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Action needed: Help us measure project sustainability

Quickly delivering capital projects will be key in fighting climate change. Doing so requires capital-sustainability metrics that apply across industries and sectors.



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One of the key highlights from McKinsey's seventh Global Infrastructure Initiative Summit in April was that sustainability performance has moved to the top of the CEO agenda. Several reasons help explain why this is the case—namely, the need for industry leaders to adapt to more frequent extreme weather events as a result of climate change, the acceleration of greenhouse-gas (GHG) emissions targets, and increasingly stringent government regulations.

On these points, a number of initiatives and measures offer high-level guidance for navigating the years ahead. Most prominently, the Paris Agreement aims to limit global warming to 1.5 degrees Celsius,¹ and the United Nations' Race to Zero campaign aims to build momentum before COP26, the next UN conference on climate change.² Yet players across the infrastructure value chain—including investors; developers; owners; and architecture, engineering, and construction players—are looking for more consistent ways to assess the sustainability projects at both the board level (for investment decisions) and the executive level (to better manage and direct project development).

This should not be surprising: capital sustainability will play a critical role in achieving long-term sustainable development goals. In addition, consumers are increasingly aware of and demand more sustainability, investors are considering its impacts across the value chain, and projects that employ sustainable practices are more likely to be supported and receive funding.

As sustainability continues to shift to the forefront of the minds of investors and the public, infrastructure players are looking for markers that demonstrate their commitment toward sustainable practices, such as leveraging alternative building products,

retrofitting existing assets with carbon-capture technology, and employing digital practices to reduce waste.

Shifting to the project of the future

There are two driving forces behind improving capital sustainability. First, construction is directly or indirectly responsible for approximately 25 percent of GHG emissions,³ and the industry creates up to 20.4 million tons of waste in a single year from building and demolition.⁴ Second, capital sustainability can improve ROIC and reduce risk—lowering financing costs—as many private and pension investors offer more and cheaper capital for sustainable players and shun carbon-related assets.

In response, financiers, developers, and owners are looking not only to build more sustainable assets but also to build them more sustainably.

On the first point, there are several ways to approach the sustainability of assets. Those currently being employed can reduce their carbon footprints by being retrofitted for carbon-capture, utilization, and storage technology. In other instances, different types of asset classes can be pursued, such as renewable (solar and wind) and emerging (hydrogen). In addition, as the world moves toward increased electrification, upgrading utility grids to withstand extreme weather events because of climate change will be as important as increasing capacity to meet demand for electric vehicles (EVs) and other technologies.

Regarding building more sustainably, companies can pursue practices at the outset of the construction process that improve how new assets are designed, engineered, and constructed. This can entail incorporating materials with smaller carbon footprints or employing digital practices

¹"The Paris Agreement," United Nations Climate Change, unfccc.int.

²"Race to zero campaign," United Nations Climate Change, unfccc.int.

³Jose Luis Blanco, Hauke Engel, Focko Imhorst, Maria João Ribeirinho, and Erik Sjödin, "Call for action: Seizing the decarbonization opportunity in construction," July 14, 2021, McKinsey.com.

⁴Salman Shooshtarian et al., "We create 20m tons of construction industry waste each year. Here's how to stop it going to landfill," July 18, 2019, theconversation.com.

such as digital twins to reduce sources of waste, and modular building to reduce unnecessary transportation.

Creating capital-sustainability metrics

Quickly delivering capital projects will be key to fighting climate change. Doing so requires building more renewable power at a faster pace, and developing economies around the electric grid and hydrogen. The transport industry will need to be further decarbonized, which requires a number of new battery plants as well as a huge push for EV charging infrastructure. Other industries—such as cement, chemicals, and steel—will similarly require significant changes to both existing plants and those being built. The construction industry also needs to be decarbonized around new builds and revamping existing buildings. Finally, in terms of capital expenditures, sustainable businesses need to be grown.

Overcoming these challenges in the most sustainable way will require instruments and sustainability metrics that are incorporated across

industries, sectors, and regions. Senior leaders should have a good sense of what to measure while also being able to demonstrate that their changes are making progress toward their sustainability goals.

McKinsey is embarking on an effort to create clarity across key sustainability dimensions. In doing so, we hope to provide an actionable set of metrics to better define and enable the performance improvement of a “sustainable project.” Furthermore, we aim to assess the full asset life cycle—including location, development, supply-chain materials, construction methodologies, social or community engagement, and lifetime operating footprint—to allow owners, investors, and contractors to improve their projects, design and deliver them sustainably, and secure demonstrable sustainability over the asset’s complete life cycle.

To better understand sustainability practices for major capital projects, as well as what we should measure, collaboration is required. Please help us by completing this [short survey](#).

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