

# SUSTAINABLE INVESTMENT

NEW HORIZONS IN  
THE CONSTRUCTION  
INDUSTRY

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PROPERTY  
CERTIFICATIONS

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DISCUSSION:  
SUSTAINABILITY ASPECTS  
IN PLANNING AND  
CONSTRUCTION

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## PUBLICATION INFORMATION

Media proprietor: Zentrale Raiffeisen Werbung  
A-1030 Vienna, Am Stadtpark  
Published and created by: Raiffeisen Kapitalanlage GmbH  
Mooslackengasse 12, A-1190 Vienna  
Responsible for the content: Raiffeisen Kapitalanlage GmbH  
Mooslackengasse 12, A-1190 Vienna

[www.rcm.at/nachhaltigkeit](http://www.rcm.at/nachhaltigkeit)

General orientation: Information on the topics of investment funds, securities, capital markets, and investment; additional information pursuant to the Austrian Media Act can be found in the publication information at [www.rcm.at](http://www.rcm.at).

Project coordination: Irene Fragner, Sabine Macha  
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Photos: iStockphoto (p. 06, p. 15, p. 22, p. 27)  
Delta, Andreas Hafenscher; private, Roland Rudolph (p. 12, p. 14)  
Raiffeisen KAG (p. 03, p. 05, p. 09, p. 11, p. 12, p. 15, p. 19, p. 20, p. 25, p. 29)  
Graphic design: [WORX] Multimedia Consulting GmbH

Editorial deadline: 23 October 2023

This is a marketing communication of Raiffeisen Kapitalanlage GmbH.

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# PREFACE



**Dieter Aigner**

Managing Director of Raiffeisen KAG,  
responsible for fund management and  
sustainability

*Dear Readers,*

According to a UN report, 38% of global carbon emissions stem from the construction and building industry. That is a very high share and it means that extraordinary efforts are needed to make the building stock climate-neutral by 2050. The political will to do so is there. In its Green Deal, for example, the European Commission announced a significant increase in investments to improve the energy efficiency of buildings, since currently around 35% of buildings are older than 50 years and 75% are considered to be energy-inefficient. With a renovation initiative, the EU wants to invest an additional EUR 275 billion annually in this area up until 2030. These are enormous sums of money. They also underline the huge investment opportunities in various sectors, because, among others, industrial and IT companies active in fields such as

thermal insulation, or electrical and digital building infrastructure will profit from this initiative. Along with reducing carbon emissions, this initiative should also help to create new jobs.

Outside of politics, we have a myriad of players in the construction and building industry, such as clients, architects, property developers, construction companies, scientists, and many other stakeholders. The decisions they make also have and will continue to have a great impact on whether we are able to significantly reduce carbon emissions from the construction sector and the building stock. There's no need to constantly reinvent the wheel, and bonds issued by construction clients from the past can also support sustainability and a good climate. For instance, the building physics of thick walls in old

brick buildings create a good interior climate and the deep window inset provides natural shading. In any case, everyone involved in construction and building needs to be planning and implementing measures that improve sustainability.

The financial industry is also part of this great undertaking. It must support the industry in this process of change, promote the circular economy, and temporarily withhold capital from companies that have not yet recognised the need for a new paradigm. It is also vital to maintain and initiate dialogue with companies, working cooperatively together to reduce the industry's ecological footprint. Sustainable investment 2.0 means investing responsibly in the future and moving forward together on the path of transforming the built environment.

# NEW HORIZONS IN THE CONSTRUCTION

## CHALLENGES AND

Predicting the future based on past events is something of an Olympic sport among investors, as it can lead to the timely recognition of trends, promising business areas, and the challenges of the future. When it comes to assessing the sustainability of buildings and the construction industry, it is important to analyse all of the opportunities and challenges in this very diverse area.

In order to arrive at a solid ESG assessment of buildings, all of the components have to be taken into consideration, from the beginning of a structure's lifecycle until its demolition. This includes the selection of building materials, utilisation of the building, aspects of the circular economy, and dismantling. Ultimately, as with the sustainability assessment of so many other investment goods, the situation is rarely black and white when it comes to what is "green". For example, some emissions-intensive construction materials have very long lifecycles and cannot be substituted in many projects. You can't build wind farms without cement. Nevertheless, it is possible and necessary to improve sustainability in construction, while at the same time not losing sight of the "big picture".

### MORE AND MORE DEMAND FOR BUILDINGS

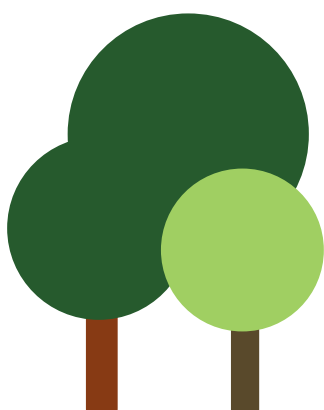
A number of trends suggest that demand for residential space is increasing. A growing population needs more room to live. Additionally, families are becoming smaller and more people are living alone. Urbanisation and de-

mographic change are also driving demand for housing. Cities are growing and the trend towards more residential space per capita is also rising. As a result of all of these factors, there is more and more construction activity. According to Statistics Austria, in 2012 housing completions amounted to around 50,000 new dwellings per year; with this figure climbing to roughly 70,000 by 2021, and the trend is accelerating. Viewed from an investor perspective, all of this indicates a growing sector.

Residential buildings promote good social cohesion and contribute strongly to people's sense of well-being. Suitable housing is a basic need for everyone and thus also represents an important contribution to fighting poverty. Along with residential construction, a large portion of the available construction resources are also used for industry, infrastructure, and administration. Economic growth and ensuring prosperity are also driving forces in the construction industry.

### ENVIRONMENTAL IMPACTS

Erecting buildings, however, generates a »



# INDUSTRY: OPPORTUNITIES FOR INVESTORS



**Mathias Zwiefelhofer**  
Sustainability Office  
at Raiffeisen KAG

number of problems. First and foremost: high carbon emissions. The construction of a conventional masonry house generates approximately 40 tonnes of CO<sub>2</sub> emissions. Scaling this figure up to the European level, the construction industry alone accounts for 9.4% of domestic carbon emissions, and this does not even include the environmental impacts of the subsequent use phase. Around 40% of the energy consumption in the European Union can be traced back to the use of buildings and 38% of global carbon emissions stem from buildings. With due consideration of these challenges, the EU initiative “Fit for 55” requires that all new structures must be zero-emissions buildings by 2030 and that all existing buildings must be turned into zero-emissions ones by 2050. In light of these figures, it is important to look for alternative construction materials. Because one of the most common and cheapest materials is concrete.

## CONCRETE AS A PROBLEM

To use concrete as a building material, you need a binder: cement. Above and beyond this, reinforcing steel bar is also needed for masonry construction. These materials are usually used on the basis of cost considerations, but they have a particularly negative impact on a building's emissions footprint.

The substantial emissions are not the only problem. New structures and the related road construction are the biggest factors be-

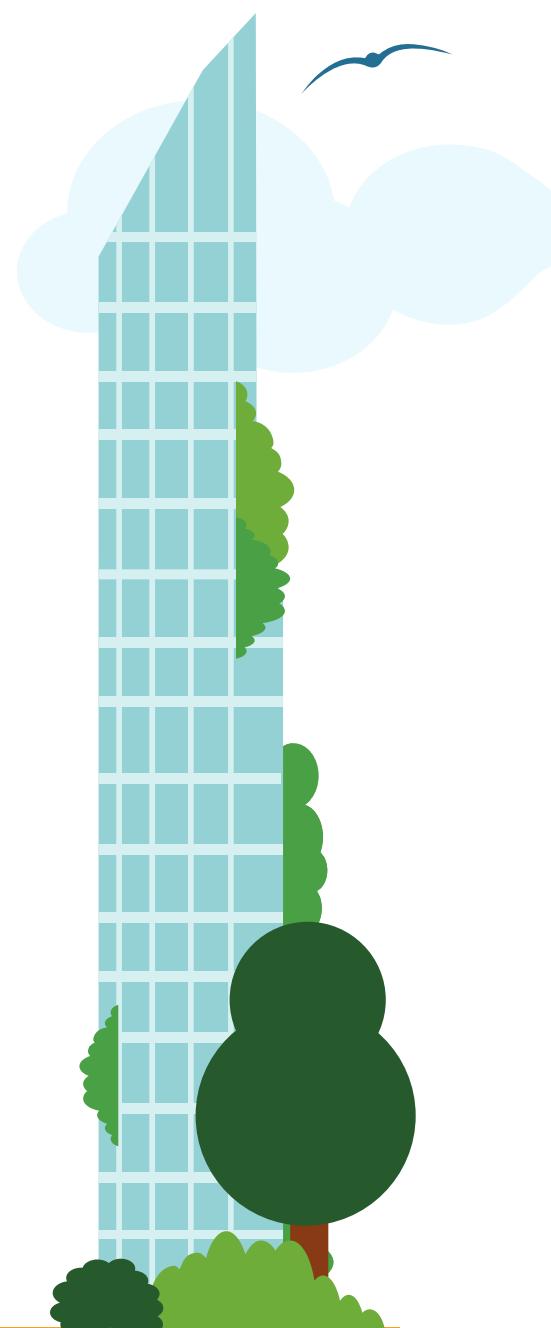
hind soil sealing. Once the soil is sealed, it is very difficult to return it to normal conditions, and this has wide-ranging consequences, as biodiversity is reduced and ecosystems are destroyed.

## SOIL SEALING

Soil sealing also leads to higher temperatures, which results in more hot days and tropical nights. That is the reason, for example, that an outdoor temperature of 30 degrees Celsius feels much warmer in Vienna than it does in more rural areas. Not only is CO<sub>2</sub> emitted directly by construction projects, due to the lack of green areas less photosynthesis, i.e. the transformation of carbon dioxide into oxygen, also takes place. From 1995 to 2021, there was a 53% increase in developed settlement area in Austria, while the population only rose by 12%. As a result, Austria is permanently losing around 0.5% of its agricultural land every year.

## WASTE CONSTRUCTION RUBBLE

Waste is also produced where resources are used. The construction industry is responsible for much of the waste generated at the global level. The demolition of buildings literally results in mountains of construction rubble. In terms of waste generation within the EU, the construction industry tops the table with a share of 36%, and a large part of this waste goes »



NEW HORIZONS  
IN THE  
CONSTRUCTION  
DELIVERY



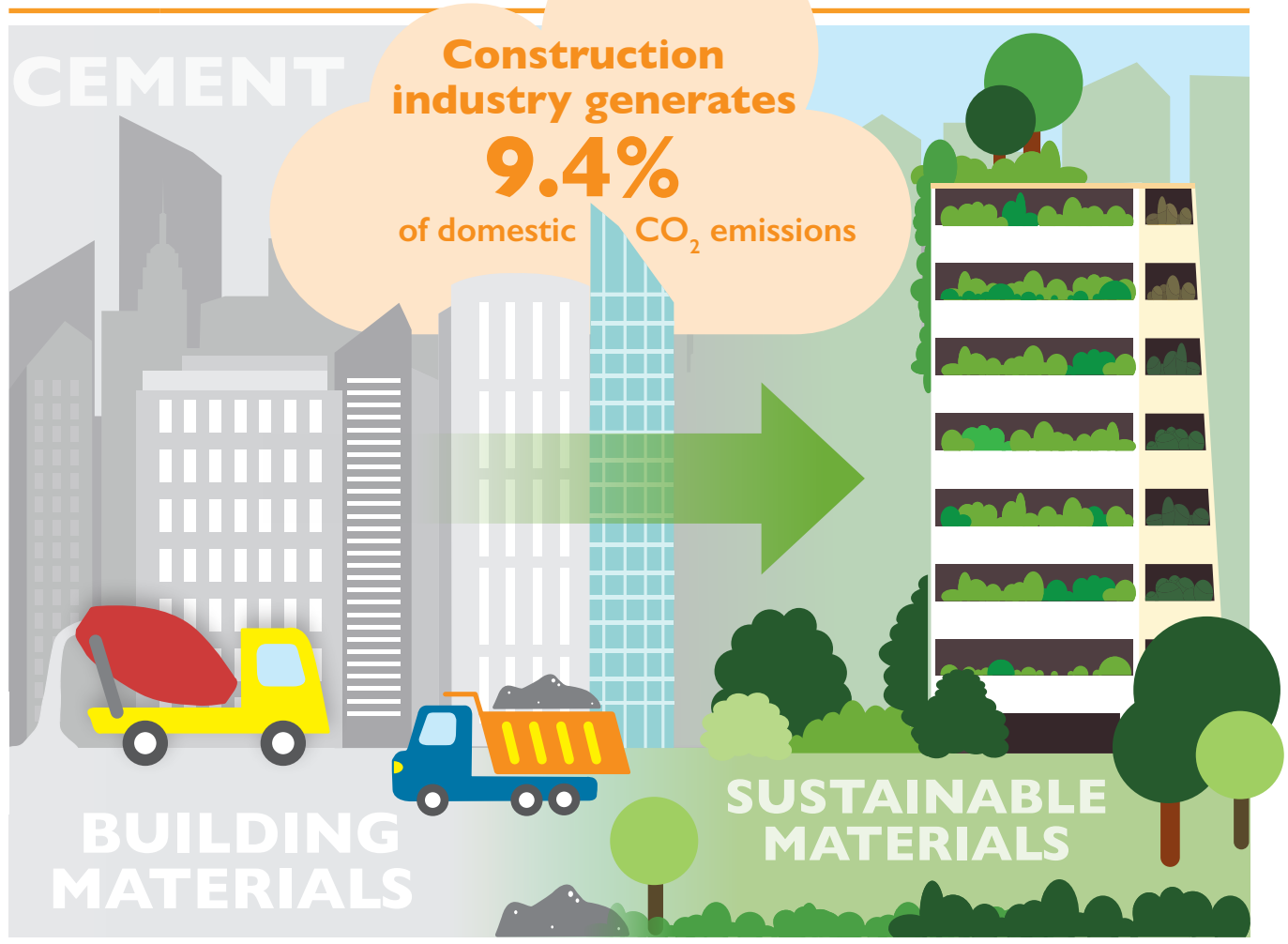
into landfills. This in turns involves travelling long distances and more soil sealing. Recycling options for construction materials vary widely, but fundamentally there is still great potential in this field. For instance, the share of construction waste recycling in Germany is quite high, at 75%. Considerable opportunities are also avail-

able in other aspects of the circular economy, such as the reuse of construction materials and durability.

### CONSTRUCTION IN THE FUTURE

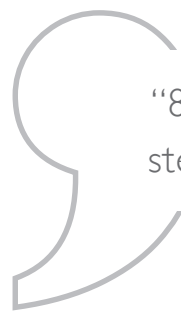
The wide-ranging sustainability risks in the building industry »

Chart: Environmental impacts



Source: Raiffeisen Kapitalanlage-Gesellschaft m.b.H. 2023

## NEW HORIZONS IN THE CONSTRUCTION DELIVERY



“8% of global carbon emissions stem from cement production.”

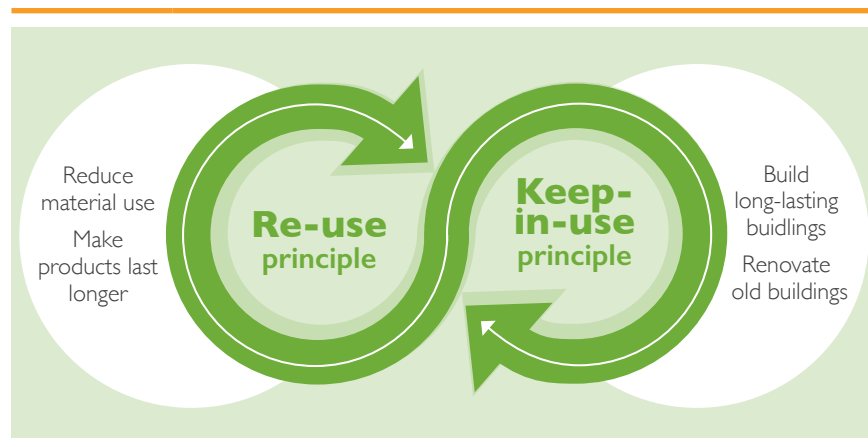
must addressed in a variety of ways. Technical innovation should integrate circular economy aspects and the ideal selection of construction materials. Pragmatic solutions are needed, and a construction industry that is fit for the future can only be created by combining different measures. The most important aspect is the selection of the best construction material. Concrete and cement are irreplaceable for the energy transition (cf. wind turbines, hydroelectric plants, etc.). However, from a sustainability perspective, these materials are no longer the best option for private residential construction and new public structures. Solid wood solutions or brick masonry are practical alternatives for many building purposes, even though concrete is currently still cheaper.

With “green” construction, the focus is on sustainable materials without toxic problems, that are biodegradable, recyclable, and sustainable, and which are available and transportable at the regional level when possible.

### CIRCULAR ECONOMY

The circular economy brings great hopes for a turnaround in the construction industry and involves much more than just recycling. Aspects related to the circular economy must already be taken into account during the planning stage of a project. The circular economy is very important if the goal is to make construction materials reuseable in the event of later dismantling. In this regard, the principle of re-use can be a game changer, because from the planning phase through to construction there are numerous possibili- »

Chart: Circular economy in the construction industry





ties to reduce the use of materials and make products last longer. The principle of “keep in use” is also very important. Long-lasting buildings reduce the amount of soil sealing and the use of resources; and old structures can be given a new lease on life with renovation. It is vital to keep buildings, building components, and materials in use as long as possible and to recycle them at a high level of value. In line with this, the reconstruction and renovation of existing buildings is a very promising option as a way to integrate sustainability into the construction industry.

The renovation of buildings not only increases the lifespan of real estate, it also helps to improve energy efficiency and reduce the consumption of resources. Energy-optimised new structures are particularly important from a sustainability perspective. However, existing buildings also need to be considered if one is to take a holistic view of sustainability in this industry. In an ideal case, there would only be energy-efficient, perfectly sealed buildings. In reality, however, this is generally not the case, and old buildings can often only be restored to new, sustainable glory through cost-intensive renovation work.

More at  
[www.rcm.at/kreislaufwirtschaft](http://www.rcm.at/kreislaufwirtschaft)

## CONSTRUCTION MATERIAL CEMENT

Thanks to its tried and trusted track record, cement is the standard binding agent of choice in the construction industry. However, over its entire lifecycle, this material has its drawbacks: First, it takes a lot of energy to make so-called reactive cement clinker, which is produced by heating limestone to 1,450 degrees Celsius. In the future, it will be possible to reduce this energy consumption through technical optimisation, and in an ideal situation the production facilities would be operated using renewable energy. Second, the chemical process involved in firing the limestone generates large amount of CO<sub>2</sub>, which accounts for around two-thirds of the emissions.

The cement industry’s solutions to reduce emissions are to partially substitute the clinker with additives such as blastfurnace sand or fly ash, but these materials are only available in limited quantities and also generate carbon emissions, or alternatively to separate the carbon dioxide that is produced and sequester it in under



**Alexander Toth**  
Fund Manager  
at Raiffeisen KAG

ground storage facilities. Concrete rubble generated from the demolition of buildings is generally “re-used” as a filler, but this is not a closed-cycle solution. Accordingly, in the future concrete should only be used very selectively and in long-term applications, for which there are currently no technical alternatives.

When discussing concrete as a construction material, it is also necessary to take into account the reinforcing steel used to provide tensile strength, as this is also the basis for technical progress like other industrial metals. Steel has good recycling properties, as this metal can be reused as often as desired and can be recycled without quality loss using far less energy than needed for new production.

## SUSTAINABILITY CERTIFICATES FOR PROPERTIES

# PROPERTY CERTIFICATIONS

The definition of clear, comprehensible standards should contribute to a high level of objectivity and transparency. On the one hand, independent certification can strengthen the awareness of sustainability issues, and on the other hand it makes it easier for building users (tenants, for example) and investors to identify sustainable properties.

The most commonly found certifications are those issued by the providers LEED, BREEAM, and DGNB/ÖGNI, while the klimaaktiv certification is frequently used within Austria. The large providers certify both new buildings and existing structures (according to different criteria), and distinctions are also made between different utilisation profiles.

The following certifications are found most commonly on the European real estate markets. It should also be noted that each certification has different focal points or different emphasis in various areas (such as environmental, social, and economic aspects).

## klimaaktiv



The klimaaktiv certification is an initiative of the Ministry of Climate Action, Environment, Energy, Mobility, Innovation, and Technology, and is part of the Austrian climate strategy. This programme promotes sustainable construction and renovation, the use of renewable energy, energy conservation, and

Sustainability certifications for properties are intended to help real estate companies to develop, maintain, manage, and in some cases reposition their properties in a sustainable manner, by promoting environmentally and socially sustainable practices, ideally over the entire lifecycle of a property.

mobility. The klimaaktiv building standard offers various levels of certification (Bronze, Silver, Gold) for buildings, concentrating on infrastructure quality, high energy efficiency, the use of renewable energy, the utilisation of environmentally-friendly materials, and thermal comfort.

**bauXund**  
forschung und beratung gmbh

bauXund schadstoffgeprüft is another Austrian certification system that focuses on building materials. This certification is awarded to buildings whose chemical and product management aspects are assessed in an in-depth review and which are erected in accordance with environmentally-sound construction requirements. The results are also checked by way of interior air sampling.

**DGNB System**

In addition to ecological and social aspects, the certification system of the German

Sustainable Building Council (DGNB, Deutsche Gesellschaft für Nachhaltiges Bauen) also takes into account economic factors, assessing, among other things, energy and resource efficiency, ecological and technical quality, and user-friendliness. It offers several certification levels (Bronze, Silver, Gold, Platinum), as well as special certifications such as DGNB Diamond (for outstanding design quality) or ÖGNI Crystal (for outstanding social sustainability). It is also possible to obtain certifications for entire neighbourhoods that are planned and implemented with sustainability in mind.



In Austria, buildings are certified by the Austrian Sustainable Building Council (ÖGNI).

### LEED

The LEED certification system (Leadership in Energy and Environmental Design) »



**Christoph Drdla**  
Transaction Manager at  
Raiffeisen Immobilien KAG

was developed by the U.S. Green Building Council (USGBC). It establishes standards for energy-efficient, environmental-sound, sustainable buildings. Here again, there are several certification levels (Certified, Silver, Gold, Platinum) and various criteria are assessed, such as environmental performance, water efficiency, energy efficiency, materials and use of resources, interior quality, and innovation. As it often references US standards, it is mainly found in the USA, or used when US tenants lease larger areas.

## BREEAM

The BREEAM programme (Building Research Establishment Environmental Assessment Method) was developed in the United Kingdom and assesses buildings in terms of their ecological, social, and economic sustainability on the basis of criteria such as energy, water, materials, health, and well-being. The certification levels range from acceptable, satisfactory, good, and very good to excellent. In the German-speaking area, the certifications are issued by the organisation TÜV Süd.



HQE (Haute Qualité Environnementale) is a French sustainability certification, which is also fundamentally applicable at the international level as well. It is used for buildings under construction or in use, as well as sustainable neighbourhoods and infrastructure. The main focal points are environment, quality of life, economic viability, and responsible management. The certification levels are Good, Very Good, Excellent, and Outstanding.







WELL is a building certification that concentrates on the human health and well-being of building occupants. This system focuses strongly on the interior spaces

of a property, which are assessed in terms of the following ten categories: air quality, water quality, nourishment, visual comfort, movement, thermal comfort, interior and building acoustics, low-emissions and resource-efficient construction materials, satisfaction, community, and innovation. Again, the certification levels range from Bronze, Silver, and Gold to Platinum.

One common feature of all of the building certifications is that the sustainability aspects of a property are analysed by independent third parties and documented in accordance with a standardised assessment system, generally featuring several different quality levels (such as Bronze, Silver, Gold, etc.). Some of the certifications (such as WELL and bauXund) consciously focus on individual subcomponent aspects, while others take a broad, holistic approach to the topic of sustainability and also consider economic criteria (such as DGNB for example).

Since the EU Taxonomy Regulation entered into force, some of the providers listed above also perform reviews of real estate for conformity with the Taxonomy. The EU Taxonomy is a classification system for economic activities which make significant contributions to the achievement of defined environmental objectives. One can expect that this topic will receive greater attention in the future in relation to property certifications and that, over the medium term, these two kinds of assessments will overlap or even merge together.

**Chart: Certification level, based on the example of DGNB**

				
	PLATIN	GOLD	SILBER	BRONZE*
Total score	from 80%	from 65%	from 50%	from 35%
Minimum score	65%	50%	35%	–%

Source: DGNB

\* This level is only available for certification of existing structures or for the certification "Building Operations".



Moderated by  
Dieter Aigner,  
Managing Director of  
Raiffeisen KAG



## Round-table discussion on the integration of sustainability aspects in planning and construction



**Marc Guido Höhne**  
Managing Director, Delta Projektconsult  
Wien



**Johann Marchner**  
Managing Director, Wienerberger  
Österreich



**Karin Stieldorf**  
Technical University Wien,  
Institute for Building Construction



**Alexander Toth**  
Raiffeisen KAG

*For many decades, speed, profit, and efficiency were the key factors in the construction industry. Is the focus now shifting more towards ESG?*

**Marc Höhne:** The topic on everyone's minds right now is energy, obviously also as a result of the war and the related energy crisis. In particular, the goal is to reduce primary energy consumption, amongst other things by using more renewable energy. Naturally, in relation to this, it is also important to achieve much higher energy efficiency for buildings, because otherwise it doesn't do any good. With modern buildings, this is not the major challenge and there are solutions, but there are significant difficulties with older buildings. And when we talk about energy production, we mean using geothermal and solar. In this regard, however, the options are very, very limited when inner-city areas are involved, where the rooftops and lots are very small. So, what can one do? What we see is that a lot of our customers think that all they need to do is check off 5 points on a list of 10 checkpoints and then they're done. If it was that easy, we wouldn't all be constantly working on this topic. In our experience, it's ultimately a combination of different measures that leads to success. And for every project, it might be a similar solution, but it's really never exactly the same one. So, a lot of time and energy has to be invested in every project to really find the right solutions, with the right cost-benefit ratio.

*Are your customers open to more sustainability in their construction projects?*

**Marc Höhne:** Unfortunately, I have to say that many of them simply don't understand why it is so difficult. And now, with energy prices lower again, the question arises as to whether the measures taken are the right solution from a long-term perspective. In particular, when I am working with industrial customers and we have a depreciation period of more than four years, then the topic is irrelevant anyway. There is no further discussion about it. And even though properties in the industrial sector play a major role, the emphasis is often on the core business, while the property itself is a secondary consideration. Of course, very different approaches are taken by property owners. The big institutional players have had this topic on their radar for the last three or four years. They are well prepared and have at least a rough idea of what they want to achieve, and that's important. On the other hand, I still run into plenty of public sector housing developers who are just getting started and have not formulated any strategy at all about how they want to approach this topic. They are still in the dark. In our opinion, it is currently extremely important to raise awareness about this topic, in order to point out the criteria and the ways they can move towards more sustainability. Sometimes they are simply overwhelmed by the variety of options. Unfortunately, when they don't have a strategy it's often the case that they immediately focus on what they »

# “ESTABLISH THE PRINCIPLES AT AN EARLY STAGE”

think has the biggest impact on the climate. Instead of doing exactly the opposite: looking at what is easiest to implement. And where they can achieve the biggest impact with small, focused measures. To some degree, there is a lack of orientation about how to handle the subject of sustainability and how to expand the horizon.

**Ms Stieldorf, you're head of the programme “Sustainable Building” at the Technical University of Vienna. What is your experience of this paradigm change, if it is indeed one, and where do you still see deficits?**

**Karin Stieldorf:** Our programme provides a very good overview of this subject. We've recently seen a shift that is very exciting. In the past, participants were mainly interested in supplementing their existing knowledge of the subject. Now, we have a lot of young academics and architects who want to expand their knowledge and work together more confidently with property developers. They don't want to get bogged down in discussions; they want to be able to present solid arguments. In principle, I think this is a great basis. In my opinion, I think it is really important to reach a consensus on the criteria for sustainable construction, so we don't end up saying, “Well, I have my focus, and you have yours”. That was pretty typical in the past. An architect designed a building and then said, “OK, I'll pass this on to the structural engineer now, and this on to the construction engineer, and this on to the building physics engineer, and they can

figure out if the building works or not.” This is just not the way it works anymore. Even at the planning stage, I have to know that the project is moving in the right direction and won't have to be scrapped in the end. Networked thinking has become a very important goal. And because construction is a highly diverse field, this ranges from regional planning and urban planning all the way to details such as considering what construction materials to use. Ultimately, however, the first decision at the start of the planning process is whether I want to build using wood, concrete, straw, other regenerative materials, or out of bricks. Every construction material is justified, if it is used correctly in the right location and is the best solution there. Networked thinking, from very large to very small dimensions, is important. But the location is also crucial for finding the right solution, in regional, topographical and geographical terms.

**Will wood, loam, and straw play a bigger role in the future?**

**Karin Stieldorf:** One of the things we focus on is the construction and renovation of historical loam structures. But things change, and loam will have to be used differently in the future on order to be economically successful. For this to happen, a new approach is needed in terms of production. This may also include how the connection with insulation looks. The traditional insulation material in loam construction was straw, but I can't really imagine the mix of

straw and loam being used in new buildings in the future. However, you can use straw mats, which work well as an insulation material. A lot of research remains to be done for loam construction to be economically and ecologically successful, so that it is also finally accepted. There also needs to be some development in terms of design. And of course, people's awareness and understanding needs to be enhanced, so that they accept buildings that are made of loam.

**Mr Marchner, as managing director of the world's leading brick manufacturer Wienerberger – what do you think about buildings made out of loam?**

**Johann Marchner:** I'd like to emphasise that we already have everything we need for sustainable construction: there is no need to really invent anything new. We simply have to define our requirements for the buildings and their utilisation. If we decide to go with loam construction, then we just have to accept that certain applications and requirements are not possible. For instance, with a normal wall thickness, you just won't be able to hang kitchen cupboards on the wall. We have to be clear about our expectations for each individual structural unit. The only reason for this is that we always try to plan each building individually, from the ground up. If you look at the automotive industry though, you can see that it uses platforms. And then it builds variants based on these platforms, thousands of variants on an individual platform. But we are always trying »

to invent each building new every time. This results in more work and higher costs.

***What strategies are you pursuing to make your products more suitable for a sustainable construction industry?***

**Johann Marchner:** Sustainability is a highly motivating topic for us. And two big parts of this issue are energy and CO<sub>2</sub>. At the same time, I have to say that up to now we have not faced any supply problems or any problems with energy costs, because we have long-term contracts and thus we are not impacted by the fluctuations. But it is clear that manufacturing bricks still results in carbon dioxide emissions, because on the one hand we use natural gas and on the other hand as a raw material clay contains dolomite or carbonate, for example. Of course, if I take a look at the Ringstraße in Vienna, it's clear that masonry buildings last 100, 150 or even 200 years, and so they are sustainable simply based on their lifespan. And if you compare the energy data for an old brick building with an identical structure built with modern construction techniques, you often find that the old building substantially outperforms the new one in terms of energy efficiency. If we do not attempt to distort things that are dictated by building physics, then we have everything we need to be able to build sustainably. And of course, it's a question of transparency as well. While people are happy to say that wood is an environmentally-friendly building material, they

don't ask where the wood comes from. It's really important to get the whole story.

***How are you working to make brick an environmentally-sound building material?***

**Johann Marchner:** We are building the world's first-ever carbon-free brick factory in Uttendorf right now, which doesn't use fossil gas; it only uses green electricity. The plant is already under construction. This means that in the future there will be a brick that essentially has no carbon footprint from production. I can only underline what Ms Stieldorf said: the point is to work together, frankly, so that we can achieve results together and not make our plans without people. First of all, we all have the responsibility to be transparent with the figures, data, and facts, and secondly we have to make the lifecycle of the building the centre of attention. For us, sustainability is something that we are putting in practice. For decades now we have only used green electricity for our production. We are rehabilitating our quarries and our clay mines. Not just because of the legal regulations, but because biodiversity is a key topic for us. And of course, we are working to conserve the raw materials as much as possible and to fire them with the highest possible level of energy efficiency. For several years now, many of our companies have been using construction rubble as a valuable source of material. We are also producing locally; our value chain is rooted locally, and the

transport routes are short. And if we are also able to decarbonise our production process, then I think that bricks can beat practically any other construction material in terms of the ecological footprint.

***What is the investor perspective on this topic?***

**Alexander Toth:** If one looks at the global carbon footprint of the construction sector, cement accounts for around 8% of it. That is very high. Of course, we are interested in identifying which innovations can help to reduce this ratio, and what technical options there to press forward with the transformation of this sector. And there are a large number of very small components involved. Technology plays a major role. As for the materials themselves, a lot of work has already been done in the field of producing cement and clinker. Production has already become a lot more sustainable and some of it can be substituted. But when we are talking about substitution, we quickly arrive at the issue of the regulatory framework, which only allows certain qualities for specific applications. And if I have to take delivery of different batches of concrete and pre-mixed concrete, it quickly become difficult if not impossible to get any work done.

***What innovative developments play a role in this regard?***

**Alexander Toth:** The big solution that is currently a topic aims at net zero by 2050. This means that unavoidable carbon emis- »

Discussion with Marc Höhne, Johann Marchner, Karin Stieldorf, and Alexander Toth



sions will have to be used elsewhere or extracted from the air. Carbon capture may then become a major issue, and there is already a lot of capital flowing into this area. It would be great if cement were only used where it is necessary, for certain construction projects such as hydroelectric power plants or other special applications. Possible future alternatives to cement are naturally also interesting for investors. And the topic of energy is very interesting. Because in Europe a large amount of energy resources are pumped into buildings, and this could be significantly lowered, for example with recuperation. Water consumption could also be lowered. From an investment perspective, building engineering is also a major area of interest. Along with smart cities: How is it possible to shorten transport routes? How can resources be used more optimally? Everywhere you look, development and innovation are driving forces. And our focus is always on things that can be measured. In this regard, not everything can be measured in quantitative terms; you also need qualitative assessments from experts within the field. For orientation, we use the data that the companies provide to use, and the answers that we get directly from the companies in dialogue as part of our shareholder engagement activities.

**Is it true that renovation beats new construction when it comes to sustainability?**

**Marc Höhne:** There is always going to be

new construction. I am sure of that. What's more important is that we really need to significantly increase the renovation rate from the current level of 1%. We have to get to 3–4%. Otherwise, we won't come even close to achieving the EU's climate targets, because too much of our existing stock of buildings is just too energy-inefficient. As for new construction, careful use of resources is the key point, in particular that we prioritise the selection of building sites completely differently than we have in the past. It's simply the case that far too much is done backwards when it comes to zoning. For instance, I think it is sad that the city of Vienna is rezoning really excellent agricultural land in Rothneusiedl for construction purposes. The use of other brownfield sites in Vienna and the vicinity would be a better alternative. What's really important for me, and this brings me to the investor perspective is that brownfield investment should always be preferred over greenfield investment. Greenfield sites should only be an option if certain conditions are met, for example unproductive soils that can no longer be used. Every single square metre of land that is sealed is just one too many.

**What role does the circular economy play in the construction industry?**

**Marc Höhne:** I've been studying the subject of the circular economy for more than eight years now. Unfortunately, we are still really just at the very beginning in this field. Out

of a 100-km race, we've maybe run five. If that much. The main reason for this is that the stakeholders in the construction industry are not yet cooperating with each other strongly when it comes to manufacturing their materials and components. Many of them are too focused on their own little market niches. There needs to be a lot more communication with each other. After all, what is the circular economy about? We want to reuse materials, but not in a downcycling process, for example that I crush concrete after demolition and then use it as foundation layer for infrastructure construction. The idea is to reuse the component, i.e. the material, in a kind of upcycling, in the condition it was before. And right now there is simply not enough of this. There are good approaches, but I think there is too little sharing among the parties; for instance, when we ask our clients to consider standardised, modularised technologies, a lot of them are not willing to pay the additional costs in the planning phase and/or to do the development work as first movers.

**How would it be possible to improve or initiate communication?**

**Marc Höhne:** There just have to be forums where the various stakeholders can exchange ideas. And the legislator also needs to be involved. Because a lot of the aspects of the circular economy are well-intentioned, but they can't be im- »

## ROUND- TABLE- DISCUSSION

plemented due to legal regulations. For instance, if I want to reuse an insulation board from an existing building, sometimes I am not allowed to do that. I am forced to dispose of it. The stakeholders involved have to talk to each other and there has to be an understanding that things have to change. This extends deep into the regulatory framework. If we apply some of the current standards and interpretations, then some of our buildings are just simply overdimensioned, in terms of the technical aspects. We clearly have to move in the opposite direction. When it comes to designing technical facilities, sometimes we only need 40 to 50% compared to the standard, in order to be able to operate economically. So, there's a very wide range of factors at play, and they all have to be addressed in parallel.

**Ms Stieldorf, I guess you agree?**

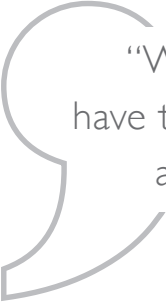
**Karin Stieldorf:** Yes. But for me, what's missing from this is the climate. When we look at which building materials are being used where, we can see that a lot more wood is used in western Austria. This makes sense too, because the higher up I am, the fewer problems I have with summer conditions. In the eastern part of Austria, wood does not have such a strong tradition in building, and I just need more mass to make buildings fit for summer. We have done a lot of research on this issue and developed some solutions. One example, which I really like for multi-floor residential buildings, is so-called "space-

frame" construction. This is essentially a framework with concrete floors, that can have quite large spans and can also be activated. This is a big advantage. I could also use recycled concrete for this. It results in a load-bearing structure which has a long lifespan and can be adapted all around, inside and out, to the needs of the local climate or the local building characteristics. Between the load-bearing elements, I can use wood, I can build it myself, or of course I can also use brick masonry. Ultimately, I have a long-lasting load-bearing structure, which is surrounded by more flexible, replaceable components. This is really a sustainable approach.

**What role does the circular economy play at Wienerberger?**

**Johann Marchner:** For a long time, construction just consisted of putting one stone on top of the other. But nowadays we have five plants manufacturing prefabricated brick components in Austria to make it easier for people on construction sites and to save time. But aside from bricks, there is no construction material that works completely on its own, and I think I pretty much know them all. Wienerberger is currently building the project Wildgarten at the Rosenhügel, which has eight stories. It's monolithic construction, using only brick masonry. It can be completely dismantled at the end of the lifecycle. The principle, a well-known, large property developer, is building it like this, because it will retain ownership. And it knows what it is doing, »





“With regard to the circular economy, we will have to pay a lot more attention to the selection and management of construction materials.”

because this building will have significantly lower maintenance costs, at least for the walls. It's this kind of thing that demonstrates that we don't need to invent anything new. What we need to do is bring all of the stakeholders together to make more progress with sustainable building.

In Vienna's Seestadt district, we are erecting a structure based on a 10-year old idea from the architects Baumschlager Eberle, called ROBIN. The buildings essentially do not have heating or cooling. It has dual-layer, massive walls, using 2 x 38cm bricks. But after many years of experience, I can tell you: it works. What makes this approach so successful? It exploits normal building physics effects, such as deep window recess, which leads to natural shading, and it also utilises the natural thermal mass of the brick.

#### **What opportunities does the circular economy offer on the capital markets?**

**Alexander Toth:** Circular economy means that at the end of their lifecycles, buildings can be dismantled into their component parts without generating any toxic waste and that these parts can then be reused for new construction again. From an investment perspective, there's a lot of complicated topics to unpack here. For example, the bricks: for regulatory reasons, I am not allowed to reuse bricks. Or components like the ceiling elements, which are poured and cannot be separated. Legacy pollutants are also a major topic. One need only think of the insulation materials

used before 1996, before the regulations. These old materials are nothing at all like the insulation that is used nowadays, which is integrated directly into the bricks. Some companies have made a lot of progress in this field. Our standpoint is to use old buildings as long as possible, when it is technically feasible. Because even if I gut a building and have to reconstruct it, say because I have an office building and I want to make it into residential space, this is still far better in terms of the emissions and ecological footprint, and ideally it's combined with the installation of modern technology for heat recovery and ventilation. Of course, we are also interested in the most effective possible use of resources.

#### **Do you have any final requests, interests or remarks?**

**Johann Marchner:** I have a request directed at the legislators. Please get rid of the excessive subsidies for specific construction materials based on ideological considerations. If we are supposed to use wood, then let's use Austrian wood, from sustainable forestry. And that has to be transparent and demonstrated with certification of origin.

**Karin Stieldorf:** With regard to the circular economy, we will have to pay a lot more attention to the selection and management of construction materials. This is a new element in the planning process, which is linked to the other parameters of sustainability. This means that which materials one selects, which characteristics these materials have, and what their lifecycle

looks like will become increasingly important. This may even result in a new design look, which is not just possible but also very desirable. In any case, we will have to work with building materials differently in the future, and more consciously. I think that Building Information Modelling offers great opportunities, because the individual materials can be included in the planning process, together with their specific properties. This may result in better cooperation going forward and a higher degree of digital networking as well. I think that new forms of production will emerge, maybe not in brick production, but in other areas. And so I see opportunities for loam, straw, and other regenerative materials in specific projects.

**Marc Höhne:** People often think that sustainability and architecture are inseparably linked with each other, but this really isn't the case. But the situation is improving and especially the young generation of architects is very keen on the topic of sustainability. That said, they are often totally frustrated, because in 90% of the projects that happen, sustainability is often the first thing to be sacrificed to economic considerations. In order for this not to happen, sustainability has to be anchored in corporate strategy and working on that basis it has to be developed at the project level, so that it can ultimately be implemented in all of the key processes. What this also means is that one has to establish the principles at an early stage, which can only be changed with great difficulty later on.

# BEST PRACTICE: SUSTAINABLE REVITALISATION

The story of the “Jeuneurs” office building and Raiffeisen Immobilien KAG got off to a slightly frightening start in 2006, when a fire broke out in a 5th-floor kitchenette on the day of closing, when the purchase price was to be transferred. Ultimately, however, Immo-KAG was able to successfully complete the transaction for one of the real estate funds it manages, albeit with a slight delay.

The six-story building was originally erected in 1972 with approximately 5,800 square metres of floorspace, as well as a separate, seven-level underground car park providing 300 parking spaces, which – rather unusually – was jointly owned. Basically, the property was in its original condition when it was purchased, i.e. it had never been thoroughly renovated. The massive concrete curtain-wall façade was typical for the architecture of the 1960s and 1970s. Despite the condition of the building, it was fully leased out thanks to the good location: it is situated in the so-called “Sentier” neighbourhood, a historical part of town in the second district of Paris, near the city’s old stock exchange. Over the last 250 years, this part of town was mainly characterised by textile trading, but starting from the 1990s it also became home to many Internet start-up companies thanks to the good data connections. Nonetheless, at the time of purchase, it was not part of central business district (CBD) in Paris, and most of the tenants were from the IT sector.

Due to the mounting pressure on rents and considering the age and condition

of the building, in 2014 there was an architectural tender for the renovation of the property, which was won by Axel Schoenert Architectes. The very good construction quality of the load-bearing structure from the early 1970s and the fact that the building plot was already fully utilised made it easy to decide in favour of full renovation, rather than a new build. Along with economic considerations, the following sustainability aspects were also defined as parameters for the renovation project in 2014:

- Preserving the existing structure as much as possible (cost savings)
- Ensuring maximum flexibility in utilisation (leaseability)
- Asbestos-free building (health and reuse)
- Optimising energy efficiency (reducing operating costs)
- Certification of the property (quality certification)

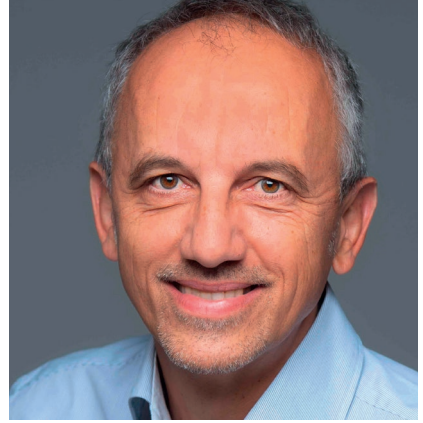
Although building certifications were not such a common feature on the real estate market in 2014, even back then Im-

mo-KAG was interested in certifying its properties in the interests of sustainability, as a long-term investor.

However, before the project could be carried out, it was necessary to go through a very meticulous process of agreeing with the majority of the roughly 120 co-owners of the car park and also terminating the existing leases to enable timely execution. Once this work was done, the project development and construction permitting could get underway.

In 2016, an application for the renovation including a completely new glass façade was submitted to the authorities. However, the Commission du Vieux Paris (a commission of experts advising the construction authorities on historical preservation matters) insisted that the façade from the 1970s be preserved. At a number of meetings, it was finally possible to convince the Commission and the authorities that a new façade was preferable, in particular so that the task of removing the asbestos from the building was not left to future generations. »





**Alfred Hajdu**  
Senior Asset Manager  
at Raiffeisen Immobilien KAG

In order to establish a link to the appearance from the 1970s, a new façade was designed in agreement with the Commission. The project was then finally approved in 2017, and the last remaining tenant left the property shortly before construction began at the end of 2017.

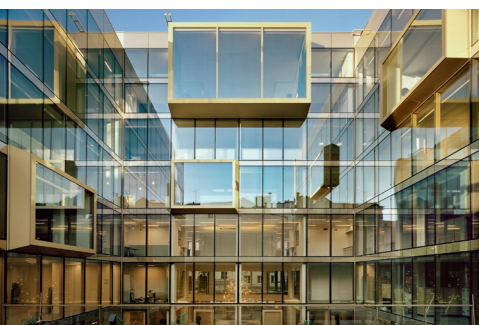
Comprehensive renovation work started in 2018, with only the load-bearing structure (skeleton) being left in place. The car park with its roughly 300 parking places remained in operation throughout the project. During the same year, a lease was concluded with a single tenant for all of the office floorspace. One key point in this regard was certification of the lease contract as a “green lease” for its whole duration. An agreement was also reached to have a say in the tenant’s selection of finishing materials, so for example no PVC may be installed.

Nowadays, five years later, this is completely normal, and certifications documenting the quality of the property and the careful selection of building materials are a fundamental prerequisite for sustainable project

development, in the interests of both the property owner and the tenant. Back then, it took a lot of hard work and convincing to reach such an agreement.

After the project was completed, the entire property was transferred to the tenant on March, 15, 2020, which just happened to be the day that the first COVID lockdown started. The successful transfer amidst these difficult conditions once again underlines the commitment and dedication of both the tenant and the lessor, as well as the quality of the building itself.

Now, in 2023, the difficulties and enormous efforts required have faded into the past and “UFO Paris” is one of the flagship properties in the portfolio managed by Immo-KAG. UFO Paris ranks among the most modern office buildings in the centre of Paris and is also one of just five buildings with a Platinum certification by WiredScore. This downtown area has developed into an excellent location and is now also a prime business location as part of the CBD (“location, location, location!”).



Asset manager Alfred Hajdu, who is responsible for France, discusses this highly successful property development project which had some close calls.

## KEY DATA ON UFO PARIS:

[www.ufo-paris.com](http://www.ufo-paris.com)

**Address:** 22–26,  
rue des Jeuneurs, 75002 Paris

**Built:** 1972

**Purpose:** Office

**Renovation:** 2018–2020

**Client:** Raiffeisen Immobilien  
Kapitalanlage-Gesellschaft mbH

**Architect:** Axel Schoenert  
Architectes / Paris

### Certifications:

- BREEAM Excellent
- HQE Excellent
- BBC Renovation
- Wired Score Gold
- Well Platinum

### Key facts:

7,800 m<sup>2</sup> leasable floorspace /  
7 floors

1,360 m<sup>2</sup> per standard floor  
Subdivisible into 3 variable  
units per floor

6.5 m<sup>2</sup> / person,

for up to 1,000 employees

### Open spaces:

landscaped interior courtyard /  
roof terrace / green wall



**WiredScore**  
PLATINUM



If you are wondering what UFO Paris means, the answer is “Unique Flexible Offices”.



**Herbert Perus**  
Sustainability Office  
at Raiffeisen KAG

# ON THE TOPIC OF CORPORATE



**Mathias Zwiefelhofer**  
Sustainability Office  
at Raiffeisen KAG

Due to its relatively high share in global greenhouse gas emissions, the construction industry is one of the most important areas with regard to the Paris climate objectives.

The shareholder engagement activities of Raiffeisen Capital Management's fund management on the topic of construction materials include dialogue with some of the largest producers of concrete, bricks, and cement. As part of these activities, roughly 20 companies around the world were questioned about their efforts to make the construction materials industry more sustainable. The following questions were sent to these companies:

- 1 How does your company contribute to sustainable building practices with the construction materials you supply, in particular with regard to the high level of carbon intensity in the construction industry?
- 2 What measures and strategies have you introduced to reduce the carbon footprint of your products and to have a positive effect on environmental sustainability?
- 3 How does your company integrate technologies or practices for carbon capture in its operations, and what effects do you anticipate from such in relation to offsetting the carbon emissions stemming from the manufacture and utilisation of your materials?
- 4 If your company uses technologies or practices for carbon capture, are you able to quantify the resulting reduction in carbon emissions?



# VOICES

## CONSTRUCTION MATERIALS

**5** How does your company approach the issue of resource consumption in the manufacturing of your products, and what steps have you taken to ensure the durability and recyclability of your products in order to promote a more sustainable circular economy in the construction industry?

**6** What is the significance of employee safety at your company, and what measures have you taken to reduce workplace accidents? Are you able to produce statistics or data on the frequency and severity of job-related injuries at your company in recent years?

### **1 & 2** (Buzzi Unicem, Italy)

Cement production is one of the biggest factors behind climate change, as it accounts for 8% of global emissions. There are a number of approaches to improving the sustainability of cement production. One way is to reduce the ratio of energy-intensive clinker in the cement. Cement clinker is the component in the material that is necessary for the concrete to harden. The Italian firm Buzzi Unicem has set the goal of reducing the ratio of clinker from 75.4% in 2021 to 67.3% by 2030. This measure alone could lower the company's total carbon emissions by up to 9%. Another possible way to reduce carbon emissions is to improve the natural carbon uptake of the concrete. In this regard, rapid carbonation is important and according to Buzzi Unicem this

could cut the company's greenhouse gas emissions by up to 8%. The company is also focusing on carbon capture, product optimisation, and the use of renewable energy. The production of sustainable construction materials is part of Buzzi Unicem's business strategy. The company underlines the growing demand for low-carbon buildings and also identifies the regulatory requirements as a business advantage. According to Buzzi Unicem, all of this results in rising demand for its sustainable products.

### **3 & 4** (Heidelberg Materials, Germany)

Since a large portion of the carbon emissions are generated by the chemical processes in cement production and these are difficult to reduce, there is often a focus on later production stages when it »

CORPORATE  
VOICES ON  
CONSTRUCTION  
MATERIALS



comes to making the products more sustainable. Within the cement industry, one of the possible solutions is carbon capture and storage (CCS), which involves capturing and storing carbon emissions. Heidelberg Materials, which is headquartered in the German city of the same name, sees itself as a pioneer in the application of this technology. The company is testing the capture of high-purity carbon dioxide from the clinker production process. The captured carbon dioxide will be used by the company in the production of synthetic fuels, for the cultivation of microalgae, and for the decarbonisation of recycling concrete. Heidelberg Materials is the first company industry-wide to operate a large-scale facility for carbon capture, which is located in the Norwegian town of Brevik and will capture 50% of the plant's annual emissions starting from 2024. This project has been under construction since 2021, without interrupting current production, and will be completed by 2024. The unit uses amine technology, filtering out sulphur and nitrogen oxides and then storing them underground.

#### 5 (Holcim, Switzerland)

Adding recycled materials in cement production can result in a lower consumption of resources, but also represents a risk for the quality of the cement.

Holcim, the world's largest construction materials producer, already uses 20% recycled materials in its Swiss production facilities, while maintaining the same level of product quality. In its dialogue with Raiffeisen Capital Management, the company stresses that different buildings have different quality requirements. More liberal regulations would be needed by the construction supervisory authorities, which would allow higher admix levels of many structures. According to Holcim, concrete is perfectly suited for recycling and can be reused again and again, by pulverising and sorting it.

#### 6 (Builders FirstSource, USA)

Workplace accidents cannot be ruled out in the production of construction materials. Accordingly, it is even more important for producers to take preventive measures to protect employees and to focus on continuous staff training and instruction. Builders FirstSource, the second largest construction materials producer in the USA, has lowered its accident rate by 15% since 2020. In order to foster a lasting awareness of safety-related issues, all employees in production must participate in a daily safety briefing. For 2023, the company has set the goal of reducing the number of accidents by another 10%. The company's most important goal is to lower this figure to 0.

# COMPANY SUSTAINABILITY SPOTLIGHT

“Our purpose statement is ‘Do good for people and the planet. Replace non-renewable materials with renewable products’. This underpins our belief that everything that can be made with fossil-based materials today can be made from a tree tomorrow, and highlights Stora Enso’s opportunity to contribute to a more sustainable future.

Our goal is to offer fully regenerative solutions by 2050 – products that remove more carbon than they emit and support biodiversity restoration. We have set science-based targets for 2030 in three areas where we have the biggest impact and opportunities: climate change, biodiversity, and circularity. These ambitions stand on a foundation of conducting our business in a responsible manner.”

*Hans Sohlström, CEO*

## COMPANY HISTORY

One has to look back deep into the annals of European economic history, all the way to the 13th century, to reach the beginning of the fascinating story of Stora Enso. The cornerstone of the company’s history was laid when the Swedish bishop Peter acquired a concession to mine copper ore in the year 1288. According to many commentators, this means that the Stora Enso Group is the oldest company in existence today. For 700 years, copper mining was the core business of the company called Stora in the Swedish town of Falun. In the 17th century, it held a two-thirds share of the global market. In 1997, one year before the fusion with Enso, Stora had more

than 20,000 employees, group turnover of almost 45 billion Swedish krona, and was the owner of 2.3 million hectares of forest (equivalent to about one third of the area of Austria) in Sweden, Canada, Portugal, and Brazil.

The roots of Enso in Finland reach back to 1872, when the sawmill W. Gutzeit & Co was founded, which was later renamed to Enso-Gutzeit after its home industrial town in 1924 and finally to just Enso.

In October 1998, three companies – Stora, Enso, and Schweighofer, an Austrian firm that had developed into one of Europe’s largest sawmills and lumber »





**Herbert Perus**  
Sustainability Office  
at Raiffeisen KAG

companies after its foundation in 1642 – merged together to form Stora Enso, one of the world's biggest wood processing and paper groups. This status was also achieved with the acquisition of many other companies, such as the North American paper group Consolidated Papers for EUR 4.9 billion in 2000. After this, Stora Enso continued to grow, in particular thanks to expansion in Latin America and Asia. The company started focusing more and more on digital publishing, by expanding its printing and publishing activities to Internet and mobile telephone platforms. Additionally, it has increasingly been pursuing a business model based on the circular economy.

The 2010s saw the development of products using biomass as a base material and support for the general issue of sustainability started in the Group. Since then, this commitment has been strengthened year after year, as clearly demonstrated in the statements made by CEO Hans Sohlström.

At present, Stora Enso has operations in over 30 countries, with more than 26,000 employees. It is one of the world's leading companies in the field of sustainable resources and is constantly developing innovative solution for the wood- and paper-based products of the present and the future. The company's

vision is clear: to reach a fossil-free future and have a positive impact on the environment. This stands to benefit economic regions and their societies around the world.

### BUILDING WITH WOOD

In our meeting with Stora Enso, we were able to pose many questions and also discuss the company's various business areas in depth. Among other things, we were interested in the growth in the field of renewable materials in the construction industry. The company had the following answer:

“Our journey started about 15 years ago. Back then, we were strongly concentrated on the market for single-family homes in the DACH region. The business grew steadily and nowadays we deliver CLT (Cross Laminated Timber) globally from our four CLT plants. We also offer LVL (Laminated Veneer Lumber). We supply various different customer segments (ranging from installers and general contractors to property developers) and a broad spectrum of building types, from single-family homes and multi-story residential buildings to schools, offices, and business properties. The long-term prospects look very promising, as regulatory conditions and other megatrends, such as environmental awareness, support the underlying growth potentials. Moreover, »

compared to buildings that are erected with fossil-based materials, wood creates a healthier living environment for people, and it is a flexible material, both in terms of its use in construction and as a material in its own right, for example for earthquake-prone areas. Wood products store CO<sub>2</sub> over their entire lifetime, and depending on the type of product, i.e. the building, this can be very long. Building with wood using our solutions is faster than with other materials and also saves labour, as the construction occurs with components."

## DURABILITY WITH WOOD

Many people wonder about the durability and stability of wood construction. Stora Enso responded to our question as follows:

"We think that one can rightly say that many of the oldest buildings in the developed world are built out of wood. What does that mean? It does not mean that wood is a durable solution for every application. It means that the lifespan of wood is almost unlimited in the case of good planning, construction, and maintenance. Materials like steel and concrete are often thought to be more durable

than wood, but in turn they too are not durable in the case of poor planning, construction, and maintenance. Right now, we are building our new headquarters in Helsinki, which should guarantee a lifespan of 100 years, and we think that it will last even longer."

Stora Enso estimates that the construction timber segment accounts for roughly 20% of the total turnover in wood products, and the goal is to increase this ratio to over 40% in a few years. At present, Stora Enso says that it is building around 2,000 to 2,500 projects annually. Examples are the University of Singapore and a partial new construction of the Technical Museum in Stockholm, which will open in December. In the last 15 years, almost 20,000 projects have been implemented, including some award-winning structures using the sustainable materials produced by Stora Enso.

Stora Enso is a very old but still highly innovative company, which we are happy to accompany as a constructive, sustainable investor in the years to come. On this journey, we will have more and more to report on its progress on the path of sustainability.



# FOOTPRINT TEAM LAUNCHES CYCLECHALLENGE

Raiffeisen Capital Management (Raiffeisen KAG) places great emphasis on sustainability and not just in the investment solutions it offers. The company was an early mover in the field of operational ecology, for instance with its participation in the ÖKO Business meetings from 2008 to 2013. 2018 marked another milestone, when the company established its own footprint team with the primary goal of creating a dedicated group for continuous activities related to the guidance, measurement, and reduction of the company's operational carbon footprint. The team is always working to connect the many different aspects of work life and private life and to draw on ideas from both of these spheres. One of its results was to launch the CycleChallenge initiative.

One important aspect of Raiffeisen KAG's footprint is transport-related carbon emissions. This can be easily quantified and is always a balancing act for a service-oriented company which has to take care of its customers. We are committed to working together closely with our customers as often and as intensively as possible, and this naturally leads to business travel. Of course, we already have a range of measures and principles in place in this regard, such as

- travelling by train rather than by car,
- advocating for hybrid or completely virtual meetings, and
- gradually replacing the vehicle fleet, etc..

## AUSTRIA'S CYCLING

Another aspect that should not be neglected is employees' travel to and from the office. The footprint team took a close

look at this and included this travel in Raiffeisen Capital Management's climate balance, with the goal of improving this aspect along with the other measures. And ultimately, actions speak louder than words... In May 2023, Raiffeisen Capital Management's CycleChallenge was launched, as part of the "Austria's cycling" campaign.

13 company employees took the many good reasons to ride to heart:

- Reducing Raiffeisen KAG's carbon footprint
- Cycling improves physical fitness
- Movement makes for better mood
- Only those who change themselves can motivate other to change
- Success every day
- Achieving personal goals
- ...

and achieved some significant results:

- In the month of May they cycled around 2,700 kilometres,
- That's equivalent to around 210 kilometres a day, mostly within Vienna itself!
- The calculated amount of CO<sub>2</sub> emissions that was avoided was around 500 kg.

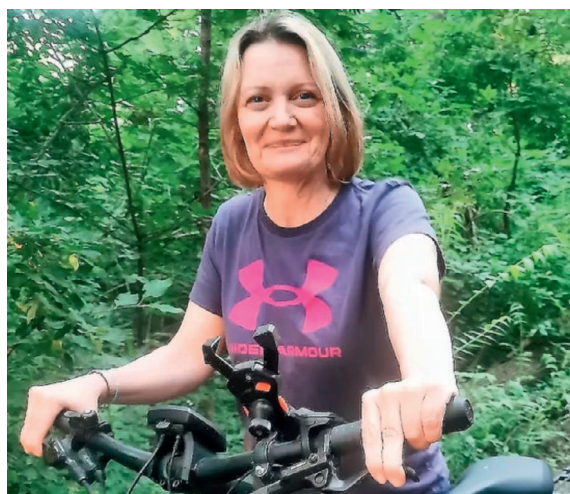
The values for CO<sub>2</sub> savings are based on the number of kilometres ridden and the assumption that these kilometres would otherwise have been travelled by automobile. A standard vehicle fleet was taken as the basis for calculating the average CO<sub>2</sub> emissions.

## PLUS ANOTHER 350 TREES

And even almost more important than achieving personal goals and reducing CO<sub>2</sub> emissions is that by cycling for a month these 13 employees supported the planting of 350 trees, which Raiffeisen KAG donated as part of the campaign "Wald4Leben" for reforestation efforts in Austria. One can just imagine how much reforestation would be possible in Austria if everyone could support the planting of almost 27 trees every month by simply riding their bike to work, regardless of the amount of carbon emissions that would be saved.

Links:

[www.radelt.at](http://www.radelt.at), [www.wald4leben.at](http://www.wald4leben.at)



Top: Thanks to the CycleChallenge initiative by Raiffeisen Capital Management's employees, another 350 trees were planted by the Wald4Leben project. Right: The CycleCommunity (Lidija Semlak, Martina Rigatti, Bernhard Grubhofer, and Claudia Palmetzhofer) is motivated for 2024!

**Raiffeisen  
Capital Management**



Member of RBI Group

**LET'S INVEST  
TOGETHER IN A  
SUSTAINABLE FUTURE.**

**PRESERVING VALUE. CREATING VALUE.**

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created by Raiffeisen Kapitalanlage GmbH, Mooslackengasse 12, 1190 Vienna, Austria, as of: June 2022.