BCG

Weekly Brief

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AI as a Tool for the Planet

Our records indicate that this is the first time you're receiving the Weekly Brief, and I want to personally welcome you. I hope that BCG's latest knowledge and my own reflections can help you make sense of our rapidly changing reality. If you have any feedback, I'd love to hear from you.

To BCG's network around the world,

As both Rich and I have shared in past notes, we have to address climate change from multiple angles. Many energy technologies—renewables, carbon capture and storage, battery technology, and more—are playing an important role, but so must AI and advanced analytics. In fact, because it can gather, complete, and interpret large, complex datasets on emissions and climate impact, AI is fundamentally important in helping to manage the full range of climate-related issues. These include:

Mitigation. We can use AI to help measure emissions at the macro and micro levels, reduce the effects of emissions, and remove existing emissions from the atmosphere. In our work, we've found that AI can help reduce GHG emissions equal to 5% to 10% of an organization's carbon footprint, or 2.6 to 5.3 gigatons of CO_2e if scaled globally. BCG's CO_2 AI platform helps organizations measure, simulate, track, and optimize their emissions at scale. Pachama uses satellite imagery and AI to measure and monitor the carbon stored in forests over time, identifying high-quality carbon credits.

Adaptation and Resilience. AI is well suited to help anticipate climate-related hazards, whether by improving long-term projections of localized events, such as sea-level rise, or by upgrading early warning systems for extreme phenomena, such as hurricanes or droughts. One such example of how AI and advanced analytics can help communities adapt to changing climates is work BCG did in Southeast Asia. By combining satellite data with advanced flood modelling, our team was able to

identify the hospitals and wetlands most at risk of flooding, and understand where strategically placed artificial barriers could do the most good.

Research, Finance, and Education. AI can be used to support climate research and modeling, to understand the scale of change and inform policy decisions. It can play a critical role in climate finance, by forecasting carbon prices. And AI can help educate the public and influence behavior, through personalized tools that can estimate carbon footprints, for example, or make recommendations for climate-friendly purchases. Investing in these AI-powered fundamentals will be key to the success of both mitigation and adaptation and resilience efforts.

Overcoming AI's Roadblocks

In May 2022, BCG surveyed more than 1,000 global public- and private-sector climate and AI leaders in 14 countries around the world about their views on the potential of AI as a tool in the fight against climate change—as well as what might be the current roadblocks preventing its adoption. The resulting report, produced with the AI for the Planet Alliance, for which BCG is a knowledge partner, reveals some interesting results that I'm eager to share with you.

Among respondents, 87% feel that AI is a helpful tool for their climate efforts, but only 43% have put a plan in place. What's holding them back? Insufficient AI expertise, according to 78% of respondents, limited availability of AI solutions as a roadblock
(77%), and a lack of confidence in AI-related data and analysis
(67%).

Most existing AI-related climate solutions are scattered, can be inaccessible, and lack the resources to scale. If we reverse these shortcomings, stakeholders can use AI to take a more informed and data-driven approach to combating carbon emissions and building a greener society and to reweight global climate efforts toward the most at-risk regions.

A Call to Action for Business Leaders

Leaders have a clear role to play here. They can leverage data and advanced analytics to support their climate decision making and help their organizations move to action: setting the right emissions baseline, assessing the cost of inaction, and prioritizing ways to make progress not just on mitigation but also adaptation and resilience.

Leaders can also support the use of AI to accelerate climate-related innovation and adoption, through electrification, renewables, carbon capture and storage, early warning systems, and more.

In an exciting effort to drive and support climate AI innovations at scale, the AI for the Planet Alliance has launched a call for solutions, sponsored in part by BCG, that offers financial, business, and technical support as prizes to scientifically robust, AI-driven ideas with the greatest potential for impact and scale.

I have found that in my recent travels across Europe, as many places endure dangerously high temperatures, the sense of urgency is rising fast. Right now, 44% of the EU and UK are exposed to warning drought levels. AI is not a cure-all. It's one of many tools we should be using to address this global challenge. But it can help us go down a more informed, increasingly data-driven—and faster—path.

Until next time,

Christoph Schweizer
Chief Executive Officer

Further Reading

AI Is Essential for Solving the Climate Crisis

Advanced analytics and artificial intelligence can be used to help manage challenging issues related to mitigating climate change and improving adaptation and resilience.

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The Climate Actions Companies Should Take Today

Net-zero commitments are long-term pledges—but meeting them requires action today. BCG experts explain what CEOs need to do this year on climate.

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Use AI to Measure Emissions—Exhaustively, Accurately, and Frequently

Despite good intentions, companies say they are struggling to cut their emissions in line with targets. Their inability to measure appropriately is the leading roadblock.

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