase interest in certification by clearly communicating its benefits, such as reduced investment risk, enhanced market value, and improved access to sustainable finance. Additionally, promoting data-driven approaches and the use of certification databases would further support this effort.

Technical and digital tools are emerging as powerful drivers of change. Specifically, the provision of measurement and benchmarking tools for zero-carbon and resilient buildings has received the highest combined score in recent assessments. These data-driven and digital solutions are essential for achieving net-zero goals in the construction sector.

Gaps Data (D)

Despite these opportunities, several gaps hinder progress in the sector. There is questionable credibility and fragmentation of available data, particularly in areas such

as carbon assessments, energy performance, and material sustainability. Data inconsistency, lack of verification, and dispersion across different sources reduce the comparability and trustworthiness of results.

Currently, Slovenia lacks a comprehensive, centralized national database for Environmental Product Declarations (EPDs) related to construction products. This gap presents a significant barrier to conducting life-cycle assessments and achieving sustainability certifications.

Another notable gap is the limited availability of EPD-labeled products on the domestic market. As a result, investors are often compelled to rely on imported materials, which increases costs and diminishes the competitiveness of local producers.

Transparency and accessibility of sustainability data also remain low. The likelihood of “Data transparency to promote leadership” received the lowest score (3.02), indicating that systemic barriers continue to prevent open access and sharing of essential data in this field.

Priority Actions Data (D)

To address these gaps, several priority actions are recommended. First, establishing a national database of sustainable construction products is crucial. This would involve developing a centralized, publicly accessible platform containing verified EPD data and ensuring interoperability with European systems such as ECO Platform, INIES, and ÖKOBAUDAT.

Second, there is a need to define clear operational and embodied carbon targets and limits. Setting national benchmarks and standardized methodologies for monitoring both energy use and material-related emissions will provide a solid foundation for progress.

Improving data transparency and the quality of verification is also essential. The implementation of Measurement, Reporting, and Verification (MRV) mechanisms will help ensure the accuracy and consistency of data across sectors.

Furthermore, the promotion of certification systems supported by data tools should be prioritized. Integrating national databases and standardized digital assessment tools

into sustainability certification schemes—such as DGNB, LEED, and BREEAM—will facilitate broader adoption and recognition.

Finally, building capacity for data management and interpretation is vital. Specialized training programs should be developed to enhance digital literacy and data

management skills among professionals, investors, and public officials engaged in sustainable construction.

Overall Perceived Awareness – Data (D)

Overall awareness of the importance of data in enabling sustainable and low-carbon construction in Slovenia is moderate, with strong recognition of the role of digital tools, benchmarking, and certification systems. However, confidence in existing data is low, due to fragmentation, limited verification, and the absence of a centralized national EPD database. While stakeholders broadly understand that reliable, transparent data is essential for Whole Life Carbon assessment and investment decisions, practical access and usability remain limited. As a result, awareness of the need for data-driven decision-making is high, but readiness to apply it consistently across the market is still developing.

6.5 Finance (F):

Opportunities Finance (F):

A significant opportunity exists in financing public investments under the DNSH (Do No Significant Harm) principle. By applying this principle to all public investments, funding is directed away from projects that could cause environmental damage and instead supports those that promote low-carbon development, enhance energy efficiency, and build climate resilience.

The Eco Fund can play a pivotal role by expanding its programs to include support for sustainability certification systems such as DGNB, LEED, and BREEAM. This expansion would incentivize investors to pursue construction projects that are not only higher in quality but also more transparent in their sustainability credentials.

Another important opportunity is the establishment of comprehensive state subsidies for sustainable construction. By designing subsidy schemes that integrate energy,

material, circular, and social considerations, the transition toward a green economy can be significantly strengthened.

Developing financial models with targeted incentives for net-zero and resilient projects has been identified as the most important and highest-priority action, as evidenced by a total score of 7.58. This finding underscores the urgent need for systemic financial mechanisms to accelerate the implementation of sustainable and climate-resilient construction practices.

Gaps Finance (F)

A key gap is the absence of comprehensive sustainable finance frameworks at the national level. Currently, there is no financial scheme in place that effectively connects sustainability objectives with both public and private financing mechanisms.

There is also limited awareness of the true economic value that sustainable construction offers. The frequently raised question—"If sustainable construction is so beneficial, why isn't it better financed?"—highlights a general lack of understanding regarding the long-term economic and social benefits of sustainable investments.

The sector faces insufficient capacity for technical-financial analysis, particularly in assessing climate risks and financial impacts associated with sustainability measures. Although this area received the lowest likelihood score (2.98), it remains essential for making reliable long-term decisions.

Additionally, the connection between ESG (Environmental, Social, and Governance) reporting and the construction sector is weak. While ESG reporting is gaining recognition, integration with building performance indicators—such as energy efficiency, carbon neutrality, and resilience—remains underdeveloped.

Priority Actions Finance (F):

Establish Clear and Transparent Criteria for Green Public Procurement

To ensure sustainability is embedded in public investments, it is essential to define measurable and verifiable criteria for green public procurement. These criteria should cover sustainable materials, emissions reduction, and principles of circularity. By applying these standards consistently across all public tenders, public authorities can

drive the market toward environmentally responsible construction and procurement practices.

Develop a National Sustainable Finance Scheme

A comprehensive national sustainable finance scheme should be established to unify various sources of funding—such as budgetary resources, Eco Fund programs, European Union funding, and private sector investments. This framework will provide the financial foundation necessary to support net-zero and climate-resilient projects, ensuring that investments are strategically directed to achieve national sustainability goals.

Finance Comprehensive Renovation Programs

It is important to support renovation programs that go beyond energy efficiency improvements. These programs should also address seismic safety, enhance the quality of living environments, and promote adaptation to climate change within the built environment. By taking a holistic approach to renovation, these initiatives can deliver multiple co-benefits to society and the environment.

Introduce Guidelines for Climate Risk Verification and Disclosure

Mandatory guidelines should be implemented for the assessment and disclosure of climate risks in all investment projects. This approach will increase transparency, help manage financial exposure to climate-related risks, and build investor confidence in the sustainability of funded projects.

Integrate ESG Reporting with Building Performance Indicators

To further align financial and sustainability objectives, it is crucial to integrate Environmental, Social, and Governance (ESG) reporting with specific building performance indicators. This includes metrics related to energy efficiency, responsible materials usage, carbon footprint, and resilience. Incorporating these metrics into ESG frameworks will promote more comprehensive and meaningful reporting, strengthening the overall impact of sustainable construction practices.

Overall Perceived Awareness – Finance (F)

Overall awareness of the importance of finance as a driver of sustainable and low-carbon construction in Slovenia is moderate, with growing recognition of the role of public funding, subsidies, and sustainable finance principles such as DNSH and ESG.

However, understanding of how financial mechanisms can systematically support net-zero, resilient buildings remains limited and fragmented, particularly in relation to long-term value, risk reduction, and life-cycle benefits. While the need for targeted incentives and integrated finance frameworks is widely acknowledged, practical tools and capacities to link sustainability performance with investment decisions are still underdeveloped. As a result, awareness of the potential of finance is high, but confidence in existing financial structures to deliver sustainability outcomes remains low.

3.0 Examples of best practice from the market

Companies offering low-carbon products & materials

JUB – EPD-backed façade/ETICS systems (JUBIZOL EPS / MW)

JUB provides Environmental Product Declarations (EPDs) for its JUBIZOL external thermal insulation composite systems (EPS and mineral wool). This is a clear market best practice for WLC because EPD data enables designers to quantify and compare embodied impacts of façade solutions (and supports low-carbon procurement / certification requirements).

XELLA Slovenia – YTONG AAC with EPD and efficient production

Xella Slovenia reports having obtained an EPD for YTONG products (AAC), verified/issued through Slovenia's national institute pathway, and communicates sustainability/energy-efficiency improvements in production. Best practice here is the combination of declared, third-party verified impacts + continuous production optimisation, allowing WLC-driven material choices rather than generic “green” claims.

URSA – insulation products with published EPD documentation

URSA publishes EPD documentation for insulation (including glass wool and other ranges). In WLC terms, insulation is a high-leverage decision: upfront impacts can be assessed via EPDs, while operational carbon reductions are captured through

improved thermal performance—enabling transparent optimisation across life cycle stages.

ZAG (market enabler) – national EPD issuance supporting low-carbon product supply

While not a product manufacturer, ZAG is a critical “market best practice” actor: it operates a Service for Environmental Declaration and maintains an overview of issued EPDs. This expands the number of Slovenian (and regional) construction products that can compete in low-carbon specs because they can provide standardised, verified LCA data.

WLC assessment tools/services offered to the market

EUTRIP – packaged building LCA + LCCA + sustainability certification support

EUTRIP explicitly offers building LCA and LCCA and sustainability assessment (e.g., DGNB/LEED), and references One Click LCA competence. Best practice is that WLC is offered as a repeatable service (not an ad-hoc study), so carbon and cost can be optimised early and documented consistently for investors/procurement.

ZRMK – environmental assessment of buildings using LCA + EPDs (and LCC)

ZRMK lists services including environmental assessment of buildings using LCA and EPDs, plus life-cycle cost (LCC) analysis. This is strong practice for WLC delivery because it couples quantified carbon (LCA) with economic decision-making (LCC), supporting credible design trade-offs and “value for carbon” arguments.

ZAG – EPD/validation workflow as a backbone “tool” for WLC calculations

ZAG’s EPD service (application, issuing, published EPD lists) functions as the backbone data infrastructure for WLC assessment tools. Market best practice is having a recognised national route for EN 15804-aligned product declarations, which reduces friction for manufacturers and improves the quality of inputs used in building LCAs.

One Click LCA – widely used software platform promoted via GBC Slovenia learning

GBC Slovenia has published materials/webinars about One Click LCA, which automates building and product LCAs and supports compliance across common

standards. Best practice here is capacity building (training + shared understanding) so WLC tools move from specialist use into mainstream design/procurement workflows.

INNORENEW – LCA research applied to real buildings (bridge from R&D to practice)

INNORENEW has published content around its buildings and LCA-related research outputs (including assessment work communicated in academic/professional channels). This is best practice for the market because it produces local evidence and reference methods for WLC (hotspots, structural/material choices), which can then be transferred to designers and manufacturers.

4.0 List of core actors

Consistent Core Actors (apply to all steps)

- Ministry of the Environment, Climate and Energy (MOPE) – lead authority
- Ministry of Infrastructure (Mol) – co-lead (energy & buildings)
- GBC Slovenia – coordination and facilitation
- ZAG – technical standards, EPDs, data
- ZRMK – LCA methodology, building assessment
- INNORENEW – research and innovation support
- IZS (Chamber of Engineers of Slovenia) – engineering practice and supervision
- ZAPS (Chamber of Architecture and Spatial Planning of Slovenia) – architectural and design practice
- Eco Fund (Eko sklad) – financial incentives and subsidies
- BORZEN – energy-market mechanisms and data
- JUB., chemical industry
- URSA, construction industry
- XELLA, construction industry
- EUTRIP, certification and consulting company

Note: All actors are engaged throughout; leadership emphasis shifts, but participation remains constant.

5.0 5-Year Roadmap

Year	Objective	Key Actions	KPIs	Outputs / Outcomes
Y 1	Strengthening knowledge and awareness of low-carbon construction	• Organise professional training sessions on Whole Life Carbon, Life Cycle Assessment (LCA), and climate-resilient buildings. • Prepare a guide of best practices for sustainable building renovation. • Establish working groups on low-carbon construction and sustainable finance.	• 3–4 professional events • At least 60 participants • 1 publication • 1 working groups established	• Increased professional knowledge across the sector. • Higher awareness of integrated sustainable construction approaches. • Activated network of experts and stakeholders.
Y 2	Strengthening cooperation between industry, professionals, and education	• Organise a national conference on sustainable construction. • Collaborate with universities and institutes on practical sustainable construction projects. • Prepare professional recommendations for comprehensive building renovation.	• 1 national conference • At least 40 participants • 2 university/institute collaborations • 1 professional document	• Stronger collaboration between academia and industry. • Greater integration of sustainability topics in education. • Professional support for comprehensive building renovation.

		• Promote pilot projects in sustainable construction and renovation.		• More practical examples of sustainable construction.
Y 3	Promoting pilot sustainable solutions	• Develop guidelines or a simple tool for monitoring building carbon footprints (LCA / Whole Life Carbon).	• 1 professional guideline or digital tool • At least 100 users of the guidelines	• Increased use of LCA approaches in projects. • Greater transparency of environmental impacts of buildings.
Y 4	Supporting policies and standards for sustainable construction	• Prepare recommendations for integrating LCA and carbon indicators into national policies. • Promote the use of sustainability certification systems such as LEED, BREEAM, and DGNB. • Organise dialogue between government, industry, and investors.	• 1 policy recommendation • 2 expert roundtables • Increased interest in project certification	• Better alignment of national policies with international standards. • Increased adoption of sustainable certification systems. • More stable conditions for sustainable investment.
Y 5	Systemic impact on the development of sustainable construction	• Prepare a national review of progress in low-carbon construction. • Establish a platform for best practices in sustainable projects. • Organise an international professional event.	• 1 national report • 1 best-practice platform • 1 international event • At least 50 participants	• Improved access to knowledge and data on sustainable construction. • Increased visibility of Slovenian sustainable projects. • Strengthened professional community in low-carbon construction.

In addition Project matrix

Pillar	Opportunities	Gaps	Priority Actions	Lead Actors	Supporting Actors	Awareness
Technical Solutions (T)	Integration of renewable energy (solar, geothermal); practice-oriented education; continuous professional development; green façades and nature-based solutions; digitalisation (BIM, digital twins, IoT); multifunctional outdoor spaces.	Fragmented energy-efficiency measures; weak climate resilience integration; low automation; workforce challenges; resistance to innovation; lack of unified standards; poor water and urban planning.	Strengthen workforce skills; increase BIM and digital adoption; ensure stable renewable investment frameworks; align education with market; foster interdisciplinary collaboration; integrate LCA as standard practice.	MOPE, Ministry of Infrastructure (MoI), GBC Slovenia	ZAG, ZRMK, INNORENEW, IZS, ZAPS, JUB, URSA, XELLA, EUTRIP	Moderate
Mindset (M)	Adoption of green and circular mindset; integration into education; stronger responsibility for carbon footprint; data-driven decision-making.	Weak public perception; inconsistent policy priorities; trust issues related to social/ethical aspects.	Align systems with circular principles; strengthen understanding of sustainability interconnections; promote holistic approach.	GBC Slovenia, MOPE	INNORENEW, ZAPS, IZS, ZRMK, education sector, NGOs	Moderate
Government Leadership (GL)	Clear targets and budgets; monitoring systems;	Lack of pilot projects; late government involvement; illegal buildings;	Strengthen MRV; develop carbon market; align with LEED, BREEAM, DGNB;	MOPE, MoI, GBC Slovenia	ZAG, ZRMK, Eco Fund,	Moderate– High



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continuation of projects; demonstration projects.	insufficient subsidies; legislative instability.	improve policy coordination.	BORZEN, IZS, ZAPS, EUTRIP
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Data (D)	Digital tools for users; benchmarking systems; increased certification uptake; data-driven decision-making tools.	Fragmented data; lack of national EPD database; limited EPD products; low transparency.	Establish national EPD database; ensure EU interoperability; define carbon benchmarks; strengthen MRV; integrate data into certification; build capacity.	ZAG, MOPE, GBC Slovenia	BORZEN, ZRMK, EUTRIP, INNORENEW, JUB, URSA, XELLA	Moderate
Finance (F)	DNSH-based investments; Eco Fund incentives; state subsidies; financial models for net-zero projects.	Lack of finance framework; low awareness of long-term value; weak financial analysis capacity; poor ESG integration.	Green public procurement criteria; national finance scheme; support deep renovation; climate risk disclosure; ESG integration with building performance.	Eco Fund, MOPE, MoI, GBC Slovenia	BORZEN, ZRMK, ZAG, EUTRIP, JUB, URSA, XELLA	Moderate

6.0 Agenda, attendance list and photos from the workshops

15 October 2025, Maribor

Expert Meeting: Technical Solutions in Sustainable Construction

Date: 15 October 2025

Location: Secondary School of Civil Engineering and Gymnasium Maribor

Duration: 9:00–12:00 (240 minutes)

Duration	Topic	Speaker
9:00-9:10	Registration and Welcome	GBC Slovenija
9:10-9:30	Presentation of the project and survey results	GBC Slovenija
9:30 -10:15	Availability of technologies for the implementation of energy efficiency strategies and improvement of energy performance from the design stage Incorporation of climate resilience strategies from project planning and design Availability of renewable energies for integration into the decarbonization pathway of buildings Training in selection criteria of technical solutions for decarbonization and climate resilience	dr. Iztok Kamenski, GBC Slovenija
10:15-10:50	Technical Solutions in Sustainable Construction – Slovenian Interactive Workshop	Jure Lovše, Xella
	Mindset	dr. Iztok Kamenski, GBC Slovenija,

10:50-11:30	Existence of a capacity-building mechanism in the field of energy efficiency and building decarbonisation National Working Group for Energy Efficiency, Net Zero Carbon, and Building Resilience Existence of a capacity-building mechanism for climate change adaptation and building resilience Existence of a “public statement of commitment” as a requirement to ensure transparency and access to financial and regulatory incentives for the public sector	
11:30-12.00	Mindset in Sustainable Construction – Slovenian Interactive Workshop	Jelka Slatinšek, JUB



Ime primek	Podpis	Podjetje	Poklic
JURE LAVIN		XELLA	mag. M. Z. HODER
JELKA SAMSAR		JUB d.o.o.	2.ICE, PRAVNI SVET
BOJAN JUKIC		SG SGH B	VELIKI PR.
SLAVKO KOSIČ ŠKARJ		SG ŠG MB	DETELJ ANG
LEON SEMČAR		SG ŠG MB	VEITENJANG BEMSE
SPRIMO KOPAR		SG ŠG MB	VE PR. POUK
Denis Vrhovnik		ti-	ti-
MITJA GRISOVNIK		MITJA GRISOVNIK SP.	LASTNIK PODJETJA
BLAŽ HADVIČ		JUB d.o.o.	(MIL. SVET. MAG. GRAF)
MATIJAJ POTČENJ		Drošilo TENBOX	2. podzupnik

Mika Banjak	125	drusko TRUBOX	zastupnik
Vida CAPURER	91	113 d. o. o.	Demografski
GOR PIMA	91	ABS	colok
SPEKA uici	113	speka uici sp	ladak
MIHA AUG	113	F. LOZAROVIC d.o.o.	DIREKTOR
KATOWSKI IZAK	113	SLOVENSKO TOBOGERS IT TEMAJSKI 6	Pravni kon
ICRATS NIVAS	113	DRUŠTVO ZA TRATNO STVA KAZAN	ČLAN

BUILDING LIFE 15. 10. 2021	
Ime priimek	Podpis
Borjda Vili	_____
Rok Špenčija	_____
Klemen Pallo	_____
Lan Pelovnik	_____
ALEN PLAVŠTINEV	_____
Ma Skript	_____
Zan Parnaric	_____
Barbara Dohaj	_____
Rea B. BYTAKI	_____
Jim Šušl	_____
Zan Kozaric	_____
Ziga Berko	_____
Jure Deger	_____
Uroš Perko	_____
JAROB LUŠTJEK	_____
Janez Sinc	_____

Ime priimek	Podpis
Aleks Kozarac	<i>Aleks</i>
Gregor Urš	<i>Gregor</i>
Timi Kozma	<i>Timi</i>
Filip Simec	<i>Filip</i>
Urban Prazdnik	<i>Urban</i>
Gregor Obidnik	<i>Gregor</i>
Matjaž Turk	<i>Matjaž</i>
Filip Pesek	<i>Filip</i>
RENE GORZI	<i>Rene</i>
JUR KURČ	<i>Jur</i>
JAN PRODELNIK	<i>Jan</i>
ROK VALTE	<i>Rok</i>
Goj Robić	<i>Goj</i>
Peter Šušter	<i>Peter</i>

Ime priimek	Podpis
Emo Medić	Emo Medić
Rajza Horvatić	Rajza
Alma Vikić	Alma Vikić
Haral Zukić	Haral
Tijan Šturm	Tijan
Amara Ljubić	Amara Ljubić
Alma Ljubić	Alma Ljubić
Željka Horvatić	Željka Horvatić
Alma Ljubić	Alma Ljubić
Stanka Jukić	Stanka Jukić

5 November 2025, Ljubljana

Expert Meeting: Government Leadership

Date: 5 November 2025

Location: Austria Trend Hotel Ljubljana, Dunajska c. 154, 1000 Ljubljana

Room: Ara Hall

Duration: 15:45–19:30 (240 minutes)

Duration	Topic	Speaker
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15:45-16:00	Registration and Welcome	GBC Slovenija
16:00-17:00	Presentation of the project and survey results	GBC Slovenija
17:00 -18:00	Government Leadership Existence of mandatory regulations and/or performance requirements related to a national goal of zero carbon in buildings Existence of a National Energy Efficiency Policy or Strategy for the construction and operation of buildings Existence of a National Decarbonization Policy or Strategy for the construction sector and its value chain Availability of regulations aligned with zero carbon certification systems Existence of a National Climate Resilience Policy or Strategy for the construction sector and its value chain	dr. Iztok Kamenski, GBC Slovenija
18:00-18:15	Break	
18:15-19:30	Government Leadership in Sustainable Construction – Slovenian Interactive Workshop	dr. Iztok Kamenski, GBC Slovenija



SEZNAM udeležencev seminar Building Life 5.11.2025

Ime, Priimek	Podjetje	ZAPS	Podpis	Podpis
Tadej Pihler	Gradbeni inštitut ZRMK, d.o.o.			
Primož Gutman	Gradbeni inštitut ZRMK, d.o.o.	1439		
Lucijana Radošević Vrbic	Protim Ržišnik - Perc d.o.o.			
Šisernik Anže	Bureau Veritas d.o.o.			
Jure Judež	CELOVITO d.o.o.	PA-2359		
Mojca Gužić Trplan	Gužić Trplan d.o.o.	1096 PA PPN		
Gregor Trplan	Gužić Trplan d.o.o.	0895 PA PPN		

Primož Perko	FIBRAN doo		
Tadej Bogovič	Eutrip d.o.o.		
Nives Jeras	Društvo za sonaravno		
Levan Ekhvaia	DGNB		
Marko Markič	GBC Hrvaška		
Iztok Kamenski	GBC Slovenija		

6 November 2025, Ljubljana

Expert Meeting: Data and Finance

Date: 5 November 2025

Location: ZAG, Dimičeva ulica 12, 1000 Ljubljana

Duration: 8:00–11:30 (240 minutes)

Čas predavanja	Naslov predavanja	Predavatelj
8:00-8:15	Registration and Welcome	GBC Slovenija/ZAG
8:15-9:00	Presentation of the project and survey results	Dr Iztok kamenski GBC Slovenija
9:00-9:20	Digital passports and their relevance in the construction sector.	dr. Alenka Mauko Pranjić ZAG
9:20-9:40	Technological Digital Platform	Mag. Jelka Slatinšek JUB
9:40-10:50	Provide tools or databases for defining energy efficiency, embodied and operational carbon, and resilience goals for the construction sector Digital solutions for measurement, monitoring, control and automation of buildings such as BIM modeling, AI, 5G, and big data Data transparency to promote leadership,	Dr Iztok kamenski GBC Slovenija

	favor comparability, management and trust in the dissemination of results Interactive Workshop	
10:50-11:10	Shifting the focus from energy to building materials	Liina Länsiluoto (MSocS), Public Affairs Manager at Green Building Council Finland (FIGBC)
11:10-11:30	The role of energy efficiency, carbon neutrality, and building resilience in sustainability reporting.	izr.prof.dr. Marjana Šijanec Zavrl, univ.dipl.inž.grad. ZRMK
11:30-12:30	Guidelines for the verification and disclosure of climate risks to include in project economic models Linking energy efficiency, zero carbon and building resilience with ESG performance reporting frameworks and disclosure standards Capacity building in technical-financial analysis with a project life cycle approach and best practices considering climate mitigation and adaptation Interactive Workshop	Dr Iztok kamenski GBC Slovenija



Seznam udeležencev IZS- 9 trajnostne konference TOP CLeveR 6.11.2025

Ime in Priimek	Podjetje	IZS	podpis	podpis
Alojz Mohorčič		S-1472		
Andrej Voh	Studio NMV	G-3623		
Damijan Grudnik	ZIPEX d.o.o.	G-1733		
Jernej Mrzelj	GORENJSKA GRADBENA DRUŽBA D.D.	IZS G-2185		
Marko Miklavac	Marko Miklavac s.p.	E-1014		
Matevž Podbreznik	Ventitehna d.o.o.	4810		
Milan Prša	MP inženiring, Marko Prša s.p.	G-1305		
Miloš Kmetič	Xella porobeton SI	G-4423		
Mirko Križaj	AS TEPROM d.o.o.	PIG-2371		
Nada Radonjić		T-0384		
Peter Petrovčič	EnSvet-EKO sklad	S-1813		
Petra Krištof	Pošta Slovenije d.o.o.	G-3581		
Petra Marinšek	STUDIO RUMENA D.O.O.	PA 1631		
Tomaž Peternel	Lumar IG d.o.o.	G 2922		
Vladimir Dragorajac	Vladimir Dragorajac sp	G-2045		

Seznam udeležencev IZS- 9 trajnostne konference TOP CLeveR 6.11.2025

HAJANA ŠIJANEC ZAORL	GI ŽRMK	G-1169		
PRIMOŽ PRAPER	EUTRIP	G-2185		

Seznam udeležencev (brez) 9 trajnostne konference TOP CLeveR 6.11.2025

Ime in priimek	Podjetje	Podpis
Alenka Mauko Pranič	ZAG	
Anja Kodrič	ZAG	
Anže Sisernik	Bureau Veritas d.o.o.	
Črtomir Kurnik	LEAG	
Emir Jelkić	Studio.a+v, d.o.o.	
Gregor Ožbolt	OMID d.o.o.	
Jelka Slatinšek	JUB d.o.o.	
Jeras Nives	Društvo za sonaravni razvoj	
Kamenski Iztok	GBC Slovenija	
Levan Ekhvaia	DGNB	
Marjana Šijanec Zavrtl	ZRMK	
Marko Aljaž	TEDI d.o.o.	
Marko Markić	GBC Hrvaška	
Nena Lamut	Arhive d.o.o.	
Nevenka Kosec	Inšpektorat RS za stanovanja	
Peter Bandelj	AluKönigStahl Slovenija	
Primož Perko	Fibran d.o.o.	

PA 2185 + Petra Marinšek PA 1631

Primož Praper	EUTRIP, d.o.o.	
HAJANA ŠIJANEC ZAORL	ZAG	
ANDREJ BOGOVIČ	EUTRIP, d.o.o.	



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Seznam udeležencev ZAPS -9 trajnostne konference TOP Clever 6.11.2025				
Ime in Priimek	Podjetje	ZAPS	podpis	podpis
Andreja Čučkovič	Abz projekt, Andreja Čučkovič s.p.	ZAPS 1017PA		
Anže Koren	Studio.a+v, d.o.o.	ZAPS 1866		
Leni Pernar	MNVP	ZAPS 1148 A		
Miha Vehovar	Arhive d.o.o.	ZAPS 1950		
Mirza Eminagić	ALTO DESIGN STUDIO d.o.o.	ZAPS PA PPN 0482		
Petra Ostanek	BALKON arhitektura d.o.o.	ZAPS 1238 PA PPN		
Romeo Zalokar Miklič	Petrol d.d. Ljubljana	ZAPS 1298		
Srečko Kreitmayer	Studio Kreitmayer d.o.o.	ZAPS 0524		
Tanisa Sterlekar Benulić	Studio 2B d.o.o.	ZAPS PA-PPN-0416		
EMIL JELIČ	STUDIO A+V	PA 2133		
TERZA MARINSEK	Studio Ljubljana d.o.o.	PA 1634		