

# AI and ESG: The twin engines of sustainable development

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In the backdrop of the deep entwining of global green transformation and the digital economy, sustainable development and artificial intelligence (AI) have emerged as dual pivotal forces shaping the current era. During the 2025 NPC and CPPCC annual sessions (known as “the two sessions”), AI and the “AI+” strategy emerged as a core theme, recognized as a primary driving force behind the reshaping of China’s economic, societal and technological landscape, reflecting China’s strong commitment to and high expectations for AI development. At the same time, the two sessions emphasized the important task of coordinating carbon reduction, pollution reduction and green growth, expediting the holistic green transformation of economic and social progress. The deep integration of AI and sustainable development is expected to build a green and intelligent socio-economic framework, empowering China to offer insights and solutions to global sustainable development.

## From AI to ESG: An advanced path to new quality productive forces

The deep integration of environmental, social and governance (ESG) with AI has energized green and sustainable development. ESG guides enterprises towards green transformation and enhancing industry competitiveness, while AI, with its powerful data capabilities, helps in energy conservation and emissions reduction. Similarly, ESG also guides the sustainable use of AI, which in turn facilitates ESG objectives, fostering a mutually beneficial synergy. The growing support for ESG and AI integration initiatives is a necessary step in advancing new quality productive forces and accelerating the shift towards a green and low-carbon economy.

## Breaking data silos to unlock enterprises’ sustainable development potential

Digital transformation, a crucial pillar for enterprise sustainability, synergizes with ESG strategies but often contends with the dual challenges of “data silos” and “underutilized organizational potential”. The AI-driven knowledge matrix is becoming the linchpin for overcoming these hurdles. By embarking on technological transitions, companies can achieve:

- Efficient integration of data elements: Building an intelligent data base; breaking down barriers between systems; realizing real-time interconnection of data across the whole area; improving the accuracy and efficiency of decision-making.
- Structuring and institutionalizing tacit experience: Converting tacit knowledge dispersed in individuals, teams and business processes into systematic and accumulated enterprise assets; building a dynamic learning mechanism and continuously improving organizational resilience and innovation capabilities.

## Removing decision-making blind spots and cultivating a dynamic strategic platform

Traditional strategic planning relies on static data and solidified processes, which is difficult to adapt to rapid changes in the market. As a result, enterprises tend to fall short of forward-looking insights and precise response capabilities. AI-driven dynamic strategic platform enables enterprises to efficiently carry out ESG risk identification, strategic planning and enhance strategic agility and competitiveness:

- Prospective insight into market trends and risks: Through big data and AI, we can perceive industry dynamics and ESG risks in real time, as well as identify opportunities and challenges in advance.
- Intelligent deduction of strategic path: Based on AI algorithm, ESG scenario analysis is carried out to optimize strategic layout and ensure forward-looking, flexible and sustainable decision-making.

## Redefining service boundaries and pioneering the era of cognitive inclusivity

The traditional service model is limited by manpower and standardized processes, hindering the adaptation to evolving market demands and personalized services. Particularly in the realm of ESG, companies grapple with intricate data and regulatory landscapes. AI-driven service enhancements are surmounting these barriers, empowering enterprises to undertake digital transformations aligned with ESG objectives.

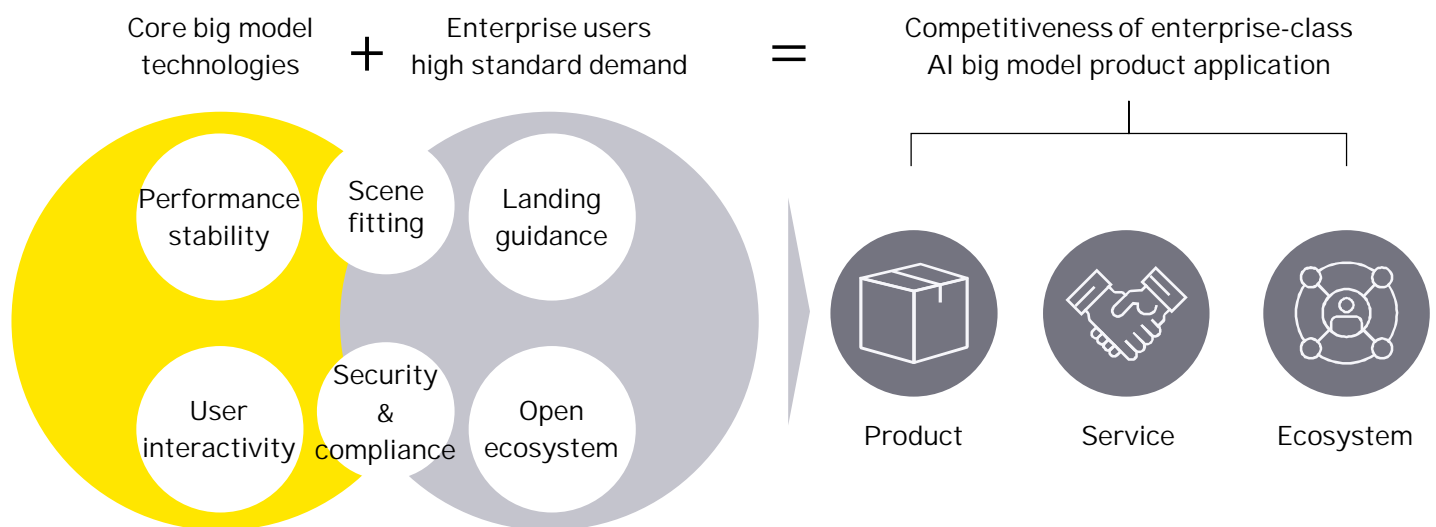


Figure: New enterprise service paradigm in the era of intelligence

- Intelligent service extension: Deploying automated customer service and intelligent recommendation systems for round-the-clock online services. This enhancement improves the responsiveness of ESG services, liberates resources and enables a shift towards high-value service delivery.
- Cognitive capability dissemination: Building an enterprise-level ESG knowledge hub to structurally shape professional capabilities (such as regulatory interpretation, industry insights), ensuring that advanced expertise is accessible at all service interactions.

## Challenges in applying AI for sustainable development

Despite the enormous potential of AI technology in sustainable development, its application still faces multiple challenges, mainly in the following aspects:

### 1. The impact of data fragmentation on AI applications

- The data related to sustainable development are scattered in sources, inconsistent in format, insufficient in timeliness and difficult to govern.
- A fragmented data ecosystem undermines the effectiveness of AI model training, making it difficult to capture comprehensive and accurate information.

### 2. Data governance and collaboration mechanism to be improved

- It is necessary to build an end-to-end, transparent and shared data governance system to ensure data quality and compliance.
- Establishing an effective synergy framework at the strategic level to harness AI for promoting sustainable development and enhancing ESG practices, thereby unlocking its long-term strategic value.

## Fostering industry transformation and empowering enterprises in the digitalization wave

EY teams attach great importance to scientific and technological innovation. Since June 2024, we have spearheaded the adoption of the DeepSeek model. Leveraging our self-developed large model platform METIS, which seamlessly integrates across business scenarios, we help enterprises in addressing challenges spanning strategy to operations. In the realm of sustainable development, drawing from a wealth of EY authoritative reports and insights across 20+ vertical industries, our AI platform renders around-the-clock regulatory tracking and practical case analyses, with a focus on creating a sector-specific knowledge base and offering professional guidance to businesses. As pioneers in the industry, we not only champion cutting-edge concepts but also lead by example through innovative implementations. Our commitment lies in propelling the industry towards a new era of “human-machine co-intelligence”, empowering enterprises and the public to embrace the concept of green development.

As the “AI+” initiative progresses, the deep integration of AI and ESG will invigorate sustainable development, providing comprehensive intelligent support from basic knowledge to deep insight and facilitating effective implementation of sustainable practices across diverse sectors. Although challenges persist regarding data quality and accessibility, we are optimistic that the fusion of AI and ESG can drive society towards a greener, more intelligent future through policy support and technological innovation.

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