



香港恒生大學
THE HANG SENG UNIVERSITY
OF HONG KONG



ESG 研究中心
RESEARCH CENTRE FOR ESG

ESG Overview

- E** Environment
Environmental Performance
- S** Social
Social Responsibility
- G** Governance
Governance & Compliance



Investor Relations

AI Empowered ESG Disclosure

ESG Score
80
/100

Prof. Louis Cheng

Dr. S H Ho Professor of Banking and Finance

Associate Dean (Research) and Director of Research Centre for ESG

The Hang Seng University of Hong Kong

October 19, 2026

About Louis



Prof. Louis Cheng

Dr. S H Ho Professor of Banking & Finance
Associate Dean (Research)
Director of Research Centre for ESG
The Hang Seng University of Hong Kong

- Dr S H Ho Professor of Banking and Finance, HSUHK (since 2021)
- Ranked 96th in Economics & Finance in China in research (2026) by the international academic platform “Research.com”
- Scopus h-index 26, h5-index 10; Google Scholar h-index 39, h5-index 21 (Oct 2026)
- Associate Dean (Research), School of Business, HSUHK (since 2025)
- Directors of Research Centre for ESG (CESG) (since 2022)
- Member of the Hospital Governing Committee of Ruttonjee & Tang Shiu Kin Hospitals (2023-28)
- Business Studies Assessment Panel member for Competitive Research Funding Schemes (Self-financing sector) of the RGC (2022-28)
- Member of the Investment Committee of the Hospital Authority Provident Fund Scheme (2016-22)
- Advisor for Bhutan’s Green Bond initiative and consultant of United Nations (2019-22)
- Professor of Finance (2010-20) & Director of the Center for Economic Sustainability and Entrepreneurial Finance (CESEF) (2018-20), PolyU
- Council member & Trustee of the Pension Fund of the PolyU (2011-13)
- ESG Advisor for the Hong Kong Police Force (2025-28)
- Served as a project consultant for various organizations including:
 - Securities and Futures Commission (SFC), Mandatory Provident Fund Scheme Authority (MPFA), Hong Kong Exchanges (HKEx), Investor Education Centre (IEC)
 - Bank of China (HK) Private Banking, Agricultural Bank of China (HK) Private Banking, Value Partners, Fubon Bank, Bank Consortium Trust Hong Kong, Charles Schwab (US)

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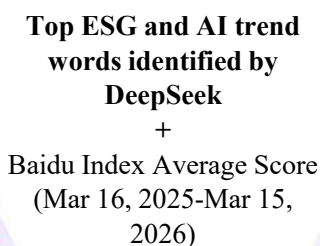
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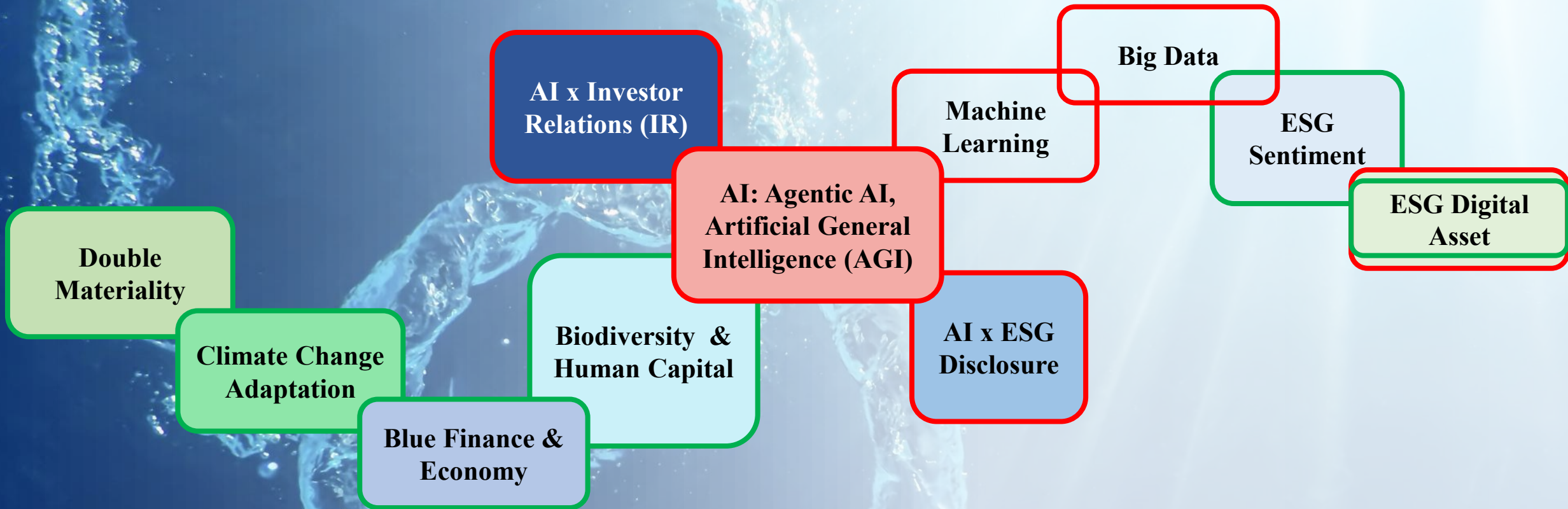


➤ **Baidu Index Average Score:** Using Baidu Index data from Mar 16, 2025, to Mar 15, 2026, DeepSeek's identified keywords into Baidu Index. The platform calculates an "Information Index" by weighting various user interactions, including reading, commenting, sharing, liking, and disliking.

1. 新能源 (renewable energy) (Baidu Index Ave Score 4,672,307) and 人工智能 (Artificial Intelligence) (Baidu Index Ave Score 19,529,922) are the most popular topics in the fields of ESG/Sustainability/Green and AI respectively.
2. In the filed of ESG/Sustainability/Green, the high frequency of renewable energy, electricity vehicle (EV), solar panel and battery during March 2025 to March 2026 show the same pattern in Year 2024, which indicating China is making a long-term deep transfer to green economy and renewable energy development.
3. For AI, it shows artificial intelligence is still the most core topic compared to Year 2024, but the integration of AI and other scenes has increased compared to Year 2024, indicating AI applications has been transferred from the theory to practice in different fields and help enhance work productivity and life experience.

1. Understand Key Issues in ESG and AI

Trendy Topics



1. Understand Key Issues in ESG and AI

Meanwhile, in the academic world, attention to AI-related corporate issues has been increasing, as evidenced by a Special Issue on Artificial Intelligence in Corporate Finance at *Finance Research Letters* covering topics such as Political risk, AI, and R&D; Managerial tone, earnings calls, and text-mining; AI and accounting conservatism; Executive communication and machine learning; AI and ESG greenwashing; AI and corporate governance and AI washing.

However, rigorous academic research in top-tier journals remains relatively limited.



Currently, there is growing interest in applying AI to ESG reporting and disclosure. Several leading consulting firms, such as Boston Consulting Group (BCG), have published influential reports highlighting how AI can enhance ESG disclosure processes.



2. How AI is Affecting ESG Integration

AI at Work: Strategy Matters More Than Tools (by BCG 2026)

KEY TAKEAWAYS

BCG, JUNE 2026

Our fourth annual global AI at Work survey reveals that AI is changing jobs faster than companies are redesigning operating models to keep up—and strategic clarity is crucial to long-term success.

- Among frontline employees, 42% who are regular AI users report saving eight hours a week—the equivalent of a full workday. But most organizations haven't figured out how to convert the time into value.
- AI adoption among frontline workers has surged: 74% now say they use it every day or a few times a week, up 23 percentage points from 2025.
- More than six out of ten people believe that in the next three years, AI agents could do at least half of their jobs.
- The driving force for achieving long-term success with AI is strategic clarity. Having an explicit plan is so crucial that it improves AI's impact even at organizations with limited access to AI tools.



2. How AI is Affecting ESG Integration

Successful Digital Transformation (AI)
Always Includes ESG Goals (by BCG 2022)

The AI Opportunity to resolve climate change problems (BCG 2022):

- **Mitigation.** AI can be employed to help measure emissions at both the macro and micro levels, reduce emissions and greenhouse gas (GHG) effects, and remove existing emissions from the atmosphere.
- **Adaptation and Resilience.** AI can be applied to improve hazard forecasting for regionalized long-term events, such as sea-level rise, and for immediate, extreme events, such as hurricanes, among other possibilities. These applications can minimize the impact of climate hazards.
- **Fundamentals.** AI can also be used to bolster efforts across climate research and modeling; climate finance; and education, nudging, and behavior change, such as by powering personalized tools to estimate an individual's carbon footprint or making recommendations for environmentally friendly purchases.



Companies that are successful at digital transformation are almost twice as likely to view ESG goals as a key focus of digital initiatives.

2. How AI is Affecting ESG Integration

We Propose a Three-Tier AI-Human Cooperation

Tier 1: AI acts independently and automatically.

Tier 2: AI assists, but humans supervise and make final decisions.

Tier 3: Humans perform the work without AI involvement, especially where communication, judgment, and human relationships are critical.



2. How AI is Affecting ESG Integration

Our Findings on AI x ESG Disclosure
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Figure 1. AI Autonomy vs. Human-Required Share, by Task

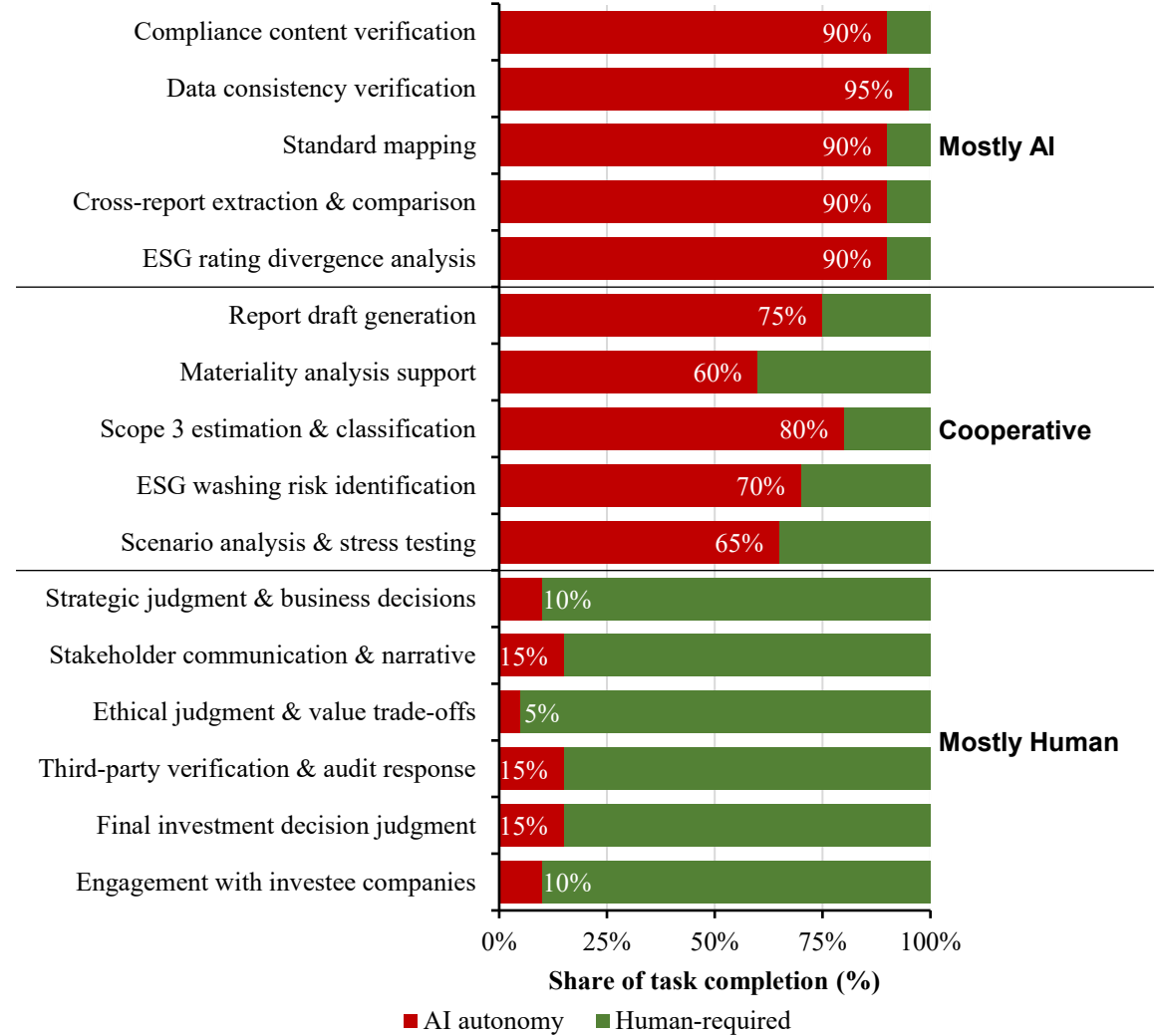
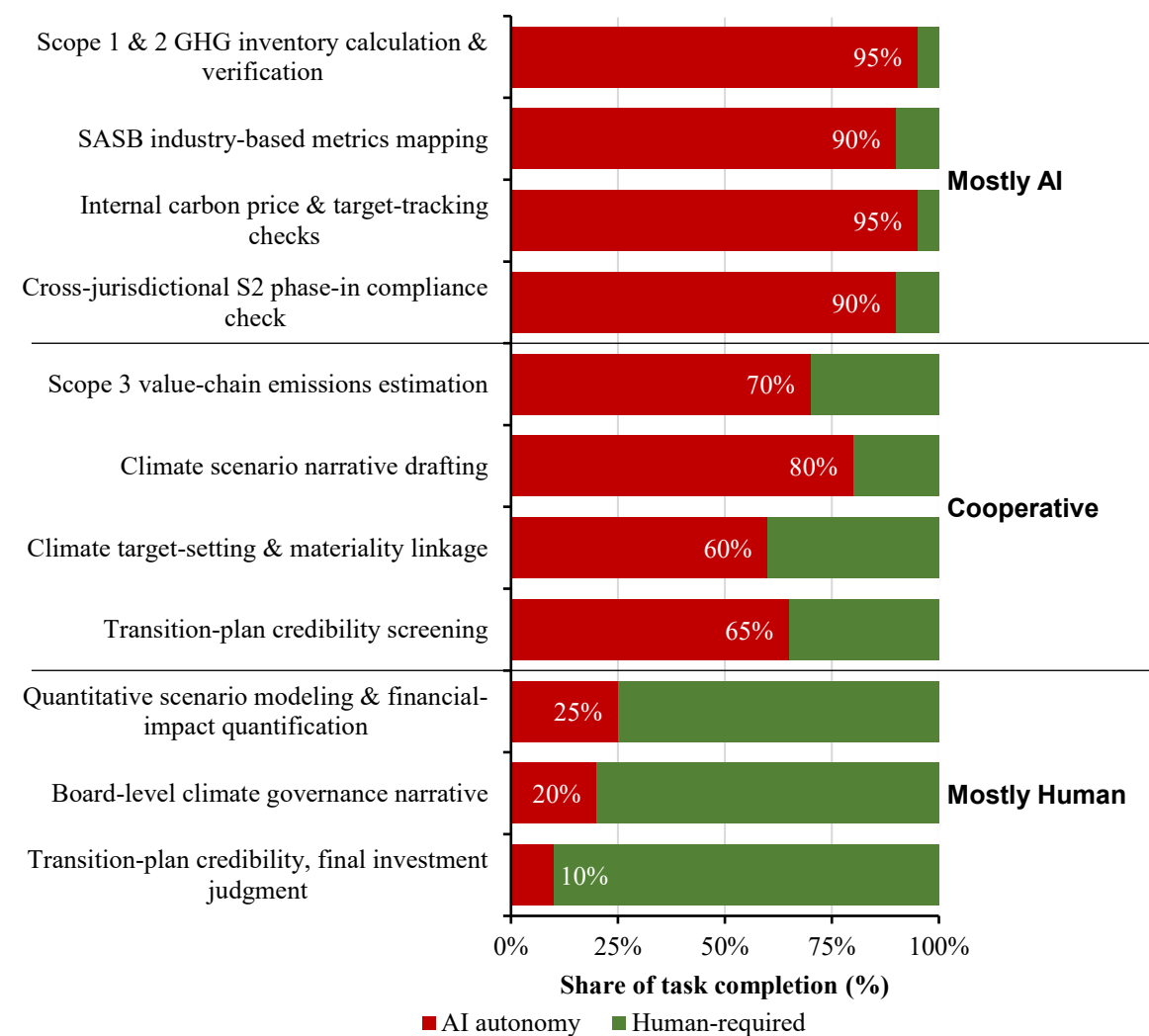


Figure 2. AI Autonomy vs. Human-Required Share, IFRS S2 Tasks



2. How AI is Affecting ESG Integration

Our Validation of AI's Participation in ESG Reporting Tasks

Testing if AI Platforms have a Consistent Opinion with Human Expertise for Tasks in Tiers A, B and C

Tier A Prompt: ... Please evaluate the probability of correctness of the following statement: “AI can handle most of compliance content verification tasks correctly, competently, in a professional manner.”

Tier B Prompt: ... Please evaluate the probability of correctness of the following statement: “AI can handle a significant portion of report draft generation tasks correctly, competently, in a professional manner.”

Tier C Prompt: ... Please evaluate the probability of correctness of the following statement: “AI cannot handle strategic judgment & business decisions tasks independently, correctly, competently, in a professional manner.”

Probability of the Correctness of the Statement for Tier A, B and C Tasks Evaluated by AI

Tier	Sample Tasks	GPT	Gemini	Deepseek	AI Prob Avg	AI Tier Prob Avg	Human (AI Part. %)
A	Compliance content verification	0.70	0.35	0.35	0.467	0.637 (N=5)	90%
B	Report draft generation	0.90	0.80	0.75	0.817	0.763 (N=5)	75%
C	Strategic judgment & business decisions	0.85	0.92	0.85	0.873	0.884 (N=6)	10%

Conclusion: AIs do not trust their own ability to handle ESG reporting tasks by themselves but agree with the cooperative mode for Tier B and human-dominated tasks for Tier C.

2. How AI is Affecting ESG Integration

Environmental Challenges of AI
(by NY Times and Climate Cosmos)

1. The massive water and electricity consumption of AI data centers has sparked social concerns.

- According to a New York Times investigation, the rise of AI data centers has led to these facilities requiring massive amounts of electricity for computing and vast quantities of water for cooling computers.
- In Mexico, South Africa where blackouts have long been routine, data centers are further taxing the national grid.
- In Ireland, data centers consume more than 20 percent of the country's electricity.
- In Chile, precious aquifers are in danger of depletion.

<https://www.nytimes.com/2025/10/20/technology/ai-data-center-backlash-mexico-ireland.html>



2. The energy demands of AI training far exceed those of everyday electricity usage.

- Google AI-enhanced searches now require up to 6.9 watt-hours according to data from the International Energy Agency. This means Google's AI search alone now consumes more electricity annually than countries like Uruguay or Jamaica. The company's own sustainability reports show a 48% increase in energy consumption between 2022 and 2024, primarily attributed to AI integration.
- OpenAI's GPT-4 training process consumed an estimated 50 gigawatt-hours of electricity, equivalent to the annual energy consumption of about 5,000 American households.

<https://climatecosmos.com/world-weather/exposed-the-true-energy-toll-of-every-ai-query/>



3. ESG Integration in Finance with AI Enhancement

ESG Integration Life-cycle (by CESG)

ESG Fully Integrated

Directly invest capital towards companies which provide solutions to ESG issues and affect real world outcomes.

➤ *Best-in-class*

Investors actively invest in a sub-set of the best practitioners in a sector.

➤ *Thematic*

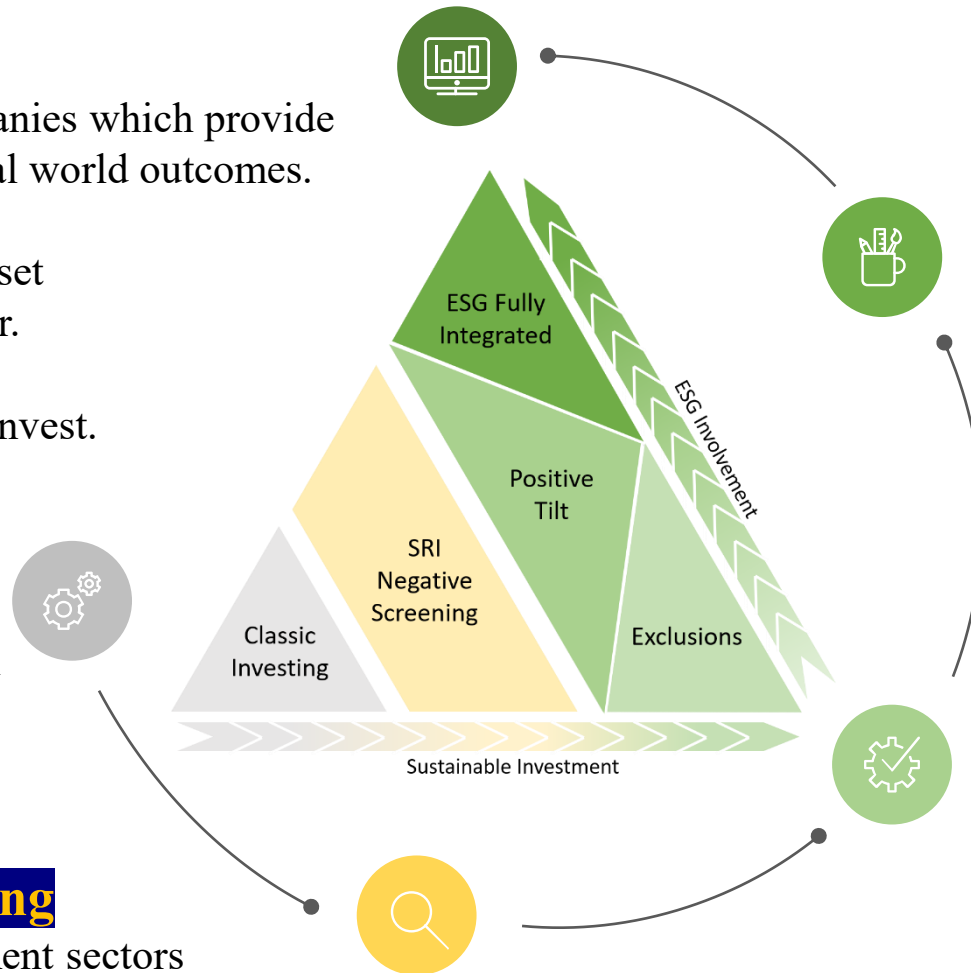
Investors often follow themes to invest.

Classic Investing

Investment involves little ESG-related issues.

SRI Negative Screening

Passively excluding investment sectors based on ethical and religious values.



ESG Positive Tilt

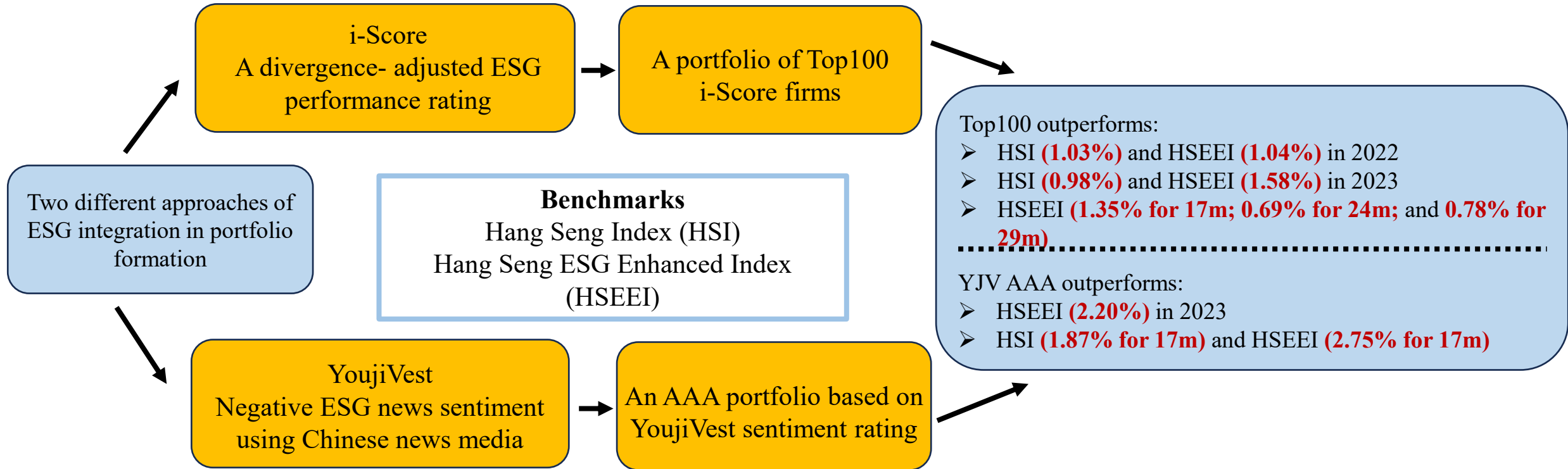
With the intention to generate measurable and beneficial societal impacts alongside a financial return.

ESG Exclusions

Excluding the companies or sectors based upon low ESG factors.

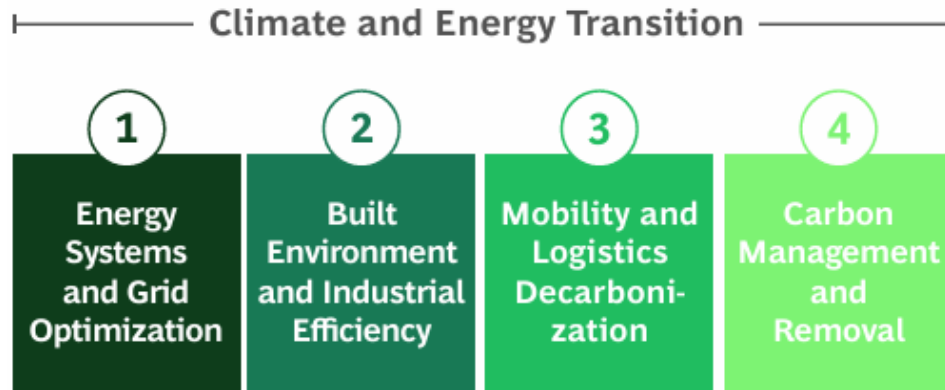
3. ESG Integration in Finance with AI Enhancement

Summary of Alpha Generation (by CESG)

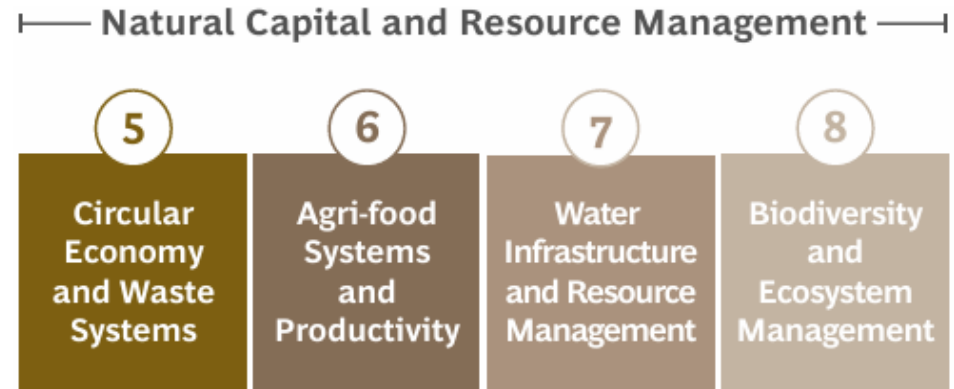


3. ESG Integration in Finance with AI Enhancement

The Sustainability Map Covers a Broad Range of Investable Sectors (by BCG)



The investable landscape spans all strategies.



Investable strategies include:

- AI-native companies purpose-built for sustainability challenges
- Established businesses integrating into existing products and operations
- Enabling infrastructure providers whose economics improve as AI adoption accelerates.



3. ESG Integration in Finance with AI Enhancement

AI x Investor Relations



The Research Centre for ESG will cooperate with HKIRA on a project to understand and explore how AI can support the operations of Investor Relations.

Your participation is welcome.

Disclaimer

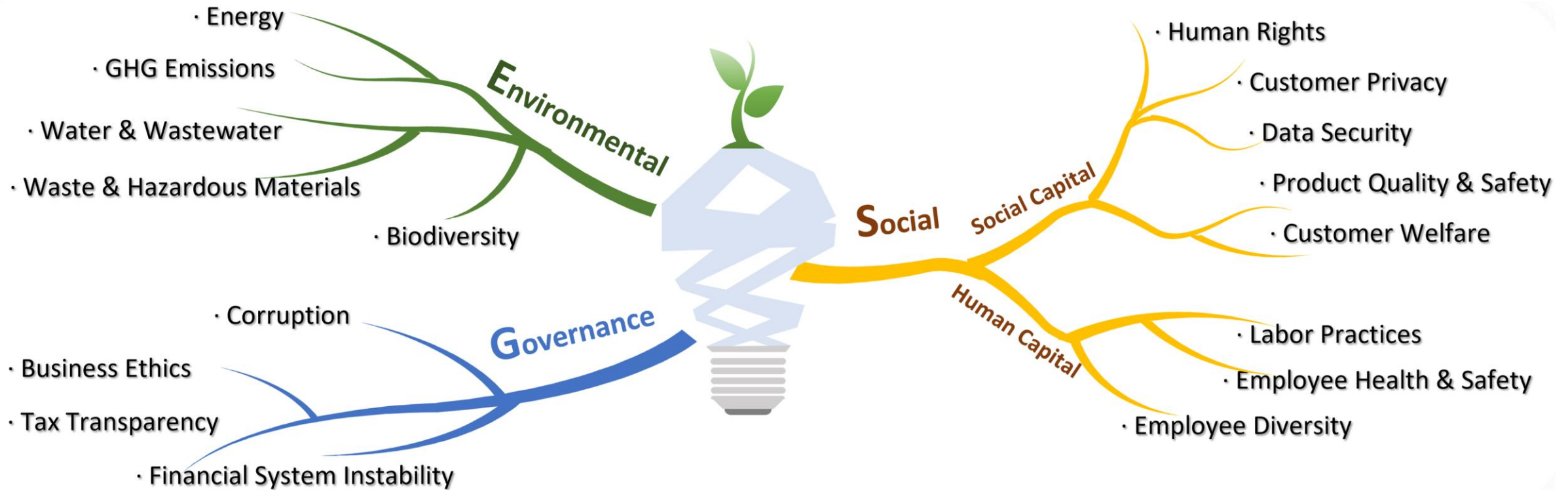
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Acknowledgement

The images on p. 1, 9, and 11(left) are generated by the Adobe Firefly **AI**. The Firefly generative AI models were trained on **licensed content**.

The images on p. 5 and 11(right and background) are from Magnific.



4. Appendices

Details of the Sustainability Map Covering a Broad Range of Investable Sectors

