![|||| KAO DATA]

ENVIRONMENTAL, SOCIAL & GOVERNANCE
REPORT 2022

About this report

The world is becoming increasingly reliant on data, and the services, products and communications underpinned by data centres. At Kao Data, we are conscious that our industry needs to fulfil this role in the most sustainable and environmentally friendly way possible.

Sustainability has been an integral driver for the business since Kao Data was founded in 2014, and has become an increasingly important aspect to data centre deployments for all customers. In addition to our impact on the environment, it's also crucial Kao Data makes a positive contribution to our staff, the communities in-and-around our facilities, and of course society at large.

We understand therefore that we must outline transparently how we currently operate, set targets for the years to come, and report on our progress against these in a more formalised way.

This is our first Environmental, Social and Governance (ESG) report and aims to show how Kao Data is building a more resilient, sustainable, and successful business for all its stakeholders. The report has been informed by the SASB sustainability reporting standards. We have also mapped our activities and objectives against the United Nations Sustainable Development Goals (UN SDGs). The report shows how we are progressing against the goals that are most relevant to the data centre sector.

This report features information about our vision for sustainability, our commitments, and progress in driving positive impact through our strategic sustainability pillars: Design & Build, Efficient Operations and Industry Leadership & Advocacy.

Navigating this report

For ease of use, we've made our report interactive. You will find our navigation bar (see top of this page) and return-to-Contents arrow button (see bottom left) on most pages. Click them to quickly move around the report. Additionally, look out for **underlined text**, in-text references, page numbers, and footnotes. Try it on the next page by clicking 'Introduction'.

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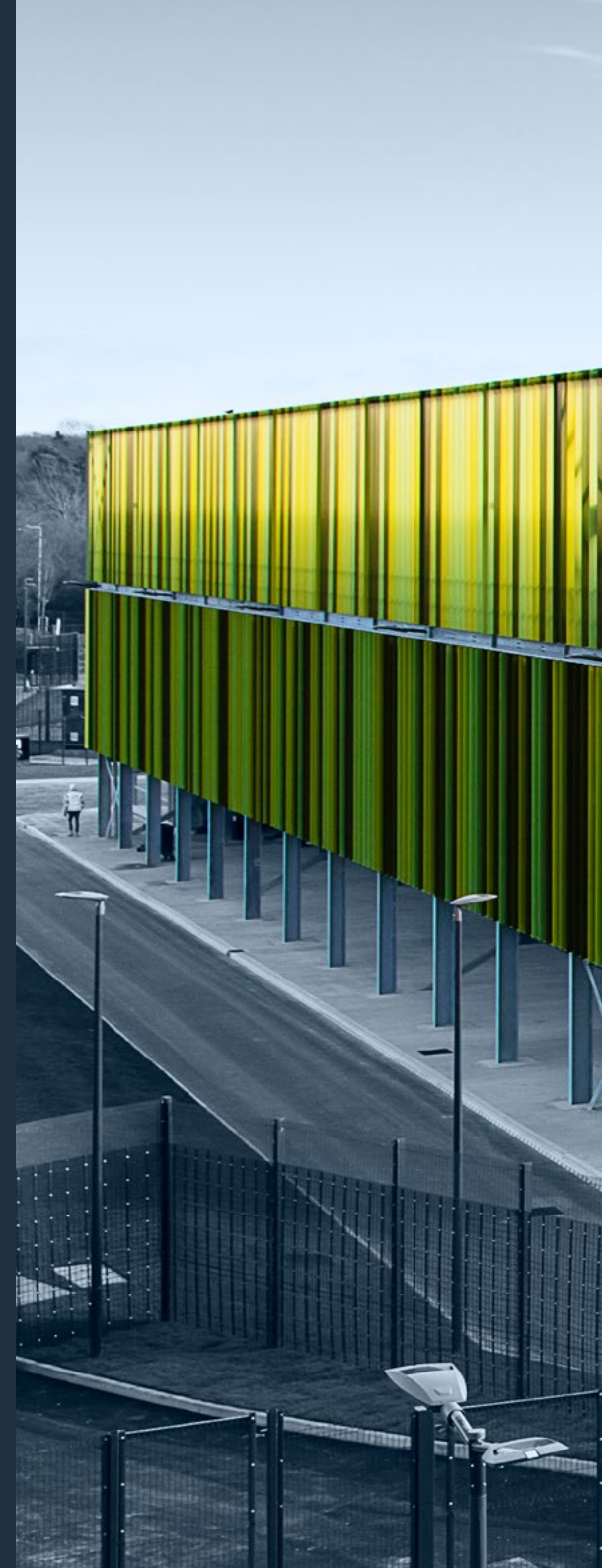
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Introduction

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Kao Data's aim is to be the UK's most sustainable data centre company. Through root-and-branch focus of ESG metrics across our design, build and operational phases, and pioneering advances in power, cooling and water usage within our facilities, we're on target to be NetZero by 2030.

SPENCER LAMB | CHIEF COMMERCIAL OFFICER

Introduction to Kao Data

Founded in 2014, Kao Data develops and operates high performance data centres for advanced computing. With hyperscale-inspired facilities east and west of London, and a new facility planned for Manchester, we provide enterprise, cloud, HPC and AI customers with a world-class home for their compute.

Designed, engineered and operated by one of the industry's most respected teams, our carrier neutral data centres offer the highest calibre OCP-Ready and DGX-Ready environments. We are the UK's home for the most demanding computing infrastructure, with our east of London facility in Harlow housing NVIDIA's Cambridge-1, the UK's most powerful supercomputer. This is complemented by state-of-the-art facilities in west London, which combined, deliver a data centre footprint of 55MW, all powered by 100% renewable energy.

Backed by leading international investors, Kao Data is one of the UK's most pioneering data centre developers and operators. We deliver high performance solutions across three key areas:
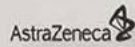
✓ **Infrastructure** With facilities designed by one of the industry's most respected teams, we deliver customised, ultra-efficient and highest-grade colocation.

✓ **Operations** World class operations management providing secure, resilient and reliable IT environments for our customers' mission critical workloads.

✓ **Efficiency** Optimised, efficient and sustainable architecture ensuring a low total cost of operations (TCO) and sustainable, Net Zero-aimed colocation.

3
Operational UK-based data centres

100%
Customers' guaranteed data centre uptime

1.2
Our industry leading design PUE

100%
Renewable energy used in our operations (linked with a tangible UK renewable asset)

100MW
Power capacity currently operational, under development or planned

1ST
DCD Award Winner 2021/22: Data Centre Operations Team of the Year

1ST
Home of the UK's most powerful supercomputer, (NVIDIA Cambridge-1)

1ST
European data centre operator to transition to HVO fuelled generators

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Sustainability Strategy

Climate-conscious computing

Given the exponential rise of the digital economy and its associated impact on sustainability, Kao Data has a key role in mitigating climate change within our business and enabling our customers and stakeholders to do the same. It's what we call 'climate-conscious computing', and it's where Kao Data sees a huge opportunity to add value with our responsible offering.

Kao Data has always sought to set ambitious benchmarks for data centre sustainability and has pioneered some of the industry's key steps to achieving Net Zero by 2030. We are also actively leading the campaign, alongside other operators from around the world, to advocate, promote and demonstrate the steps necessary to make Net Zero a reality.

To guide us in this aim Kao Data became a signatory to the cross-operator Climate Neutral Data Centre Pact (CNDCP) in early 2021. To keep us accountable, our Sustainability Policy outlines specific commitments around climate change, our impact on the environment, and our corporate carbon footprint.

Succeeding together

At Kao Data we want to help create a fairer and more sustainable future for all. To do this we invest in the success of all our staff, customers, partners and wider stakeholders.

We are fully committed to hiring and nurturing diverse talent, which enables our team to make better, more balanced decisions for our long-term success. Driven by our values and operating principles, we are always aiming to do the right thing.

Kao Data measures its sustainability performance and progress across three strategic sustainability pillars: Design and Build, Efficient Operations, and Industry Leadership & Advocacy.

Kao Data's **Sustainability Pillars** — Design & Build, Efficient Operations, Industry Leadership & Advocacy

Sustainability Pillar 1:
Design and build

As an award-winning designer, builder and operator of sustainable data centres, our commitments at this early stage include objectives around the sourcing of sustainable materials and equipment throughout the whole lifecycle of our facilities. When siting our data centres, we ensure physical and climate resilience by choosing low risk locations that are often previous brownfield sites.

All new constructions are built to BREEAM 'Excellent' rating, and any existing facilities we take ownership of are redeveloped to an equivalent level. The BREEAM assessment gathers data on every aspect of built sustainability, from energy use, to biodiversity to health & wellbeing, and social sustainability. All construction work is carried out by carefully vetted main contractors who work within 'considerate construction' principles, and like Kao Data, are able to demonstrate their sustainability ethos and operations.

Responsible, efficient design and build doesn't end with the exterior construction. Kao Data is proud to be the first operator outside of the United States to achieve OCP-Ready status, as set by the Open Compute Project (OCP). This was for our pioneering KLON-01 facility in Harlow, just north of London. OCP-Ready sets the benchmark for industrial scale computing providing the most efficient and sustainable hosting environments within the industry.

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Sustainability Pillar 2:
Efficient operations

Kao Data's facilities provide a robust, resilient, and reliable environment to house mission-critical systems. Compute deployments within our facilities include life-saving work around vaccine research and genetics, research into new drug discoveries and the continued development of artificial intelligence frameworks across financial services and risk analysis. We also house industrial scale cloud and e-commerce deployments that facilitate many of the services people use on a daily basis.

To ensure these workloads remain uptime, all of the time, and provide a low TCO for our customers, Kao Data's operational teams manage highly efficient and sustainably powered data centres.

At Kao Data, 'efficient operations' means consuming fewer resources for any given task, and where we must consume resources, ensuring they are procured sustainably. Efficiency affects every aspect of our data centres, from our commitment to use less water, to our commitment to produce less waste and create more circular energy systems. By ensuring best-in-class power and cooling efficiency, Kao Data achieves an industry leading Power Usage Effectiveness (PUE) ratio, of <1.2, even at partial loads.

In terms of utility power, ever since Kao Data went operational in 2018 we have procured 100% renewable electricity, backed by REGO certification, to match our current and forecasted usage. We are also one of the only operators in the UK to link this power usage against a tangible, renewable energy asset – removing any uncertainty as to the source of our power.

All highest-calibre data centres require a resilient back-up power option in the event of utility power failure. In this regard Kao Data was the first operator in Europe to transition all of our back-up generators to renewable HVO (hydrotreated vegetable oil) fuel. This move enabled us to eliminate up to 90% of the net CO_2 from our generators and significantly reduced our nitrogen oxide, particulate matter and carbon monoxide emissions.

Together these initiatives are helping our customers tackle their own Scope 3 emissions, reinforcing the fact that our digital infrastructure meets the demands for a reduced carbon footprint while maintaining industry-leading uptime.

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Sustainability Pillar 3:
Industry leadership and advocacy

Kao Data is committed to leading our industry toward a more sustainable future, to achieving Net Zero operations by 2030, and advocating for the technologies and solutions that can help us achieve this. Kao Data is at the 'leading edge' of data centre technical design philosophy. The team, which has over 100 years combined experience, focuses on adopting innovative new technology where appropriate and undertaking adequate due diligence in everything we do. In addition, sustainability progression and operational advancement is driven by a cycle of continuous improvement that the Kao Data team have become synonymous for. Our team also advocates for sustainability best practice within our industry, while listening to the views of our customers and stakeholders.

Kao Data regularly engages with government, as well as non-government bodies and trade organisations such as ASHRAE, Uptime Institute, techUK and the European Data Centre Association to assist in supporting the development of environmental and sustainability impact frameworks among other activities.

Finally, Kao Data has a program of annual engagements with wider stakeholders, including schools, colleges, science centres and apprenticeship schemes to help nurture the diverse tech talent of tomorrow and embed positive sustainability concepts from an early age.

ESG materiality

Identifying and managing our material issues

This ESG report details our sustainability commitments, performance highlights and our progress in embedding sustainability considerations into our business. This report also contains some of our new targets and ambitions for 2023 onwards. These are informed by a 2022 ESG materiality assessment, conducted by an independent consultancy. This will enable Kao Data to further hone our sustainability strategy in 2023, so we can continue to be accountable to our stakeholders, tackle the most pertinent sustainability challenges, and create an even better company in the years ahead.

The 2022 materiality assessment gathered insights from internal and external stakeholders to determine and clarify our material ESG issues. We interviewed stakeholders from four groups:

- ▸ Kao Data's management team
- ▸ Our customers
- ▸ Our partners
- ▸ Industry experts

Combining the responses generated 17 material issues for Kao Data. These issues are grouped around SASB's Planet, People

and Prosperity materiality categories. In this report these three categories are covered in the Environmental, Social and Governance sections of this report respectively.

We have also mapped our material issues to the United Nations Sustainable Goals throughout this report. Our United Nations Sustainable Development Goals: Spotlight on 2022 section on the following pages outlines our SDG and SASB aligned 2022 sustainability highlights.

Kao Data ESG Materiality — ENVIRONMENTAL — SOCIAL — GOVERNANCE — **SASB Standards** — **United Nations' SDGs**

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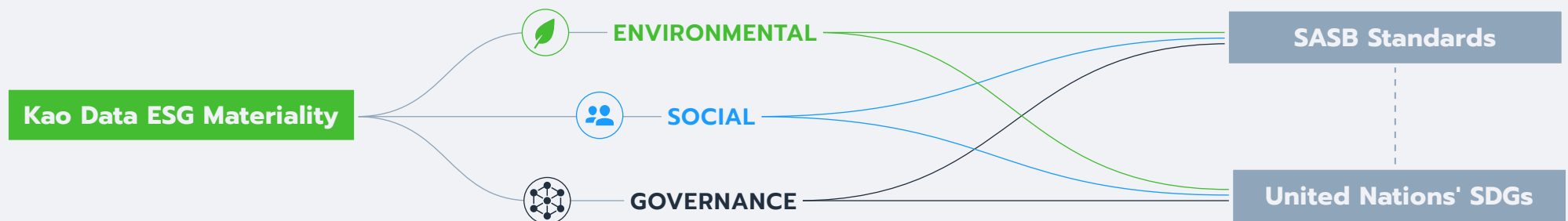
Materiality matrix

Planet (Environmental)

A GHG Emissions

B Energy Management

C Water & Wastewater Management

D Waste & Hazardous Materials Management

E Ecological Impacts

People (Social)

F Human Rights & Community Relations

G Customer Privacy

H Data Security

I Employee Health & Safety

J Employee Engagement, Diversity & Inclusion

Prosperity (Governance)

K Product Design & Lifecycle Management

L Supply Chain Management

M Materials Sourcing & Efficiency

N Physical Impacts of Climate Change

O Business Ethics

P Management of the Legal & Regulatory Environment

Q Systemic Risk Management

IMPORTANCE TO STAKEHOLDERS

IMPACT ON BUSINESS
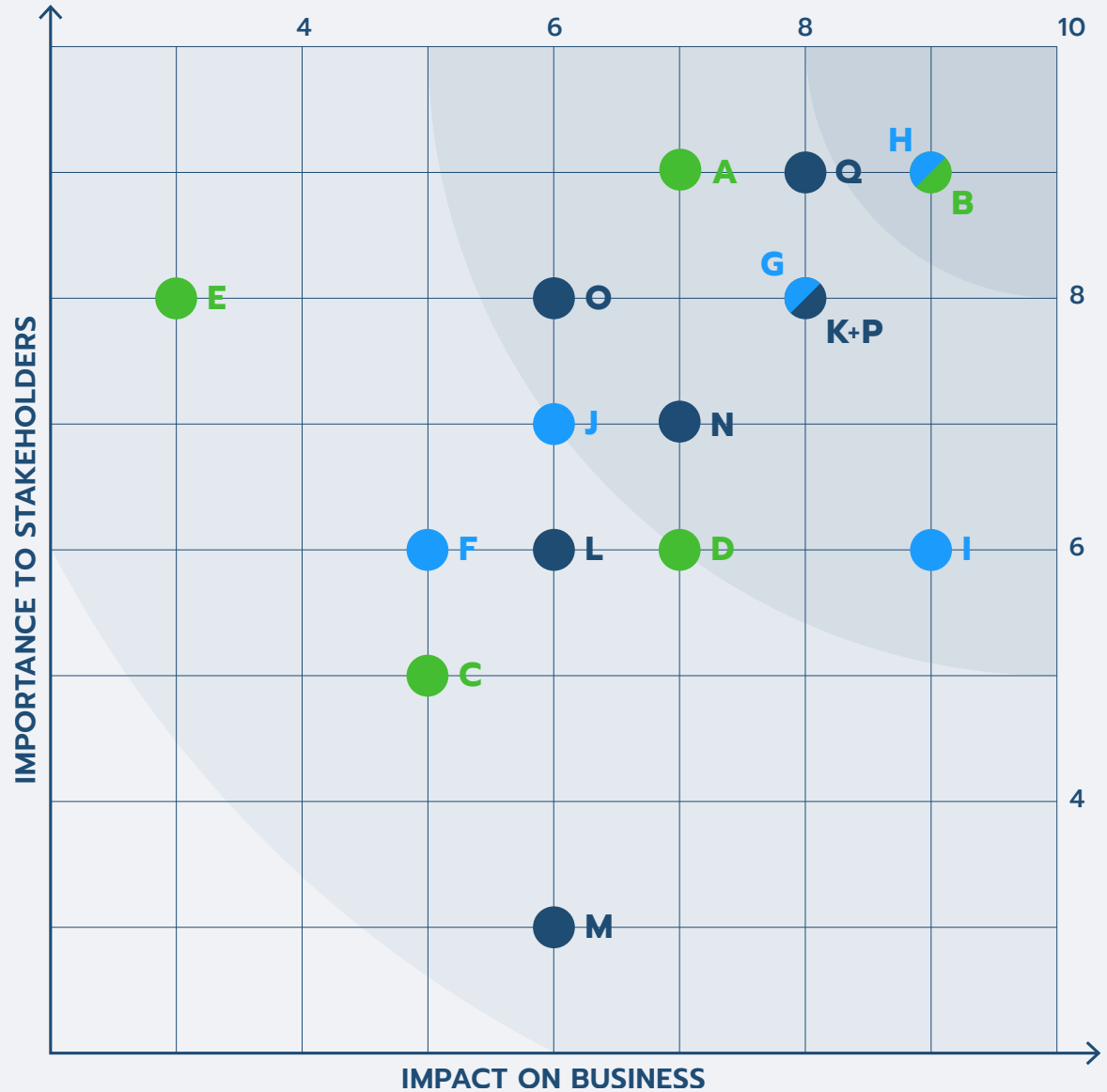
Sustainable Development Goals: Spotlight on 2022

On the following pages we have mapped our 2022 sustainability highlights against the United Nations Sustainable Development Goals (UN SDGs), arranged alongside Kao Data's SASB aligned material issues.

For environmental sustainability, the five SDGs chosen are informed by JLL's Data Centre Sustainability Scorecard. For social and governance sustainability we have included additional SDGs that we believe we can best tackle within our business and through external outreach. In addition, we have mapped our progress and future ambitions relating to the six metrics outlined by the Climate Neutral Data Centre Pact. These are the six overarching KPIs that a data centre must tackle to reach carbon neutrality by 2030.

You can read this and more about our environmental progress in the **Environmental sustainability** section of this report on page **18**.

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🖊 Environmental – Planet

UN SDG	SASB MATERIAL ISSUE	2022 HIGHLIGHTS	▶ PAGE
7 AFFORDABLE AND CLEAN ENERGY / 13 CLIMATE ACTION	GHG EMISSIONS	▶ Procuring 100% renewable power (REGO backed) since 2018, helping reduce company emissions and customers' Scope 3 emissions. ▶ First data centre operator in Europe to transition to renewable HVO fuel for back-up power, eliminating up to 90% of net CO_2 in 2021. In 2022 we began exploring local solar generation for our Harlow campus.	25
7 AFFORDABLE AND CLEAN ENERGY / 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE / 13 CLIMATE ACTION	ENERGY MANAGEMENT	▶ Across our Technology Suites, and even at partial loads, we operate an average Power Usage Effectiveness (PUE) of 1.2 which is tracked on a rolling 12-month basis, and is made available to all customers. ▶ Across 2022 we utilised digital twins technology to identify hotspots, improving the efficiency of our Technology Suites.	25
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	WASTE AND HAZARDOUS MATERIALS	▶ In 2022, we engaged our Facilities Management partner, Greenline to better understand our waste footprint. ▶ We have set targets for recycling, reuse and recovery, with an aim to achieve 100% actual landfill diversion, improving on our current 75% target. We already divert 100% via waste management contracts.	28
6 CLEAN WATER AND SANITATION	WATER AND WASTE WATER MANAGEMENT	▶ Across our Technology Suites, we operate an average Water Usage Effectiveness (WUE) of 0.41. We routinely compare performance against hyperscale providers. In 2022 Microsoft reported a global WUE of 0.49 (but noted some regions reporting at 1.65) whilst in 2021, Facebook (Meta) reported its industry average WUE metric as 1.80.	29
12 RESPONSIBLE CONSUMPTION AND PRODUCTION / 15 LIFE ON LAND	ECOLOGICAL IMPACTS	▶ Kao Data minimises our ecological impact by ensuring new builds (like KLON-01, KLON-02 and our planned facility in Manchester) are built on brownfield land and that facilities include grassed areas (including wild grass areas). In 2022, we've also planted trees at our Northolt facility, KLON-05.	30

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Social – People

UN SDG	SASB MATERIAL ISSUE	2022 HIGHLIGHTS	▶ PAGE
5 GENDER EQUALITY 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 10 REDUCED INEQUALITIES	**HUMAN RIGHTS & COMMUNITY RELATIONS**	▸ Supporting Cambridge Science Centre to bring STEM subjects to life for disadvantaged communities. ▸ Nominated for an Open:UK 2022 Award, for our KAO Academy, which we use to engage KS2 children (aged 7-11) around the increasing role of data centres in our everyday lives. ▸ UTC Heathrow - University Technical College (UTC) Heathrow runs the 'Digital Futures' programme which provides students (aged 14-19) with the opportunity to start a data centre career. As a partner, Kao Data shares technical expertise across the spectrum of data centre design, engineering, and operations.	**41**
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 11 SUSTAINABLE CITIES AND COMMUNITIES	**CUSTOMER PRIVACY**	▸ In addition to operating ISO certified high-security facilities, Kao Data continues to be certified within the Cyber Essentials and Cyber Essentials PLUS scheme. Cyber Essentials is a Government-backed, industry-supported scheme to help organisations protect themselves against common online threats.	**56**
3 GOOD HEALTH AND WELL-BEING	**EMPLOYEE HEALTH & SAFETY**	▸ Across 2022 we maintained our zero LTIFR for employees and contractors.	**37**
5 GENDER EQUALITY 8 DECENT WORK AND ECONOMIC GROWTH	**EMPLOYEE ENGAGEMENT, DIVERSITY & INCLUSION**	▸ In 2022 we launched a range of online training portals and provisions so our employees can continually upgrade their skills. ▸ During 2022, 90% of our employees received professional training, and 20% received ESG related training.	**37**

Governance – Prosperity

UN SDG	SASB MATERIAL ISSUE	2022 HIGHLIGHTS	PAGE
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	**PRODUCT DESIGN & LIFECYCLE MANAGEMENT**	▸ All our new facilities are designed in line with the industry-leading BREEAM assessment, with our KLON-01 and KLON-02 sites both awarded 'Excellent' certification. ▸ KLON-01 was also the first data centre outside of the US to be certified OCP-Ready.	20
5 GENDER EQUALITY **12** RESPONSIBLE CONSUMPTION AND PRODUCTION **13** CLIMATE ACTION **17** PARTNERSHIPS FOR THE GOALS	**SUPPLY CHAIN MANAGEMENT**	▸ Our new Supplier Code is helping us take a more data driven approach to sustainability within our value chain. We will be ramping up this work in 2023.	56
11 SUSTAINABLE CITIES AND COMMUNITIES **13** CLIMATE ACTION	**MATERIALS SOURCING AND EFFICIENCY**	▸ In 2022 and through unique collaboration with our energy provider (Shell UK) every electron of energy we use is now matched by an equivalent capacity generated by Little Cheyne Court wind farm in Kent.	26
13 CLIMATE ACTION	**PHYSICAL IMPACTS OF CLIMATE CHANGE**	▸ Our new Supplier Code and Sustainability Policy is enabling Kao Data to better manage climate related physical risks and opportunities for 'win wins' in our value chain.	56
16 PEACE, JUSTICE AND STRONG INSTITUTIONS	**BUSINESS ETHICS**	▸ Our Business Code ensures management understand their responsibility in embedding ESG excellence within the business and for our stakeholders.	56
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE **16** PEACE, JUSTICE AND STRONG INSTITUTIONS	**MANAGEMENT OF THE LEGAL & REGULATORY ENVIRONMENT**	▸ Our Integrated Management System (IMS) is certified to numerous ISO standards and is helping us future proof our business against legislative risks.	55
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	**SYSTEMIC RISK MANAGEMENT**	▸ Our Business Continuity plan, certified to ISO 22301:2019 (Security and Resilience - Business Continuity Management Systems), is helping us understand, manage and mitigate against systemic risk.	55

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Environmental sustainability

Creating a sustainable campus

Our strategic sustainability pillar 'Design & Build' helps us ensure that sustainability is engineered into our data centres, from design, to built form, right through to their operational lifecycle. This is evidenced by our Sustainability Policy and Supplier Code of Conduct which includes sustainability requirements for all our buildings and services.

Our approach to creating a sustainable campus starts with conducting a site risk assessment to ensure we site all our buildings for maximum resilience and minimal environmental impact.

We are also committed to the reuse of brownfield sites for our data centre locations. In fact, the Kao Data campus in Harlow is built on the former 'Nortel Networks' laboratories site, the home of Sir Charles Kao's pioneering discovery of fibre optic cable in 1966, an invention that makes today's data centres possible.

We also ensure we reach the highest architectural sustainability standards for our buildings by utilising the BREEAM assessment process for all our developments. In 2019 our KLON-01 facility was certified BREEAM 'Excellent' for both the design and construction stages, measured against a specific assessment methodology for data centres.

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The expansion of our Harlow campus is another strategic milestone in Kao Data's evolution as we continue to scale the business's high performance data centre offering across the UK and Europe.

LEE MYALL | CEO, KAO DATA.

Future-proof facilities

Our Harlow campus consists of a development of four state-of-the-art, OCP-Ready, carrier neutral data centres. KLON-01 has an initial capacity of 8.8MW (which can expand to 10MW) and has been fully operational since 2018.

Construction of KLON-02 started in 2022 and permits for the other two data centres – KLON-03 and KLON-04 - are in place. When fully completed the 15 acre, +£230m campus will support an ITE load of up to 40MW, across 150,000sq ft of technical space – all powered by 100% renewable energy.

The Kao Data campus was recently rated with Top 10 status for science and research parks in the Cambridge and East of England region, a testament to our customer led approach, and our innovative sustainability vision.

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Harlow campus

1 100% sustainable, hydrotreated vegetable oil (HVO) power for back-up generators. This equates to a CO_2 emissions reduction of +80,000 tons per annum, the equivalent of removing +30,000 vehicles from the road.

2 Through expert and efficient design we cool the servers within KLON-01 via free-air cooling, which reduces our energy usage, lowers our PUE and reduces our environmental impact.

3 SLA-backed industry leading PUE of <1.2.

4 100% renewable energy procurement from Little Cheyne Court Wind Farm to match our power usage.

5 Trees planted and wild grass areas to boost ecological impact.

Flexible, efficient OCP-Ready facilities with over 75% in the 'Optimum' category.

OCP READY™

ISO14001 certified campus, which includes waste reduction plans to boost circularity, especially for e-waste. ISO50001 certified for energy management.

Certificate Number 16950
ISO 9001, ISO 14001, ISO 27001, ISO 45001, ISO 50001

BREEAM 'Excellent' certified for New Construction and Operational.

Mapping our environmental impact

At Kao Data we are committed to leading the global data centre industry in energy efficiency and sustainability excellence. Our sustainability strategy includes commitments to reducing environmental impact and reducing carbon emissions through our procurement and use of power.

In addition, we are reducing our reliance on water, and through responsible waste management ensuring landfill is minimised and as much waste is recycled as possible.

We are also committed to preserving natural capital, and enhancing biodiversity and ecology at all our sites wherever feasible.

In the following sections we have provided tables that map our environmental sustainability progress and future ambitions against the United Nations Sustainability Goals.

We have also included metrics for each of our material issues. This includes our progress against the climate related KPIs identified by the Climate Neutral Data Centre Pact (CNDCP). These are the essential levers for reaching net zero by 2030. You can find these metrics in **bold** in the the tables of the Environmental Sustainability section of the report.

The tables throughout this report also show our progress year-on-year via a traffic light system. Red is for areas we must improve, amber is for things we are doing fairly, and green is for areas where we are performing well.

Read more about the CNDCP here: **climateneutraldatacentre.net**

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Transformational Goal

Achieve Net Zero in our business by 2030

Key Policies

Sustainability Policy, Environmental and Energy Policy, Green Policy

Kao Data Aspiration

Achieve climate-conscious computing for our customers by procuring renewable energy and tackling the emissions from our business.

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7 AFFORDABLE AND CLEAN ENERGY   **9** INDUSTRY, INNOVATION AND INFRASTRUCTURE   **13** CLIMATE ACTION

Energy and emissions

SDG	SASB MATERIAL ISSUES	METRICS CNDCP-ALIGNED METRICS IN BOLD	2022 FIGURES	POLICIES & CERTIFICATIONS	PROGRESS & AIMS	
7 **13**	**GHG EMISSIONS** Addresses Greenhouse Gas Emissions that a company generates through its operations. Management of regulatory risks, environmental compliance, and reputational risks and opportunities, as they relate to direct GHG emissions.	GHG Scope 1 emissions	331.23 mtCO$_2$e	▸ Environmental Green Policy	▸ Across 2022, Harlow ran generators on HVO after migration mid-2021 – this has helped lower tCO$_2$e by up to 90%.	⊖
		GHG Scope 2 emissions	19,516.79 mtCO$_2$e			
		GHG Scope 1 and 2 combined	19,848.02 mtCO$_2$e		▸ Charging Points installed in Harlow both in Customer Car Park area and inside site compound.	
		GHG Scope 3 emissions	1,790.22 mtCO$_2$e			
		Business travel emissions (road)	13.80 tCO$_2$e		▸ Cycle to work scheme introduced to the business. Working with Octopus EV to launch a hybrid and electric vehicle scheme for staff in late 2023.	
		Emission intensity metric (purchased electricity)	0.19338 kg CO$_2$e/kWh			
		Carbon Usage Effectiveness (CUE)	**0[1]**		▸ Working on lifecycle replacement program.	
7 **9** **13**	**ENERGY MANAGEMENT** Addresses environmental impacts associated with energy consumption. Management of energy in provision of products and services derived from utility providers not controlled by the company.	**Total energy consumed**	**101.09 GWh**	▸ ISO14001:2015 (Environmental Management) ▸ ISO 50001:2018 (Energy Management)	▸ In 2022, Kao Data started actively exploring options for local solar energy production which could potentially subsidise data centre operations on a private wire basis.	⊖
		Energy intensity	0.00028 MWh/revenue			
					▸ Across 2022 we continued to optimise the energy efficiency of our data halls using CFD digital twins technology.	
		Renewable Energy	**100%**	▸ Shell 100% Renewable Energy Supply (Certificate)	▸ HVO used at Harlow. Looking at Slough and Northolt migration in 2023.	⌃
		Biofuels	33%[2]			
		Facilities Power Usage Effectiveness (PUE)	**1.63[3]**		▸ Estate average for 2022, working on improvement through 2023 across wider estate and lifecycle works.	⌃
		Harlow / Slough / Northolt PUE	1.38 / 1.72 / 1.77			

1   100% renewable electricity purchased via REC so CUE noted as zero.
2   Harlow HVO. Lower value reported this year as roll out at Slough and Northolt sites still underway.
3   For data halls, PUE is 1.2 or 1.25.

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Our approach

Our approach to reducing our energy use and emissions is to ensure that our data centres are intricately designed to drive operational and energy efficiency, no matter the type of deployment. Kao Data offers hyperscale levels of power and cooling efficiency, from rack level to full occupancy, all powered by 100% renewable power, a key differentiator for our customers.

As part of a continual program of improvement at all our sites, we continue to carefully monitor our data centres' Power Usage Effectiveness (PUE), to ensure our customers' workloads are being powered and cooled as efficiently as possible, thus using as little energy as possible.

In addition, we are also looking at ways to reduce and offset the remaining emissions in our business, such as for travel. We currently promote public transport where possible, have introduced cycle to work schemes, are exploring hybrid and electric vehicles schemes in partnership with Octopus EV, and keep business flights to a minimum by using remote meetings.

Our progress

Our environmental sustainability progress has included a number of technical design and engineering 'firsts' that were incorporated into the structure and operations of our facilities. This includes being the first wholesale colocation data centre operator in the UK to incorporate facility-wide free-air cooling, and in 2021 becoming the first data centre operator in Europe to transition our back-up generators from diesel fuel to 100% renewable HVO (hydrotreated vegetable oil) fuel.

Other achievements include our innovative approach to energy use by utilising Digital Twins technology, to identify inefficient 'hotspots' within our Technology Suites. This is helping us ramp up the efficiency of our data centres even further.

OCP-Ready: Beyond compliance

In 2018 Kao Data was successfully self-audited against OCP's checklist for compliance and became one the first data centre outside of the United States to achieve OCP-Ready status. Our KLON-01 facility achieves over 75% in the 'Optimum' category, meaning that our systems go beyond the base requirement, ensuring compliance with emerging 'future-proof' standards. As Board members we continue to look for ways to improve our operations in open collaboration with other project members, creating an accelerated cycle of innovation.

OPEN
Compute Project

Enabling energy and emissions reductions

To best highlight our energy and emissions related achievements, the following pages cover the broader energy and emissions topics of operational excellence, power efficiency, renewable energy, and the road to Net Zero. These are areas of intense focus at Kao Data as they are key levers to help deliver climate-conscious computing for our customers.

Operational excellence

In line with our sustainability vision and policy commitments, Kao Data's data centres comply with the hosting requirements of the Met Office's Supercomputing 2020+ Programme, which sets high standards for sustainability, climate resiliency, risk management and energy efficiency.

Our Environmental & Energy Policy, Green Policy and Sustainability Policy, help guide the delivery of operational excellence through our Integrated Management System, which sets clear and ambitious commitments for energy efficiency, environmental management, and emissions reduction. Since 2019, all our sites are certified to the ISO14001 and ISO5001 international standards for energy and environmental management for data centres.

As part of the ongoing commitment to furthering data centre design excellence, and helping to define new 'Best Practices', Kao Data is a member of the Open Compute Project Foundation (OCP), and sits on the Data Centre Facility (DCF) project board, a key part of the OCP.

The OCP was initiated in 2011 by Facebook, Microsoft, Rackspace and other similar mature IT equipment users, to drive innovation, simplify equipment specifications, and reduce cost.

Power efficiency

One of the most common metrics used to measure performance within the data centre environment is Power Usage Effectiveness. PUE determines the effectiveness of a data centre by dividing the total amount of power consumed by the facility by the power used to run the IT equipment within it.This is expressed as a ratio with the ideal target of 1.0. A PUE of 1.0 means all the power consumed by the facility was used by IT equipment. Of course, this is unrealistic as cooling, lighting, power transmission losses, and other miscellaneous services also require power which raises that figure of 1.0 northwards. The industry average PUE in 2022 was 1.55 as provided by the Uptime Institute.

Through innovative design, energy efficient infrastructure and technical operational excellence Kao Data runs our new 'Kao design' facilities at a PUE of 1.2, while our redeveloped facilities – KLON-05 and KLON-06 – run at a PUE of 1.25[4]. Operating a low PUE across our facilities means we are utilising less energy to run our customers' IT hardware. This is a benefit to them as it reduces their TCO and reduces the amount of power required from the utility grid.

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4   This already low figure drops to 1.15 at 50% load, 1.16 at 75% and 1.23 at full IT utilisation. Furthermore, these values were achieved using air-to-air heat exchange technologies which are less efficient from a heat transfer perspective compared to water-to-water.)

Renewable energy

Kao Data is committed to the use of natural resources within our operations. To help our customers fully address their own Scope 3 emissions, Kao Data is first and foremost committed to ensuring we purchase all energy/fuel responsibly, with a commitment to procuring 100% renewable electricity for all Kao Data facilities, on a cost neutral (passover) basis for customers. This achievement takes our market-based carbon emissions to zero.

Using our Harlow campus as an example, when fully operational and operating at full load (43.5MVA), our renewable energy contracts will reduce the campus's CO_2 emissions by +80,000 tons per annum, the equivalent of removing +30,000 vehicles from the road.

In addition, our goal is to improve on the annualised 100% renewable energy target in the next 2 to 3 years by seeking local Power Purchase Agreements (PPAs) driven by wind or solar (PV) directly connected to the facility, dedicated to our needs. It is envisaged that whilst this may form a percentage of our total consumption, a grid connection with a 100% REGO contract will also be required.

Read more about our sustainability commitments here: **kaodata.com/news/kao-data-increases-commitment-to-sustainability**

Little Cheyne Court Wind Farm

Through unique collaboration with our energy provider all the renewable energy we use is now associated with a known source - Little Cheyne Court wind farm in Kent. Every electron of energy Kao Data consumes is matched by an equivalent capacity generated by this specific wind farm. While we're still using the REGO certificated system, we're removing the uncertainty as to the source and validity of this green energy, by ensuring our power is matched by genuine, renewable energy - generated here in the UK, at this wind farm. This also provides certainty to the market, and incentivises continued development of renewable assets, by providing a committed, long-term demand for the wind farm.

The road to Net Zero: HVO fuel

All data centres, especially those operating to Uptime Institute Tier 3 equivalence and above, must plan and prepare against a loss of utility power and mitigate against this risk by installing on-site back-up power generation. Yet the vast majority of UK data centres are still backed-up with fossil fuel, mineral diesel generators.

That's why in 2021 Kao Data partnered with Crown Oil to become the UK's first data centre to transition towards all back-up generators from diesel to hydrotreated vegetable oil (HVO) fuel, eliminating the need for diesel fossil fuel at our facilities. Kao Data has replaced an initial 45,000 litres of diesel at our Harlow campus and will eventually switch to an HVO provision of more than 750,000 litres, when the campus is fully developed. Kao Data will eliminate up to 90% of net CO_2 from its back-up generators following this move. This achievement demonstrates the potential for operators globally to further reduce their CO_2 emissions in the pursuit of Net Zero operations.

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Pioneering the use of HVO in place of diesel fuel for our generators, is a key step toward achieving our goal of being a Net Zero business by 2030. It also enables our customers to reduce their own Scope 3 emissions, and is just one example of our leadership in the international data centre sustainability field.

GÉRARD THIBAULT | CTO, KAO DATA

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Eliminating emissions

As a clean, renewable diesel alternative, HVO fuel eliminates up to 90% of net CO_2, therefore significantly reducing harmful greenhouse gases, including nitrogen oxide, particulate matter and carbon monoxide emissions. Using HVO also offers a number of additional benefits in respect of infrastructure reliability, and resiliency. It is easier to store and maintain, free from aromatics, sulphur and metals, odourless and completely biodegradable.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Circularity and waste

SDG	SASB MATERIAL ISSUES	METRICS CNDCP-ALIGNED METRICS IN BOLD	2022 FIGURES	POLICIES & CERTIFICATIONS	PROGRESS & AIMS
12	**WASTE AND HAZARDOUS MATERIALS** Addresses environmental issues associated with hazardous and non-hazardous waste generated by companies. It covers the management of solid waste, its treatment, handling, storage, disposal, and regulatory compliance.	**Energy Reuse Factor (ERF)** **Electronics Disposal Efficiency (EDE)** *Reuse / Repair / Recycle* **Total waste disposed** **Total waste diverted from landfill/ incineration** **Total waste recycled**	100% 135.55 tonnes 100% 100%	▸ ISO 14001:2015 (Environmental Management Systems)	▸ Currently we do not re-use any of the energy provided to site. Waste Management Contracts in place have 0% to landfill, 100% diversion via Recycling, Reusing, or conversion to Green Energy. We have no IT disposal in 2022, as lifecycle not reached, though we re-use within the business where practicable. ▸ In 2023, working with our FM, we aim to better understand product procurement and procure more EPD's (environmental product descriptions) rated products.

Our approach

Kao Data is committed to reducing the waste footprint of our value chain through sustainable procurement, minimising packaging, and running recycling initiatives at all our sites.

The Climate Neutral Data Centre Pact highlights the need to reuse, repair and recycle all used server equipment, which we do where possible, partnering with externals schemes when required.

We donate redundant IT infrastructure to charity or to other local authority programs, and encourage customers to adopt the EU's Waste Electrical and Electronic Equipment Regulation designating responsible collection and recycling of electronic waste.

Our progress

In 2022, we stepped up our efforts to understand our waste footprint by working with our Facilities Manager, Greenline, to begin taking a more granular approach to our waste. This is so we can tackle the areas that will create the most positive impact.

We already actively engage with our suppliers and contractors through our Environmental Policy, Green Policy and our Supplier Code of Conduct. Our Supplier Code of Conduct includes criteria around waste management and the adoption of circular waste systems in line with our ISO14001 certification.

6 CLEAN WATER AND SANITATION

Water

SDG	SASB MATERIAL ISSUES	METRICS CNDCP-ALIGNED METRICS IN BOLD	2022 FIGURES	POLICIES & CERTIFICATIONS	PROGRESS & AIMS	
6	**WATER AND WASTE WATER MANAGEMENT** Addresses water management risks and strategies, practices and policies to mitigate those risks.	**Water Usage Effectiveness (WUE)** Potable water consumed Water recycled/harvested	**0.41** 13,169,100 litres 0	▸ ISO 14001:2015 (Environmental Management Systems)	▸ Live initiatives include living walls to use harvesting water and recycling. ▸ We will review evaporative cooling and whether water can be retreated and recycled to provide further efficiencies in 2023. ▸ Adiabatic cooling and cycling of water, via treatment to provide further lifecycle efficiencies. ▸ Enhanced metering of water to better understand usage.	⊖

Our approach

The Climate Neutral Data Centre Pact, (CNDCP), of which Kao Data is a signatory, sets out clear commitments to curb water usage across the industry, challenging the industry to reach zero water use by 2030. Part of this commitment is to measure water usage with a Water Usage Effectiveness Ratio (WUE).

At Kao Data we aim to reduce our water consumption wherever possible and through good design and efficient infrastructure we are able to operate our data centres using predominantly free-air cooling. This reduces are water usage significantly.

Though we do not site our data centres in areas of water stress, water use is an industry wide issue, and as an industry advocate for sustainability it's important we set a best-in-class benchmark.

Our progress

In 2022 we reused some of our water for our living wall at our Northolt site. We are fully committed to further lowering water usage and recycling water where we can, through utilising more efficient cooling systems, with the support of our staff and the expertise of our technology partners.

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12 RESPONSIBLE CONSUMPTION AND PRODUCTION   13 CLIMATE ACTION

Ecological impacts

SDG	SASB MATERIAL ISSUES	METRICS	2022 FIGURES	POLICIES / CERTIFICATIONS	PROGRESS AND AIMS	
12 13	**ECOLOGICAL IMPACTS** Addresses the management of the company's impacts on ecosystems and biodiversity, including through project development.	Maintain BREEAM Excellent certification for all new developments.	KLON-02 facility awarded BREEAM 'Excellent' in 2022	▸ Environmental Green Policy ▸ Sustainability Policy ▸ Supplier Code of Conduct	▸ Have implemented biodiversity areas to boost local wildlife and ecosystems ▸ Green areas planted, including recreational space for employees. ▸ All future builds to include ethical sourcing of materials and consider impact, including the introduction of biodiversity and ecosystems. ▸ Our finance team are exploring the viability of biodiversity credits schemes and plan to include developments in the 2023 report.	⊖

Our approach

Kao Data values natural capital as an essential resource for ensuring the sustainability of our society, and our business. Biodiversity and ecological enhancements are also a key weapon in the fight against climate change, yet biodiversity is a commonly neglected aspect of sustainability in the data centre industry. Data centres occupy large areas of land, and this can disrupt ecosystems, accelerating species loss. The UK's biodiversity offset scheme is starting to help halt this decline, but we know that as a business we can do much more to tackle these issues, other than just offsetting.

Our progress

As part of our approach to built sustainability, the BREEAM assessment methodology requires our sites to address biodiversity and ecology aspects in our campus. We have outlined areas of our Harlow campus that are to remain 'wild grass' areas to help encourage biodiversity. Our approach to biodiversity is a testament to Kao Data's holistic approach to ensuring 'an environment with a future'.

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Optimised environments

With servers generating heat all day long, data centres need sustainable, energy efficient cooling. Yet, cooling systems are among the most energy-intensive systems in most Data Centres, accounting for 30% of power usage within many facilities.

They can also be huge users of water, adding to global water stress problems. Our data centres cooling system meets the stringent ASHRAE TC 9.9 environmental guidelines, and our facilities utilise Scheider Electric's EcoStruxure tool that uses multiple sensors in our data centres to help us continually improve power and cooling efficiency.

The cooling infrastructure at Kao Data provides an ultra-efficient, sustainable, highly reliable distributed and redundant indirect air-cooling system. The system units utilise water sprays only at peak temperatures, above 24°C. Overall, this means compared to a chilled water scheme it is much less water intensive. This represents a step-change in HPC infrastructure sustainability, offering a cooling model with higher degree of reliability and hence availability, driving a more stable Technology Suite environment.

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Social sustainability

Social sustainability

Kao Data understands that long term business success is only achievable when we make social sustainability progress. This approach was first evidenced by our award-winning CSR-strategy in 2019, which included firm commitments on responsible resourcing, ethical business and recruiting and developing diverse tech talent.

Kao Data is also aware of the part all our stakeholders can play in minimising the impact of our industry on the environment, and providing a sustainable, more equitable future for all. That's why our stakeholder engagement

strategy, driven by our core values and operating principles, empowers our customers, employees and partners to get involved with our sustainability work. This ensures all our stakeholders can contribute to our social and environmental impact, and provide valuable insights and input to help shape our governance approach.

Transformational Goal

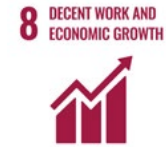Increase the percentage of women managers to 30%

Key Policies

The Kao Way principles and value, Business Code of Ethics

Kao Data Aspiration

Harness and grow a diverse workforce fit for the future.

3 GOOD HEALTH AND WELL-BEING

5 GENDER EQUALITY

8 DECENT WORK AND ECONOMIC GROWTH

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

10 REDUCED INEQUALITIES

Our people

SDG	SASB MATERIAL ISSUES	METRICS	2022 FIGURES	POLICIES & CERTIFICATIONS	PROGRESS & AIMS	
5 **8** **9** **10**	**EMPLOYEE ENGAGEMENT; DIVERSITY AND INCLUSION** Addresses a company's ability to ensure that its culture and hiring and promotion practices embrace the building of a diverse and inclusive workforce. It addresses the issues of discriminatory practices on the bases of race, gender, ethnicity, religion, sexual orientation, and other factors.	Racial diversity / International background (employees)	17%	▸ Kao Data Code of Conduct ▸ The Kao Way principles and value	▸ In 2022 we co-created our values and operating principles, called the Kao Way, with our employees. ▸ We aim to fully report the percentage and breakdown of bonuses related to ESG and Climate progress from 2023 onwards. ▸ We are committed to closing the gender gap by aiming to increase the percentage of women managers to 30% by 2025.	⊖
		Gender ratio (employees)				
		Men	86%			
		Women	14%			
		Gender ratio (management)				
		Men	100%			
		Women	0%			
		Employee attraction and retention	100%			
		Employee growth YoY	Almost 100%			
		Training (awareness)				
		Employees	100%			
		Training (ESG)				
		Employees	20%			
		Managers	0%			
		ESG related incentives awarded	HVO / Green Energy (Wind Farm)			
		Number of apprenticeships	0			
3	**EMPLOYEE HEALTH & SAFETY** Addresses a company's ability to create and maintain a safe and healthy workplace environment that is free of injuries, fatalities, and illness (both chronic and acute) for both employees and contractors and that promotes mental health.	*Lost Time Injury Frequency Rate (LTIFR)*		▸ ISO 45001:2018 (Occupational Health & Safety Management)	▸ Maintain 'zero' LTIFR ▸ Further embed training throughout our supply chain	⌃
		Employees	0			
		Contractors	0			

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Our approach

Employees at Kao Data live out our core values, so we can grow and develop the business together. We are committed to giving our employees and workers the opportunities and training they need to grow our business, and to further their skills for long term shared success. To help us build a future-fit workforce, we look to recruit diverse talent and individuals from other industries to bring in fresh ideas and different ways of thinking. We operate an agile, flat structure that empowers ownership of tasks and fosters real responsibility. This helps make Kao Data an engaging location for a career within the rapidly evolving data centre industry.

Our progress

In 2019, a year after operations began, Kao Data won the Corporate Social Responsibility category at the prestigious Datacloud Global Awards. This win was in recognition of our comprehensive CSR strategy and our work leading the industry to more sustainable outcomes. In 2021 Our COO, Paul Finch was awarded Sustainability Champion by the Infrastructure Masons, a testament to his work on both social and environmental sustainability within Kao Data, and for a lifetime of dedicated sustainability advocacy. This was closely followed by our Operations team winning 'Operations Team of the Year' at the 2021 DCD Awards for their work on NVIDIA's Cambridge-1 deployment.

Diversity and inclusion

At Kao Data, we know that we have both an obligation and an opportunity to make our company as diverse and inclusive as possible. Diverse opinions lead to better ideas, more robust decision making, faster innovation and the assurance of our reputation as a socially conscious employer. Kao Data utilises a number of diversity metrics, as can be seen in the progress table at the start of this section. However, we know that we must do better if we are to truly capitalise on the immense pool of talent regionally, nationally and globally. In 2023 and beyond, we will continue to seek ways to enhance equity and inclusivity for our people.

Training and talent

To best serve our customers, we must attract the very best and most diverse talent to our business. This is why Kao Data provides comprehensive and ongoing training to our employees. This training includes a focus on excellence, customer satisfaction, compliance and sustainability helping us continually improve the performance of our business, the appreciation of our clients and the wellbeing of our employees and contractors. In 2022 we launched our dedicated training portal provided by LinkedIn so our employees can continually upgrade their skills. During 2022, 90% of our employees received professional training, and 20% received ESG related training.

Health and safety

Kao Data is firmly committed to the Health and Safety of our employees, contractors and the communities we interact with. This is evidenced by our zero accident LTIFR record, enabled by our Health and Safety Policy. As we develop our facilities, we ensure our contractors follow rigorous Health and Safety standards, providing ongoing training through our employee portal. Our supplier code helps us ensure safe working practices, with task risk assessed and governed, based on the permit of work that may be required.

Kao Data is also a signatory to the Considerate Constructors scheme. The scheme has three focus areas: Respect the Community, Care for the Environment and Value their Workforce.

We are also committed to employee health and wellbeing. Our KLON-01 facility is one of the first data centres in Europe to implement the monitoring of gaseous contaminants within the technical space, providing the assurance of clean air for our workers, while simultaneously ensuring our server storage warranties are never put at risk.

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The Kao Way: Living our values

Across 2022 we launched our first set of company values, and operating principles, which together form 'The Kao Way'. This was the culmination of a six-month internal process to find out the essence of what Kao Data stood for and how, collectively, we wanted to approach our work. 'The Kao Way' informs every interaction with our customers, partners and stakeholders, to ensure shared sustainable success. It also ensures we continually assess our management approach for optimising our employee's wellbeing, health and development.

The Kao Way is driven by collaboration, inclusion, trust and high performance in everything we do. By enabling our people to define their own collective values we are creating a diverse, dedicated and determined team to lead us in our next phase of growth. As our staff numbers have grown steadily, these values and principles have now become the firm bedrock for achieving our ESG vision.

� Our values

Team

We are one united team. We trust each other to deliver, and stand shoulder-to-shoulder in our pursuit of excellence.

Vision

We are pioneers. We continually look to innovate and break new ground within the wider data centre industry.

Respect

We are equals and respect each other's contribution. Our teams support, share and achieve success together.

Relevance

Our teams are laser focused on providing the right, relevant, and tailored solutions to solve our client's challenges.

Collaboration

We continually collaborate with each other, our partners, supply chain and clients to foster innovation.

Agility

We punch above our weight. While small in numbers, our teams are fast, agile, and respected across the industry.

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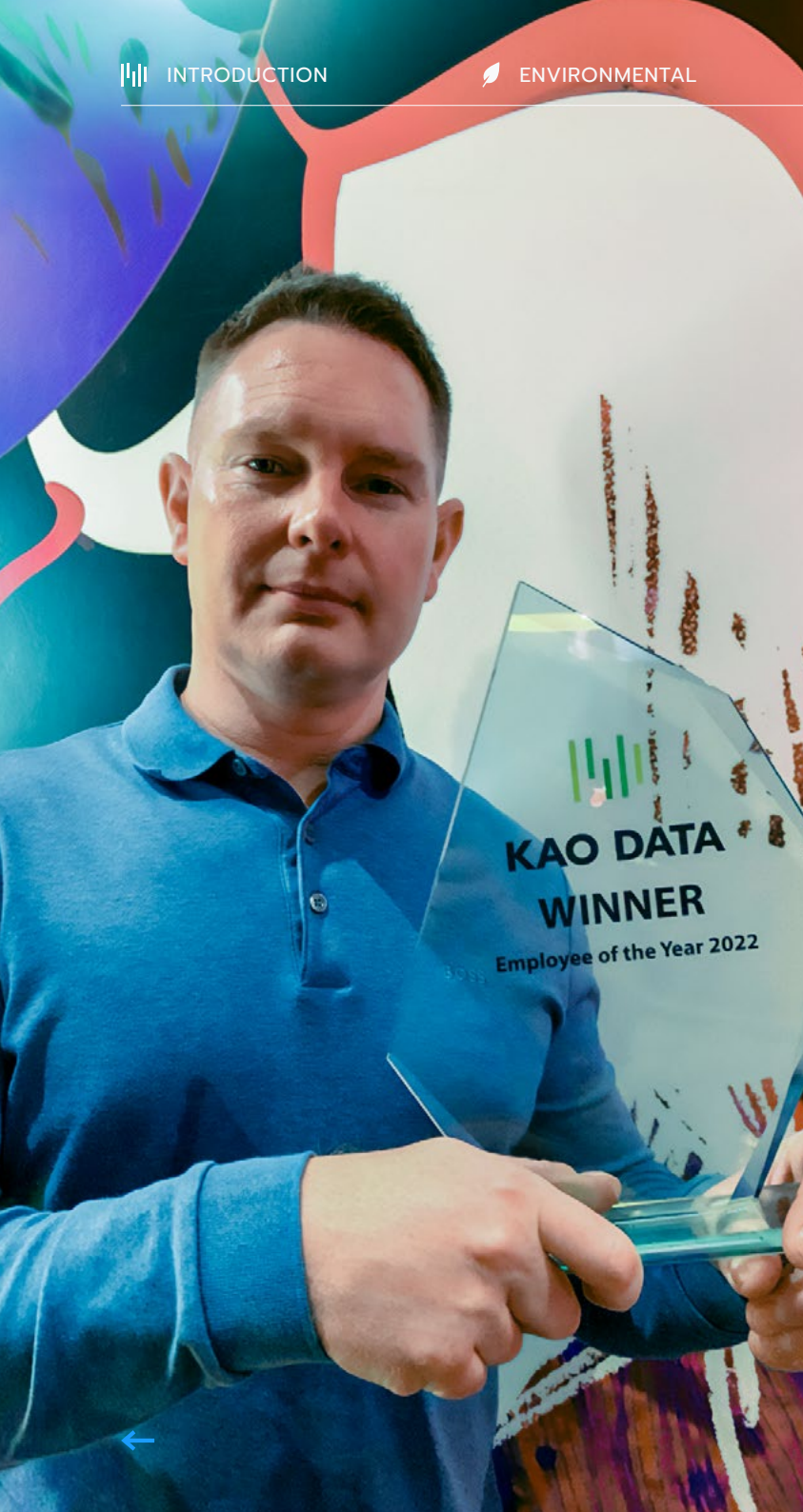
🏆 How we work

Efficient

We are a small, agile, efficient team who champion delivery.

Focused

Our people are focused on achieving our goals and objectives, with the satisfaction of our client paramount.

Together

We are all specialists in our own areas and together form one of the industry's most trusted teams.

Proactive

Our people work positively, and with a spirit of entrepreneurialism to solve challenges faster.

Clarity

We are clear, concise, and consistent in our contact with customers and communications to industry.

Leaders

We are influencers in our industry and visionary in our approach.

Our stakeholders

5 GENDER EQUALITY   **9 INDUSTRY, INNOVATION AND INFRASTRUCTURE**   **10 REDUCED INEQUALITIES**

SDG	SASB MATERIAL ISSUES	METRICS	2022 FIGURES	POLICIES & CERTIFICATIONS	PROGRESS & AIMS
5 **9** **10**	**HUMAN RIGHTS & COMMUNITY** Addresses management of the relationship between businesses and the communities in which they operate, including, but not limited to, management of direct and indirect social and environmental impacts on core human rights and the treatment of indigenous peoples.	Maintaining the work of the Kao Academy and other STEM initiatives	N/A	▸ Supplier Code of Conduct ▸ Code of Conduct ▸ Diversity/Inclusion Policy ▸ Anti-Harassment Bullying Policy	▸ Nominated for an Open:UK 2022 Award, for our KAO Academy. ▸ Maintained and cultivated partnership with Cambridge Science Centre. ▸ Began partnership with UTC Heathrow 'Digital Futures' programme ▸ By the end of 2023 we aim to become signatories to the UN Global Compact.

Our approach

As part of its CSR strategy, Kao Data aims to drive greater stakeholder awareness by engaging students at all levels of education to foster a greater understanding of what data centres are, and how they underpin much of our everyday lives. This will provide an appreciation of the importance of 'mission-critical' digital infrastructure, and why we need to balance this demand against the environmental impact of the data centre industry.

Our progress

In 2022 we expanded our work to engage local communities through education, introducing new initiatives and welcoming further cohorts of young people to existing programmes, while the success of our Kao Academy was recognised with a nomination for an Open:UK Award. Looking ahead, Kao Data aims to become a signatory to the UN Global Compact to further underline our commitment to responsible and sustainable business practices.

You can read more about our educational outreach initiatives on the following pages.

Supporting STEM

The data centre skills shortage is widely recognised as one of the industry's most significant challenges, with the Uptime Institute estimating the sector needs to employ nearly 2.3 million people by 2025. The industry must therefore work harder to showcase the opportunities for attractive, long-term and sustainable careers it represents. Kao Data supports a range of initiatives to boost education related to the world of data centres, in particular STEM (science, technology, engineering, and mathematics).

Rewarding innovators

Since 2021, Kao Data has been a sponsor for the 'Start-up of the Year Award' at the Cambridge Independent Science and Technology Awards. With numerous categories for companies and individuals, the awards are a celebration of the Cambridge region and the UK Innovation Corridor's extraordinary talent. The awards are now in their fifth year and have grown dramatically since inception.

UTC Heathrow

University Technical College (UTC) Heathrow is a school and sixth form in North London for 14-19 year olds, specialising in engineering and IT. Its 'Digital Futures' programme provides students with the opportunity to start training for a world-class career, in a course designed by some of the data centre industry's biggest companies. Kao Data sponsors and supports this course. As a partner Kao Data helps support the

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professional education of students, sharing its teams' technical expertise across the spectrum of data centre design, engineering, and operations. This includes the impact of innovative technologies such as high performance computing and artificial intelligence on data centre design, and how both computer-aided design software and Computational Fluid Dynamics influence energy efficiency.

Cambridge Science Centre

Since 2021 Kao Data has supported Cambridge Science Centre, an independent, educational charity helping disadvantaged communities and young people into the technology, engineering and scientific sectors. Kao Data is a member of the Centre's Executive Council, and the funding and support it provides helps give young people a hands-on taste of STEM subjects.

Kao Academy

Created in collaboration with Cambridge Science Centre, the Kao Academy helps teach children aged 7-11 about the role of a data centre, including how they are designed, engineered and constructed, and explains both their importance and relevance to our everyday lives. Delivered via an interactive website, the Kao Academy provides several dedicated resources, including a live 'data-crunching' game, a downloadable 'how-to' pack which children can use to build their own data centre, as well as educational videos on how Kao Data's award-winning KLON-1 facility in Harlow was constructed. Such has been the success of the Kao Academy, it was nominated for an Open:UK Award at the end of 2022.

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The Kao Academy: Design your own data centre

Working in partnership with the Cambridge Science Centre and schools across Cambridgeshire, Hertfordshire and Essex, we invited Key Stage 2 students to submit innovative data centre designs to win £150 worth of LEGO. The design had to be ultra-secure and incorporate advanced sustainability, biodiversity and energy efficiency features.

The worthy winner, Jasmine Wales (age 11) was chosen for her 'Desert Data Centre'. Her design incorporated pioneering sustainability features: a condensation pit to harvest water for the building, one-way glass to reduce the amount of energy needed to power the facility, and solar panels for energy efficiency. It also included clever biodiversity features such as living walls for nature, and even a snake pit for added security. The competition is just one way we are encouraging students to take an active interest in STEM subjects.

Visit the Kao Academy website to learn more.
kaoacademy.kaodata.com

KAO
ACADEMY

Solar panels to make the remote data centre energy efficient

Living walls for nature and to reduce heat levels produced

Kao Desert Data Centre

Security cameras to keep the building safe

One-way glass – daylight in (reduce energy needed), prying eyes out!

Barbed wire to stop intruders

Condensation pit to harvest water for the building

...or with fingerprint keypad ...employees

Secure gate barring doorway

Snake pit for natural security

Spiky cacti for protection and desert wildlife – to help reduce the detrimental impact of building this data centre here

11 SUSTAINABLE CITIES AND COMMUNITIES

Our customers

SDG	SASB MATERIAL ISSUES	METRICS	2022 FIGURES	POLICIES & CERTIFICATIONS	PROGRESS & AIMS	
5 **9** **10**	**CUSTOMER PRIVACY** Addresses management of risks related to the use of personally identifiable information (PII) and other customer or user data for secondary purposes including but not limited to marketing through affiliates and non-affiliates. The scope of the category includes social issues that may arise from a company's data privacy approach, and how it manages evolving regulation.	Data Breaches	0	▸ All our data centres are accredited to ISO 22301:2019 (Security and Resilience - Business Continuity Management Systems) and ISO 27001:2013 (Information Security Management)	▸ Maintain ISO27001, PCI and Cyber Essentials certifications and keep up to date against best practice.	⌃

Our approach

Customer success is a major focus at Kao Data, with every client assigned a dedicated Customer Success Manager, to help empower faster, more secure innovation, maximising computing power while minimising environmental impact. We increase engagement and monitor satisfaction during regular monthly meetings and via customer Net Promoter Scores (NPS).

Our progress

Thanks to our sustainable facilities, and our ongoing culture of continuous improvement, our customers rate us highly. For 2022, our customer satisfaction score was 71. This NPS score, which ranges from -100 to 100, measures the willingness of customers to recommend a product or service to others. Our high score is a testament to the Kao Way, which enables us to live out our values and principles every day for our customers. Our customers use our facilities to carry out mission critical tasks, handling sensitive data 24 hours a day, so customer privacy and information security is critical. Kao Data deploys military grade levels of physical security and monitoring across all sites, providing maximum protection to customers' infrastructure and data assets.

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NVIDIA: Customised cooling, cleaner computing

NVIDIA is the global technology leader for AI, GPU-powered computing and high-performance computing. It selected Kao Data because of our world-class architecture, industry-leading operating efficiencies, and our team's experience in building industrial scale colocation.

NVIDIA was able to customise Kao Data's power and cooling infrastructure to easily accommodate a DGX A100 SuperPOD deployment. The deployment ranked as the world's top five most energy-efficient supercomputers on the Green500 list, being both efficiently cooled and powered by renewable energy.

In 2021, this project saw Kao Data, in collaboration with NVIDIA, named 'Data Centre Operations Team of the Year' at the DCD Global Awards.

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Governance

Governance

Since its inception in 2014, Kao Data has been built on solid foundations with a strong investor base. The company is governed by an experienced management team who collectively hold more than 100 years of career experience within the international data centre sector and are industry respected.

From a governance perspective Kao Data is subject to regional, national and international legislative drivers around the sustainability performance of the entire ICT industry. In the UK, this includes the Department for Environment, Food and Rural Affairs' (DEFRA) ICT sustainability strategy, while in Europe the EU Green Deal sets ambitious Net Zero targets for the ICT sector through the European Green Digital Coalition, and we are active members of the European Data Centre Association.

Internationally, Kao Data is already a signatory of the Climate Neutral Data Centre Pact (CNDCP) which mandates signatories to Net Zero operations by 2030.

From a technical and compliance standpoint, Kao Data operates its facilities within technical guidelines provided by industry bodies such as ASHRAE, Open Compute and the Uptime Institute. Our facilities, operating procedures and policies are certified by bodies such as the International Organization for Standardization (ISO) and their equivalents in the UK.

Transformational Goal

Fully embed sustainability into governance processes

Key Policies

All business policies

Kao Data Aspiration

Raising sustainability awareness and co-creating better environmental and social impact for our business, our customers, and stakeholders.

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Governance

1 NO POVERTY   **5** GENDER EQUALITY   **9** INDUSTRY, INNOVATION AND INFRASTRUCTURE   **12** RESPONSIBLE CONSUMPTION AND PRODUCTION   **13** CLIMATE ACTION   **17** PARTNERSHIPS FOR THE GOALS

SDG	SASB MATERIAL ISSUES	METRICS	2022 FIGURES	POLICIES & CERTIFICATIONS	PROGRESS & AIMS	
9	**PRODUCT DESIGN AND LIFECYCLE MANAGEMENT** Addresses incorporation of ESG considerations in characteristics of products and services provided or sold by the company. This includes the approach to lifecycle consideration.	Not a metric driven area but we maintain company policies adherence through our IMS and utilise best practice in relation to: Uptime Institute certification, BREEAM certifications, ISO standards, and OCP-Ready certification.	N/A	▸ Kao Data Code of Conduct ▸ The Kao Way principles and values	▸ In 2022 we co-created the Kao Way - our values and operating principles - with our employees. ▸ We aim to fully report the percentage and breakdown of bonuses related to ESG and Climate progress from 2023 onwards ▸ We are committed to closing the gender gap by aiming to increase the percentage of women managers to 30% by 2025.	⊖
		Customer NPS	0.71			
1 5 12 17	**SUPPLY CHAIN MANAGEMENT** Addresses management of ESG risks within a company's supply chain. It addresses issues associated with environmental and social externalities created by suppliers through their operational activities.	Adherence to relevant policies Number of suppliers engaged	N/A N/A	▸ Supplier Code of Conduct ▸ Anti-Bribery and Corruption Policy ▸ Anti-Fraud Policy	▸ Work with our suppliers to find win wins to save energy and waste, as well as to ensure ethical conduct is embedded across our value chain	⊖
13	**MATERIAL SOURCING AND EFFICIENCY** Addresses issues related to resilience of material supply chains to impacts of climate change and other external factors. This also captures impacts of environmental and social factors on operational activity of suppliers.	Adherence to relevant policies Number of EDP labelled products purchased	N/A To be confirmed during 2023 and reported hence.	▸ Environmental Green Policy ▸ Environmental and Energy Policy ▸ Sustainability Policy (needs review/sign-off) ▸ Supplier Code of Conduct	▸ Continue to design and improve our facilities for increased efficiency, safety and ethical outcomes for all, source of materials via supplier chain in line with company roadmap to NetZero.	⌃
1	**PHYSICAL IMPACT OF CLIMATE CHANGE** Addresses the company's ability to manage risks and opportunities associated with direct exposure of its owned or controlled assets and operations to actual or potential physical impacts of climate change.	Adherence to relevant policies	N/A	▸ Sustainability Policy (needs review/sign-off) ▸ Business Continuity Policy (customer-facing copy)	▸ Going forward we seek to assess our business more thoroughly against climate related physical and transition risks, We are members of Climate Neutral Data Centre Pact and are establishing a roadmap for NetZero by 2030	⌃

Governance cont.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

SDG	SASB MATERIAL ISSUES	METRICS	2022 FIGURES	POLICIES & CERTIFICATIONS	PROGRESS & AIMS	
16	**BUSINESS ETHICS** Addresses the company's approach to managing risks and opportunities surrounding ethical conduct of business, including fraud, corruption, bribery and facilitation payments, fiduciary responsibilities, and other behavior that may have an ethical component.	Adherence to relevant policies	N/A	▶ All Business Policies in IMS ▶ Anti-Bribery and Corruption Policy ▶ Whistleblowing Policy	▶ Enhance the embedding of our Supplier Code of Conduct with our suppliers and increase ESG related skill sets within the management team and for employees.	⌃
16	**MANAGEMENT OF LEGAL & REGULATORY RISK** Addresses a company's approach to engaging with regulators in cases where conflicting corporate and public interests may have the potential for long-term adverse direct or indirect environmental and social impacts.	ESG related management training (hours or % of managers receiving training)	Awareness training 100% ESG training 20%	▶ Relevant ISO standards in IMS ▶ ISO 9001:2015 ▶ ISO 14001:2015 ▶ ISO 22301:2019 (Security and Resilience - Business Continuity Management Systems) ▶ ISO 27001:2013 ▶ ISO 45001:2018 ▶ ISO 50001:2018	▶ Continuously horizon scan to ensure compliance and exceed wherever we can. New standard reviews being adopted, with rollout in 2022/2023 of standards across the estate – consistency and continuity of service and management of estate.	⌃
9	**SYSTEMIC RISK MANAGEMENT** Addresses the company's contributions to or management of systemic risks resulting from large-scale weakening or collapse of systems upon which the economy and society depend. This includes financial systems, natural resource systems, and technological systems.	Adherence to relevant policies ISO certification	N/A ISO 22301:2019 certified	▶ Business Continuity Plan ▶ ISO 22301:2019 (Security and Resilience - Business Continuity Management Systems) ▶ BC/IS forum and reviews ▶ Risk Registers (forum and reviews)	▶ Continue to integrate best practice risk management practices in line with the latest ISO standards and best business practices Continual Service Improvement Planning.	⌃

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Our approach

Our management team believes in a collaborative approach to managing ESG matters and creating sustainable success. All of our managers and team leaders are required to attend regular training, CPD events and courses, many of which cover sustainability related topics. As part of Kao Data's commitment to leadership and advocacy, the management team also attends, and speaks at, regular industry leadership events, gaining fresh perspectives on ESG topics. This activity is managed through our senior management team. The management team reports to its investors on a quarterly basis, who are also active in shaping our thinking on ESG matters.

Integrated management system

Our management team's delivery against ESG objectives and compliance is delivered through our Integrated Management System (IMS), which features robust internal processes, informed by our comprehensive governance policies and enterprise risk management program. Kao Data complies with all relevant regional, national and international legislation pertaining to our business, and we have a number of certifications and accreditations that help us manage every aspect of our business. This includes best practice compliance with the Met Office Supercomputing Hosting requirements and meeting the stringent ASHRAE TC 9.9 environmental guidelines. We also manage our business against the United Nations Sustainable Development Goals (UN SDGs), tackling those which we can impact the most. Our approach to ESG is further guided by our recent 2022 ESG Materiality assessment.

Our policies

See below for a full list of our governance policies:

- ▸ Company Policies
- ▸ **Business Continuity Policy**
- ▸ **Health & Safety Policy**
- ▸ **Quality Policy**
- ▸ **Environmental and Energy Policy**
- ▸ Environmental Green Policy
- ▸ Supplier Code of Conduct
- ▸ Anti-Bribery and Corruption Policy
- ▸ Whistleblowing Policy

For more information and any questions regarding company policies at Kao Data, please get in touch at **kaodata.com/contact**

Our progress

Kao Data operates to the standards set by the European Data Centre Association which includes managing our business in line with the Climate Neutral Data Centre Pact (CNDCP) recommendations. To better manage ESG matters in 2023, we plan to enhance our ESG strategy and set more granular sustainability related targets. This is so we can drive further efficiency toward our net zero goal and enhance the resiliency of our business.

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ESG oversight

Our senior management team ensures all our managers can input on ESG and sustainability governance related matters pertaining to the company's strategy and operations.

Kao Data also engages with external bodies such as ASHRAE, the American trade organisation that drives global data centre standards for operating conditions for IT equipment. ASHRAE feeds into the European Code of Conduct for Energy Efficiency in Data Centres, and ISO 50001 Data Centre Energy Management. Our COO Paul Finch is a member of ASHRAE, and is influential in setting the environmental conditions for the reliable operations of servers and IT Equipment, serving and voting as a board member of the ASHRAE Technical Committee (TC) 9.9.

Following is a detailed summary of the roles and responsibilities of our leadership team with regards ESG matters.

Management team

Lee Myall CEO

Our CEO is responsible for setting the strategic direction of Kao Data with regards to ESG matters, informed by our senior management team sustainability working group. The delivery of our strategic sustainability goals is supported by relevant managers such as our COO for specific issues such as operational performance, as part of our collaborative approach to delivering sustainable value and achieving Net Zero by 2030.

Matthew Harris CFO

Our CFO is responsible for managing financial risk, including those risks posed by energy availability and a changing climate. In addition, from 2022, our CFO was instrumental in switching our energy procurement from a fixed basis to a flexible approach, and he aligned our renewable power provision with a tangible UK asset to provide greater certainty to our customers. The CFO also helps the senior management team to report financial and non-financial progress to our investors and stakeholders.

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Paul Finch COO

Kao Data's Chief Operations Officer (COO), supported by our Director of Compliance, works to ensure we always meet the highest standards set by ASHRAE and ISO among other standards. He is also responsible for managing our facilities adherence to efficiency and sustainability targets. Our COO has vast experience and authority within the data centre industry, especially pertaining to delivering and championing sustainable operations.

Gérard Thibault CTO

Both our CTO, and COO, are trained to 'ATD' level by the Uptime Institute, ensuring the requirements of all Tier levels I to IV are fully understood by the senior management team. Our CTO's technical expertise and experience helps us ensure we partner with the most technically proficient and sustainable companies within our value chain. He is also responsible for ensuring our built assets are best in class in terms of sustainability performance. Our CTO also pioneered Kao Data's use of HVO fuel as we became the first operator in Europe to transition all our back-up generators across to this 100% renewable alternative to mineral diesel.

Spencer Lamb CCO

Our CCO is responsible for optimising our campus and facility developments to support customers within high-touch areas such as cloud, enterprise, HPC, AI and machine learning. The CCO works closely with our CEO, COO, and CFO, and other managers, to ensure all supplier purchases for resources and equipment meet our sustainability and resiliency objectives, as defined in our Supplier Code of Conduct. He also works with the leadership team to identify acquisitions, partnerships and social sustainability initiatives aligned with our values, and is ultimately responsible for our STEM activities within schools and communities.

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Strong investor partners

Kao Data is privately funded and backed by Goldacre (part of the Noé Group), Legal & General Capital and New Zealand-based Infratil.

In 2019, Legal & General partnered with Goldacre, already an existing investor in Kao Data. This investment reflects Legal & General's commitment to help deliver the digital infrastructure required for Future Cities. It also marked the first step of an ambitious partnership with Goldacre to drive the strategic expansion and accelerated growth of the UK data industry. Fittingly, both investors were nominated in the infrastructure category of the 2020 EG Tech Awards, for Kao Data's advanced data centre and HPC campus.

In October 2021 Goldacre and Legal & General were joined by Infratil, a listed global infrastructure business with existing investments in the international data centre sector.

Legal & General Capital

Established in 1836, Legal & General is one of the UK's leading financial services groups and a major global investor. Legal & General Capital is the Group's principal investment arm, and aims to generate long-term shareholder value with a major focus on residential housing, investment in future cities and venture capital to support the continuing development of the UK's cities.

Goldacre - Noé Group

Goldacre is a specialist investment firm with extensive expertise in digital infrastructure and technology for the real estate industry. It builds, owns, operates and manages critical digital infrastructure assets such as data centres, securing their long-term profitability. Goldacre is passionate about backing businesses that drive sustainable change through technology in the real estate sector in the UK, Europe and Israel.

Infratil

Launched in 1994, Infratil is a publicly-listed, active global infrastructure investor with significant investments across the digital infrastructure, renewable energy, healthcare and airport sectors. Based in new Zealand, it also has operations in Australia, Europe, Asia and the US.

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Risk management

Kao Data takes its corporate and social responsibilities very seriously. This is why we are fully committed to managing, mitigating and avoiding risks that could affect our customers, stakeholders and the wider environment – including cyber-security risks, data privacy risks and climate-related risks. Our Board of Directors is responsible for oversight of our enterprise risk management program. Our risk management processes are formalised and managed through all our governance policies, delivered through our IMS, which is externally assured by UKAS. This is supported by our sustainability working group, with members of the Board and working group overseeing specific risks that pertain to their area of expertise.

Progress in relation to our environmental and social governance objectives and performance is reviewed regularly by the management team. Kao Data also holds monthly or fortnightly meetings with our customers, and provides daily and instantaneous automatic reporting regarding data centre performance when required.

Systemic and climate-related risks

Data centres should provide a robust, resilient and secure environment to house critical systems. As part of the design and build process and ongoing operational state, varying controls are reviewed to mitigate risk to our business and customer base.

The physical risks we assess include flooding, fires, water stress, subsidence, and aviation risk. This proactive risk prevention approach has been a key enabler of our 100% uptime record.

Our approach to systemic risk is outlined in our business continuity policy, which sets out the management direction in ensuring business continuity via adherence to all relevant laws and regulations, in support of the businesses requirements, managed through our IMS, certified to the ISO9001 standard. The policy covers issues such as climate risk, environment, information security, quality, energy, and health & safety. The policy helps protect Kao Data's ongoing ability to meet contractual commitments and helps us to minimise the risk of disruption to our operational activities across the business, while always protecting our customers' information.

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Business ethics

Our procurement process is designed to protect the human rights and well-being of every diverse stakeholder in our value chain. To keep us accountable to our stakeholders, Kao Data operates an Anti-Bribery and Corruption Policy, including a Whistleblowing Policy.

Kao Data suppliers cannot offer any gifts, entertainment, or hospitality, which could be seen or interpreted as a bribe or action to influence a decision. All workers, irrespective of their nationality or legal status, are treated fairly and equally. Our employees utilise our online training portal to receive training on risk related topics, ensuring we fully protect all our stakeholders.

We also run a formal grievance monitoring process to protect our workers, while protecting our business from reputational and legal risk.

Supply chain assurance

To create shared value for all our stakeholders, our Supplier Code of Conduct ensures we engage suppliers to embed standards of best business practice across the business stream. The code covers many aspects including: information security, business continuity, and business ethics. It sets environmental standards related to fossil fuel consumption, waste and pollution reduction, environmental performance of goods and services. Suppliers complete a questionnaire to ensure they share our values and sustainability aspirations, helping us reduce both reputational and climate related risks in our value chain.

Customer privacy and cyber securiy

Customer privacy and information security are increasingly critical factors for all data centre and colocation customers, and one which Kao Data takes very seriously. Our customers use our facilities to carry out mission critical tasks, handling sensitive data, 24 hours a day. This is why Kao Data deploys military grade levels of physical security and monitoring across all campus facilities, providing maximum protection to customers' infrastructure and data assets.

The Group is certified to the Uptime Institute Stamp of Approval for Management and Operations (M&O) standard. Our Design Team is trained to Accredited Tier Designer level by the Uptime Institute. Kao Data is also certified against the Cyber Essentials and Cyber Essentials PLUS scheme. Cyber Essentials is a government-backed, industry-supported scheme to help organisations protect themselves against common online threats.

To ensure continual improvement we are assured against the following (ISO) international standards:

▸ ISO 22301:2019 (Security and Resilience - Business Continuity Management Systems)

▸ ISO 27001:2013 (Information Security Management)

Read more about our security measures at **kaodata.com/data-centre-security-monitoring** and our full list of accreditations and certifications at **kaodata.com/certifications**.

Accreditations and certifications

With today's heightened sensitivity to assured data centre security and continuity, our customers and their end-users require a robust and independent validation of our performance and governance.

In 2019, our selected consultants and advisors, Keysource and Teamwork IMS, worked along with UKAS Accreditors, Alcumus ISOQAR, to ensure that our Integrated Management System (IMS) was tailored to meet the specific needs of a data centre business. The ISO Standards that make up our IMS are completely re-audited every third-year to identify key strengths, weaknesses and non-conformance, and to enable continual improvement in line with ISO9001.

These standards enable Kao Data to engage stakeholders throughout all aspects of data centre management and operations. They also give our customers assurance that Kao Data is compliant across the board from corporate governance and regulatory requirements, to organisational resilience, proactive risk prevention and continual improvement.

For more information regarding certifications and accreditations at Kao Data, please get in touch with us at **kaodata.com/contact**

Our current ISO certifications

▸ **ISO 9001:2015** (Quality Management Systems)

▸ **ISO 14001:2015** (Environmental Management Systems)

▸ **ISO 22301:2019** (Security and Resilience - Business Continuity Management Systems)

▸ **ISO 27001:2013** (Information Security Management)

▸ **ISO 45001:2018** (Occupational Health & Safety Management)

▸ **ISO 50001:2018** (Energy Management)

Additional industry certifications

▸ Uptime Institute Stamp of Approval for Management and Operations

▸ ISAE 3000 SOC2 (Type 1)

▸ ISAE 3000 SOC2 (Type 2)

▸ PCI DSS

▸ Cyber Essentials

▸ Cyber Essentials PLUS

▸ BREEAM 'Excellent'

▸ OCP-Ready certified

▸ Shell - 100% renewable energy supply

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