IHRB
Institute for Human Rights and Business

AI INFRASTRUCTURE: RIGHTS, RISKS AND RESPONSIBILITIES

A BRIEFING FOR DECISION-MAKERS

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ABOUT THIS BRIEFING

In a growing number of contexts and countries around the world, communities are raising serious concerns about major infrastructure projects being developed to power artificial intelligence (AI) systems. This paper translates those concerns into concrete recommendations for corporate risk management and human rights due diligence, intended for business leaders across the technology, energy, construction, and financial sectors. It draws on IHRB's existing work including its Dignity by Design framework, as well as established international standards, in particular the United Nations Guiding Principles on Business and Human Rights.

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Links to four country case studies - India, the UAE, the United States and Ireland - each illustrating distinct governance challenges and lessons for companies operating in comparable regulatory environments

This briefing paper was conceptualised, researched, and authored by IHRB staff members. Generative artificial intelligence was used for support in: desk research; identification and retrieval of relevant sources; copy editing and proposed revisions of specific passages; and citation verification. All AI-assisted outputs were reviewed, evaluated, and either accepted, modified, or rejected by the authors. Final analytical judgements, normative positions, and responsibility for factual accuracy rest entirely with IHRB.

IHRB welcomes feedback on the analysis and recommendations in this paper, and is committed to engaging constructively with all stakeholders involved in, and impacted by AI infrastructure projects around the world.

DEVELOPMENTS IN AI INFRASTRUCTURE AND THE NATURE OF THE PROBLEM

Artificial intelligence (AI) is reshaping the global economy at remarkable speed. Concerns about AI's social impacts are widening across multiple dimensions - from displacements of workers to algorithmic discrimination in hiring to unprecedented concentration of economic and informational power in a small number of companies. This paper focuses on the physical scale of this expansion - seen in rapid build out of data centres and the supply chains, land, water, and labour they depend on. This expansion is matched by its financial scale. Recent estimates suggest that nearly US$3 trillion in AI-related infrastructure investment is planned through 2028, with more than 80% of that spending still ahead.[1]

These developments are generating significant social and environmental costs[2] and causing adverse human rights impacts that rarely feature in business strategies or investment decisions. This gap was thrown into sharp relief at the first United Nations (UN) Global Dialogue on AI Governance in Geneva in July 2026.[3] A preliminary assessment by the UN's Independent International Scientific Panel on AI[4], presented to the Dialogue, projected that AI-related electricity demand could nearly triple by 2030, with water consumption rising to match the basic domestic needs of 1.3 billion people and a land footprint exceeding 14,500 square kilometres - impacts concentrated in the handful of countries, chiefly the United States and China, that already host over 90% of global AI computing capacity. In a civil society summary of the event[5], data centres, undersea cables, and mineral supply chains were described as expanding in territories with little community consultation or corporate disclosure, leaving host communities to absorb lost access to land and water, higher utility bills, and health effects while the economic benefits accrue elsewhere.

The supply chains for this infrastructure span multiple tiers - from mining, through refining and manufacturing, to the construction contractors, labour agencies, and logistics networks that build and service data centre facilities. Each part of the supply chain carries distinct human rights risks, which should be part of the thinking and decision-making of the companies that ultimately benefit from these activities.

These human rights risks span the full lifecycle of AI data centre development, from planning and siting through design, materials sourcing, construction, operation, and decommissioning. As a recent analysis from the sector points out, current due diligence guidance for new data centre projects typically focuses on site-based issues such as power availability, zoning, environmental permitting, water infrastructure, and the potential for long-term expansion.[6] The populations who will bear the social and environmental costs of such projects often do not play any part in the assessments that determine whether such developments move ahead. Nor are communities convinced that they will benefit. Growing community concerns are, however, resulting in greater transparency requirements in some contexts.[7]

Problems in the distribution of costs and benefits merits close examination. Technology firms gain revenue and AI capability in exchange for capital expenditure. National economies compete - sometimes with financial incentives - for foreign investment to boost their GDP growth and digital competitiveness while absorbing grid and infrastructure strain. Local communities, by contrast, typically receive limited tax revenue and short-term construction employment, while bearing the full, long-term weight of energy cost increases, water stress, environmental degradation, and community disruption, unless this is properly planned, designed, permitted under appropriate regulations, to avoid the negative impacts. This misalignment is structural, and it is the primary driver of the social backlash, regulatory uncertainty, and project risk that now characterise the sector.

Community opposition to these developments is already a material business risk. Over 100 grassroots groups worked to block data centre projects worth an estimated $64 billion across 28 US states between May 2024 and March 2025.[8] Projects have been cancelled or delayed in a number of other countries including the Netherlands, Germany, and Singapore. The question for business leaders is not whether to engage with these risks, but how to do so before they become project-killing conflicts.

A further and under-appreciated risk concerns the possibility that the current pace of infrastructure investment will outrun foreseeable demand. Several converging trends warrant caution. Architectural efficiency improvements, including the emergence of new models that deliver comparable capability at a fraction of the compute cost of earlier generations, as well as the trend towards on-device AI, are already calling into question how much compute capacity needs to be built.[9] Geopolitical restrictions on chip exports and data flows could fragment demand in ways that render regionally concentrated infrastructure economically unviable. And the capital now flowing into AI infrastructure reflects, in part, competitive positioning ahead of validated demand: the fear of missing out on a strategic asset is itself a driver of current construction roll out.

So what will move corporate leaders to address this range of concerns, and what roles should governments, investors, and civil society play to make responsible conduct in AI infrastructure the norm rather than the exception? Failure to address these issues is not just about equity and ethics. It has direct operational, reputational, and legal consequences for companies across the technology, energy, construction, and financial sectors. The costs of community-related conflict in terms of permitting delays, legal challenges, reputational damage, and regulatory intervention, are already material and rising.

The same problems have been experienced over decades by other sectors, including mining and energy.[10] And many of the same solutions - better impact assessment and monitoring, improved environmental and social performance, greater transparency, more community engagement and local benefits are likely to be relevant. Business leaders in the AI sector - and local authorities - need to act urgently - but they do not need to reinvent the wheel. The challenge is to apply the lessons from other sectors across a complex and rapidly changing ecosystem of companies.

CASE STUDY

INDIA — WATER STRESS AND AGRICULTURAL LAND CONFLICT

Data centre capacity has nearly tripled since 2020, concentrated in cities already under water stress, with facilities consuming an estimated 150 billion litres in 2024–25 — a figure projected to more than double by 2030. Farmers have taken land-acquisition disputes to court, and India's 2025 AI governance guidelines rely on voluntary self-regulation with no binding environmental disclosure. **Read more**.

WHO HAS RESPONSIBILITIES?

The growing data centres ecosystem is complex and rapidly changing. Depending on the location and situation, some companies may have roles as investors, owners or tenants. For example, some hyperscalers (such as Google, Microsoft, Amazon (AWS), Meta, Oracle) are self-building, including through raising debt, but also leasing substantial capacity from Real Estate Investment Trusts (REITs) and colocation operators to meet near-term demand. Each part of this ecosystem may cause or be linked to adverse human rights impacts.

TERM	DEFINITION
CAPITAL	Ownership and structure – and hence disclosure obligations – vary, obscuring who ultimately is responsible for due diligence: • Publicly traded companies subject to national reporting rules. • Private equity funds whose disclosure obligations sit with the fund (investor-facing), not the asset. • Sovereign wealth funds including from the Gulf and Asian countries who may acquire a stake in land through private special purpose vehicles (SPVs). • Private credit – debt financing is a fast-growing source of capital.
LAND	Land intermediaries involved in the data centre ecosystem may acquire and hold parcels in growth corridors, ahead of confirmed demand, bidding or betting on power and fibre availability. Acquisitions may in some cases involve contested or customary land claims, and landowners (agriculture, industrial, or utility-adjacent who sell parcels to developers) may retain ownership and lease to the data centre or an intermediary. Brokers and site-selection consultants may play a role in identifying, negotiating, and structuring land acquisitions, and may specialise in data centres. Some land developers will also co-develop and operate a data centre campus as colocation operators and lease space and provide services to one or multiple tenants.
TENANTS	Companies that lease data centre capacity include hyperscalers, who with other companies may be wholesale / bulk tenants who lease entire buildings or large blocks of capacity (10MW+) rather than colocation racks. Other tenants of data centres are the public sector, as well as private sector companies including financial services, healthcare, media, telecoms. AI labs / specialised compute tenants is a newer, fast-growing tenant category which leases Graphic Processing Unit (GPU)-dense capacity specifically for model training.
CONSTRUCTION AND FIT OUT	General construction contractors (GCs) and engineering, procurement, construction (EPC) firms organise the construction and fit out of the infrastructure. This can include specialist electrical contractors, and cooling and power specialists, as well as workforces that include low-wage and migrant workers in this build-out.

TERM	DEFINITION
EQUIPMENT SUPPLIERS	This includes the manufacturers and suppliers of power equipment and cooling equipment, including specialist liquid-cooling for AI-density racks. Chip and GPU suppliers provide semiconductor/compute hardware. The inputs for these materials will include critical minerals and metals.
POWER SUPPLY	Power may be drawn from the grid, including state-owned or private entities, and reflect the energy mix of the grid. It may be generated on-site 'behind-the-meter' as is increasingly required by regulators. This may include power generation companies providing gas turbine, solar/battery storage, contracted directly by data centre developers. Hyperscalers and colocation operators may enter into renewable power-purchase agreements to meet clean energy commitments or requirements.
PROFESSIONAL SERVICES	To support planning and permitting, design, construction and fit out, a variety of specialist firms may supply services in engineering, architecture and design. Legal and zoning specialists as well as consultants involved in preparing environmental statements, hydrological studies, and environmental and social impact assessments for planning applications, are also needed. Consultants may also be involved in negotiating community benefits agreements on behalf of either developers or communities.
ONGOING MAINTENANCE	Data centres require ongoing monitoring and maintenance of power and cooling systems, fire and building safety, hardware and software as well as general facilities management such as security, landscaping and other services that may be undertaken by subcontractors and specialised technicians.
CUSTOMERS	The end-users of data centres include companies in all sectors, particularly financial services, who make use of cloud storage and software as a service, including those consuming compute via hyperscaler cloud platforms, as well as the public sector. More specialised AI/Machine Learning companies will require GPU capacity.

HUMAN RIGHTS IMPACTS OF DATA CENTRES

AI carries genuine transformational potential, from accelerating scientific research to expanding access to education and health services in underserved regions. Realising this potential, however, depends on getting the foundations right. What currently receives limited scrutiny is the social impacts of the physical substrate on which hyperscaled AI depends - land, water, power grids, minerals, and workers.

WATER AND ELECTRICITY

Hyperscale AI data centres can each require hundreds of megawatts of electricity and millions of gallons of water annually for cooling.[11] A single large facility can consume energy equivalent to tens of thousands of households while operating with limited transparency and public oversight. While direct water use by these facilities has been the subject of increasing attention, recent reports indicate that indirect water use - primarily from power generation to meet data centre energy needs - has a much greater impact, notably in water-stressed areas, and is expected to increase significantly by 2030.[12]

LOCAL COMMUNITIES

The costs of this expansion are not evenly distributed. Governments increasingly describe AI data centres as critical national infrastructure - the UK formally designated them as such in 2024[13] - which has in some jurisdictions been used to restrict public debate, fast-track planning approval, and limit the scope of legal challenges. Local communities may bear rising energy prices, water stress, noise and light pollution, and economic displacement without receiving proportionate benefit. A national review of approximately 700 US data centres found that nearly half are located in areas with significant environmental burden - including air and water pollution - with many also scoring high on social vulnerability indicators such as poverty and low education attainment.[14]

It is unclear whether data centre investment produces as many permanent local jobs as proponents claim. Data centres can create employment opportunities, but the bulk of jobs - more than 90% based on an analysis of some data centres in the USA[15] - are created at the time of construction and are therefore inevitably short-term, and may not match the skills profile of local populations. Even longer-term jobs associated with operation and servicing of the infrastructure may not benefit local populations.

SUPPLY CHAIN INPUTS

The supply chains that feed AI infrastructure rely on a range of raw materials, including copper, aluminium, iron and nickel as well as a variety of other critical minerals, particularly those in semi-conductors and chips, magnets (used in hard drives, server fans, pumps, and power-electronics motors), and batteries for back-up power and storage, not to mention basic construction materials such as concrete.[16] These may be mined, refined and manufactured into equipment under conditions that have been widely reported as falling short of basic labour and environmental standards or even involve child labour. Their supply chains span dozens of countries and touch millions of workers.

CASE STUDY

UAE — STATE-LED EXPANSION, MIGRANT LABOUR RISK

Rapid, state-backed expansion — including a $15.2 billion Microsoft investment plan — relies heavily on migrant construction workers facing passport confiscation, wage theft, and poorly enforced heat-safety rules despite temperatures routinely exceeding 50°C. Regional conflict since 2026 has added physical-security and mobility risks for workers at facilities now classified as critical infrastructure. **Read more**.

GEOGRAPHIC / LOCALISED DIFFERENCES

The global pattern of AI development varies significantly by governance model.

For example, in Brazil, strategic growth ambitions are colliding with weakening environmental governance and Indigenous rights protections.

In **India**, competitive state-level incentives and fast-tracked approvals are generating acute resource conflicts with limited safeguards.

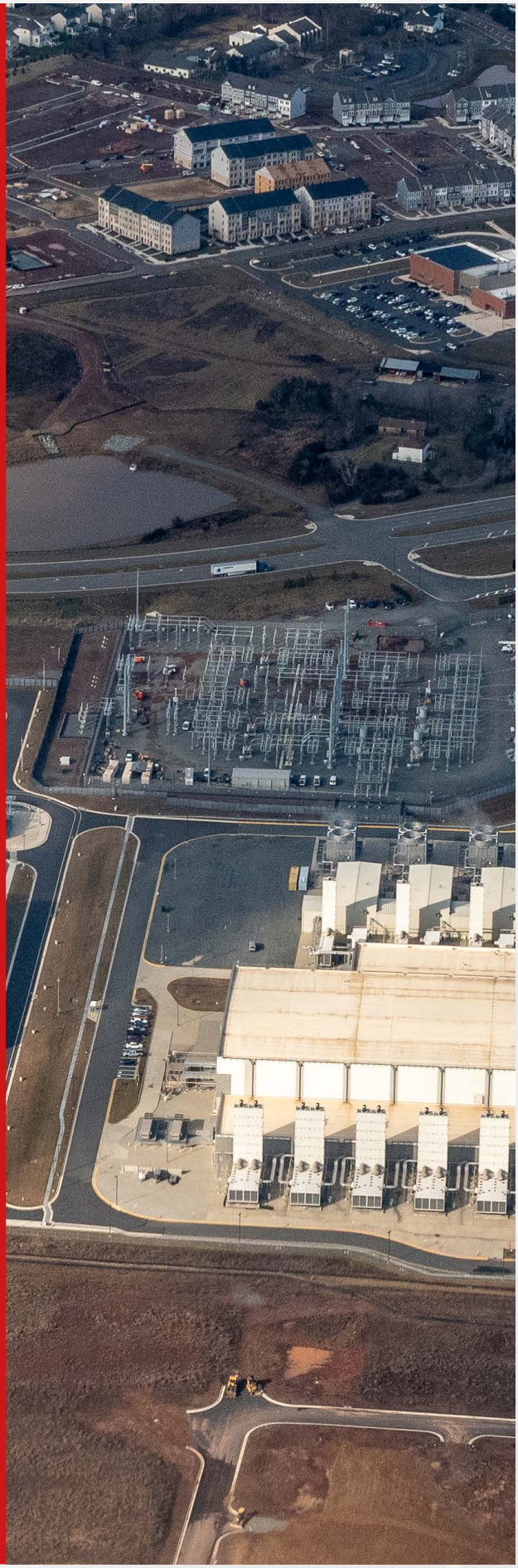
In the **UAE**, state-led centralised models enable rapid deployment but at significant costs to transparency, labour rights, and public participation.

In the **United States**, a market-driven approach with local-level planning has produced the world's largest concentration of data centre infrastructure, but also the most visible fragmentation of oversight and community opposition.

In **Ireland**, by contrast, the national energy regulator imposed a four-year effective freeze on new grid connections and then reopened them under stringent conditions, all concerning the electricity system, none concerning who pays, who was consulted, or who benefits.[17]

In each of these contexts, the supply chains involved in data centre development - for construction, hardware, energy infrastructure, and facilities management - replicate, and in some cases amplify, the governance weaknesses of the host jurisdiction, creating compounding risks for companies that have not fully mapped or addressed what is happening beyond their direct contractual relationships.

A further structural observation deserves emphasis: the governance gaps described here are not random. Jurisdictions that compete most aggressively for data centre investment - offering tax exemptions, fast-tracking approvals, and subsidised land - tend to be those where community consultation and labour protections are weakest.



WHY COMPANIES ARE FACING STAKEHOLDER PUSHBACK

The social and environmental impacts now associated with AI infrastructure are not novel, and the failure to anticipate them is itself not new. They closely follow patterns documented over decades in the oil, gas, mining, and large-scale agribusiness sectors: resource capture in communities with weak bargaining power; cost externalisation onto local populations; governance gaps exploited through regulatory arbitrage; and the suppression of dissent when opposition becomes inconvenient.

What is novel is the speed. The oil industry took decades to generate the community opposition and regulatory backlash that ultimately produced frameworks like the Extractive Industries Transparency Initiative.[18] The AI sector has replicated those dynamics within years, without apparent awareness of the lessons learned by other industries.

Several structural factors help account for this failure of foresight. First, the dominant self-conception of technology companies as software and services businesses - rather than physical infrastructure operators - has led to systematic blind spots in how these companies assess and manage operational impact. The hardware supply chain, the construction workforce, and the communities surrounding data centres have historically been treated as someone else's problem: the contractor's, the landlord's, the utility's. This disaggregation of responsibility is precisely the dynamic that so often leads to adverse impacts for individuals and communities involved.

This disaggregation of responsibility in the AI infrastructure supply chain is evident in the multiple distinct layers between the hyperscalers that commission new data centres and the physical components and systems that make the completed facilities function - spanning semiconductor production, servers, network infrastructure, and the power and cooling systems needed to manage the heat and electricity demands required.

Second, the extraordinary speed of AI-driven infrastructure expansion has compressed the timeframes in which impacts typically become visible. In extractive industries, the community and environmental consequences of a major project might take years to manifest, and decades to become legally actionable. In the data centre sector, the scale of deployment has been so rapid that cumulative regional impacts - on grids, water systems, and housing markets for example - have emerged within months of project approval. The feedback loops that traditionally discipline corporate behaviour have not had time to operate.

Third, commercial incentives have to date pointed in one direction only. The race to build AI capability is intensely competitive, capital is abundant, and the costs of moving fast have fallen primarily on communities that lack the political or legal power to impose them on shareholders. Growing local opposition to data centres is an on the ground manifestation of wider concerns about the impacts of AI on jobs, and anger over the apparent lack of concern by powerful actors currently benefiting economically from explosive growth in the industry.

Understanding why companies involved in AI infrastructure have so far failed to adequately address stakeholder concerns is necessary but not sufficient. The more urgent question is what combination of pressures and incentives will change leadership behaviour at the pace and scale required.

Voluntary commitments and industry self-governance have a mixed track record in sectors where commercial incentives point strongly in the opposite direction. For example, Microsoft's 2024 Datacenter Community Pledge[19] commits the company to delivering "significant local, economic, social and environmental benefits" to host communities although these aren't specified and did not appear to be quantified at facility level or independently monitored. A January 2026 follow up initiative, Community-First AI Infrastructure[20] is considerably more specific, including apprenticeship partnerships, a commitment not to seek property tax reductions, and a pledge to publish water-use data for each data centre region. Transparency advocates have also welcomed recent pledges to stop the use of non-disclosure agreements.[21]

Investors are a second potential lever for positive change. Institutional investors and asset managers with

significant AI infrastructure exposure are only beginning to recognise that human rights and environmental risks in this sector are core financial risks to project timelines, operating licences, and long-term asset value, as reported in the renewables sector.[22] The scale of exposure makes this recognition increasingly urgent as governance frameworks - or their absence - under which this capital is deployed become systemic risks, not merely reputational ones. Stranded asset risk - the possibility that infrastructure built to meet projected AI demand will be rendered economically unviable by efficiency gains, demand shifts, or regulatory change - is an additional dimension that responsible investors must factor into their assessment.

The responsible business community has extensive experience of stewardship coalitions that have transformed expectations in the extractive sector – the same is needed for AI infrastructure. Investors have a key role to play in ensuring credible demand forecasting to justify infrastructure scale, as well as board-level accountability as a condition of continued or expanded investment. The purchasing power and leverage of hyperscalers, which are the most active and well funded data centre construction clients in the world, must also be stressed. Companies at the scale of Amazon, Google, Meta and Microsoft could, through their own practices and contracts with data centre construction companies, significantly influence how decisions are made on AI infrastructure across the board.

Civil society and affected communities are a third lever, and frequently underestimated by corporate leaders. Community opposition has already stalled or cancelled data centre projects across four continents.[23] Legal challenges grounded in environmental and human rights law are growing in frequency and sophistication as well. Companies that treat community engagement as a permitting formality rather than a genuine relationship will find that the costs of that approach compound over time.

Finally, the technology sector's own talent market is a potentially powerful lever that leaders should not ignore. The engineers, researchers, and executives who build and run AI infrastructure are, or should be, aware of the social consequences of the systems they are creating. Companies that visibly lead on responsible infrastructure development will over the long term have a competitive advantage in attracting and retaining the talent on which their technical capabilities depend.

CASE STUDY

UNITED STATES — COMMUNITY COSTS AND FRAGMENTED OVERSIGHT

Because permitting for data centres in the US happens at municipal level, while impacts occur locally, regionally and nationally, cumulative water, air-quality and cost burdens have gone largely unmanaged. State-level oversight mechanisms remain inadequate, fragmented, and poorly enforced. Some states are taking actions to address community concerns over proposed development projects and their potential impacts. **Read more**.

REGULATIONS AND STANDARDS AI INFRASTRUCTURE STAKEHOLDERS SHOULD ACT ON

All companies involved in AI infrastructure need to be aware of the evolving national and international laws and standards relating to human rights impacts and supply chains, and incorporate them into their own policies and operational practices.

NATIONAL LEGISLATION

National-level planning, land use, energy efficiency, and environmental and social impact assessment (ESIA/EIA) frameworks provide the main legal constraints for data centres, particularly those with significant environmental footprints and energy use. The schedules used to screen projects to determine whether an EIA is required, and list types of investment, generally do not specify data centres or AI infrastructure. They might fall instead under headings such as 'industrial estate' or 'power generation', or they may become subject to EIA processes through general triggers such as size and location, or components such as emergency power supply, or water use and discharge. In some jurisdictions there are calls for EIAs to be compulsory for all data centres.[24]

The quality of EIA and planning frameworks varies significantly between jurisdictions as does the competence and capability of the regulatory agencies, which will influence how far regulators require companies to avoid adverse impacts. In some jurisdictions, EIAs are discretionary for the authorities, rather than being triggered by published numeric thresholds. This opens up the risk that they will be over-ridden by other priorities. Furthermore, some jurisdictions are seeking to shorten or bypass EIA and planning processes for AI infrastructure, including by redefining it as 'nationally significant'.[25]

On the other hand, some jurisdictions have imposed moratoria as a result of public opposition, and are developing bespoke policy guidelines for the application of existing legislative instruments to data centres.[26] These trends are likely to continue, as governments find themselves needing to respond to local opposition.

INTERNATIONAL NORMATIVE AND REGULATORY FRAMEWORKS

Changes in national legislation and policy are a compliance risk for companies in the supply chain, which can be best managed by applying a human rights due diligence approach consistent with the UN Guiding Principles on Business and Human Rights (UNGPs). Companies that can demonstrate this are likely to be better able to weather changes in national legislation, as well as respond to stakeholders, including business partners and local communities.

UN Guiding Principles on Business and Human Rights

The UNGPs unanimously endorsed by the UN Human Rights Council in 2011 - and now referenced in investment frameworks, national legislation, and judicial decisions across more than 40 jurisdictions - establish the foundational expectation that companies must respect human rights regardless of whether states fulfil their own duty to protect them. The corporate responsibility to respect human rights as set out in the UNGPs, requires businesses to conduct ongoing human rights due diligence: identifying, preventing, mitigating, and accounting for adverse impacts across their operations and value chains.

For AI infrastructure companies, the UNGPs make clear that the full lifecycle of a data centre - from site selection, material sourcing and construction through to operation and eventual decommissioning - falls within the scope of the corporate responsibility to respect human rights, and extends this responsibility to business relationships. In the case of the AI industry, a hyperscaler procuring colocation services, or a chipmaker sourcing minerals through a multi-tier supply chain, cannot disclaim responsibility for what happens upstream or downstream. Severity and leverage determine prioritisation, but ignorance is no longer a defensible position.

EU Corporate Sustainability Due Diligence Directive (CSDDD)

Regulatory frameworks, such as the 2024 (amended 2026) EU Corporate Sustainability Due Diligence Directive (CSDDD), and the Norwegian Transparency Act, establish legal requirements for human rights due diligence consistent with the UNGPs.[27] Non-compliance can attract fines of up to three percent of global net turnover. For AI infrastructure, the CSDDD's proportionality principles would direct attention towards the highest-risk parts of the value chain such as critical minerals sourcing, construction labour, particularly in weak regulatory environments, and energy-intensive infrastructure in water-stressed regions.

The CSDDD is only applicable to the largest companies active in EU markets, and is not yet in force at EU member state level.[28] Furthermore, the data centre ecosystem, comprising financiers, land owners, tenants, equipment providers, as well as AI company customers, some of them hyperscalers, and the ultimate customers of the AI systems themselves, as well as rapidly changing plans, means that not all AI infrastructure build-out will involve companies subject to the CSDDD, particularly at planning stage. However, hyperscalers and other very large companies subject to the CSDDD may well be the ultimate actual or intended customers. They will need to demonstrate that adverse impacts have been identified, avoided and mitigated in their supply chain. Again, this strengthens the case for all companies involved in AI infrastructure demonstrably applying human rights due diligence from Day 1, so as to future-proof projects. This mirrors experience in the mining sector, where large mining companies baulk at taking on projects where junior exploration companies have failed to conduct human rights due diligence or secure a social licence to operate.

EU Energy Efficiency Directive (EED)

Unlike the CSDDD, the reporting obligation for data centres under the EU Energy Efficiency Directive is already in force and operational. Article 12 of Directive (EU) 2023/1791 requires operators of data centres with at least 500 kW of installed IT power to report annually, by 15 May, to a European database maintained by the Commission. Commission Delegated Regulation (EU) 2024/1364 specifies the information to be submitted, from which four key performance indicators are published: Power Usage Effectiveness, Water Usage Effectiveness, Energy Reuse Factor and Renewable Energy Factor.[29] The Commission has issued reporter guidance, established national contact points, and published a dashboard presenting aggregated results, and in July 2025 published its assessment of the first reporting period.[30] This is the most developed mandatory disclosure regime for data centres anywhere, and it functions as a template that other jurisdictions are likely to draw on.

The indicators are, however, exclusively concerned with the resource intensity of individual facilities. The reporting scheme captures nothing on land use or conversion, labour conditions in construction or operation, the allocation of network reinforcement costs between large energy users and other consumers, community consultation, benefit-sharing arrangements, or the relationship between tax incentives granted and employment delivered. A facility reporting strong efficiency indicators may nonetheless have displaced agricultural land, transferred grid costs to household consumers, and conducted no engagement with the population living alongside it. None of this would be visible in the data submitted.

This limitation becomes more consequential as capacity expands. The Commission states that the EU aims to triple its data centre capacity by 2035[31], while global data centre electricity consumption is projected to more than double by 2030.[32] Indicators measuring efficiency per facility, reported against a policy objective of tripling the number of facilities, may show improvement at the same time as aggregate/cumulative impacts rise. The Commission is currently preparing a Data Centre Energy Efficiency Package, which will introduce an EU-wide rating scheme and begin work on minimum performance standards; a call for feedback on the draft rating scheme regulation closed in April 2026.[33] Whether social and distributional indicators are incorporated at that stage remains open.

As with the CSDDD, the practical implication is that human rights due diligence conducted from the outset is likely to prove less costly than retrofitting it once disclosure requirements catch up with the scale of deployment.

Other International Standards

The OECD Guidelines on Responsible Business Conduct for Multinational Enterprises (2023 update) apply to AI infrastructure. The Guidelines are aligned to the UNGPs and the ILO Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy. This references ILO core labour conventions, which establish universal minimum standards for workers, inter alia in construction, facilities management, and mining. Failure to apply the OECD Guidelines may lead to a company or companies being the subject of a complaint 'specific instance' at a National Contact Point.

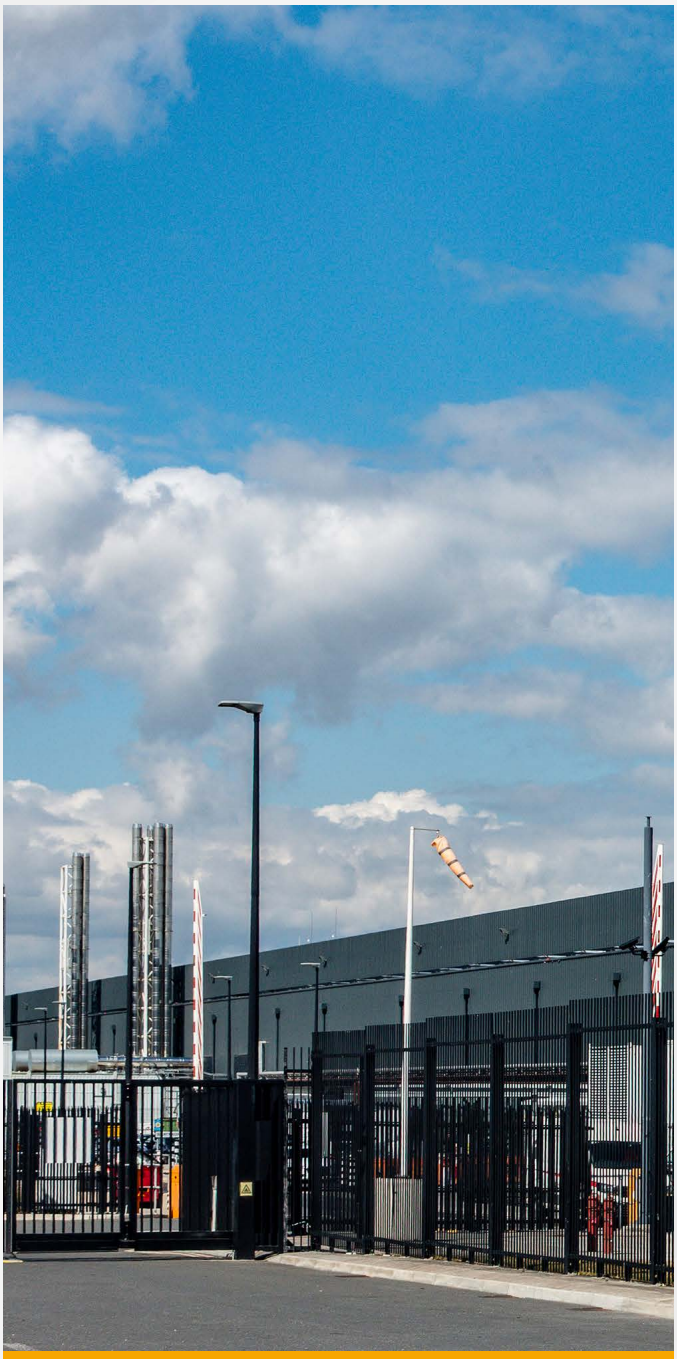
The OECD has published guidance on Responsible AI[34] which is addressed, inter alia, to enterprises involved in supplying digital, physical and financial inputs for the development of AI systems (e.g., data annotation services, compute providers, cloud service providers, hardware manufacturers and investors), as well as the sale, licensing, trade, and use of AI systems, as described in the Multinational Enterprises Guidelines and in line with the revised 2024 OECD Recommendation on AI. The OECD's guidance on conflict minerals may also be relevant for raw material inputs in AI infrastructure.

The Paris Agreement and the Convention on Biological Diversity are also increasingly cited by investors and regulators in relation to data centre energy and water footprints.

Companies that engage proactively with these frameworks rather than waiting for enforcement are better positioned to retain operating licences and attract investment.

Voluntary Initiatives and Standards

In addition to certifications linked to raw material inputs[35] such as copper (e.g. CopperMark, IRMA, and the Responsible Minerals Initiative), there is a range of emerging voluntary standards. These include the Climate Neutral Data Centre Pact (CNDCP)[36], the EU Joint Research Centre's Code of Conduct for Data Centre Energy Efficiency[37], as well as various ISO and other standards. However, these are focussed on energy, building performance and resilience. The Global Real Estate Sustainability Benchmark (GRESB), a certified B Corp that helps real asset investors, managers, and market participants connect sustainability performance with better capital and asset decisions, is developing a more holistic data centres benchmark.[38]



CASE STUDY

IRELAND — REGULATION AND SOCIAL LEGITIMACY

As data centres' share of national electricity use rose from 5% to 23% in a decade, Ireland's regulator imposed a de facto four-year moratorium on new grid connections, then reopened them under strict renewable-generation conditions. Every approval criterion addresses energy security, yet none asks who was consulted, who pays for network reinforcement, or how benefits are shared. **Read more**.

Civil Society Initiatives

There are a growing number of initiatives by civil society organisations and broader coalitions to address community impacts of AI infrastructure and set out principles to guide corporate actions. For example, the NAACP's Frontline Framework Community Guiding Principles[39] and accompanying Community Benefit Agreement template was developed in response to community concerns in the USA about rapid date centre expansion. A 2026 update to the framework[40], developed following a convening of climate, civil rights, and community organisations in Memphis, Tennessee calls for moratoriums on new or expanding facilities pending full environmental monitoring and impact analysis where multiple facilities are proposed in one region, and explicit attention to patterns by which data centres and fossil-fuel generation that powers them cluster in overburdened communities. Crowdsourced mapping of data centres is taking place in the USA.[41]

Similar coalitions have formed elsewhere in the US and in other countries. For example, in Australia, a coalition of actors issued a February 2026 joint statement setting out eight principles for new developments. These include requiring facilities to be powered by 100% additional renewable energy, as well as respecting First Nations interests, biodiversity standards, and a "social licence" principle calling for ongoing community acceptance through free, prior and informed consent (FPIC), and genuine benefit sharing.[42]

DIGNITY BY DESIGN: A FRAMEWORK FOR RESPONSIBLE AI INFRASTRUCTURE

The IHRB Dignity by Design Framework[43], launched in 2020, is a practical tool to minimise human right risks and maximise social outcomes at all stages of infrastructure projects. Applied to AI infrastructure, the Framework calls for action at each stage of the project lifecycle: land acquisition, planning and finance, design, construction, management and use, and redevelopment. In the land acquisition and planning and finance phase, it requires Human Rights Impact Assessments (HRIAs), genuine consultation with affected communities including those traditionally excluded from planning processes, and transparent disclosure of projected energy demand, water consumption, and land-use impacts. It also requires that prospective demand assessments be disclosed, so that the scale of infrastructure proposed is proportional to credible demand forecasts.

In the design phase, choices about cooling technology, modular construction, relative to grid and water capacity, end-of-life designed for repurposing, all determine the 'rights' footprint of the facility for its operational life and beyond.

In the construction phase, enforceable labour standards should be prioritised across the full contractor and subcontractor chain (including with regards to material sourcing), as well as due consideration to local hiring and skills development commitments, and credible grievance mechanisms accessible to workers. In the operational phase, it expects ongoing monitoring and public reporting, utility pricing protections for neighbouring communities, and binding Community Benefit Agreements.

Finally, in the decommissioning and redevelopment phase, financial bonds, land restoration plans, and long-term liability frameworks should be in place to ensure the costs of exit are borne by operators rather than communities. The mining sector offers a relevant precedent. Financial assurance mechanisms such as bonds or insurance instruments calculated against projected remediation costs, are increasingly standard requirements in mining regulation. The principle transfers directly to data centre development: operators should be required to post a decommissioning bond, calibrated to the projected cost of site remediation, before construction begins. The bond should be held by a public authority rather than the operator and released only upon verified completion of remediation. Implementing this recommendation raises practical questions including how to value remediation costs for rapidly evolving technology assets, and how to structure bond instruments that remain adequate if a facility is decommissioned earlier than planned.

The Dignity by Design framework's value for business is significant. Companies that apply these principles can consistently reduce the likelihood of project delays caused by community opposition, lower their exposure to regulatory action, and build the trust relationships that long-term operating licences require. It also provides a structured, auditable methodology that satisfies evolving due diligence requirements, making it a practical compliance tool as much as a normative one. Community Benefit Agreements in particular have been identified as essential risk mitigation tools for data centre development.[44]

TARGETED RECOMMENDATIONS FOR THE SECTORS AND REGULATORS DRIVING AI INFRASTRUCTURE EXPANSION

This section provides a number of high-level recommendations applied to the specific roles and leverage points of key sectors involved in AI infrastructure development. The recommendations apply insights from IHRB's Dignity by Design framework and draw on international standards such as the UNGPs. Some of the recommendations in this section are likely implementable largely within existing corporate capacities and governance, while others will need to be established through multi-stakeholder processes with significant resources and investments of time and political engagement.

Technology Companies - Infrastructure Development and Operations

- Conduct and publish lifecycle Human Rights Impact Assessments for all major infrastructure projects, covering siting, construction, operation, and decommissioning.
- Adopt and enforce supplier codes of conduct incorporating ILO core labour standards, with independent third-party auditing and accessible grievance mechanisms for workers in all geographies.
- Ensure that the consultation with communities takes place in conditions free from coercion or intimidation and consent is obtained freely. Consultation processes must be genuinely accessible, conducted transparently in local languages, at appropriate times, and through channels communities themselves identify as legitimate.
- Negotiate binding Community Benefit Agreements at project inception, including utility cost protections, local employment commitments, and revenue-sharing provisions.
- Appoint a board-level executive with explicit accountability for infrastructure human rights due diligence, with performance assessed and disclosed annually.
- Publicly report annually on energy, water, and emissions performance per facility, and on progress against HRDD commitments — including in third-country supply chains.

Technology Companies and Enterprise Customers - Service Provision and Downstream Use

- Ensure that personal data processed, stored, or traded is handled in compliance with applicable data protection legislation and with meaningful user consent.
- Establish firm protocols about sharing data with law enforcement authorities including the military to prevent unauthorised use or violation of the rights of human rights defenders, trade unionists, the media, opposition politicians, and other civil society groups. Comply with legitimate, authorised, time-bound requests that are legal but draw firm lines if the risk of complicity is heightened.

Equipment and Hardware Suppliers

- Conduct and disclose due diligence on critical minerals supply chains feeding chip, GPU, and power/cooling equipment manufacturing, including mapping to sub-tier smelters and refiners.
- Participate in independent verification schemes such as the Responsible Minerals Initiative and make audit results available to customers and the public.

Energy Sector Companies

- Develop data centre connection frameworks that ring-fence grid capacity for residential and small business consumers, preventing cost cross-subsidisation from data centre demand.
- Apply human rights and environmental due diligence to power purchase agreements and infrastructure investments enabling AI data centre expansion.
- Engage proactively with regulators on cumulative grid impact assessment in regions of high data centre concentration.
- Prioritise renewable energy supply and water-efficient cooling technologies; refuse to extend coal plant lifetimes solely to service data centre demand.

Land, Construction and Real Estate Sectors

- Implement supply-chain labour due diligence reaching subcontractors and informal labour markets, with specific attention to migrant worker protections.
- Apply Dignity by Design principles to site selection and master planning, including community consultation requirements and due diligence on land tenure before planning applications are submitted.
- Work with relevant stakeholders to develop sector-wide standards for data centre construction, including labour practices aligned with ILO standards.
- Require decommissioning plans and financial bonds as standard contractual provisions in all data centre development agreements.
- Extend due diligence and worker grievance mechanisms beyond the construction phase to ongoing facilities management and maintenance subcontractors.

Financial Services and Capital Providers (Banks, Institutional Investors, Private Equity, Sovereign Wealth Funds)

- Integrate HRDD requirements aligned with CSDDD and UNGPs into investment screening, loan covenants, and ongoing monitoring frameworks for AI infrastructure assets.
- Require borrowers and investees to conduct and disclose HRIAs as a condition of financing for data centre projects above a defined scale threshold.
- Use stewardship and shareholder engagement to drive board-level accountability for infrastructure human rights performance across portfolio companies.
- Develop sector-specific ESG reporting expectations for AI infrastructure going beyond carbon metrics to include water impact, labour rights performance, and community engagement outcomes.

Professional and Advisory Services (Legal, Consulting, Engineering)

- Advise clients on CSDDD compliance requirements as a standard component of AI infrastructure transaction and project advisory mandates.
- Develop cross-disciplinary HRIA capability integrating legal, engineering, environmental, and social expertise.

- Support clients in designing community grievance mechanisms that meet the UNGPs' effectiveness criteria: legitimate, accessible, predictable, equitable, transparent, and rights-compatible.
- Advocate within professional associations for sector guidance on AI infrastructure human rights risks and best practice due diligence approaches.

Governments and Regulators

- Encourage the extension of human rights and environmental due diligence legislation obligations to AI infrastructure investment and operations, building on existing instruments where they exist, and work toward closing extraterritorial gaps to prevent regulatory arbitrage.
- Ensure that planning and environmental and social impact assessment frameworks are updated and fit for purpose to capture hyperscale data centre risks, and that public participation in these processes is genuinely facilitated.
- Establish regional-level governance frameworks for cumulative AI infrastructure impacts on grids, water systems, and land use — moving beyond fragmented municipal oversight.
- Mandate Community Benefit Agreements as a condition of public subsidy, tax incentive, or fast-track planning approval for AI infrastructure projects.
- Require the data centre project, throughout its lifetime, to establish accessible grievance mechanisms for affected communities, and ensure that all relevant monitoring data is collected and made publicly available.
- Resist classifying AI data centres as security or critical national infrastructure in ways that limit legitimate planning scrutiny, environmental review, or community participation rights. When such designation is deemed necessary, it should be accompanied by enhanced disclosure obligations.

Security and Facilities Services Providers

- Ensure that security providers guarding data centre premises do not interfere with legitimate peaceful protests against the operations. Require that private security companies guarding data centre facilities are signatories to the International Code of Conduct for Private Security Service Providers (ICOCA) and subject to third-party monitoring.
- Require that facilities management, maintenance and other subcontractors are subject to the same labour standards, contractual accountability, and access to grievance mechanisms as construction-phase workers, recognising these roles are often outsourced and receive less oversight once a facility is operational.

THE WAY FORWARD

The social and environmental consequences of AI infrastructure expansion were, in large measure, foreseeable. The patterns were known in the history of oil and gas, mining, and large-scale agribusiness. That they were not foreseen or addressed earlier reflects a combination of deliberate blind spots, structural incentives that reward speed over responsibility, and a self-conception of the technology sector as fundamentally different from the industries whose mistakes it is now replicating.

The challenge ahead is not whether AI infrastructure should expand but how and at what pace: whether expansion is governed by frameworks grounded in transparency, participation, and accountability, or whether it proceeds in ways that concentrate benefits and distribute costs in patterns that are neither equitable nor sustainable.

The trajectory of AI infrastructure development is not predetermined, but the window for course correction is narrowing. Decisions made in the next 18 to 24 months - on regulatory frameworks, investment screening criteria, and corporate governance of infrastructure projects - will shape the social and environmental terms on which AI scales for decades. Infrastructure, once built, cannot be easily undone by subsequent efficiency gains or better intentions.

Governments should decide to explicitly include AI infrastructure supply chains in existing corporate due diligence implementation requirements. Major institutional investors should begin to incorporate stranded asset risk and community impact metrics into AI infrastructure financing decisions. Community opposition in major markets will likely continue to escalate from project-level conflict to broader regulatory challenges without responsible actions by those with the authority and resources to make needed changes now. Companies that are monitoring these indicators and adjusting strategy accordingly will be better positioned than those treating current conditions as stable.

In the end, managed growth under transparent and accountable governance frameworks can produce AI infrastructure that genuinely serves the communities in which it operates, distributes benefits more equitably, and builds the social licence on which long-term investment value depends.

The companies that engage communities as partners rather than obstacles, and that use their leverage across supply chains to drive standards upward, will build the trust and operating licences that long-term success in the AI economy requires.

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Making respect for human rights part of everyday business