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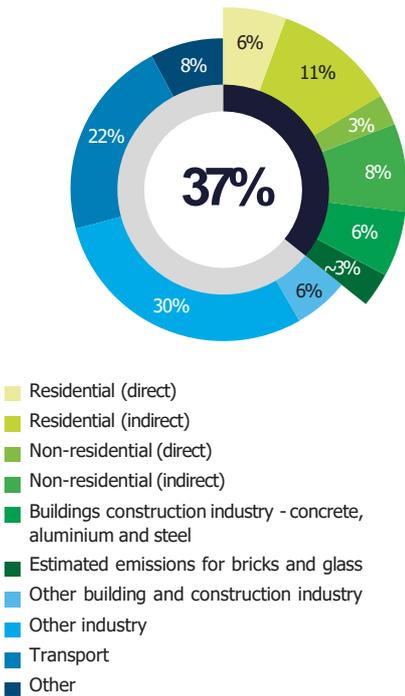
**Shining GreenLight on  
the Construction  
Industry**

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IMPACT THAT  
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## Shining GreenLight on the construction industry

In the 2022 Global Status Report for Buildings and Construction, the United Nations stated that “Buildings and the construction sector are not on track to achieve decarbonization by 2050.” The report<sup>1</sup> highlights the various challenges that the property and construction industry have faced since the Global pandemic in 2020. In addition to an economic slowdown, companies were shut down due to the lockdown. Furthermore, a global labour and material shortages and a significant increase in energy prices were witnessed in Europe. In 2021, the buildings and construction sector accounted for around 37% of energy- and process-related CO<sub>2</sub> emissions and over 34% of energy demand globally.

**Figure 1: Global share of buildings and construction operational and process CO<sub>2</sub> emissions, 2021**



The Middle East, more specifically Saudi Arabia, is investing heavily in capital projects such as Neom, Red Sea Global, ROSHN and various downtown development projects. Moreover, the region has played host to major events; notably the FIFA World Cup in Qatar, Expo 2020 in the United Arab Emirates and COP28 which will be hosted in 2023 at Expo City in Dubai.

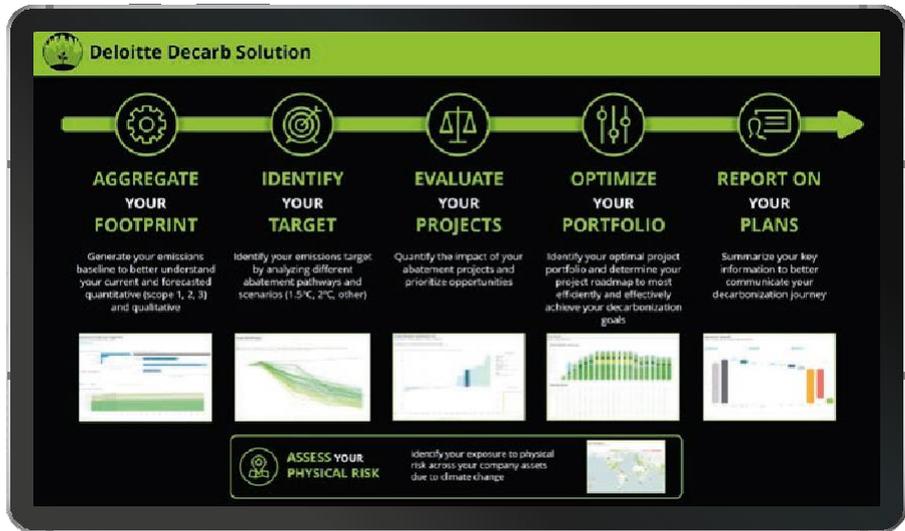
These international events, which gain millions of visitors, gave rise to interesting dynamics in the region as they attempt to fulfill the UAE, Saudi Arabia, and several Middle Eastern countries’ visions for the future. These visions include growth and development objectives for the region as well as governments commitments to achieving Net Zero emissions by 2050 for Oman and the UAE or by 2060 for the Kingdom of Saudi Arabia, Kuwait, and Bahrain.

Embedded carbon, which stems from construction materials used in the region, has one of the highest rates of carbon

emissions in the industry and is therefore the hardest to abate in the Middle East. Indeed, new innovative technologies and supply chain solutions would allow companies to mitigate and minimize carbon emissions.

As the world attempts to recover from the pandemic and plan for the upcoming global recession by carefully allocating capital and resources, we have found that there needs greater clarity on how to decarbonize giga-projects and large infrastructure projects, while planning capital expenditure over the next 30-40 years. Deloitte has therefore developed a set of tools that aim to help industries shine light (or rather, ‘GreenLight’) on how to decarbonize one of the most energy intensive industries on the planet.

Data integrity and collection in both the construction and operational phase is key with current levels of data integrity and reporting of Scope 3 (indirect emissions such as embedded carbon, supply chain emissions and waste) significantly lower



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than global levels. This solution allows you to digitize your decarbonization approach by providing a data-driven platform to build and communicate your strategy to internal and external stakeholders. It also builds your end-to-end company emissions profile, including historical and future emissions based on production schedules, capital profile and the growth prediction for your organization.

The Decarb Solution relies on leading scientific information and methodologies, including the Intergovernmental Panel on Climate Change (IPCC) RCP pathways, the International Institute for Applied Systems Analysis (IIASA) Shared Socio-Economic scenarios, and the Science-Based Target (SBT) methodologies. Relying on these methodologies allows the industry to draw scientifically based and accurate abatement pathways to help define your strategic objectives and decarbonization goals which will bolster the level of transparency and reliability in the construction sector. The pathway to decarbonization and the goal to meet net zero will only be achieved if we rely on science-based methodologies. To attain your objectives, our GreenLight tool takes into account emissions from materials, supply chains as well as assets' end of life.

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During the master planning and city strategy process, it is often asked "how much will it cost to decarbonize?" These questions need to be considered during the development process, in the future capital allocation process and during the optimization process. We take your strategic direction and prioritization of abatement projects opportunities by enabling you to calculate and visualize the NPV (Net Present Value) of abatement projects. GreenLight, will help you to identify an optimized portfolio of abatement projects, with delivery schedules based on financial constraints to create your emission reduction roadmap.

Finally, the tool assists clients with various global reporting requirements such as the Task Force on Climate Related Financial Disclosures (TCFD) and the various Sustainability reporting frameworks such as the Global Reporting Initiative (GRI). Our GreenLight tool is an efficient digital solution which can help the construction industry capture all emissions across your value chain, establish science based and verified reduction pathways, assess the various abatement projects and capital allocation processes, and plan and report to various external and internal stakeholders on your progress.

The Middle East and its leaders have committed to attain several global initiatives such as achieving Net Zero and adhering to the Sustainable Development Goals (SDGs). Everyone has an active role to play - including construction companies. ●

**Source:**

1. <https://www.unep.org/resources/publication/2022-global-status-report-buildings-and-construction>

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