

Are We Building a Greener Future?

The Role of Sustainability in Construction



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About the authors and acknowledgements

Flexcavo is a Berlin-based Construction Tech start-up on a mission to enable intelligent construction. Flexcavo is building an ecosystem combining software and asset operations and acts as the central operating system for the modern construction company. Flexcavo's goal is to increase sustainability and long-term profitability for construction companies. Leveraging its software solution FlexcavoOS, combined with telematics modules in construction machinery, Flexcavo provides an advanced and easy-to-use platform for the digital and intelligent networking of construction machines and systems. Construction firms and other machinery fleet operators benefit from real-time data availability, intuitive fleet management tools and intelligent insights.

Founded in 1984, LECTURA is a leading provider of machinery intelligence on the market and attracts around 900,000 professionals every month, sourcing all kinds of heavy machinery data. LECTURA's database contains over 150,000 heavy machinery models and provides evaluations of used machines through online tools and digital solutions. LECTURA's service offer also includes technical specifications and data enrichment, product and market analyses, high-value lines, country-specific price development determinations and a variety of further, client-tailored services. In addition, the web portal LECTURA Press provides the latest news from the heavy machinery industry and exclusive interviews with industry experts and market leaders. LECTURA also publishes the quarterly online magazine DigiMessenger and runs surveys on a variety of current heavy machinery industry topics.

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Preface

Sustainability is becoming more important in all aspects of business and operations. The construction industry is not exempt from this development, especially when considering that approximately 39% of global energy-related CO2 emissions can be traced back to the buildings and construction sector¹. Flexcavo and LECTURA partnered up for an extensive survey to improve transparency on the prevalence of sustainable measures in construction.

This report outlines the key insights gained from responses to our survey and seeks to address the following topics:

- ▶ Evaluating the presence of sustainability practices in the construction machinery ecosystem as of today
- ▶ Establishing quantified expectations regarding the development of sustainability aspects in the future
- ▶ Understanding economic feasibility and reasonability of sustainable practices
- ▶ Improving transparency on structural roadblocks the industry might face while incorporating sustainable practices

¹International Energy Agency (IEA), Global Alliance for Buildings and Construction (GlobalABC) & United Nations. 2019 Global Status Report for Buildings and Construction. World Green Building Council.

Methodology and Participants

This report is based on the results of a joint Flexcavo and LECTURA online survey among construction industry professionals. The survey was available and accessible on two online channels (specs.lectura.com and flexcavo.de) for four weeks, from 11 May to 8 June 2021.

Overall, 12,807 respondents participated in the survey. Among them, 81% are equipment owners, contractors, or dealers. Another 10% of the respondents assigned themselves to the category 'others'. This category also mainly contains firms directly linked to construction or with clients in the construction industry.

Specific sample sizes for each question may vary; scales are indicated beneath each corresponding graph.

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Executive Summary

The construction industry is in turmoil. While the industry has long faced the challenge to catch up on digitization to overcome its sluggish productivity growth in past decades, a new additional theme is emerging – sustainability. Given the industry's impact on global carbon emissions, a better understanding of the industry's attitude and approach towards sustainable practices is imperative.

This report sheds light on key aspects of sustainability in construction. This includes the perceived relevance of sustainable practices, existing offerings to support their implementation, sustainability certifications and voluntary CO2 compensation measures. A few key themes emerge:

1. Sustainability themes have reached the agenda of the construction industry

- ▶ Firms that have already implemented sustainability practices and received certificates are mainly motivated by reputational benefits
- ▶ Firms planning to introduce measures state that they would be mainly motivated by customer demand and commercial benefits
- ▶ Firms that do not apply sustainable practices perceive a lack of relevance to customers, limited commercial benefits and high complexity as main roadblocks

2. Firms are aware of and leverage solutions to implement sustainability practices

- ▶ Firms demand solutions that help them ease and accelerate the implementation of sustainability measures
- ▶ Software is considered a key tool to support these means, with firms using a broad variety of tools. However, firms yet to implement measures remain uncertain
- ▶ Potentially complex set-up processes for sustainability software drive reluctance to its implementation. Thus, easy-to-use tools, stronger incentives and demand pressure are likely to pose the key inflection points for further accelerating adoption of tools

3. Many firms aspire to receive certifications to independently verify their efforts

- ▶ A substantial share of firms in the construction industry has already received certifications for sustainable practices. However, many firms still refrain from applying
- ▶ Firms that actively apply for sustainability certifications are mainly motivated by potential reputational benefits
- ▶ Firms that are still undecided on whether to apply or those not planning to apply for certifications would be willing to apply if they could reap economic benefits from it

4. Offsetting is mainly motivated by expected positive effects on demand

- ▶ Every fourth firm in construction has already undertaken efforts to compensate for CO2 emissions, while two in three firms state that they are actively planning, or at least considering, to compensate for CO2 emissions within the next five years
- ▶ Firms are mainly motivated by reputational and commercial benefits when initiating offsetting measures
- ▶ Many firms state that they do not plan to offset their CO2 emissions due to a perceived lack of relevance to their specific customer base – thus, potentially evolving demand pressure for climate neutrality embodies a key turning point for further initiatives





Assessing the relevance of sustainability in construction

**Construction professionals
perceive the need to further
invest in sustainability
practices – yet many are still
uncertain**

Assessing the relevance of sustainability in construction

The following section investigates the perceived relevance of sustainability to construction and construction-related firms – today and in the future. Furthermore, the level of firms that have implemented sustainability practices and those planning to implement such practices is examined. In addition, this section studies the factors that motivate the implementation of sustainable practices in construction and the factors hampering their adoption. Lastly, the differences across firm types, sizes, and geographies in terms of sustainability measures are evaluated.

Key findings of this section include:

- ▶ Respondents widely perceive sustainability as a relevant or soon-to-be relevant theme for their business – with Australian respondents assigning the comparably highest relevance ratings and Eastern European firms being more reluctant
- ▶ While many firms already implemented some sustainability practices, there are still numerous firms yet undecided about their adoption
- ▶ Relatively complex and time-consuming processes are reported as critical roadblocks for firms that refrain from implementing sustainability practices
- ▶ An increase in customer and demand pressure, as well as easier and more transparent processes, are poised to be the driving force for increased future adoption of sustainability measures in the construction industry

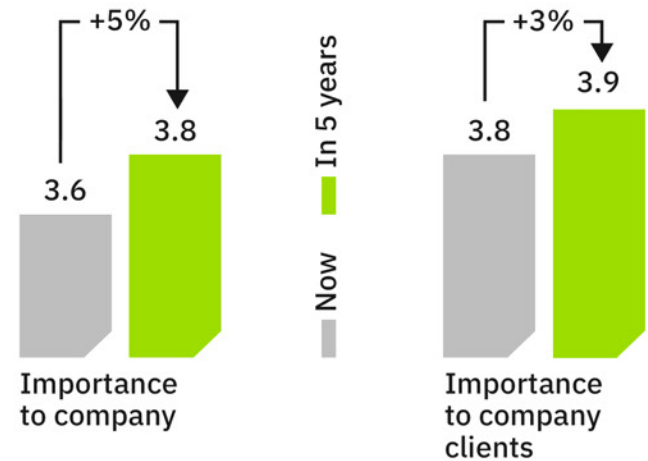
Firms strongly link their appreciation for sustainability measures to their clients

With an average rating of 3.6, respondents rank sustainability as a highly relevant yet not a decisive theme for their businesses. However, they expect the relevance of sustainability topics to further increase in the near future.

Similarly, respondents suggest that sustainability is an important topic for their clients and poised to further increase slightly over the coming years.

Non-surprisingly, the importance of sustainability for construction-related firms is driven by the perceived importance for their client base. More detailed analyses in this report further confirm customer demand as the key driver for firms to implement sustainability measures.

How important is sustainability to your company and to your clients?



7-items Likert scale
0=Not important; 6=Very important

Most respondents already implemented sustainability practices

Has your company already introduced sustainability practices into its daily operations?



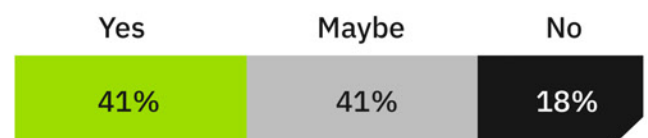
More than two-thirds of the respondents state that their firms have introduced at least some kind of sustainability practices, reflecting the generally high awareness of sustainability's relevance.

More than 80% of firms are planning or considering the implementation of further practices

Of the respondents, 41% are actively planning the introduction of additional sustainability practices, while only one in five respondents state that their firm is not planning additional measures. However, a relatively large number of respondents (41%) is undecided.

Further analyses in the following sections shed some light on how insecurity and potential roadblocks can be reduced.

Is your company planning to introduce (further) sustainability practices into its daily operations?



Gaining reputational benefits and addressing customer demand are the main drivers for adopting sustainability practices



Multiple selection allowed

The motivation to introduce sustainability practices greatly varies among firms planning to implement measures compared to undecided firms. While both groups have in common that they highly value the potential effects on customer demand and commercial benefits, the importance assigned to other factors differs.

For firms that actively plan sustainability practices, the key motivation to implement (further) measures is to reap reputational benefits (46% of respondents) and to address and improve customer demand (29–30%). In contrast, only half as many firms that are unsure about introducing sustainability practices rate reputational benefits as a key motivator (21%).

Furthermore, it appears that firms planning additional sustainability measures have a clear view of what drives their decision and the benefits they expect from it. Correspondingly, they weigh potential motivational factors more resolutely, with the delta between the least ranked factor (marketing purposes) to the most important factor (reputational benefits) amounting to 32 percentage points. In contrast, undecided firms rank all factors relatively equally, with the range from the least to the most important motivational factor amounting to only 14 percentage points.

Complexity and a perceived lack of relevance to customers are key roadblocks hampering the implementation of sustainability practices

Among firms that do not plan to implement (further) sustainability practices, two main reasons emerge.

First, many firms are afraid of complex or time-consuming processes (25%). Second, many firms do not perceive sufficient demand from customers (24%). Surprisingly, a relatively large group of respondents (12%) stated that they have not yet considered sustainability practices.

It appears that the provision of simple and intuitive solutions and increased customer pressure may help to increase the adoption of sustainability measures in the construction industry.

Firms that do not plan to introduce sustainability practices: What discourages you from introducing (further) sustainability practices?



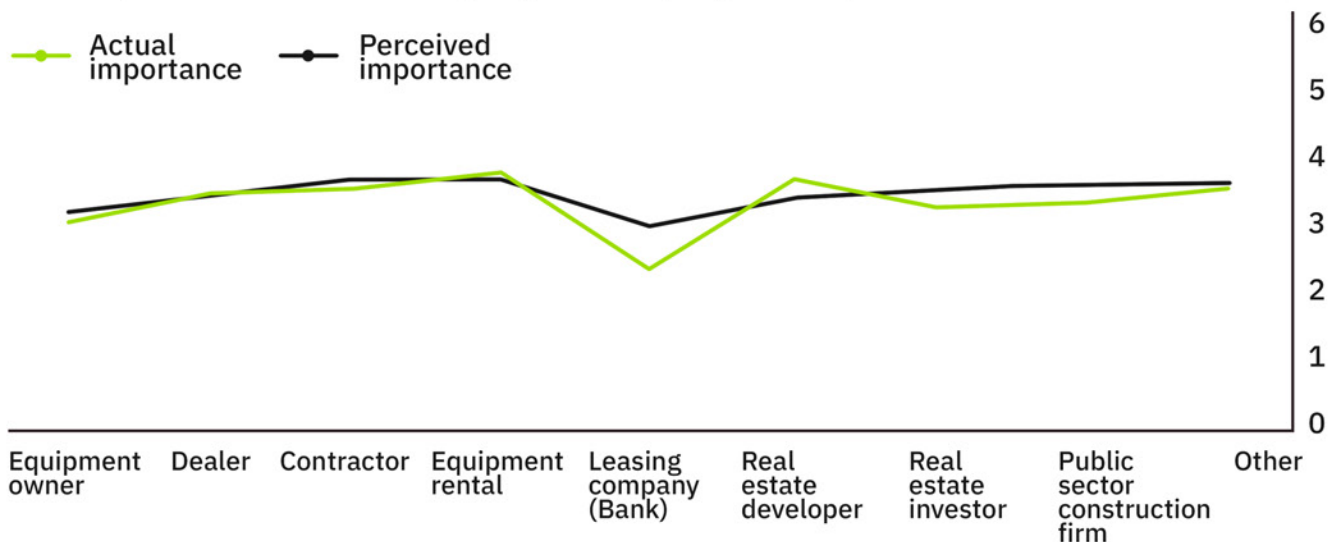
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On the matter of sustainability, respondents appear to be very well aligned with their customers

Respondents appear to be well-aligned with their customers regarding the actual versus perceived relevance of sustainability. The following graph depicts how firms perceive the importance of sustainability to their customers. Based on information about the types of customers each firm typically serves, an indication of the actual versus perceived relevance of sustainability to customers was created.

The only relatively small divergence indicates that firms are well-aligned with their customers, thus confirming the hypothesis that customer pressure is poised as the driving force for the increased future adoption of sustainability measures in construction.

How important is sustainability to your company and to your clients?

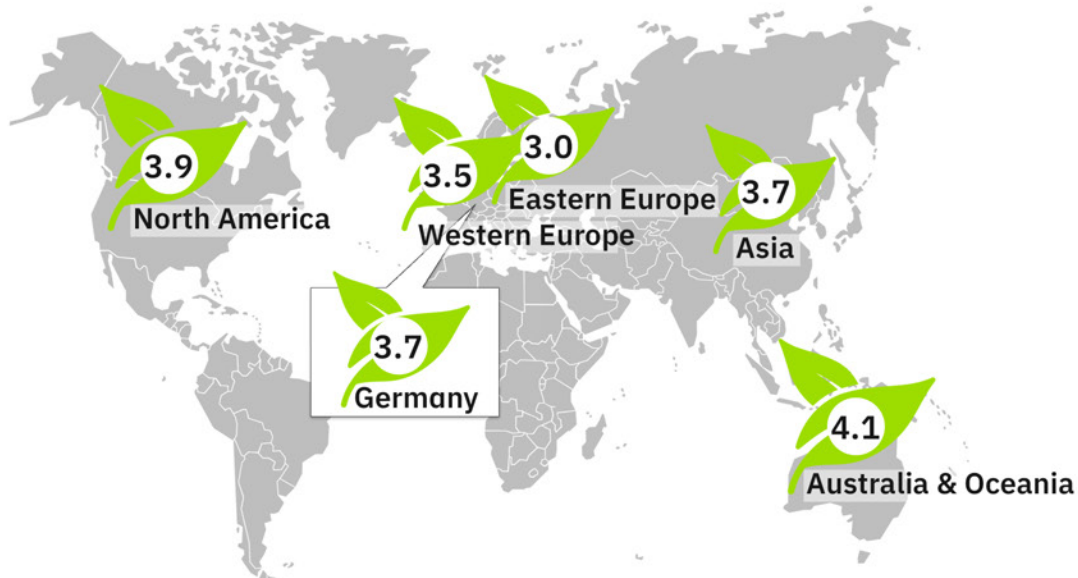


y-axis=7-items Likert scale; 0=Not important; 6=Very important

Australian respondents perceive sustainability as most relevant; Eastern Europeans attribute relatively low relevance scores to sustainability

Across all geographies, respondents attribute relatively high relevance scores to sustainability practices in their business. In particular, Australian and North American firms assign relatively high scores. Western European and Asian respondents also rate sustainability as highly relevant for their business; however, their assigned relevance scores are slightly lower. Eastern European firms assign relatively neutral relevance scores, thus appearing to consider sustainability only moderately relevant for their business.

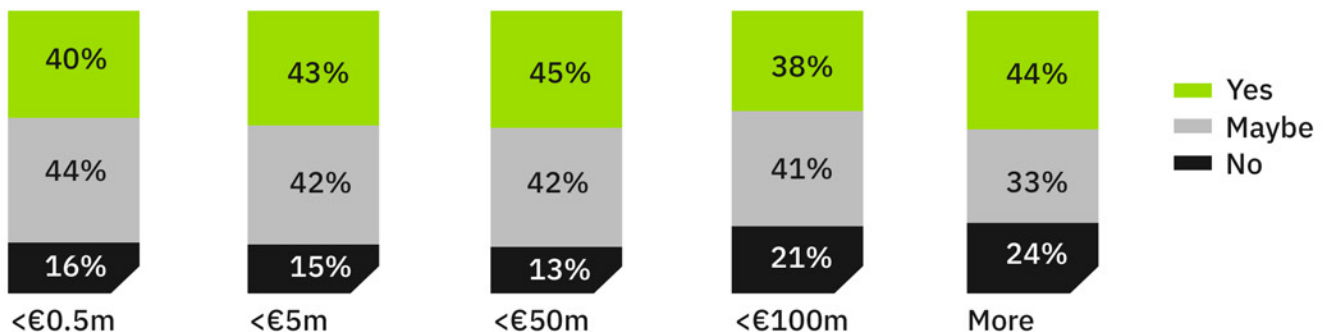
How important is sustainability to your company?



y-axis=7-items Likert scale; 0=Not important; 6=Very important; South America and Africa excluded due to insufficient data

Larger firms are more likely to implement sustainability practices in the future

Is your company planning to introduce (further) sustainability practices into its daily operations?



x-axis=annual company revenues

Across all firm sizes, a significant share of firms already plans to introduce (further) sustainability measures into their daily operations. However, another large share of firms appears to be undecided, while only few have actively decided not to pursue further measures. Larger organizations seem to have a more settled perspective on sustainability than smaller firms, as the share of undecided firms shrinks with firm size.



Implementing sustainable measures

The industry already leverages software solutions to ease the implementation of sustainable practices

Implementing sustainable measures

The following section observes the availability of offerings to support sustainable practices in the construction industry. Furthermore, it highlights the importance of clear and structured planning processes and software solutions to assist the implementation of sustainability measures. Finally, benefits and existing roadblocks are examined.

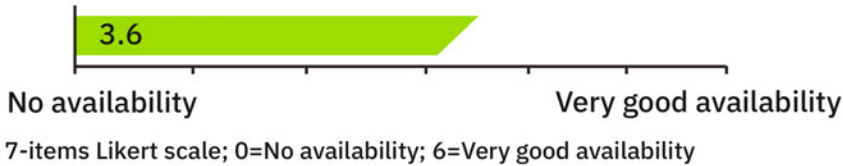
Key findings of this section include:

- ▶ Respondents acknowledge and demonstrate awareness of the availability of offerings to support the implementation of sustainability measures
- ▶ In particular, firms demand solutions that help them ease and accelerate the implementation of sustainability measures
- ▶ Furthermore, firms that implemented sustainability measures stress the importance of structured planning processes
- ▶ Software is generally perceived as a key tool to support these means, with firms using a broad variety of tools. However, some uncertainty still revolves around software solutions among firms that have not yet implemented sustainability measures
- ▶ Potentially complex or time-consuming set-up processes for sustainability-related software drive the reluctance towards its implementation. Thus, easy-to-use tools, stronger incentives and demand pressure are likely to pose the key inflection points for further accelerating the adoption of additional sustainability tools

Respondents perceive the availability of support offerings for sustainability measures as sufficient but not abundant

How does your company perceive the availability of offerings that support the implementation of measures towards sustainability?

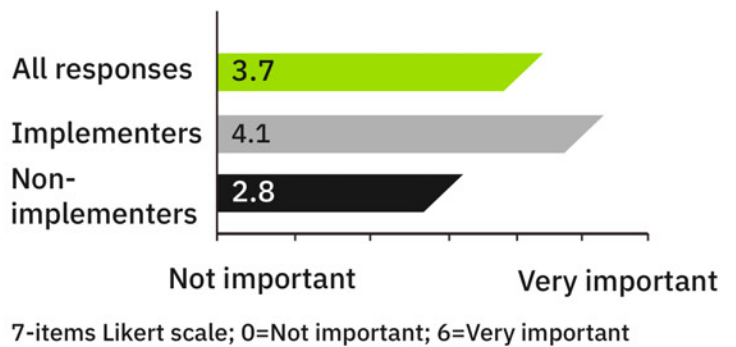
With an average rating of 3.6, respondents rank the overall availability of support offerings towards sustainability measures as generally good.



Firms that went through the implementation of sustainability measures stress the importance of structured planning processes

Respondents consider a structured planning process for the implementation of sustainability as important. However, adding some context to these results shows an even clearer picture. Among those firms that already implemented sustainability measures ('implementers'), relatively high scores prevail (Ø 4.1), and more than 35% assign the maximum relevance score.

How important is a structured planning process in the implementation of sustainability measures to your company?

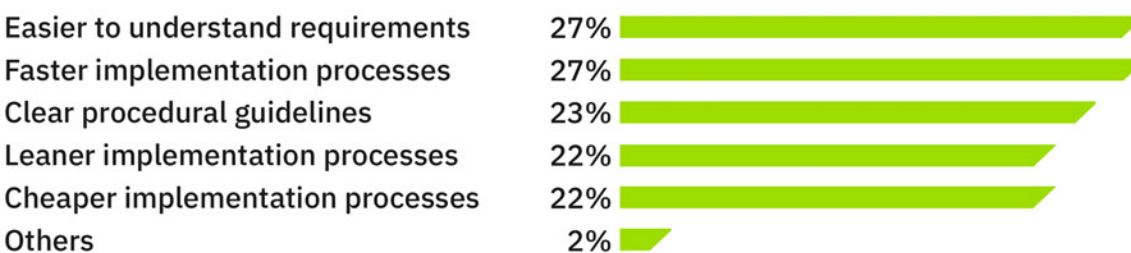


In contrast, firms that did not implement sustainability measures ('non-implementers') assign lower scores (Ø 2.8) to a structured process, with 25% of respondents in this group assigning zero relevance.

Firms demand solutions that help them ease and accelerate implementation

When firms seek assistance in implementing sustainability measures, their critical objectives are to ease the understanding of requirements and accelerate the implementation (27% each). Furthermore, firms resort to external offerings to increase transparency on processes (23%) and reduce complexity and cost (22% each). This aligns with findings stating that complex and time-consuming processes are the main roadblocks for implementing sustainable practices (page 16).

If you used an offering for the implementation of sustainability measures, what type of assistance would help you?



Multiple selection allowed

Every second firm with sustainability measures in place uses software solutions to aid the implementation and achievement of sustainability goals

Software solutions play an important role for firms to achieve sustainability goals. Around 50% of the respondents state that their firms use software solutions to support the achievement of their sustainability goals.

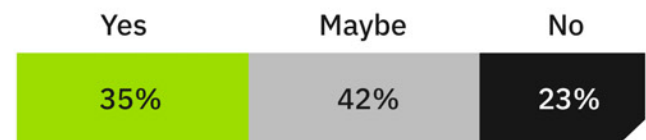
Has your company ever used software solutions to implement and achieve sustainability goals?



Two-thirds of firms without sustainability measures in place are unsure about or deliberately avoid using software solutions for sustainability matters

Around one-third of firms plan to introduce further software solutions for sustainability measures. However, two-thirds are either unsure (42%) or actively opting not to use software solutions (23%) to implement and achieve sustainability goals.

Is your company planning to introduce (further) software solutions to implement and achieve sustainability goals?



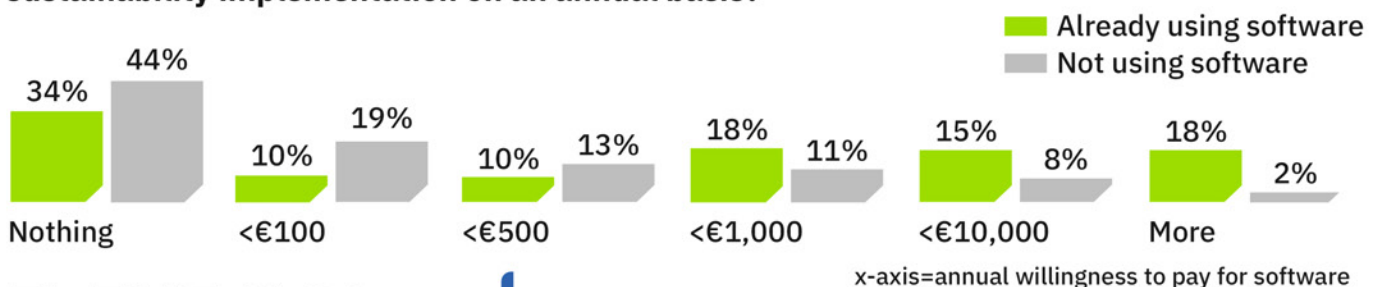
A potential driver for the high level of uncertainty around software usage may be a lack of user-friendliness in existing solutions. On the one hand, respondents demand easy-to-understand requirements and clear procedural guidelines from software. On the other hand, respondents state that software implementation is complex and time-consuming (see page 22).

Software users demonstrate a higher willingness to pay than firms that do not yet use sustainability software

Looking into the willingness to pay and actual spend for software solutions to augment firms' sustainability performance, it appears that firms already using software perceive a higher value in software use compared to non-adopting firms.

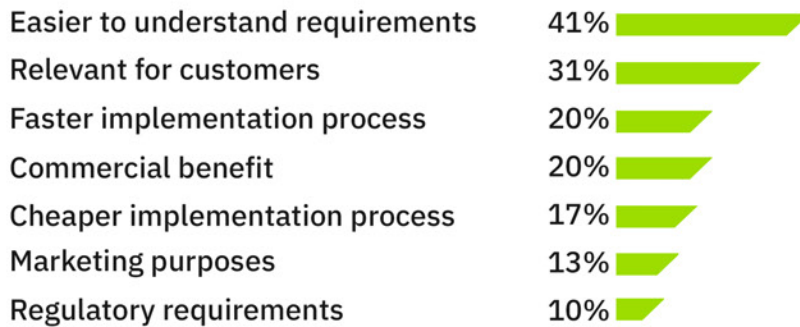
A few potential explanations emerge. First, active users are already early adopters to some extent and are, thus, generally more willing to pay for new solutions. Second, active software users already underwent the set-up process and can now reap the benefits without further delay. Third, active users already gained a better understanding of the value of the applied solutions; thus, their willingness to pay increases.

How much did you pay/would you be willing to pay for a software that assists in sustainability implementation on an annual basis?



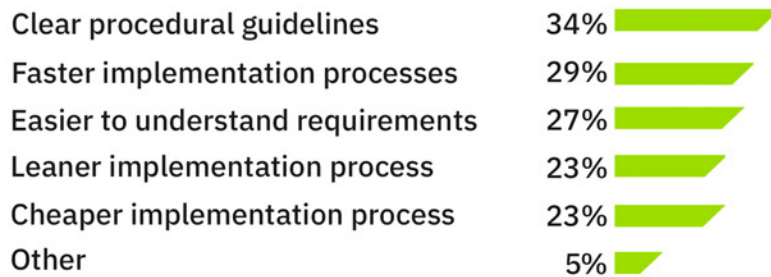
Firms plan to implement additional software solutions to ease their understanding of required actions

Firms that plan to introduce software solutions: What leads you to introduce (further) software solutions?



Multiple selection allowed

Firms that are unsure: How would a software have to assist you in your sustainability planning process in order for your company to be more likely to introduce it?



Multiple selection allowed

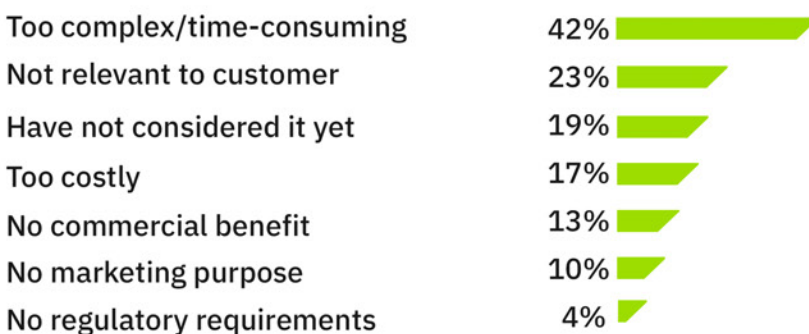
The key objective for introducing additional or new sustainability-focused software solutions is to ease the understanding of requirements (41%), followed by the relevance for customers (31%) and a desired increase in implementation speed and commercial benefit (20% each).

This aligns with findings on page 16 that complex and time-consuming processes are the main roadblocks for implementing sustainable practices. It also confirms the stated requirements for external solutions (page 20).

Firms that are still undecided also demand software to clarify and accelerate the process.

Cost and complexity related to software implementation are the main factors that discourage the adoption of software solutions for sustainability

Firms that do not plan to introduce software solutions: What discourages you from introducing (further) software solutions for the planning process of sustainability measures?



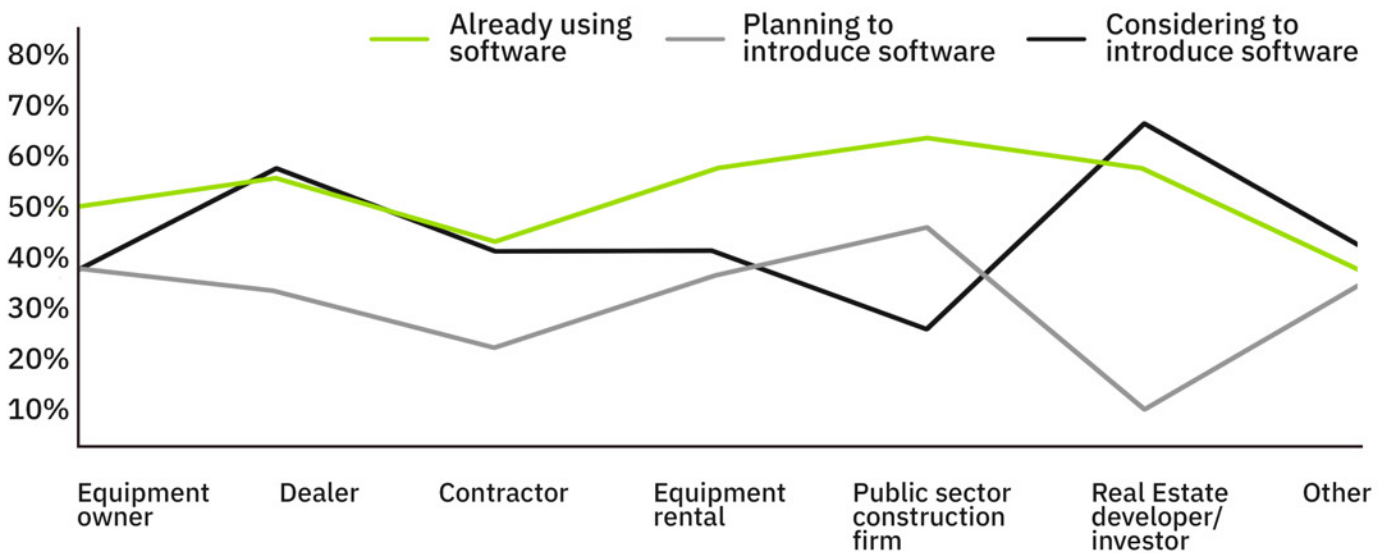
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Among firms that do not plan to introduce software for planning sustainability-related measures, the commonly stated reasons are complex and time-consuming implementation processes (42%). Furthermore, firms perceive a lack of relevance to customers (23%) or have not considered it yet (19%).

Across firm types, most firms already use some type of software solution to implement and achieve sustainability practices

Across most sectors, a slight majority of respondents claims to already use some type of software. Moreover, there is a large group of respondents actively planning (or at least considering) to introduce software solutions for improving sustainability practices. As a result, the share of potential adopters is relatively high, stressing the fact that easier adoption and higher incentives coupled with demand pressure are likely to pose the key inflection point for further accelerating the adoption of additional sustainability measures.

Has your company ever used software solutions to implement and achieve sustainability goals?



Firms use a broad variety of software solutions and often combine solutions

The respondents use a wide variety of software solutions. Many respondents rely on standard ERP tools, such as SAP, SAGE, Microsoft Dynamics and Greentree, to improve their environmental footprint. However, respondents also frequently indicate the use of industry-specific software. This includes, for instance, BIM-related tools (e.g. Autodesk Revit), project management software (e.g. LetsBuild), telematics software for construction machinery, and smart facility and maintenance management tools.

To a lesser extent, firms use software to calculate greenhouse gas emissions (e.g. US EPA calculator). Beyond the mentioned on-demand software solutions, many firms also apply customised solutions or a combination of several applications to cater to their needs.

Which type of sustainability software did your firm already implement?

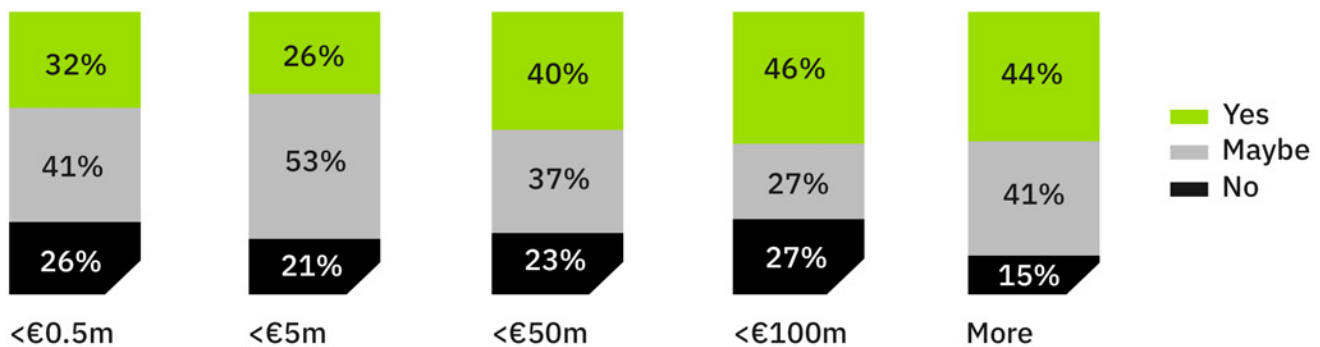


Larger firms are more open to software solutions to drive the implementation of sustainability measures

Across firm size buckets, most firms plan (or are at least open) to introduce software solutions to achieve sustainability goals. Specifically, mid-sized and larger firms are more prone to introduce software solutions (more than 40%). While a relatively large share of firms is yet undecided, only few firms have decided not to implement software solutions (between 15% and 26%, depending on firm size).

Similar to the results on page 17, larger firms tend to be less reluctant to adopt new solutions, with 44% planning the introduction of new software and only 15% opting out.

Is your company planning to introduce (further) software solutions to implement and achieve sustainability goals?

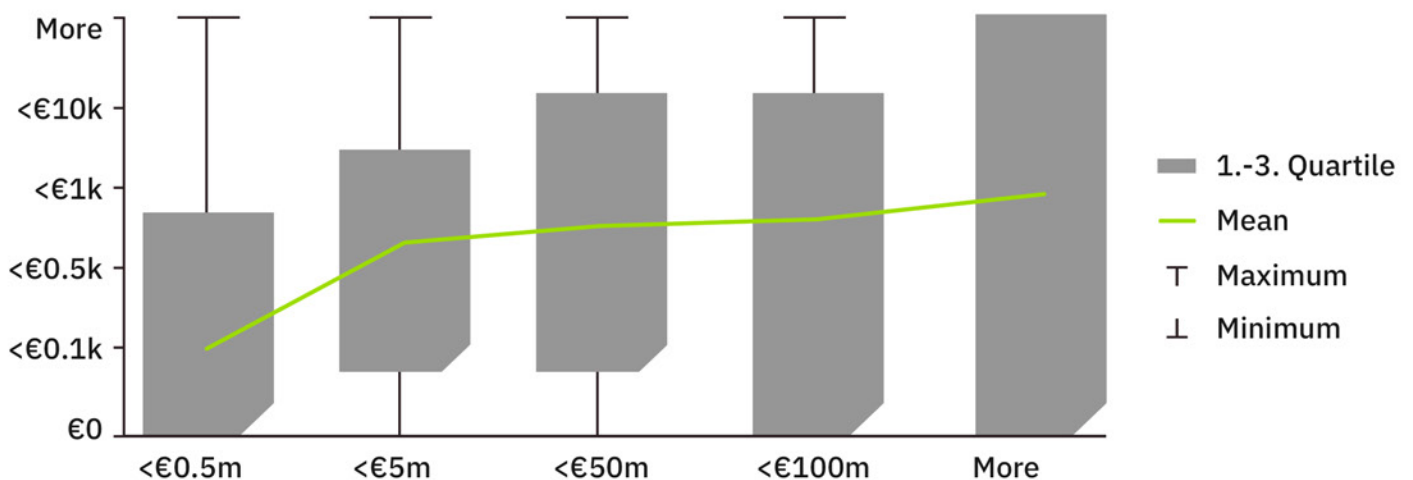


x-axis=annual company revenues

Larger firms have a higher willingness to pay for software solutions targeted at supporting sustainability implementation

Asking respondents for their firms' willingness to pay for sustainability efforts indicates that large firms show substantially higher willingness and ability to pay for introducing software solutions to facilitate the implementation of sustainability practices.

How much did you pay for sustainability-related software on an annual basis?



x-axis=annual company revenues





Certifying sustainable practices

**One in three firms uses
certifications to
independently verify
sustainability efforts**

Certifying sustainable practices

With more firms in the construction industry adopting sustainability measures, the demand to signal and communicate the undertaken measures increases. Sustainability certifications can provide a means for firms to independently verify and communicate efforts towards greener construction.

This section observes the extent to which construction-related firms resort to sustainability certifications and provides an indication of firms' intentions to apply for certificates in the near-term. Furthermore, main motivators and roadblocks for certification processes are identified. Finally, this section examines differences in the use of sustainability certifications across firm types and sizes.

Key findings of this section include:

- ▶ While a substantial share of firms in the construction industry has already received certifications for sustainable practices, many firms still refrain from applying for certificates
- ▶ Firms that actively apply for sustainability certifications are mainly motivated by a potential reputational benefit
- ▶ In contrast, firms that are still undecided on whether to apply or those that do not apply for certifications state that they would be motivated by economic benefits, i.e. if customers actively demand certificates

One out of three construction firms has received sustainability certifications

Has your company ever received sustainability certifications for environmentally friendly practices?

30% of firms indicate that they already received external certifications for implementing sustainable firm practices.

30%

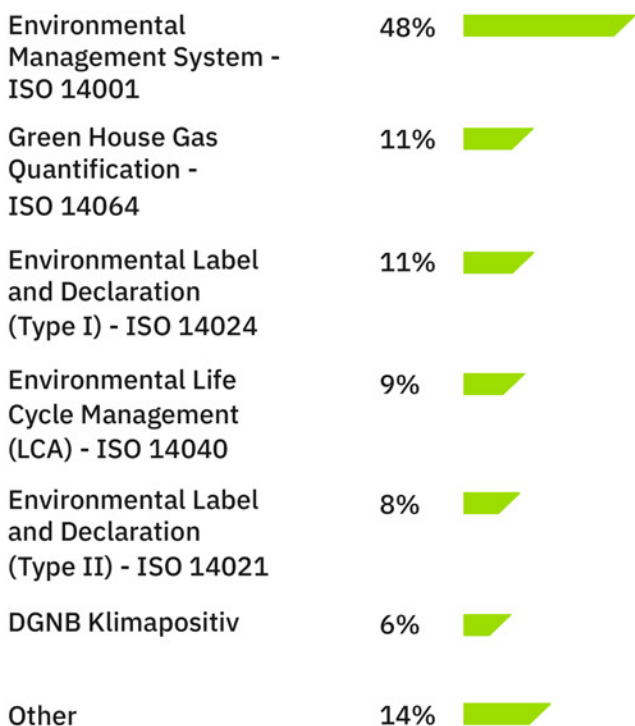
Yes

70%

No

Most firms rely on widely accepted ISO-based certifications

Which type of certificate have you received?



Multiple selection allowed

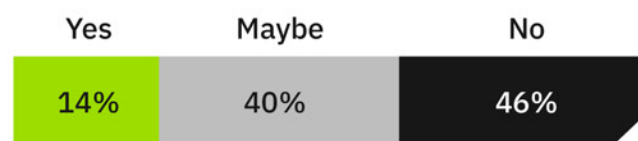
Among respondents, a clear tendency towards ISO 14001 certificates emerges. Almost 50% of certified firms have received an ISO 14001 certification. ISO 14001 describes a globally accepted standard for environmental management systems (i.e. how firms can improve their environmental performance)¹. A key element of ISO 14001 is the four-step plan-do-check-act (PDCA) process.

This requires a firm to set up a process for planning ('plan') and executing ('do') sustainability goals and measures. It further requires a continuous review of their implementation ('check') and subsequent improvements ('act'). The standard does not state specific requirements regarding environmental performance; it rather focuses on implementing solid processes to improve performance.

1. According to the German Federal Environment Agency

More than 50% of firms are either planning, or considering to apply for sustainability certificates within the next 12 months

Is your company planning to apply for (another) sustainable certificate in the next 12 months?



Around 14% of firms plan to enter a certification process for sustainability practices within the next 12 months. However, a high share of firms is still undecided (40%). Furthermore, a relatively high share of firms (46%) is not considering an application for new certifications in the near-term. Comparing these results with insights on the general tendency to apply sustainability measures (page 14) indicates that while many firms plan new measures (41%), only a few plan to apply for new certificates (14%).

Reputational benefits is the most stated reason to apply for sustainability certifications



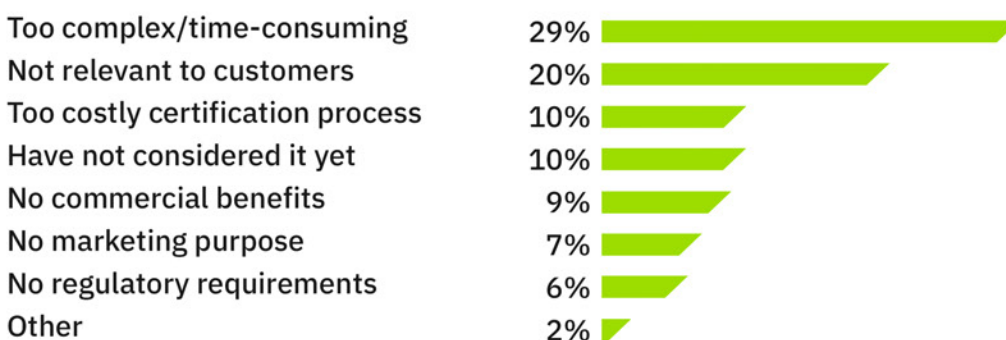
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The main reason firms apply for sustainability certifications differs between firms that plan applications and those that are still undecided. Firms that apply for certificates are mainly motivated by reputational benefits (51%). To a lesser extent, they are also motivated by regulatory requirements, expected positive impact on customer demand and commercial benefits.

Undecided firms appear to have a less clear perspective on the expected benefits, with most factors rated relatively equally. Nevertheless, most undecided firms would consider a positive impact on customer demand and relations (both 32%) and expected commercial benefits (29%) as key motivators for applying for certifications.

Complex and time-consuming processes are the most stated reasons for construction firms to avoid sustainability certification

**Firms that do not plan to apply for sustainability certifications:
What discouraged you from applying for sustainability certification until now?**



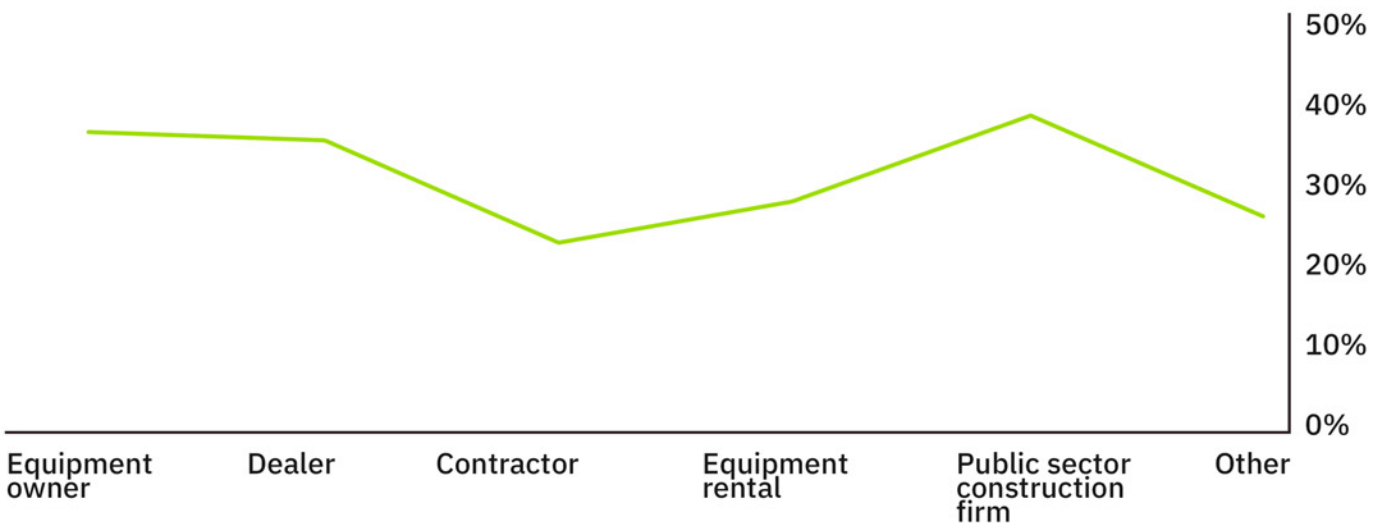
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The most common reason to refrain from sustainability certification processes is to avoid complex and time-consuming processes (29%). Furthermore, firms perceive a lack of relevance to customers (20%). Potential cost appear to be of minor importance (10%).

Contractors and rental providers are poised to catch up in receiving sustainability certificates

Among equipment owners (34%), dealers (33%) and public sector construction firms (36%), more than one-third have already received certificates. In contrast, contractors (21%) and equipment rental providers (26%) are less prone to successfully receive certificates.

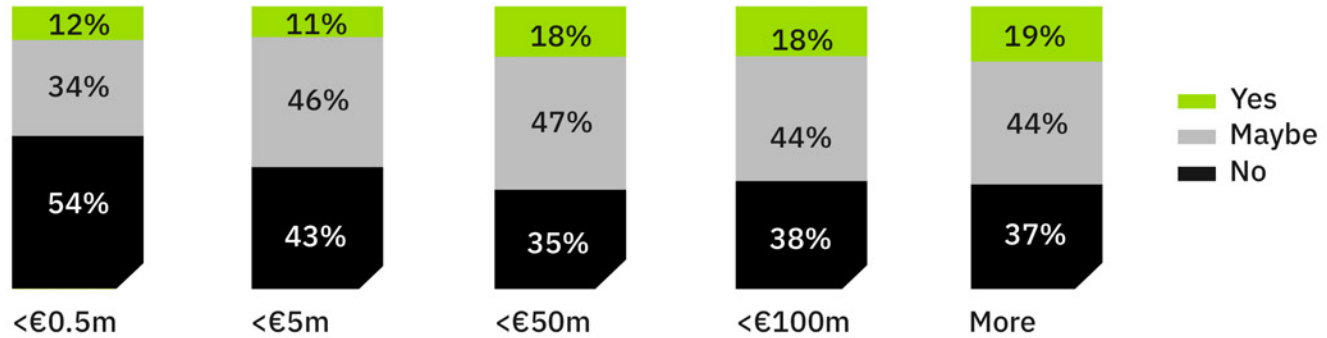
Has your company ever received sustainability certifications for environmentally friendly practices?



Larger firms are more likely to apply for sustainability certificates

As expected, cost and complexity are significant roadblocks for firms to apply for sustainability certificates. Therefore, larger – potentially more organizationally capable – firms are more likely to apply for sustainability certificates. Conversely, small firms typically refrain from applications. Apart from very small firms with <€0.5m in sales, most firms are still undecided about whether to apply for sustainability certification in the near-term.

Is your company planning to apply for (another) sustainability certification in the next 12 months?

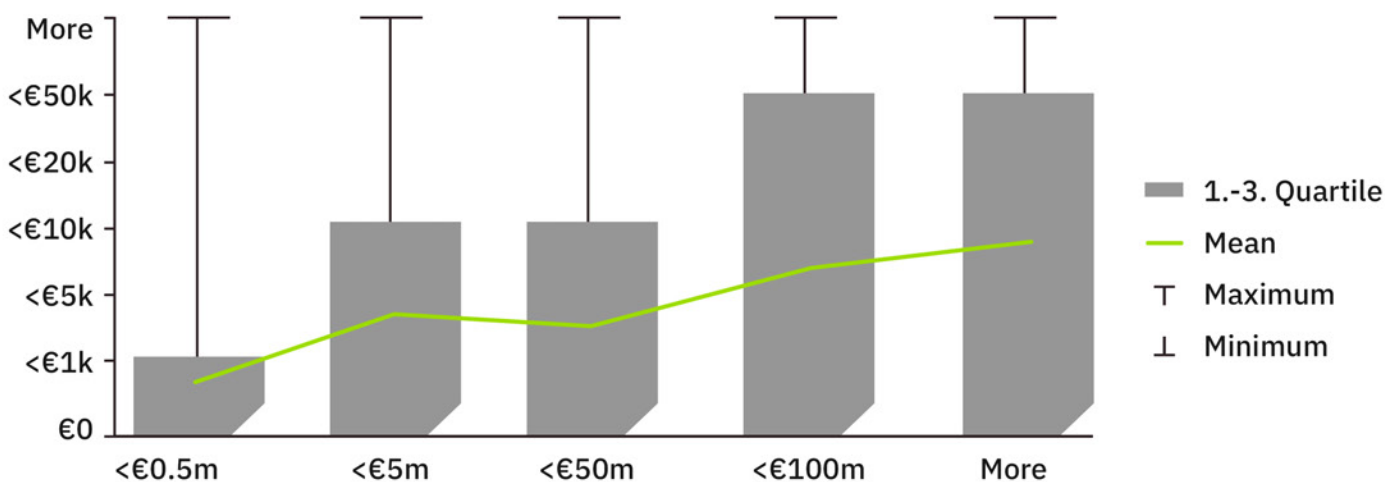


x-axis=annual company revenues

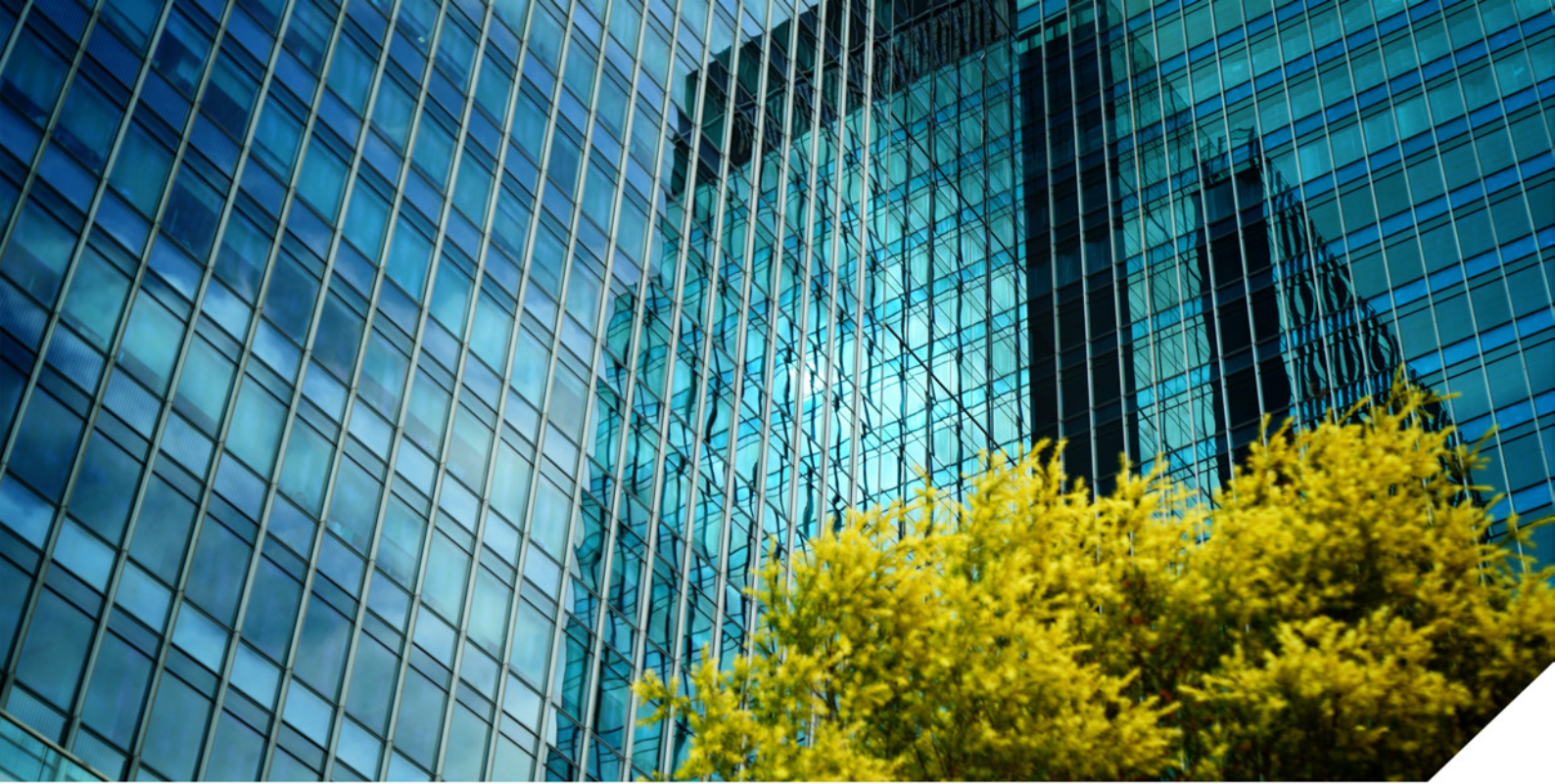
Larger construction firms show a higher willingness to pay for sustainability certifications

Asking respondents for their firms' willingness to pay for certifying their sustainability efforts indicates that large firms show substantially higher willingness and ability to pay for implementing and certifying 'greener' practices.

What would your company be willing to invest to become certified for its sustainability efforts per year?



x-axis=annual company revenues



Offsetting CO2 emissions

Reputational and commercial benefits motivate the adoption of CO2 offsetting measures

Offsetting CO2 emissions

As regulators intensify legal requirements for emission certificate systems and trading in many industries, such as aviation and utilities, voluntary CO2 compensation is also gaining ground in yet unregulated industries. Offsetting emissions refers to the implementation of measures to compensate unavoidable carbon emissions. In most cases, companies work together with external providers that plan and implement environmental protection projects. The firms often make payments that are used to finance sustainable projects.

This section observes the prevalence of CO2 emission compensation efforts in the construction industry. Furthermore, the motivation for CO2 compensation and existing gaps are depicted. Lastly, the section examines differences in the use of CO2 compensatory efforts across firm types and sizes.

Key findings of this section include:

- ▶ Around every fourth firm in the construction industry has already undertaken efforts (at least partially) to compensate for its CO2 emissions
- ▶ Almost two-thirds of firms state that they are actively planning, or at least considering, to compensate for CO2 emissions within the next five years
- ▶ Firms are mainly motivated by reputational and commercial benefits when initiating offsetting measures
- ▶ However, a considerable share of firms (42%) states that they have no plan to offset their CO2 emissions due to the perceived lack of relevance to their specific customer base

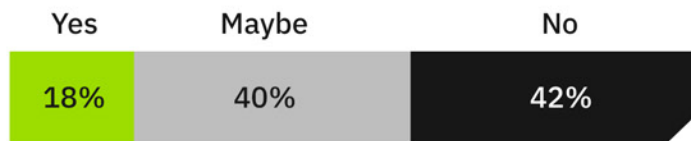
As of today, one in four construction companies has already undertaken efforts to compensate for its CO2 emissions

Among all respondents, 25% indicate that they have taken active steps to reduce their ecological footprint by offsetting their CO2 emissions.



Almost 60% of firms are either actively planning, or at least considering, to compensate for CO2 emissions in the next five years

Is your company planning to (further) actively compensate for CO2 emissions in the next 5 years?



While 18% of the respondents claim that they plan to actively compensate for CO2 emissions in the next five years, another 40% are still unsure.

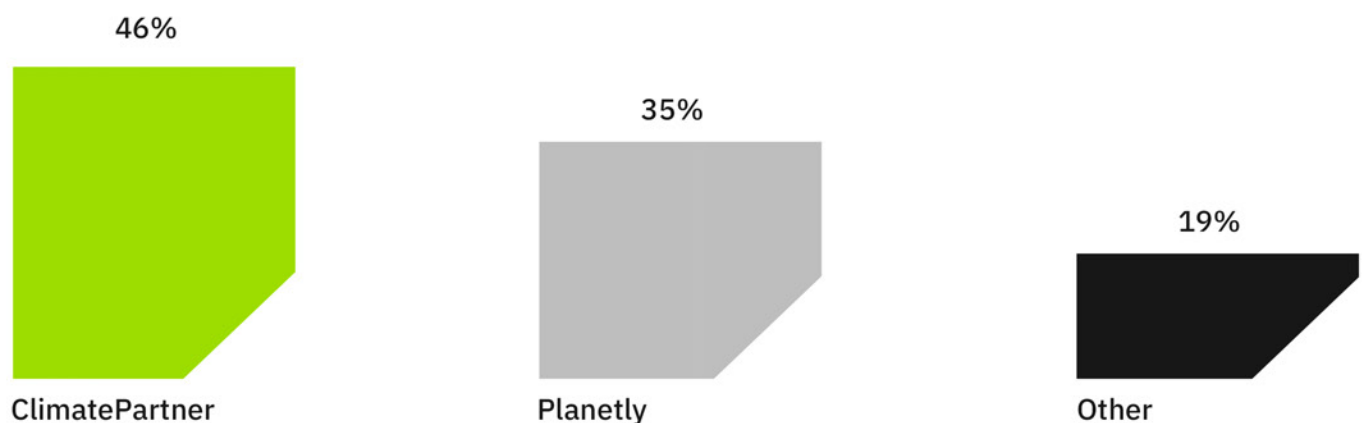
In contrast, a substantial share of respondents (42%) state no intention to offset CO2 emissions.

ClimatePartner is the most used compensation provider in the industry

Of the 25% of firms that have already compensated for CO2 emissions, almost every second respondent collaborates with ClimatePartner as an offsetting provider.

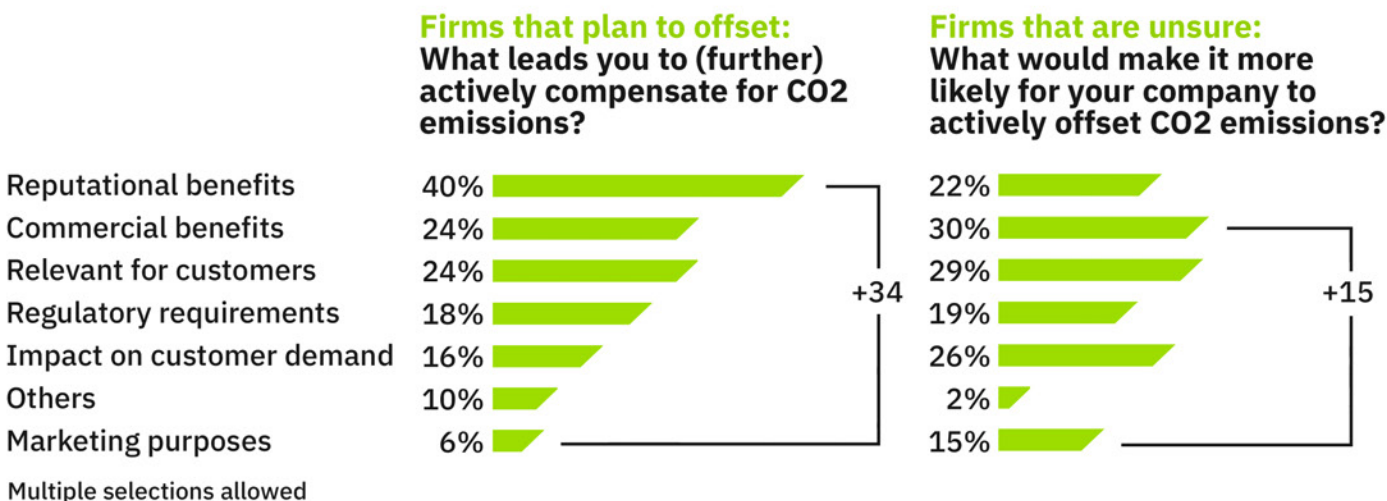
Moreover, approximately 35% of the respondents report Planetly as their partner in achieving offsetting goals. The remaining 19% list local providers, own initiatives or do not explicitly mention their offsetting provider.

Which offsetting provider did you work with?



Other includes offsetting providers not explicitly mentioned, own offsetting projects by the respondents and local providers

Firms are mainly motivated by potential reputational and commercial benefits when initiating offsetting measures



In line with findings for general sustainability practices (see page 15), motivational factors to offset CO2 emissions vary among firms that actively plan to offset carbon emissions and those still undecided. Reputational benefits are the key motivator (40%) among the firms that actively offset, followed by expected commercial benefits and the relevance for customers (24% each). Expected commercial benefits and impact on customers are the most relevant motivator for firms that are undecided.

Firms that plan to offset CO2 emissions have a relatively clear opinion as to what motivates their efforts. The difference between the least-ranked (marketing purposes) and the most important factor (reputational benefits) amounts to 34 percentage points. In contrast, undecided firms assert relatively equal importance to most factors (with a range of only 15 percentage points between the least and the most relevant factor).

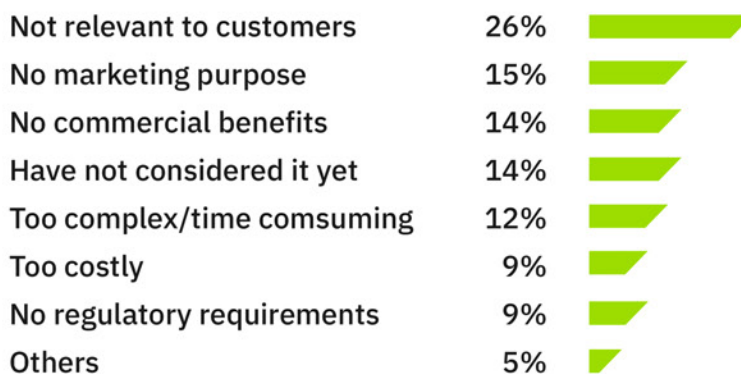
Firms that do not plan offsetting measures perceive a lack of relevance among their customer base

A perceived lack of relevance to customers is stated as the main reason (26%) to refrain from offsetting emissions.

Further factors discouraging carbon offsetting include limited marketing effects (15%) and commercial benefits (14%). Another 14% of respondents have not yet considered CO2 compensation.

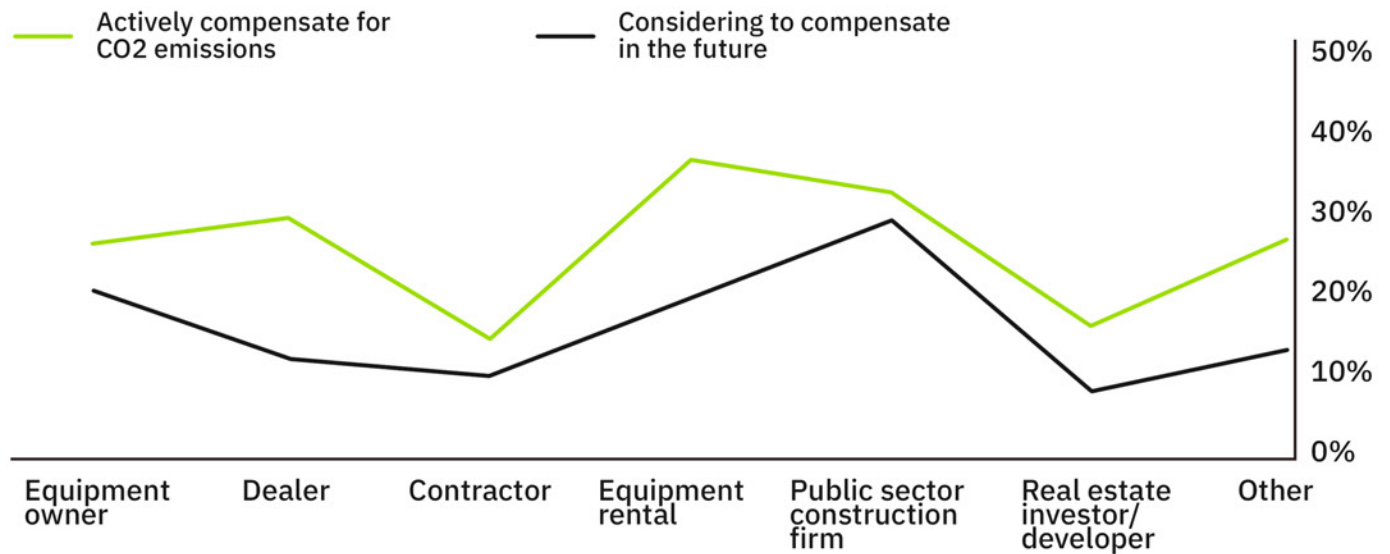
These results suggest that customers will be the main driver for firms to engage in offsetting activities.

Firms that do not plan to actively offset: What discourages you from (further) actively compensating for CO2 emissions?



Multiple selections allowed

Rental operators and firms in the public sector are most likely to compensate for CO2 emissions and have the highest likelihood to continue



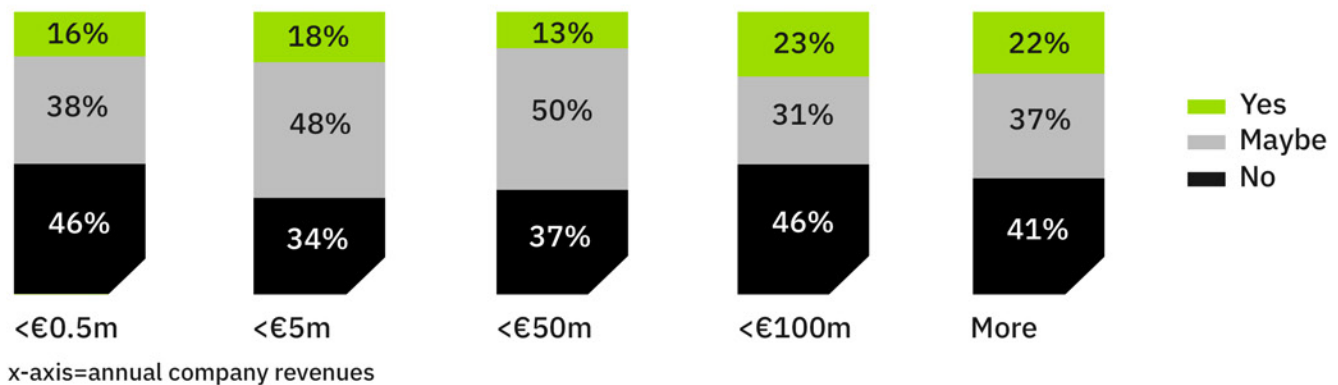
When analysing the prevalence of CO2 compensation by firm type, a considerable spread between respondents becomes visible. Offsetting activities have already been strongly implemented by rental operators (36%), firms active in the public sector (32%), equipment owners, dealers and others (~30% adoption). In contrast, less than 20% of contractors and real estate developers/investors have engaged in carbon offsetting activities.

The share of firms already engaging in carbon offsetting is closely related to the share of firms planning to compensate for CO2 emissions in the future. For instance, 29% of firms active in the public sector and 19% of rental operators plan to compensate for CO2 emission in the next five years, whereas only 11% of contractors and 9% of real estate developers/investors plan to do so.

Larger firms are more likely to engage in voluntary carbon offsetting, while many respondents are still undecided

Across all firm sizes, more than half of the respondents are either planning or considering to compensate for CO2 emissions within the next five years. It appears that, especially for small to mid-sized companies (<€5m and <€50m), there is still high uncertainty in this context, with every second firm undecided. Large firms (€50m and above) are most likely to compensate for CO2 emissions, with more than 20% planning to engage in carbon compensation.

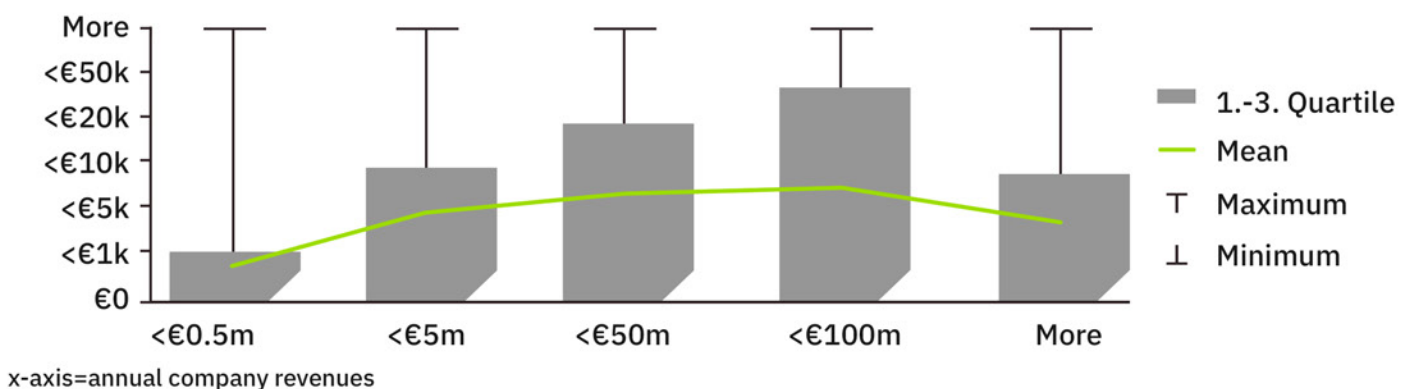
Is your company planning to (further) actively compensate for CO2 emissions in the next 5 years?



Mid-sized firms are most likely to invest in compensating emissions of their construction machinery fleet

Looking into a specific section within the broad field of carbon compensation – construction machinery fleets – reveals a strong divergence across firms in terms of their stated willingness to pay for compensating their machinery fleets' CO2 emissions. Across firm sizes, most firms are willing to pay for offsetting fleet emissions. However, very small and very large firms (<€0.5m and >€100m in sales) relatively frequently show a low willingness to pay. This could potentially be driven by small firms owning smaller machinery fleets and, in contrast, large firms operating substantial fleets, thus implying higher cost to offset their fleet. It appears mid-sized firms, with sales between €50m and €100m p.a., would be most committed to spend money on compensating CO2 emissions.

What would your company be willing to invest to achieve a 100 percent CO2-neutral fleet per year?



Conclusion

As sustainability has become an omnipresent theme in business and society, it has also reached the agenda of the construction industry. Consequently, a large share of firms in the construction industry is already engaging in sustainability practices and planning to implement further measures soon.

However, with change comes uncertainty. Many firms are still undecided on whether and how to adopt new measures. Others are unsure about which offerings to leverage in their sustainability strategy. In this regard, three key learning points emerged and were continuously confirmed throughout this global study.

First, construction professionals across continents embrace the relevance of acting sustainably and take responsibility. This is evident in more than two-thirds of firms already taking sustainability initiatives.

Second, firms appear to differ along two main dimensions – how far they are in terms of implementing sustainability practices and what motivates their actions:

- ▶ Firms that already implemented sustainability measures and adjacent solutions appear to have a clear perspective on what motivates their efforts. Those firms are mainly motivated by the prospect of gaining reputational advantages. Commercial considerations play an important yet significantly less prominent role.
- ▶ Firms that are still undecided about the further adoption of sustainability measures are mainly motivated by economic ends and customer pressure.
- ▶ Firms that do not actively plan to act mainly shun the complexity and effort associated with the implementation of new practices and perceive a lack of pressure from their specific customer base.

Third, across sub-segments in the construction industry, customers and suppliers are well aligned with regards to perceived and actual importance of sustainability to their clients. However, larger firms tend to be more open and capable to implement sustainable measures.

Looking forward, it appears that both increased availability of easy-to-use tools for effective planning of sustainability measures and pressure from customers will be the main facilitators for further driving the adoption of sustainability measures in the industry.

While customers are in charge of communicating their demand for sustainable solutions, both existing and new providers for sustainability solutions, such as software start-ups and offsetting providers, can take initiative by building effective tools and applications that raise awareness and guide the construction industry in its journey towards a greener future.

