

Build green or be left behind: The future of construction is sustainable

November 2025



Building the path to a zero-carbon future: unlocking and capitalizing on the potential of sustainable building materials



The challenge

- The construction sector faces a significant challenge to realize the EU's 2050 zero-carbon future.
- If businesses continue to operate without making abrupt changes and innovations, we'll underperform the 2050 target by more than 85%.



The barriers

- Adoption of sustainable materials remains limited despite growing ecosystem efforts.
- Weak client demand is key blocker of large-scale adoption.
- The combination of high material costs for sustainable construction and a persistently low willingness to pay a premium is driving weak client demand.



The way forward

- **Stronger collaboration between the different stakeholders** across the ecosystem to accelerate the shift towards sustainable building materials.
- **Efforts from all stakeholders** across the ecosystem **are required** to enable faster adoption of sustainable building materials to realise the 2050 zero-carbon target.

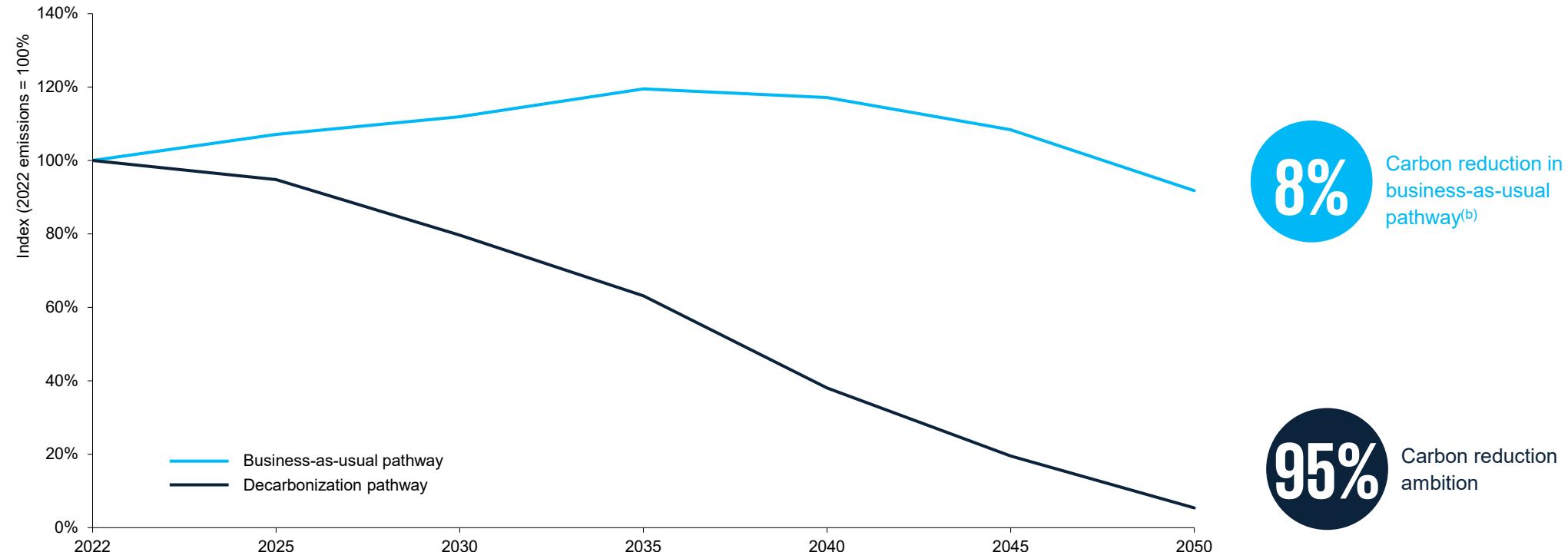


The opportunity

- **65% of the decarbonization potential resides within the building materials ecosystem**, while 15% of the decarbonization potential relies on further site improvements.
- **The market for sustainable building materials is expected to outpace conventional building materials** on the back of this climate trend.
- **Fast adopters** and manufacturers of sustainable building materials at conventional prices **can create a competitive edge** stimulating above market growth.

The construction sector stands at a crossroads, facing a monumental challenge to build its way to the EU's 2050 zero-carbon future

Total carbon emission in the construction sector and its business-as-usual and decarbonization pathway^(a), 2022 – 2050FC

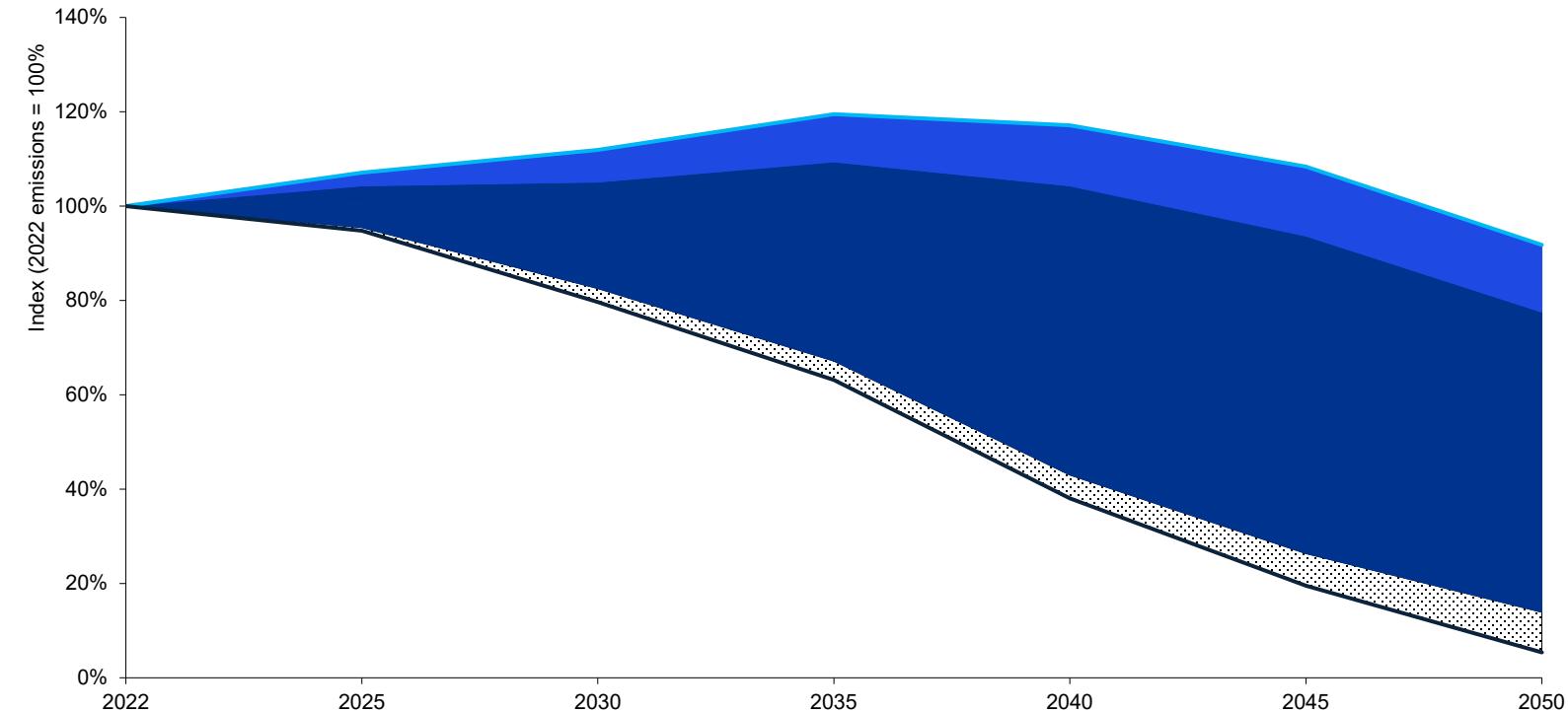


Note: (a) Excluding the infrastructure market, (b) If businesses maintain their current manufacturing processes and operations without major changes, carbon emissions will decrease by an estimated 8% compared to 2022 levels.

Source: KPMG analysis.

The decarbonization potential within building materials is more than 4x the potential that can be achieved from improving the site operations

Total carbon emissions in the construction sector and its business-as-usual and decarbonization pathway^(a), 2022 – 2050FC



c. 15%

Carbon reduction potential
via site improvements

A limited portion of the decarbonisation potential comes from enhancing site operations through (i) increased construction site efficiency, (ii) decarbonizing transportation of people and materials on-site, and (iii) transitioning to a decarbonized energy grid.

The largest potential derives from decarbonization of the building materials via (i) increasing efficiency in building design, (ii) reuse materials in building and (iii) replacement of conventional high-carbon to sustainable building materials.

c. 65%

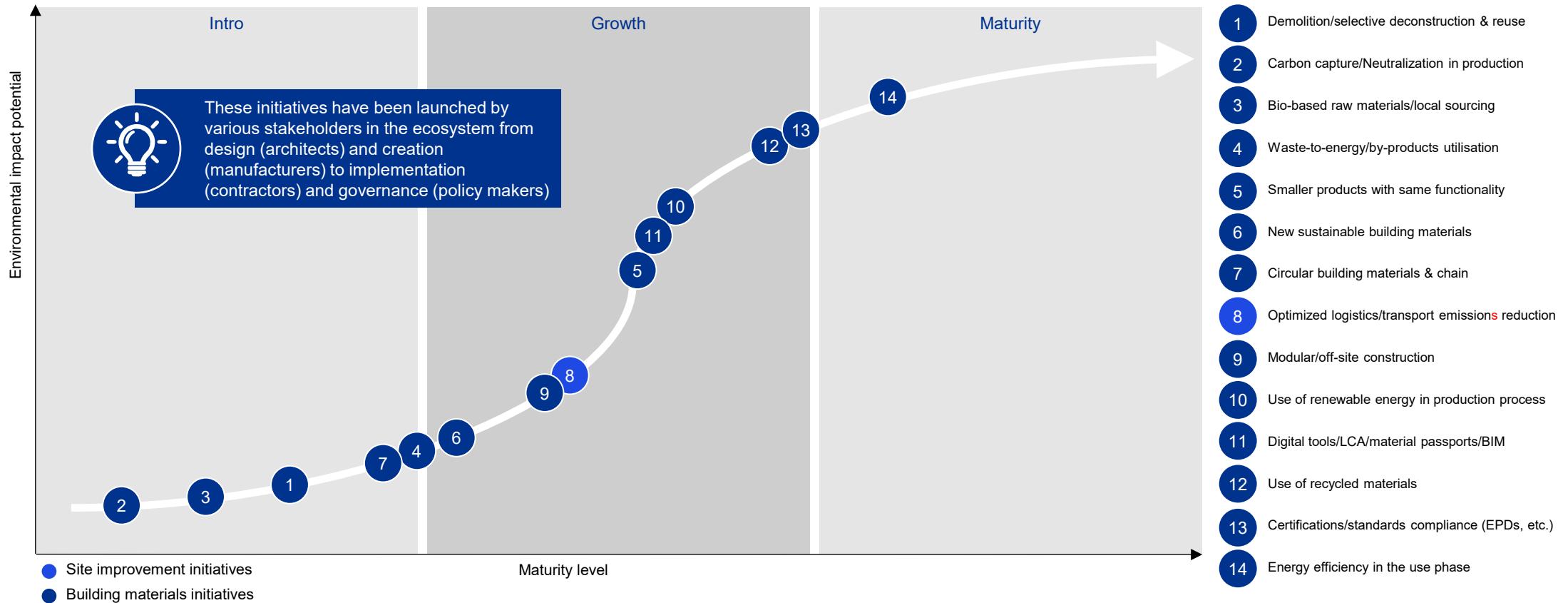
Carbon reduction potential
via building materials

Note: (a) There is an abatement gap (shaded area with black dots) relative to a 1.5°C carbon budget prior to 2050 due to residual fuel use in construction equipment and fossil fuel use in electricity generation. The abatement gap in construction site emissions could be closed by electrification of construction equipment and adopting biofuels, (b) Excluding the infrastructure market.

Source: KPMG analysis.

To unlock this decarbonization potential, multiple initiatives have already been launched, but are still in the early developing phase

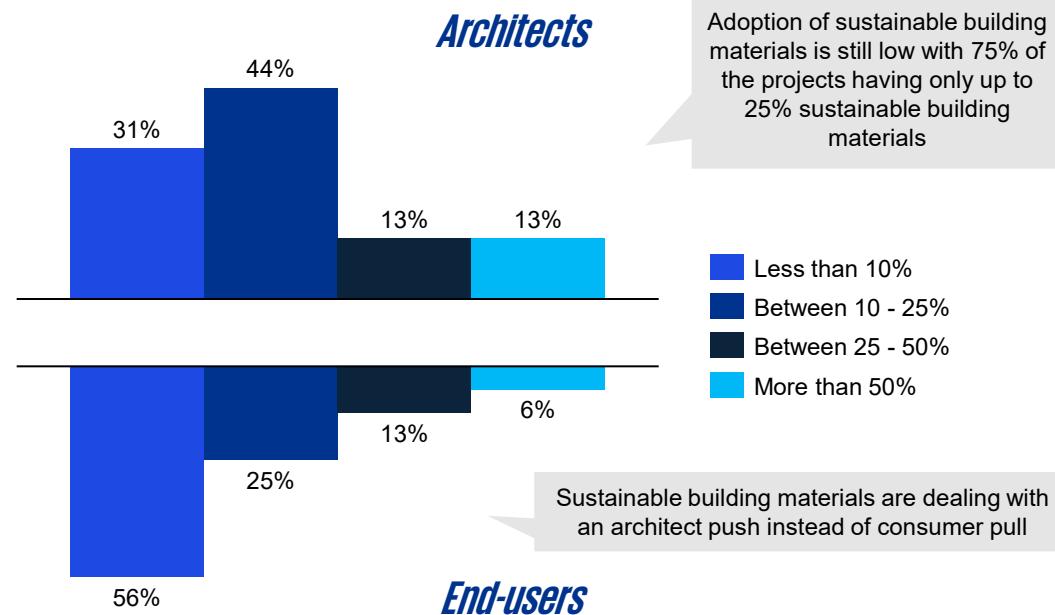
Conceptual view of the environmental impact potential per initiative in the construction sector, 2025 – Indicative and non-exhaustive



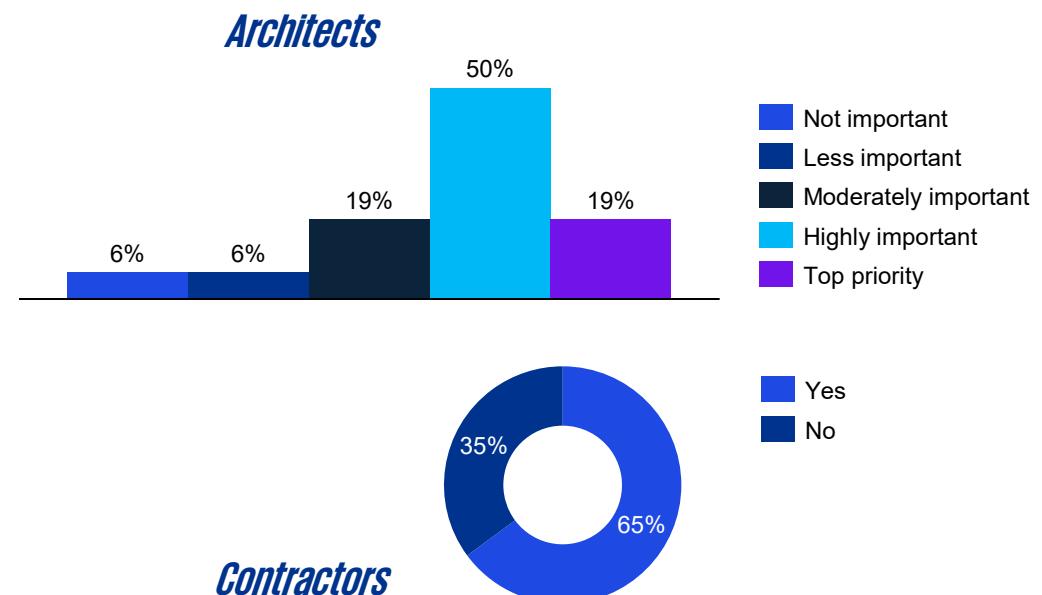
Source: Expert interviews; KPMG analysis.

However, real progress depends on how market players adopt sustainable building materials, which is currently limited despite a push from the ecosystem

Question: What share of building materials used in your projects are already sustainable?



Question: How would you rate the importance of sustainability in the selection of building materials?



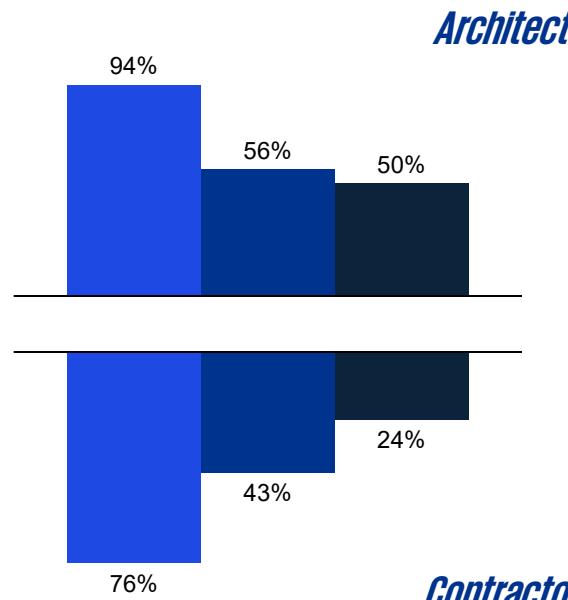
Question: How often do clients explicitly request the use of sustainable materials today?

Question: Do you actively consider sustainability when selecting building materials for your projects?

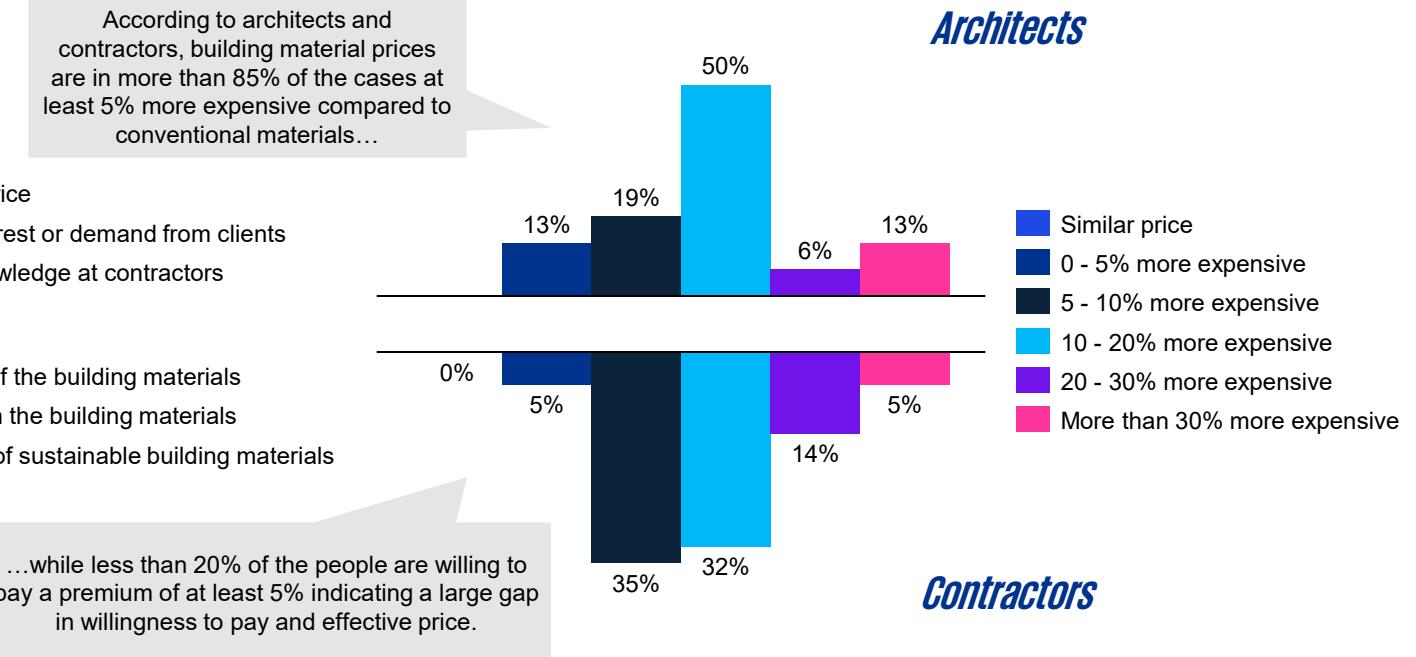
Source: Contractor and Architect survey (September 2025); KPMG analysis.

Adoption is predominantly held back by high costs versus conventional materials and an overall still-weak client demand...

Question: To what extent do the following factors limit your use of sustainable building materials in your projects? (top 3)



Question: On average, how much more expensive are sustainable building materials or sustainable building practices compared to conventional ones?



Question: What is currently keeping you of using materials more sustainable or known for having a low-impact on the environment? (top 3)

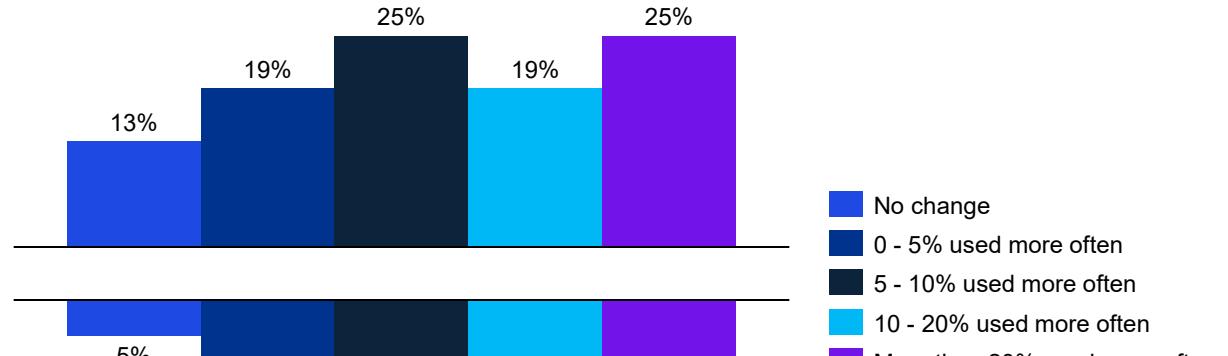
Question: On average, how much more expensive are sustainable building materials or sustainable building practices compared to conventional ones?

Source: Contractor and Architect survey (September 2025); KPMG analysis.

...which is the result of low willingness to pay a premium by end-users blocking large-scale roll-out, despite a positive market outlook

Question: How do you expect client demand for eco-friendly or sustainable building materials to evolve over the next three years?

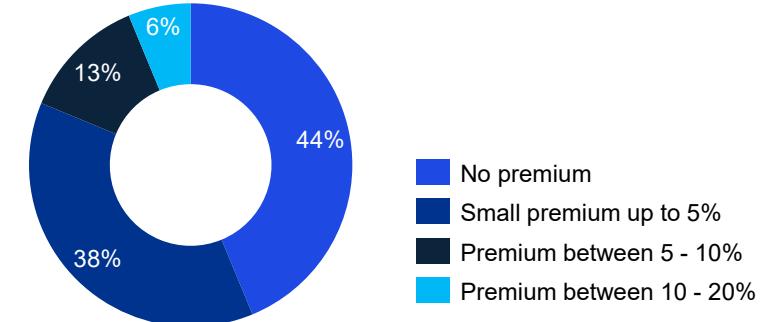
End-users



Contractors

Question: Today, to what extent are clients willing to pay a premium for sustainable materials?

Clients



Less than 20% of the clients are willing to pay a premium higher than 5% for sustainable building materials

Question: By how much do you expect your use of sustainable materials to increase in the next three years?



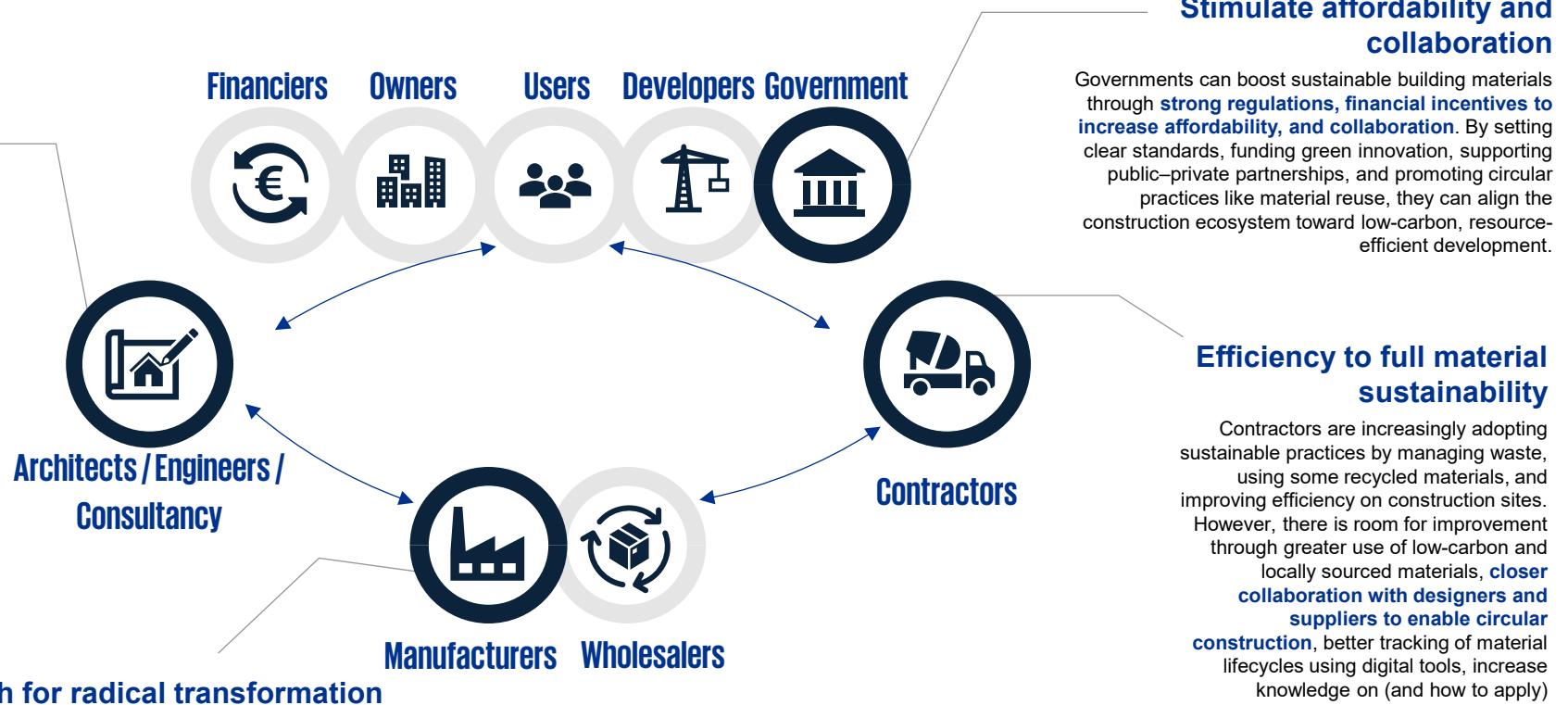
Manufacturers that can produce sustainable building materials and offer them at conventional prices gain a competitive advantage and outperform the market

Source: Contractor and Architect survey (September 2025); KPMG analysis.

To break through the status quo, more collaboration across the ecosystem is required to increase affordability of sustainable building materials

Designing for the Future

Today, many architects incorporate sustainability into their designs by prioritizing energy efficiency, sustainable materials, and overall building performance. To advance further, they can adopt a more comprehensive, lifecycle-oriented approach that accounts for both operational energy use and the embodied carbon of materials and construction processes. **Strengthening collaboration with engineers and builders is essential to embed circular design principles**, such as designing for disassembly and reuse. Ultimately, embracing regenerative design with environmental-friendly materials can enable architects to go beyond reducing harm and actively restore ecosystems, creating a net-positive environmental impact.



Push for radical transformation

Manufacturers are addressing sustainability trends by developing resource-efficient products, incorporating renewable energy into production, and increasing the use of recyclable materials. However, to achieve true sustainability, they **should strive for a full transformation toward a closed-loop system that delivers carbon-free products from design to re-use**.

Source: Expert interviews; KPMG analysis.

The contacts at KPMG in connection with this report are:



Stijn Potargent
Partner, Deals & Strategy

T: +32 4 75 90 00 60
E: spotargent@kpmg.com



Michael Wagemans
Partner, ESG & Sustainability Services

T: +32 4 99 69 53 36
E: mwagemans@kpmg.com



Nick Diver
Senior Strategy Manager, Deals & Strategy

T: +32 4 77 06 49 61
E: nickdiver@kpmg.com

kpmg.com/be



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