

## Trusted Technology and Data

**Die deutsche Übersetzung dieser Richtlinie kann auf Nachfrage zur Verfügung gestellt werden.**

### Why we engage

Digital connectivity can support international collaboration, economic growth, and sustainable development. However, rapid changes in technology can be disruptive to both society and businesses, creating significant risks and opportunities for investors.

Governments and regulators, including those in the UK, EU, and US, have introduced or proposed new rules to address risks from digital technologies, including from artificial intelligence (AI) and digital assets.<sup>32</sup> This follows earlier regulations on privacy and data protection, such as the EU’s General Data Protection Regulation (GDPR). Regulations increase compliance costs and the risk of large penalties for breaches. They may also lag behind innovations, meaning some risks may not be addressed at the company or system level. At the same time, major technology firms are intensifying lobbying efforts to shape regulations in ways that align with their business interests.

Cybersecurity threats continue to grow in scale and sophistication, with attacks posing significant financial, operational and reputational risks to companies and their stakeholders. Protecting companies from cybersecurity threats, particularly those that provide critical infrastructure, is an increasing focus area of governments.<sup>33</sup>

Misinformation and disinformation on digital platforms can distort public perceptions and erode trust in institutions. This can pose risks to companies and financial markets, for example, by damaging corporate reputations, amplifying market volatility, or undermining investor confidence. Digital platforms are also subject to shutdowns and censorship by state actors, with implications for human rights as well as business continuity.

Growing demand for digital products, especially AI, is increasing demand for energy and raw materials. The IEA predicts that electricity consumption from data centres could double by 2030.<sup>34</sup> Meanwhile, economic shocks (such as COVID-19) and geopolitical competition for key materials and components (such as semiconductors), can impact production costs and output volumes for some sectors.

### Issues relating to this theme include:

Data Security & Privacy

Product/Service Governance & Responsibility

Product/Service Quality & Safety

32. For example, Digital Markets, Competition and Consumers Act 2024 (UK) (<https://www.legislation.gov.uk/ukpga/2024/13/contents>), Digital Markets Act (EU) ([https://eur-lex.europa.eu/legal-content/EN/TXT/?toc=OJ%3AL%3A2022%3A265%3ATOC&uri=uriserv%3AOJ.L\\_.2022.265.01.0001.01.ENG](https://eur-lex.europa.eu/legal-content/EN/TXT/?toc=OJ%3AL%3A2022%3A265%3ATOC&uri=uriserv%3AOJ.L_.2022.265.01.0001.01.ENG)), and Financial Innovation and Technology for the 21st Century Act (US) (<https://www.congress.gov/bill/118th-congress/house-bill/4763>).

33. For example, UK Government’s Cyber Governance Code of Practice (<https://www.gov.uk/government/publications/cyber-governance-code-of-practice>).

34. International Energy Agency. (2025). Global Methane Tracker 2025: Understanding methane emissions. <https://www.iea.org/reports/global-methane-tracker-2025/understanding-methane-emissions>.



## Trusted Technology and Data

### Engagement approach

We highlight good practices below and encourage priority companies, where trusted technology and data are relevant issues, to work towards these.

<p>Technology and data risks</p>	<p>Identify and report on how the company is managing sustainability and financial risks that may arise from their provision of, or use of, technology and data (including bias and misinformation).</p> <p>Provide transparency regarding the use and impact of AI from an operational and product/service perspective.</p> <p>Adopt international standards regarding AI e.g., ISO/IEC 42001.</p>
<p>Security and protection</p>	<p>Take steps to protect cybersecurity, including within cyber supply chains.</p> <p>Integrate effective protection, security, and prevention strategies into technology and data-related policies.</p> <p>Carry out an independent review and verification of technology and data-related policies.</p> <p>Adopt international standards regarding information security, cybersecurity, and privacy protection e.g., ISO/IEC 27001.</p>
<p>Privacy and digital rights</p>	<p>Educate employees and users regarding data collection, storage, processing, and dissemination.</p> <p>Safeguard data and user rights to privacy, and carry out due diligence on any business model or operations carrying a risk of rights infringement.</p> <p>Take steps to uphold, protect, and respect human rights within a digital environment e.g., by implementing an independent and expert-driven committee to protect digital human rights in both real and digital environments.</p>
<p>Technology and data solutions</p>	<p>Identify opportunities for technology and data solutions that address environmental and social practices.</p>
<p>Technology and data governance</p>	<p>Ensure the board has clear responsibility for overseeing material technology risks, including cyber, AI, data governance and operational resilience.</p> <p>Ensure the board has the necessary literacy and expertise to understand emerging technology threats and opportunities, in order to effectively oversee and challenge technology-related decisions.</p>



### Trusted Technology and Data

#### Spotlight: Data Centres

Sustainability issues that are material to a company's value and prospects are often interconnected with each other, creating dependencies and feedback loops. Sometimes an industry can evolve and advance quicker than regulations and societal expectations, presenting material risks and opportunities to investors that may change or crystallise quickly. These impacts may also send ripple effects across the economy to other industries. One example that we have observed is in the rapid growth of data centres.

Each of the issues on the next page link to the themes outlined earlier in our Stewardship Plan, where we have set out our engagement approach and good practices for companies. In addition to these, where material to a data centre owner or operator, we also encourage specific disclosures such as site-level social and environmental impact assessments, as well as key metrics such as power usage effectiveness, water usage effectiveness, water sourcing, incidents metrics and any remedial actions.



## Trusted Technology and Data

### Demands and Impacts

Key: **CG** Corporate Governance    **HR** Human Rights    **BNC** Bioeconomy and Natural Capital  
**CC** Climate Change    **SO** Social Opportunities    **TTD** Trusted Technology and Data

<p>Rising energy demand due to significant electricity consumption, estimated to double by 2030<sup>35</sup></p> <p><b>CC</b> <b>BNC</b> <b>HR</b> <b>TTD</b></p>	<p>Growing investment in renewables, but also natural gas and nuclear energy, locking in more greenhouse gas emissions and nuclear waste.<sup>36</sup></p> <p>Increased strain on the grid and energy costs for local residents, for example when capital expenditure for power generation expansion is passed to consumers.<sup>37</sup></p> <p>Higher demand for renewable energy certificates, carbon removal and carbon offset credits can drive growth in innovation and nature-based solutions. However, there are concerns about the integrity, transparency and additionality of these certificates and credits, including concerns about potential double counting.</p> <p>Potential avoided emissions from AI's efficiency gains but challenging to quantify with no standard methodology yet.</p> <p>Uninterruptable backup power supply is typically fulfilled by diesel generators. Air pollution and noise from these can negatively impact local community health, leading to community opposition and diminished social licence to operate.</p>
<p>Data centres generate a significant amount of heat which require cooling</p> <p><b>CC</b> <b>BNC</b> <b>HR</b></p>	<p>Traditional air cooling tends to be more energy-intensive, and there are examples of nearby residents complaining about noise and air pollution from cooling fans.<sup>38</sup></p> <p>Liquid evaporative cooling consumes less energy but more water, which increases operational, regulatory and reputational risks in water-stressed locations. Initiatives and innovation to recover and reuse waste heat to heat homes and even cities can help to mitigate these risks.<sup>39</sup></p>
<p>Replacement of supporting hardware – chips and processors</p> <p><b>CC</b> <b>BNC</b> <b>HR</b> <b>SO</b></p>	<p>Shorter asset replacement cycles generate more electronic waste, driving higher demand for minerals and raw materials. This in turn increases socio-environmental risks in the supply chain.</p> <p>Circular economy models could help to mitigate cost and risks.</p>
<p>Talent attraction and socio-economic opportunities</p> <p><b>SO</b></p>	<p>Construction-related positions are typically temporary, while the skilled and technical roles to operate a data centre are both limited in number and typically imported rather than hired from the local community.</p>
<p>Robust cybersecurity, physical security, business continuity and incident management are critical</p> <p><b>CG</b> <b>TTD</b></p>	<p>Requires robust governance and oversight from the board and senior management to functional teams throughout an organisation, with ongoing monitoring through the enterprise risk management framework.</p>

35. International Energy Agency. (2025). Global Methane Tracker 2025: Understanding methane emissions. <https://www.iea.org/reports/global-methane-tracker-2025/understanding-methane-emissions>.

36. Krall, L. M., Macfarlane, A. M., & Ewing, R. C. (2022). Nuclear waste from small modular reactors. <https://doi.org/10.1073/pnas.2111833119>.

37. Please refer to the following links for examples: <https://www.bloomberg.com/graphics/2025-ai-data-centers-electricity-prices-and> <https://apnews.com/article/meta-data-center-louisiana-power-costs-4ce76b73c102727d71edbbb56abe1388>.

38. Please refer to the following link for an example: <https://www.businessinsider.com/data-centers-northern-virginia-noise-air-pollution-cost-2025-5>.

39. For more information and an example, please see: <https://www.irena.org/Innovation-landscape-for-smart-electrification/Power-to-heat-and-cooling/31-Waste-heat-recovery-from-data-centres> and <https://www.bloomberg.com/news/features/2025-05-14/finland-s-data-centers-are-heating-cities-too>.

The value of investments and the income from them can go down as well as up and investors may not get back the amount originally invested. The performance figures contained in this document relate to past performance, which should not be seen as an indication of future returns. Future returns will depend, inter alia, on market conditions, investment manager's skill, risk level and fees. Where overseas investments are held the rate of currency exchange may cause the value of such investments to go down as well as up. Investments in emerging markets are by their nature higher risk and potentially more volatile than those inherent in some established markets. Economies in Emerging Markets generally are heavily dependent upon international trade and, accordingly, have been and may continue to be affected adversely by trade barriers, exchange controls, managed adjustments in relative currency values and other protectionist measures imposed or negotiated by the countries and territories with which they trade. These economies also have been and may continue to be affected adversely by economic conditions in the countries and territories in which they trade.

The contents of this document may not be reproduced or further distributed to any person or entity, whether in whole or in part, for any purpose. All non-authorised reproduction or use of this document will be the responsibility of the user and may lead to legal proceedings. The material contained in this document is for general information purposes only and does not constitute advice or a recommendation to buy or sell investments. Some of the statements contained in this document may be considered forward looking statements which provide current expectations or forecasts of future events. Such forward looking statements are not guarantees of future performance or events and involve risks and uncertainties. Actual results may differ materially from those described in such forward looking statements as a result of various factors. We do not undertake any obligation to update the forward-looking statements contained herein, or to update the reasons why actual results could differ from those projected in the forward-looking statements. This document has no contractual value and is not by any means intended as a solicitation, nor a recommendation for the purchase or sale of any financial instrument in any jurisdiction in which such an offer is not lawful. The views and opinions expressed herein are those of HSBC Asset Management at the time of preparation, and are subject to change at any time. These views may not necessarily indicate current portfolios' composition. Individual portfolios managed by HSBC Asset Management primarily reflect individual clients' objectives, risk preferences, time horizon, and market liquidity. Foreign and emerging markets. Investments in foreign markets involve risks such as currency rate fluctuations, potential differences in accounting and taxation policies, as well as possible political, economic, and market risks. These risks are heightened for investments in emerging markets which are also subject to greater illiquidity and volatility than developed foreign markets. This commentary is for information purposes only. It is a marketing communication and does not constitute investment advice or a recommendation to any reader of this content to buy or sell investments nor should it be regarded as investment research. It has not been prepared in accordance with legal requirements designed to promote the independence of investment research and is not subject to any prohibition on dealing ahead of its dissemination. This document is not contractually binding nor are we required to provide this to you by any legislative provision.

All data from HSBC Asset Management unless otherwise specified. Any third party information has been obtained from sources we believe to be reliable, but which we have not independently verified.

HSBC Asset Management is the brand name for the asset management business of HSBC Group, which includes the investment activities that may be provided through our local regulated entities. HSBC Asset Management is a group of companies in many countries and territories throughout the world that are engaged in investment advisory and fund management activities, which are ultimately owned by HSBC Holdings Plc. (HSBC Group). The above communication is distributed by the following entities:

In Australia, this document is issued by HSBC Bank Australia Limited ABN 48 006 434 162, AFSL 232595, for HSBC Global Asset Management (Hong Kong) Limited ARBN 132 834 149 and HSBC Global Asset Management (UK) Limited ARBN 633 929 718. This document is for institutional investors only, and is not available for distribution to retail clients (as defined under the Corporations Act). HSBC Global Asset Management (Hong Kong) Limited and HSBC Global Asset Management (UK) Limited are exempt from the requirement to hold an Australian financial services license under the Corporations Act in respect of the financial services they provide. HSBC Global Asset Management (Hong Kong) Limited is regulated by the Securities and Futures Commission of Hong Kong under the Hong Kong laws, which differ from Australian laws. HSBC Global Asset Management (UK) Limited is regulated by the Financial Conduct Authority of the United Kingdom and, for the avoidance of doubt, includes the Financial Services Authority of the United Kingdom as it was previously known before 1 April 2013, under the laws of the United Kingdom, which differ from Australian laws;

in Bermuda by HSBC Global Asset Management (Bermuda) Limited, of 37 Front Street, Hamilton, Bermuda which is licensed to conduct investment business by the Bermuda Monetary Authority;

in Chile: Operations by HSBC's headquarters or other offices of this bank located abroad are not subject to Chilean inspections or regulations and are not covered by warranty of the Chilean state. Further information may be obtained about the state guarantee to deposits at your bank or on [www.sbf.cl](http://www.sbf.cl);

in Colombia: HSBC Bank USA NA has an authorized representative by the Superintendencia Financiera de Colombia (SFC) whereby its activities conform to the General Legal Financial System. SFC has not reviewed the information provided to the investor. This document is for the exclusive use of institutional investors in Colombia and is not for public distribution;

in Finland, Norway, Denmark and Sweden by HSBC Global Asset Management (France), a Portfolio Management Company authorised by the French regulatory authority AMF (no. GP99026) and through the Stockholm branch of HSBC Global Asset Management (France), regulated by the Swedish Financial Supervisory Authority (Finansinspektionen);

in France, Belgium, Netherlands, Luxembourg, Portugal, Greece by HSBC Global Asset Management (France), a Portfolio Management Company authorised by the French regulatory authority AMF (no. GP99026);

in Germany by HSBC Global Asset Management (Deutschland) GmbH which is regulated by BaFin (German clients) respective by the Austrian Financial Market Supervision FMA (Austrian clients);

in Hong Kong by HSBC Global Asset Management (Hong Kong) Limited, which is regulated by the Securities and Futures Commission. This video/content has not be reviewed by the Securities and Futures Commission;

in India by HSBC Asset Management (India) Pvt Ltd. which is regulated by the Securities and Exchange Board of India;

in Italy and Spain by HSBC Global Asset Management (France), a Portfolio Management Company authorised by the French regulatory authority AMF (no. GP99026) and through the Italian and Spanish branches of HSBC Global Asset Management (France), regulated respectively by Banca d'Italia and Commissione Nazionale per le Società e la Borsa (Consob) in Italy, and the Comisión Nacional del Mercado de Valores (CNMV) in Spain;

in Malta by HSBC Global Asset Management (Malta) Limited which is regulated and licensed to conduct Investment Services by the Malta Financial Services Authority under the Investment Services Act;

in Mexico by HSBC Global Asset Management (Mexico), SA de CV, Sociedad Operadora de Fondos de Inversión, Grupo Financiero HSBC which is regulated by Comisión Nacional Bancaria y de Valores;

in the United Arab Emirates, Qatar, Bahrain & Kuwait by HSBC Global Asset Management MENA, a unit within HSBC Bank Middle East Limited, U.A.E Branch, PO Box 66 Dubai, UAE, regulated by the Central Bank of the U.A.E. and the Securities and Commodities Authority in the UAE under SCA license number 602004 for the purpose of this promotion and lead regulated by the Dubai Financial Services Authority. HSBC Bank Middle East Limited is a member of the HSBC Group and HSBC Global Asset Management MENA are marketing the relevant product only in a sub-distributing capacity on a principal-to-principal basis. HSBC Global Asset Management MENA may not be licensed under the laws of the recipient's country of residence and therefore may not be subject to supervision of the local regulator in the recipient's country of residence. One of more of the products and services of the manufacturer may not have been approved by or registered with the local regulator and the assets may be booked outside of the recipient's country of residence.

in Peru: HSBC Bank USA NA has an authorized representative by the Superintendencia de Banca y Seguros in Perú whereby its activities conform to the General Legal Financial System - Law No. 26702. Funds have not been registered before the Superintendencia del Mercado de Valores (SMV) and are being placed by means of a private offer. SMV has not reviewed the information provided to the investor. This document is for the exclusive use of institutional investors in Perú and is not for public distribution;

in Singapore by HSBC Global Asset Management (Singapore) Limited, which is regulated by the Monetary Authority of Singapore. The content in the document/video has not been reviewed by the Monetary Authority of Singapore;

in Switzerland by HSBC Global Asset Management (Switzerland) AG. This document is intended for professional investor use only. For opting in and opting out according to FinSA, please refer to our website; if you wish to change your client categorization, please inform us. HSBC Global Asset Management (Switzerland) AG having its registered office at Gartenstrasse 26, PO Box, CH-8002 Zurich has a licence as an asset manager of collective investment schemes and as a representative of foreign collective investment schemes. Disputes regarding legal claims between the Client and HSBC Global Asset Management (Switzerland) AG can be settled by an ombudsman in mediation proceedings. HSBC Global Asset Management (Switzerland) AG is affiliated to the ombudsman FINOS having its registered address at Talstrasse 20, 8001 Zurich. There are general risks associated with financial instruments, please refer to the Swiss Banking Association ("SBA") Brochure "Risks Involved in Trading in Financial Instruments";

in Taiwan by HSBC Global Asset Management (Taiwan) Limited which is regulated by the Financial Supervisory Commission R.O.C. (Taiwan);

in Turkiye by HSBC Asset Management A.S. Turkiye (AMTU) which is regulated by Capital Markets Board of Turkiye. Any information here is not intended to distribute in any jurisdiction where AMTU does not have a right to. Any views here should not be perceived as investment advice, product/service offer and/or promise of income. Information given here might not be suitable for all investors and investors should be giving their own independent decisions. The investment information, comments and advice given herein are not part of investment advice activity. Investment advice services are provided by authorized institutions to persons and entities privately by considering their risk and return preferences, whereas the comments and advice included herein are of a general nature. Therefore, they may not fit your financial situation and risk and return preferences. For this reason, making an investment decision only by relying on the information given herein may not give rise to results that fit your expectations.

in the UK by HSBC Global Asset Management (UK) Limited, which is authorised and regulated by the Financial Conduct Authority;

and in the US by HSBC Global Asset Management (USA) Inc. which is an investment adviser registered with the US Securities and Exchange Commission.

In Uruguay, operations by HSBC's headquarters or other offices of this bank located abroad are not subject to Uruguayan inspections or regulations and are not covered by warranty of the Uruguayan state. Further information may be obtained about the state guarantee to deposits at your bank or on [www.bcu.gub.uy](http://www.bcu.gub.uy).