ECONOMIST IMPACT

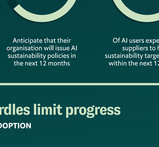
Greening intelligence: Charting the future of sustainable AI

Supported by DELTA

Artificial intelligence (AI) is rapidly transforming industries and societies, but its growing energy consumption and environmental impact raise concerns about sustainability. This infographic visualises the perspectives of **608 AI users and suppliers—including 362 C-level executives and board members**—on AI and sustainability, highlighting both areas of alignment and diversity in perception and action for a greener future of AI.

1 The AI boom and environmental impact

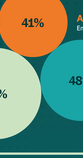
91% of executives predict that AI will be important in 12 months, up from just 47% today



- The dramatic increase in AI's importance is driven by its transformative impact on industries, but corresponding **increases in energy consumption and environmental impact are concerning business leaders**.
- Data centres have **grown from 500,000 in 2012 to more than 8M today**.

2 Sustainability is becoming non-negotiable

Expect AI sustainability to become more important to their organisation within the next 12 months

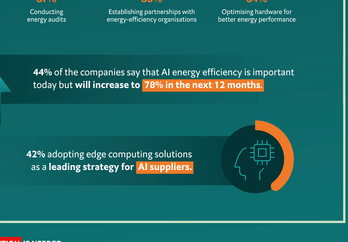


Anticipate that their organisation will issue AI sustainability policies in the next 12 months

Of AI users expect their suppliers to have sustainability targets in place within the next 12 months

3 Sustainability hurdles limit progress

TOP SUPPLIER HURDLES TO ADOPTION



REGIONAL VARIATIONS
Top hurdles differ based on the location of executives:

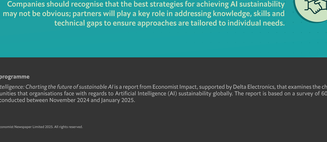
4 No silver bullet for AI sustainability, but urgent action needed

Organisations are adopting a variety of approaches to AI sustainability.

44% of the companies say that AI energy efficiency is important today but **will increase to 78% in the next 12 months**.

42% adopting edge computing solutions as a **leading strategy for AI suppliers.**

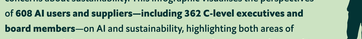
URGENT ACTION IS NEEDED
AI suppliers currently prioritise education while carbon footprint analysis, sustainable supply chains, and energy-efficient infrastructure are considered almost as important.



5 Tailored policy approaches

Financial incentives, regulation and reporting requirements take precedence in different parts of the world.

REGIONAL APPROACHES TO AI SUSTAINABILITY



6 Moving forward

PATHWAYS TO SUSTAINABLE AI

Prioritise AI sustainability initiatives

Organisations should recognise the growing importance of balancing AI innovation with environmental concerns and take concrete steps to improve energy efficiency in their AI operations over the next 12 months.

Implement a multi-faceted approach to AI sustainability

To address the complex challenge of AI sustainability, companies should adopt a diverse range of strategies, including energy audits, partnerships with efficiency organisations and hardware optimisation.

Develop a global strategy for AI sustainability

Companies should recognise and address regional differences in approaches to AI sustainability, working towards standardised practices and fostering international collaboration to create more effective solutions.

Focus on long-term sustainability over short-term costs

Organisations should prioritise comprehensive assessments such as life-cycle analyses and real-time energy monitoring when evaluating AI solutions, rather than solely considering immediate cost implications.

Bridge the gap between AI users and suppliers

AI users should clearly communicate their increasing expectations for sustainability targets to their suppliers, driving the industry towards more sustainable practices and encouraging innovation in this area.

Develop strong partnerships and collaborations to meet capability needs

Companies should recognise that the best strategies for achieving AI sustainability may not be obvious; partners will play a key role in addressing knowledge, skills and technical gaps to ensure approaches are tailored to individual needs.

About the programme

Greening intelligence: *Charting the future of sustainable AI* is a report from Economist Impact, supported by Delta Electronics, that examines the challenges and opportunities that organisations face with regards to Artificial Intelligence (AI) sustainability globally. The report is based on a survey of 608 senior executives conducted between November 2024 and January 2025.

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