Our Sustainability Journey

Strix
TECHNOLOGY

Sustainability Report 2022

Innovative & Sustainable Technology

Company overview

Strix is a global leader in the design, manufacture and supply of kettle safety controls and other components and devices involving water heating and temperature control, steam management and water filtration.

Strix overriding principle is to develop and supply best-in-class products across all of its markets and product lines. The management has set a target of doubling revenues in the 5 years to 2025. This will be achieved through organic growth, including new product introductions, and acquisitions. The latest of which, Billi was completed in November 2022, significantly expanding the Group's presence in key water and appliance markets.

2022 sustainability highlights:

	2021	2022
Scope 1 & 2 emissions (tCO_2e)	7,695	6,156
Energy usage (MWh)	15,666	14,052
Renewable electricity generation (MWh)	0	1,193
Waste generated (tonnes)	1,969	1,301
Lost time injury frequency rates per 200,000 hours	0.95	1.00
Diversity - Women in senior management roles	27.3%	27.3%

Strix has developed a broad range of products across our 3 core categories:

Kettle Controls £68.2m sales

Strix's core product line is safety controls for small domestic appliances, primarily kettles where it is the clear global market leader. The Group has a reputation for quality, performance and safety, working with customers to ensure total consumer peace of mind. New products are developed to reduce material usage, increase thermal accuracy and minimize energy wastage.

Water Category £14.5m sales

Strix looks to fulfill consumer water filtration and sterilisation requirements through water bottles, jugs, filters and other related appliances across a range of consumer orientated brands (Aqua Optima, LAICA, HaloPure and astrea brands as well as third party own brands). The segment is being driven by health choices – particularly for quality of water – and the driver to reduce plastic waste by moving away from single use items.

Appliances £24.1m sales

Strix's appliances utilise temperature and steam management technologies that offer sustainable solutions. The product portfolio includes instant flow water heaters, baby formula system and a range of products in the health & wellness segments. Billi's range of hot/cold, filtered and carbonated water taps extends the Group's product range in both domestic and commercial markets.

Chief Executive review

> "Our sustainability platform is delivering improved KPIs and benefits to all stakeholders, helping to promote our goal to become a world leading innovative and sustainable technology business."
>
> **Mark Bartlett**
> CEO

2022 progress review

We made good progress on a number of our sustainability KPIs in the year such as waste generation and water usage. Energy use and emissions improved, assisted by the closure of the old plant in China. Health & Safety three year average also continues to move in the right direction. Hence, I remain confident that we will achieve, and in many cases exceed, our stated targets.

Emissions progress

In 2022 we put in place the building blocks to enable us to deliver on our Scope 1&2 net zero commitments in 2023, which we believe will mark us out as sector leading. All plants are now running on renewable electricity which, along with China solar capacity and additional actions, puts us ahead of plan. We now expect absolute emissions reduction of 97%, up from previous 95%, reducing expected offset requirements by almost 50%. 2022 saw us delve into our Scope 3 value chain carbon inventory for the first time. We see this as an iterative process given the inherent complexity due to the limited information available from many key partners such as suppliers, who we will look to take on our journey. Not surprisingly for our core kettle business the energy requirement for boiling water means that 'in-use' dominates our Scope 3 at 94%. Efficiency improvements are therefore key and drive much of the product R&D. Areas such as business travel, transportation and component supply may have less overall significance but we believe also warrant our attention given these are areas where we can make a difference.

Investment to support our agenda

The Company and the Board continue to actively support the sustainability agenda from a financial perspective. This has included over £700k invested in China solar arrays, the electricity from which accounted for over 10% of the plant's electricity requirements in 2022, a figure which should rise further in 2023 given the additional capacity. The switch to the purchase of renewable electricity also comes at a premium but is central to our key Scope1&2 net zero commitment. From a workforce perspective, China contract workers have been moved onto Strix standard contracts whilst in the Isle of Man additional working hours flexibility and pay for volunteering hours have been introduced. These come at an additional headline financial cost to the Group but clearly support the wellbeing of our most important asset, our employees.

Product profile and development

Our core kettle switches are a critical part of the most efficient method of boiling water - a process arguably carried out every day in every household. Our development continues into how to improve the efficiency of delivering hot water through improved kettle design and the introduction of associated products such as the Aurora Instant Hot and Cold Filtered Water Dispenser which won the Sustainable Product of the Year at the 2022 Housewares Awards. The water delivery side of the business is also a key to both our commercial and sustainability strategy, eliminating the requirement for single use plastic bottles, offering higher quality through water filtration and a recycling service for filter cartridges to promote a circular trajectory. The recent Billi acquisition will provide further impetus given its heating technologies and hot/cold tap offerings.

Social wellbeing

Like many companies COVID has reinforced the importance of our workforce, the communities they live in and the world around us. We continue to support our colleagues through a range of actions. In the West this includes flexible working, time off for charity work, health benefits and mental awareness. In China, bringing contract workers onto Strix terms, facilitating access to a range of support from accommodation to meals to health benefits. I am particularly pleased with the biodiversity and employee welfare benefits of the new rewilding and beehives at the Group's Isle of Man head office.

Future plans

The range of initiatives underway to deliver on our targets will continue. In 2023, we intend to undertake Carbon Disclosure Project (CDP) registration for the first time. We are also in discussion with one of our primary lenders on sustainability based finance, the associated reduction in coupon for achieving demanding targets providing the potential for direct financial benefit from all the efforts made across the Group. 2023 will seek further consultation with our stakeholders as we look to develop a 3-5 year plan which will obviously include the integration of our latest acquisition, Billi.

The power of many

Finally, I would like to thank my colleagues at Strix for embracing our sustainability journey. Embedding a positive philosophy into a company's DNA requires broad-based commitment. The adoption of the strategy and enthusiasm shown across the Group is enabling delivery of the strategy and enhancing the experience and opportunities for all stakeholders.

Environmental, Social and Governance review

> "The level of ambition, the speed of action and the integration of a sustainability lead philosophy continues to impress, being on a par with far larger organisations."

Richard Sells
Main Board Non-Executive Director and head of the ESG committee

A large part of my career was spent at Electrolux, a leading global white goods manufacturer with a long history in sustainability, both internally within the organization and externally in areas such as product development. Not only were we dealing with legislation such as elimination of CFCs and introduction of appliance energy ratings but also working in tandem with supply chain partners, both upstream and downstream, to reduce the overall environmental impact. As a Swedish company social aspects, internally through employees and the external wider community, have always been high up Electrolux's agenda. Working for such a forward thinking global company provides insight and experience which is enabling me to bring perspective and guidance to Strix on their sustainability journey.

Sustainability has become a standard topic on the Board agenda. Whilst it is a key element of Group strategy, the Board incorporates sustainability within the ongoing business operations, reflecting the integration of sustainability into the foundations of the Group. As a Board we look to provide the overarching direction and impetus for the sustainable strategy whilst relying on the operations board, employees and external advisors to provide the targets and pathways. This permits direct ownership and accountability. It also enables the Group to address topics on multiple fronts and areas of the business. Carbon reduction has taken the headlines in the sustainability agenda and I am proud of the Group's ambition and actions. I am equally encouraged by the momentum in other areas, in particular the employee and social aspects.

The Board is integral in determining the sustainability strategy and monitoring progress. The KPIs and targets set highlight the Group's commitment. Indeed the 'best-in-class' net zero commitment demonstrates Strix's culture for setting demanding standards and attaining market leading positions.

The Board is key in determining the overall direction of the Group. The acquisitions of LAICA and Billi embody the Group's sustainability strategy, offering products which clearly fit with the Group's overall agenda and opportunities from increasing consumer preference for sustainable solutions. LAICA through its water filtration products to reduce single use plastic and Billi with its hot taps complimenting the kettle switch business.

As a responsible company, operating internationally, Strix has the opportunity to contribute to the accelerating sustainability agenda. The actions being undertaken, as highlighted in this report, demonstrate the Group's commitment and achievements. These are the result of ambitious and committed personnel throughout our organization, implementing innovative and far-reaching solutions. I look forward to continuing developments and witnessing the benefits of the strategic actions taken to date.

KPI commentary

Emissions

A key area of focus has been on emissions. This reflects our view that early action is essential in order to address climate change, whilst delays have a cumulative negative impact. We also note comments from the likes of the United Nations that targets should be ambitious. Hence our target to be Scope 1&2 net zero by 2023. Emissions in 2022 declined 21% assisted by the lack of dual plant operations seen in 2021 as the new Chinese facility was commissioned along with the benefit of the Chinese solar array.

Significant operational progress was made in 2022 with all manufacturing facilities and Group head office now using renewable energy and China solar capacity also expanded by a further 10%. As a consequence, we started 2023 achieving our net zero target pathway. Indeed, we are ahead of plan and now expect less than 3% of emissions will require offseting against 5% in the original plan. On the energy usage side, the Chinese factory has achieved ISO50001 Energy Management which will assist in formulating future plans to reduce overall energy consumption.

Water & waste

Water usage declined significantly, assisted by the lack of commissioning requirements in China. The intensity improvement is currently ahead of the KPI target. Waste also improved significantly, again benefiting from the new Chinese facility and will continue to progress assisted by higher levels of automation and further product miniaturization. The levels of recycling were flat, however, they are currently higher than the base year due to LAICA which will be an area of focus in 2023.

Personnel

Health & Safety remains an important focus for the Group. The key measure of lost time frequency rate continues on a downward path with the three year average, used to eliminate the impact of short term fluctuations, less than half of the level seen in 2019. With the achievement of certification at LAICA in 2022 all sites are now ISO45001 Occupational Health & Safety certified with the exception of the recent Bili acquisition.

From a workforce and diversity perspective the proportion of women in senior management remained stable at 27.3%, whilst across the Group we retain a positive balance with women accounting for 50.8% of the overall workforce. Other key metrics, although not a targeted KPI, include training which remained high at 9.5 hours per employee, albeit lower than the previous year when significant training was required in association with the new factory.

> “We continue to make progress on our core KPIs and are excited by the foundations put in place, particularly on emissions, which will continue to drive progress in the coming years.”
>
> **Mark Bartlett**
> CEO

KPIs and Targets

KPI	Measurement	Units	2021	2022	Target	2022 performance review
Climate action	Scope 1&2 (absolute)	tCO$_2$e	7,695	6,156	Net zero scope 1&2 emissions by 2023	Ahead of target for 2023 net zero
	Scope 1&2 (intensity)	tCO$_2$e/£m	64.4	59.2		
Resource intensity	Energy consumed	MWh	15,666	14,052	3% intensity reduction	Impacted by lower volumes Full year benefit from initial China installation
	Energy intensity	MWh/£m	131	135		
	Third party energy consumed	MWh	15,666	12,859		
	Third party energy intensity	MWh/£m	131	124		
	Own electricity generated from renewables	%	0.0	9.3		
Waste & recycling	Waste generated	tonnes	1,969	1,301	3% intensity reduction	Benefits of new Chinese facility
	Waste intensity	t/£m	16.5	12.5		
	Recycled waste	%	95.1	94.1		
Clean water and sanitation	Water consumption	m^3	46,848	34,600	Growth in the water business 2x Group	Continued positive trend
	Water intensity	m^3/£m	392	333		
	Water category growth	%	8	7		
Health & safety	Lost time injury frequency rate	per 200,000 hours	0.9	1.0	Reduce LTIR on a rolling three year basis	Continued positive trend
	LTIR 3 year average	per 200,000 hours	1.3	0.9		
Gender equality	Women in senior management	%	27.3	27.3	Further embed diversity thinking throughout the organisation	No changes to the senior management team in 2022
Innovation	R&D	£k	5,324	4,986	Continuous reduction in precious resources including the increased use of recycled materials	Retain high levels of investment in addition to acquisitions
	R&D/Sales	%	4.5	4.7		

Note some figures have been restated due to improved reporting and inclusion of LAICA, 2022 figures exclude Billi which was acquired at the end of November

Billi sustainability

A high quality addition to the Group's strategy to provide a full range of sustainability orientated products delivering high quality/low environmental impact water to consumers.

Billi was acquired at the end of November 2022, providing an extension to the Strix product range and is fully aligned with the Group's sustainability driven growth

Product portfolio extends Strix capabilities and offering

Billi supplies premium filtered and non-filtered instant boiling, chilled and sparkling water systems for domestic and commercial applications. It also supplies recyclable filtration systems and aftercare services. Billi therefore extends Strix product range in potable water heating/treatment, from kettles at the standard product end to premium on-demand filtered hot/cold taps.

Product portfolio offers sustainability advantages

Billi's unique thermodynamic heat-exchange system uses change-of-state technology which harvests the heat energy generated during the chilling cycle to preheat the water going into the boiling tank. This enables Billi systems to achieve substantial energy savings for customers.

Billi's range of premium filters have been integrated with Pentair's unique Fibredyne™ technology. The three layered structure permits impurities to be retained within the fibres rather than on the filter surface, reducing blockages hence improving flow rates. This in turn reduces pressure drop providing superior water quality along with consistent and longer filter life.

Safety is a concern in the hot tap sector, particularly in the domestic environment. Billi has designed and incorporated a range of safety features including safety lock, splash free cup filling systems and design features for disabled users.

Recognition

Billi's major product ranges are recognised as eco-friendly products by Global GreenTag with a Trusted Brands – Gold Award. Global GreenTag is one of the world's most robust, trusted and widely recognised ecolabels which independently assures that every product is fitness tested and certified under leading certification programs that use world's best scientific methods. The GrenTag award covers the core Billi products; Eco, Quadra and Quadra Plus models which offer combined boiling and chilled water systems. Products are also certified by Watermark for the Australian market.

Operations already on a sustainable pathway

From an operational perspective Billi is advanced in many areas such as the use of solar energy which accounted for over 50% of electricity requirement, seasonal variations providing the primary limiting factor.

Integration with Strix

The preliminary work to align Billi with Strix sustainability metrics is already underway. Work in 2023 will include a roadmap to ensure full integration, including Strix KPIs and targets. As with LAICA, this is expected to be a two-way process; Strix is more advanced in areas such as emissions reporting and operational certification (e.g. ISOs) but can benefit from Billi's strengths in product development and product certification.

Sustainability strategy

Planet, People & Purpose

Strix Code of Conduct, Values & Behaviours: our products are made to enhance the quality of people's lives. This means that we provide products that are well made, fairly priced and of exceptional quality, but it also means that every step we take in making those products comes from our ethics, integrity, and respect for human rights.

Strix philosophy and sustainability ethos follows the Planet, People, Purpose (and Profit). The first three Ps provide the guidance as to how the business is developed to thrive and serve all its stakeholders, the final P is essential in providing the resources to reinvest in this symbiotic relationship. This report is structured to focus on the operational drivers for stakeholders with the commercial performance reserved for the financial statement and Report & Accounts.

Strix's sustainability strategy is implemented through our eight pillars:

SUPPORTER OF THE
TERRA
CARTA
For Nature, People & Planet

We are proud signatories of the TerraCarta of The former Prince of Wales' Sustainable Markets Initiative. The Terra Carta provides a roadmap to 2030 for businesses to move towards an ambitious and sustainable future; with a path that puts Nature, People and Planet at the heart of global value creation.

Selected focus areas	Applications	Link to UN SDGs
Solutions for sustainable living	Our mission 'Innovating safety and deign for a sustainable future' reflects our ethos to develop products which reduced environmental impact	3 GOOD HEALTH AND WELL-BEING 7 AFFORDABLE AND CLEAN ENERGY 12 RESPONSIBLE CONSUMPTION AND PRODUCTION 13 CLIMATE ACTION
Promote customer wellbeing	Provide a range of products which improve customer life-styles and health	7 AFFORDABLE AND CLEAN ENERGY 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
Doing more with less	This encompasses our internal operations and final product design. Reducing product material content or corporate footprint reduce the stress on the world's natural resources	7 AFFORDABLE AND CLEAN ENERGY 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION 13 CLIMATE ACTION
Wellbeing & equality in the workplace	Employee equality, welfare and engagement are critical for developing our key asset. Pro-active actions include training, health and employee career progression	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
Community engagement	Strengthening our position as a global, socially responsible employer, reinforcing our corporate culture and employee pride in our positive contribution to all of our local communities across the group	3 GOOD HEALTH AND WELL-BEING
Supply chain	Develop sustainable practices with direct suppliers, in line with the Responsible Business Alliance (RBA) including extensive and risk sustainability audits	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION 13 CLIMATE ACTION
Governance	Continue to embed our values into our culture which are fundamental to our business specifically diversity and inclusion	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
Certifications	Continued compliance with a full spectrum of international standards, both for internal operations and products	3 GOOD HEALTH AND WELL-BEING 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Sustainability strategy continued

Planet

Planet encompasses more than climate change and emissions, through a broader definition of total resource use. We are proud of our net zero commitment for 2023 which, we believe, is best in class and significantly ahead of the Paris agreement targets. A broader sustainability measure is 'Earth Overshoot Day', the date when all the biological resources that the Earth (nature) can renew during an entire year has been used up. In 2022 this was the 28th July, or to put it another way, we are using up 75% more resources in a year than the natural world can sustain.

Emissions & energy

We report our greenhouse gas emissions on the basis of the Greenhouse Gas (GHG) Protocol corporate standard published by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). Direct greenhouse gas emissions (Scope 1) arise from sources that are in the company's possession or under its control. Indirect greenhouse gas emissions (Scope 2) arise primarily from the use of purchased electricity. Scope 3 emissions reflect the impact from our full value chain – both up and downstream, from cradle to grave (or preferably recycling).

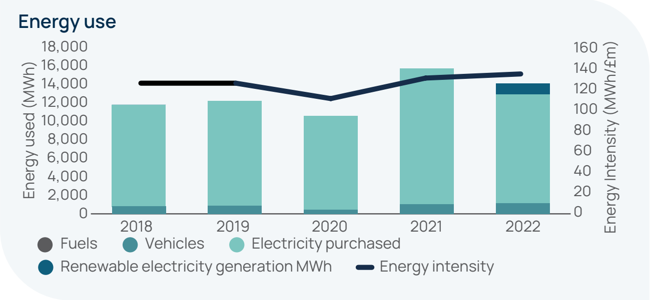
Energy use

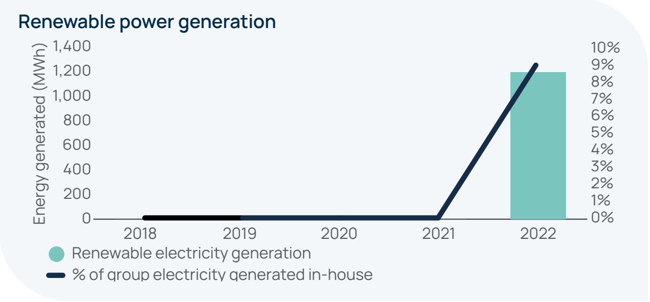
Overall energy consumption declined in the year assisted by closure of the old Chinese facility. The new larger plant inevitably requires more energy given the significant expansion in capacity and investment in areas such as automation. Intensity increased in the year due to the lower than anticipated volume.

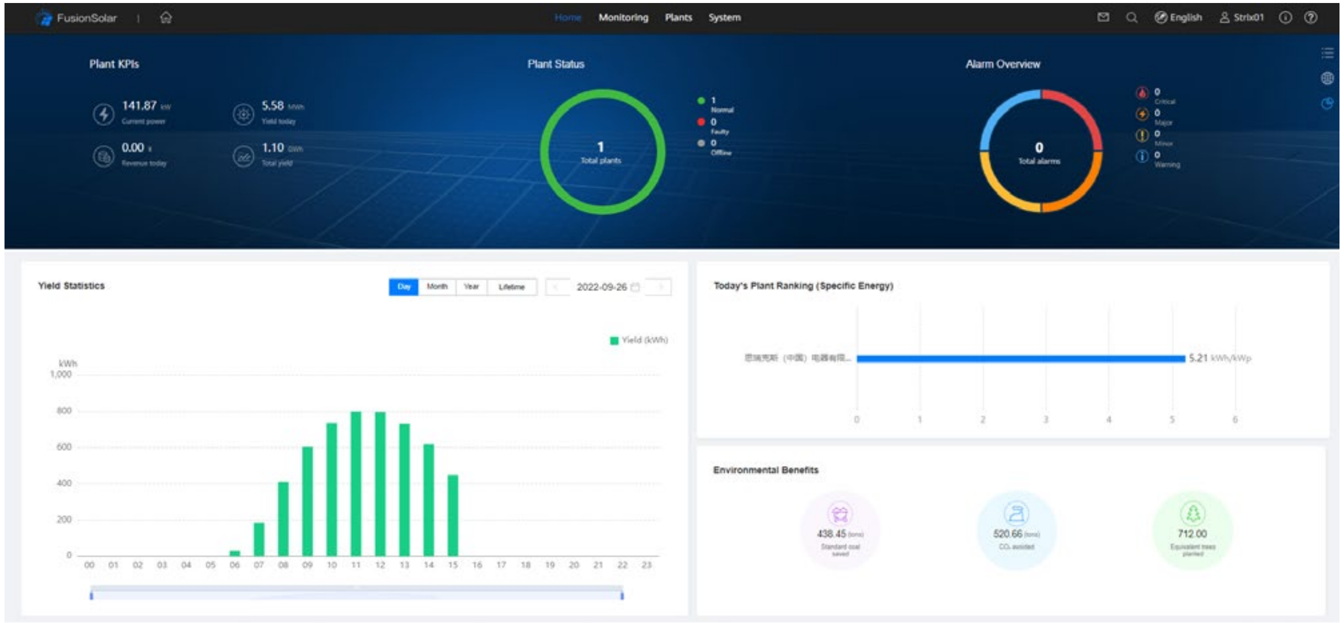
Work continues on improving our energy usage with China now ISO50001 Energy Management certified which will assist in developing future plans to reduce energy consumption. However, this is clearly a long term process through a combination of a number of small initiatives. In the short term, headwinds include the larger new facility in China which has also permitted certain activities, e.g warehousing to be brought back on site or the increasing energy requirements from our automation driven manufacturing strategy.

Renewable power generation

The new factory in China has proved to be an ideal platform for the adoption of solar technology with an additional investment of c£100k made in the year to increase capacity by 10%. In 2022 Strix generated over 1.2million kWh of electricity, a figure which is expected to increase further with a full 12 months of the additional capacity. Internally, energy generation accounted for over 10% of the electricity required for the Chinese factory and over 9% of total Group consumption. This investment also offers positive benefits for employees and customers visiting the site with our live solar generation update board – available in Mandarin and English. Work continues on the potential for other initiatives, including solar at LAICA in Italy and even at Ramsey in the Isle of Man. We note that this is an area where Billi is already well advanced with over 50% of electricity requirements supplied from their own solar capacity.



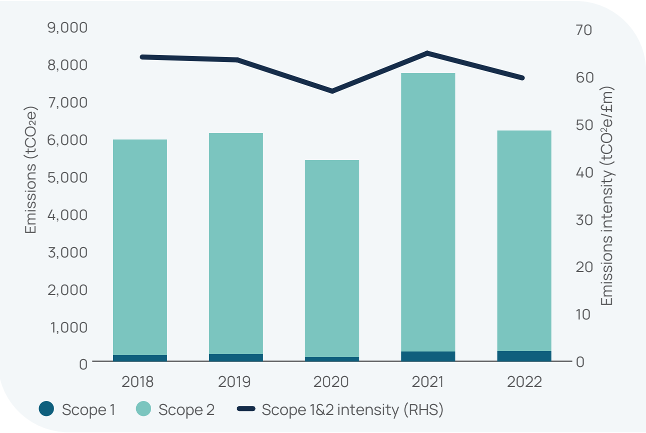




Sustainability strategy continued

Emissions

Scope 1&2 emissions



Scope 2 accounted for over 96% of the Group's 'in-house' emissions in 2022, reflecting the electricity required to operate the manufacturing facilities. Emissions were down in the year assisted by the closure of the old plant. The larger facility means that emissions are higher than pre-pandemic levels, even taking into account the acquisition of LAICA. However, intensity is lower reflecting benefits of actions taken and efficiencies of the new factory.

		2018	2019	2020	2021	2022
Scope 1	tCO$_2$e	173	187	107	265	273
Scope 2	tCO$_2$e	5,791	5,912	5,269	7,430	5,883
Total Scope 1&2 (location based)	tCO$_2$e	5,964	6,099	5,376	7,695	6,156
Scope 3	tCO$_2$e	1,014	1,014	93	573,895	410,096
Total emissions	tCO$_2$e	6,978	7,113	5,468	581,590	416,252
Scope 1&2 intensity	tCO$_2$e/£m	63.6	63.0	56.4	64.4	59.2

The numbers reported arguably do not reflect the underlying progress made. Scope 1 has seen a range of smaller initiatives including the introduction of electric cars and new boilers in the Isle of Man, replacing old less efficient models (ground source heat pumps were considered but not appropriate at this time). Our key Scope 2 emissions actions have included the signing of renewables energy contracts for all the Group's manufacturing facilities and head office. Along with the solar generation we are already meeting our net zero target for 2023. Indeed, we expect the impact of internal actions to limit the use of carbon offsets to less than 3% of the total from the 5% target in the original plan.

From 2023 management intend to enhance reporting by including 'market based' analysis of emissions alongside the traditional 'location based'. Market based reflects the emissions associated with the electricity actually used by Strix and will therefore more accurately reflect all the work undertaken to reduce emissions and demonstrate the Group's Scope 1&2 net zero credentials.

Regional profile

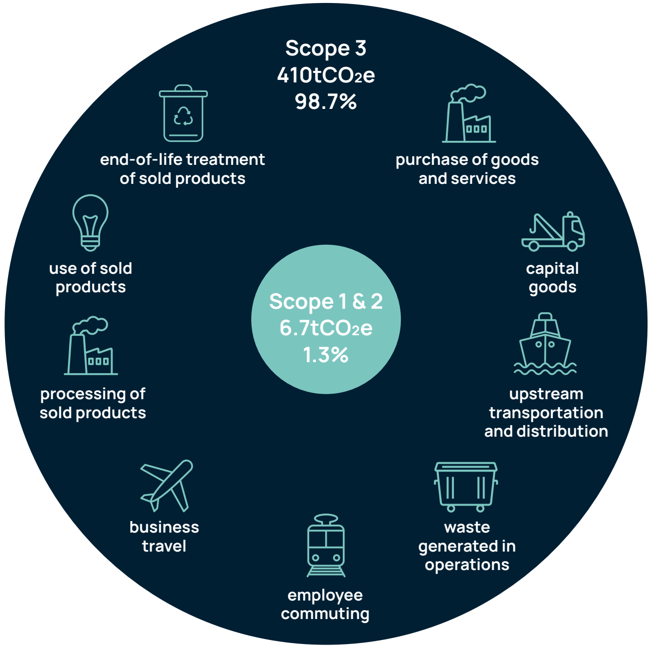
Energy use is dominated by the Chinese factory. Along with LAICA this leaves UK energy use at less than 10% of Group, a figure which, with the acquisition of Billi, is likely to decline further in 2023. The lower emissions factor of the UK grid ensures that the proportion of emissions coming from the UK is significantly lower than the level of energy consumption.

	Energy used		Emissions	
	MWh	**%**	**tCO$_2$e(k)**	**%**
UK	1,388	9.9	309	5.0
Non-UK	12,664	90.1	5,847	95.0
Total	14,052		6,156	

Scope 3 emissions

In 2022, the complex process of measuring our Scope 3 emissions was undertaken for the first time, developing a full carbon inventory and profile of Strix's value chain, using GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard. Our initial approach has been to use high level data to generate an overall picture to identify the key categories where further efforts and analysis can then be directed, drilling down and assimilating greater detail. Building an understanding of our value chain emissions is an iterative approach which will generate increasing granularity through each cycle. This is clearly a journey for both us and our supply chain, much of which is less advanced at present.

We are pleased to share our initial analysis with stakeholders. Like many industrial companies Scope 3 dominates Strix's overall carbon footprint, accounting for nearly 99% of Strix emissions. Indeed, we expect this number to rise towards 100% as we drastically reduce our Scope 1&2 emissions from 2023.



Sustainability strategy continued

Our key product, the kettle switch, forms part of a heating device which consumes energy. Our share of the associated emissions leads to the dominance of 'in-use' emissions in our Scope 3 inventory. Like many industrial companies from a materiality aspect 'in use' and 'purchased goods and services' i.e. bought in components, are the key drivers.

Strix 2022 Scope 3 analysis

Category	Emissions (tCO2e)	Percentage of total
1 Purchased goods and services	19,715	4.8%
2 Capital goods	3,649	0.9%
3 Fuel and energy use	437	0.1%
4 Upstream transport and distribution	652	0.2%
6 Business travel	98	0.0%
7 Employee Commuting	473	0.1%
9 Downstream transport and distribution	585	0.1%
11 Life-use of sold goods and services	384,123	93.7%
12 End of life	364	0.1%

Whilst there is much focus on the key 'in-use' category, particularly within R&D, we have chosen to continue our analysis and efforts of some of the less significant categories. Firstly, those where Strix has greater control and can therefore have a more immediate impact such as commuting and business travel, the latter which will be inclined to rise following the lifting of COVID restrictions. Secondly, areas which we expect to become more significant such as 'end-of-life' which will rise as recycling legislation and rates increase. We are also cognisant of what our Scope 3 may look like as the electricity grids around the world decarbonise, the UK, Germany and the US have set targets to achieve grid carbon neutrality by 2035. These actions will lead to a continual and significant reduction of 'in-use' emissions, eventually to zero, which will inevitably increase the importance of other, currently insignificant, categories.

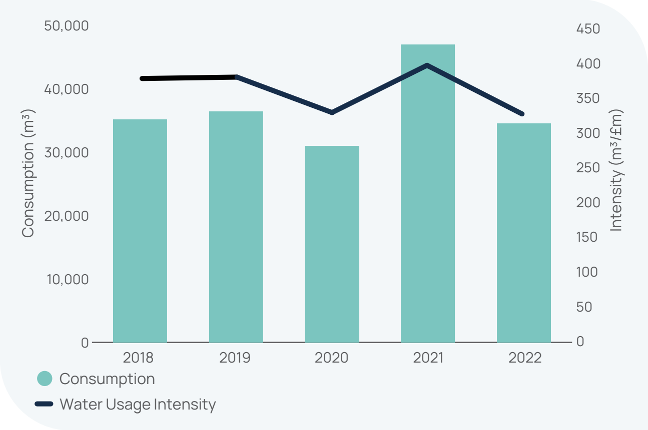
2023 will see continued analysis of our Scope 3 emissions which will increasingly look to incorporate more granular details from our value chain, in particular suppliers. We are also looking at how to best integrate Scope 3 into our life cycle analysis work for new product development. This is important in order to comprehend the differing, and sometimes counter intuitive actions. For instance, as the world moves towards a more circular economy, recycling rates can be expected to increase. This is obviously positive for a planetary perspective but DEFRA factors suggest that for Category 12 'End-of-life' recycling of materials generates over twice the emissions of landfill. Similarly extending product life increases the 'in-use' emissions, these are measured over a complete life cycle, but is obviously positive for reduced material consumption.

This analysis is helping to instigate a number of actions which we expect to increase further as our understanding of our Scope 3 emissions increases. Key actions already enacted include:

- **Purchased goods and services.** Supplier audits are in place. The key Chinese facility audited c80% of inbound goods suppliers by value in 2022 across 50 ESG related categories. Most importantly, scores increased from an average of 61% to 76% suggesting traction in bringing our suppliers along our sustainability path.
- **Business travel.** This has clearly been reduced due to the impact of the restrictions during the pandemic, particularly China. Indeed, our emissions pre-pandemic for 2019 were 1,014tCO2e versus 98 tCO2e in 2022. Along with the financial cost this has lead to a re-evaluation of travel policy. Despite the expansion of the Group geographically (LAICA in Italy and Billi in Australasia) the Group's target is to restrict business travel emission to below pre-pandemic levels.
- **Employee commuting.** Our Scope 3 analysis included our first ever survey of our employee commuting habits. This provided us with the requisite information to assess the potential best options to incentivise reductions. Key is the Chinese plant which is by far the largest employer where Strix organises free bus transport from the primary accommodation facility to the plant.
- **Transportation and distribution.** The primary manufacturing location for Strix is in China but the supply chain is complex, including components flow from the Isle of Man. COVID and recent specific supply chain disruptions have led to additional sourcing from China and introduction of buffer stocks. Both have reduced the air freight requirements and hence associated carbon costs. The challenge being to maintain and improve such logistics as the trading patterns return to normal.
- **Packaging.** We continue to assess our packing requirements and impact which is becoming increasingly important as the proportion of products sold direct to consumers (water and appliance categories) grows. Initial study suggested that moving to fully sustainable packaging would increase the cost sixfold. We have committed to recyclable packaging as a step toward full sustainability for new appliance & water products. Other actions have seen a reconfiguration and resizing of packaging which not only reduced the amount of packaging required but also enabled greater freight density, reducing cost and associated transportation emissions.

Sustainability strategy continued

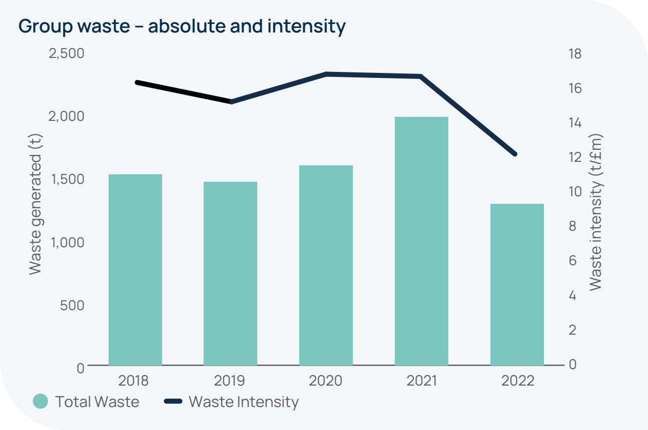
Water



Water consumption reduced significantly, benefiting from the lack of new plant commissioning, including testing, dual running of the old facility and overall lower volumes. Given the levels of water usage, much of which occurs in product testing, particularly for kettles, we are mindful of both usage and the origination of this critical resource. We are confident that our water is not extracted from areas of water stress and we are cognisant of the quality of water returned from our facilities.

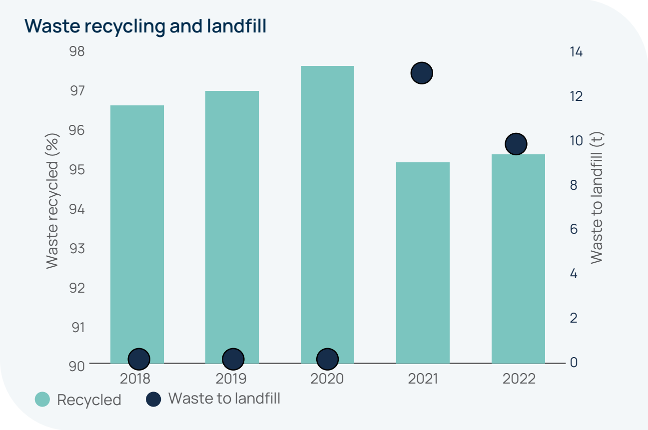
As a supplier of water delivery systems, product development and testing inevitably utilise significant amounts of water. The planned increase in new products in 2023/24 will therefore pose a challenge in terms of water usage in the coming year.

Waste & Recycling



The Oxford English Dictionary defines waste as 'useless expenditure or consumption, squandering', exemplifying the negative impact and cost. Waste clearly has a financial cost including disposal costs, reworking and lower efficiency. It also has an environmental cost in terms of wasted resources. Indeed, Scope 3 analysis has a category assigned solely to the carbon impact of waste. Hence our determination to minimise waste.

	2018	2019	2020	2021	2022
Hazardous (T)	0	0	0	0	0
Chemical (T)	49.4	41.9	32.9	32.9	42.4
Normal (metal, plastic cardboard)	1465	1414	1552	1,936	1,259
Total waste (T)	1,514	1,456	1,585	1,969	1,301
Intensity (T/£m)	16.2	15.0	16.6	16.5	12.5
Recycled waste (T)	1,462	1,411	1,546	1,873	1,225
Recycled (%)	96.5	96.9	97.5	95.1	94.1
Waste to landfill (T)	0	0	0	12.9	9.7



The overall reduction in waste has been driven by the new Chinese facility and lack of dual facility running seen in 2021. Improved layout and processes combined with the continued adoption of automation – now 77% of lines up from 68% in 2020 – have lead to improved efficiency. This has helped to improve quality, reducing failed parts and associated scrappage which remains a focus. Waste inherent in the manufacturing process, such as swarf from machining, is effectively 'designed in' at the production stage requiring a redesign of the process, normally associated with a new version of a product, in order to address. The lower volumes inevitably lead to lower absolute levels of waste hence the importance of the reduction in the waste intensity reported.

Recycling continues to be high but has declined somewhat whilst there is now a small proportion of waste sent to landfill. Both of these reflect the inclusion of LAICA figures for the first time. LAICA recycling in particular is somewhat lower. Further investigation of the causes behind these and potential improvement plans will be a focus in 2023. We continue to avoid the use and disposal of hazardous materials.

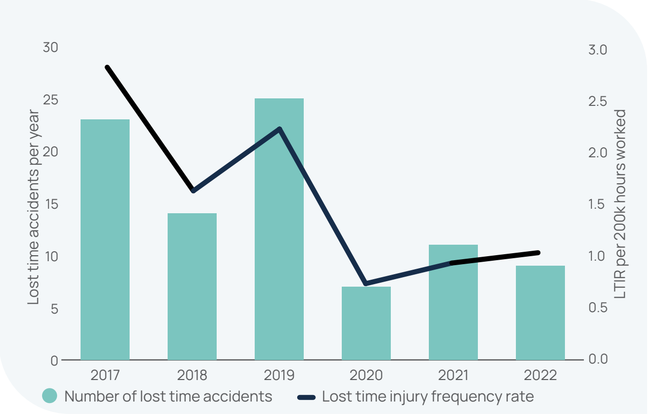
In terms of NOX/VOC and particulates we have a range of systems to ensure that our facilities remain significantly below the permitted levels. These include the moulding workshop upgrading to a 2-level cellular active carbon system which reduces VOC rate by 80%. Sink screen printing, press regrinding and blade cleaning 1-level active carbon system with negative pressure reducing VOC by 60%. A moulded material regrinding process dust filter system fitted to reduce particulate emission. Such actions are positive for both the environment and protecting our work colleagues.

Sustainability strategy continued

People

Strix maintains the family ethos of its origins in its approach to employee engagement and welfare. Not only do our people provide the intellectual capital which enables the Group to thrive, but also produce the physical products which enable the Group to operate. Our strategy is built on four key building blocks:

Health & Safety in the workplace



The safety of all employees is paramount and a key Group KPI, reviewed at every operations board. Reporting all accidents and near misses, continuous training and awareness along with a safety first culture are key. We also see governance as important for ensuring the most up to date procedures are being enacted. With the award of LAICA in 2022, all Strix facilities have achieved ISO45001. There were 9 recorded accidents in the year, down from 11. Lost time injury frequency rate (the primary international standard measurement for accidents) increased marginally in the year but key is the step change in improvement seen since pre-COVID assisted by the new plant. We continue to look to work towards the ultimate goal of zero accidents.

Inclusivity & Diversity


Women in management roles

Strix is committed to being an equal opportunities employer and prohibits unlawful discrimination on the grounds of age, disability, gender identity, gender (re)assignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, or sexual orientation. Our objective is to have a diverse workforce, where the rights and dignity of all its employees and candidates are respected and have a working environment free from discrimination, harassment, victimisation and prejudice.

Strix diversity is best demonstrated by the senior management group which includes Chinese, Turkish, Greek Cypriot as well as British nationals. We are proud of our gender equality with 51% women/49% men in the Group. Continued efforts to promote equality throughout the organization, through both internal promotion and external appointments, can be seen by the increasing representation of women within the senior management group.

People progression and development

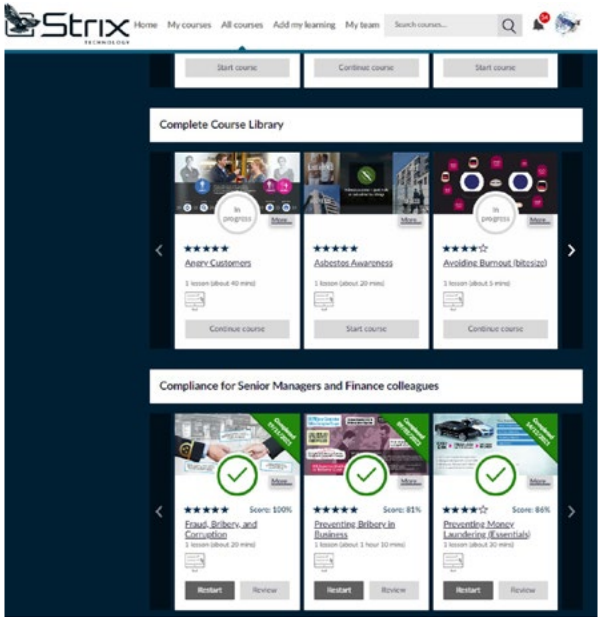
Significant resources and efforts have been made to improve training (learning & development) across the Group with a blend of in-person training, including mentoring, an e-learning platform to provide best-in-class programmes and flexibility. Whilst this will always be a work in progress, because we must all continue to stay curious and learn, we have made significant strides towards becoming a learning organisation.

Sustainability strategy continued

E-learning

A key milestone on this path includes the introduction of our e-learning platform, hosted by Kallidus. This has enabled us to ensure a consistent message and understanding of important ethical and compliance principles, as well as provide a wealth of soft skills and personal development tutorials. Of primary importance has been the flexibility of the system enabling employees to complete their e-learning at a time and pace that suits them, and it is all carefully designed to ensure that learners have to pay attention to pass the short validation tests. In 2022, learners participated in an average of 9 hours of learning on the platform, 2 hours 15 minutes of which were dedicated to health, safety and the environment.

As well as investing in the e-learning platform, we have also purchased software that enables two highly trained members of the team to create our own content. To this end, we have designed, amongst other things- “Finance for non-Finance” modules, very comprehensive career ladders and tutorials on how to use company systems.



Face to face training

In China, thanks to a dedicated Learning and Development Manager, a new hire and investment made in October 2021, we now have a team of 15 in-house trainers, covering a range of specialist topics. The team all undertook a Train the Trainer (TTT) programme, which culminated in a rigorous validation process. Based on their training abilities and trainee feedback, trainers have been allocated different status, the aspiration is to be a Master trainer! Every time a member of this team design and deliver an in-house training session, they receive a financial reward, provided delegate feedback is suitably positive, which helps ensure quality control.

As well as driving the above, Stephen, our Chinese L&D Manager, has designed and delivered an extensive range of training solutions – indeed, everything from energy conservation to innovative thinking, plus a very popular offering in how to communicate more effectively in an international business environment. Additionally, he has run a very successful multi-media programme for those wishing to improve their English.

Of particular note in our now comprehensive learning and development resource is a programme for operational team leaders and supervisors. This was developed in direct response to a particular business need and has proved very successful in improving engagement and reducing attrition.

In our Isle of Man HQ, we run a number of “lunch and learn” workshops each year. These are run by in-house experts on topics including product development and cross-team collaboration, or external providers; for example, we have had sessions on raising awareness of male health concerns and a workshop on personal financial management.

Progression - Job Grades and Career Ladders

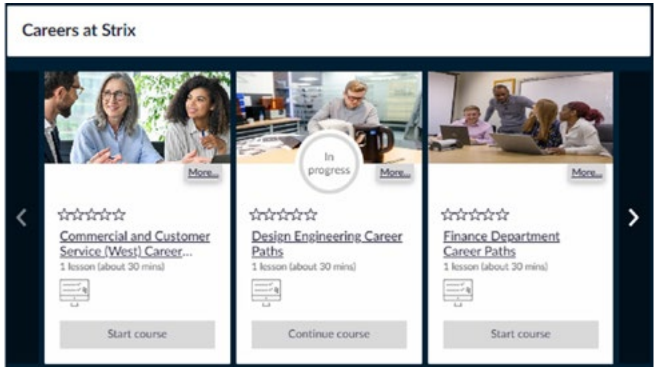
An important message that has been communicated as part of our L&D transformation is that career advancement does not have to mean assuming line management responsibilities; this simply does not suit everyone. For career progression, or simply in-role development, we have mapped and sign-posted multiple paths, enabling both technical and “soft” skills acquisition, depending upon individuals’ ambitions and preferences. This provides clear and transparent career opportunities along with the requisite training. The model very much underpins our company values and is about playing to strengths and preferences, rather than focusing on any short-comings.

Sustainability strategy continued

Future plans

Having built solid foundations, the plan is to maintain the pace of our transformation into a true learning organisation. We will further enhance the internal trainer team skills sets in China and look to mirror the same in the Isle of Man, Italy and now Australia & New Zealand following the acquisition of Billi. We continue to invest in our e-learning solution library by driving traffic to it and enhancing bespoke content.

Further ahead, we have plans to create a seamless synchronization of personal development plans with a range of mixed-media solutions, ensuring that learning needs are met in ways that meet the requirements of individuals and the wider organisation.



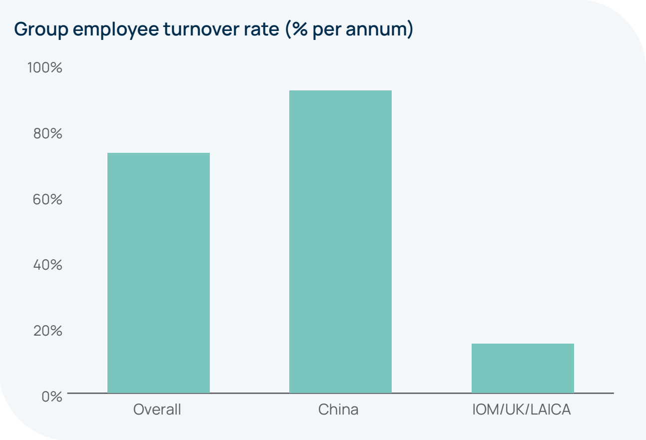
Careers at Strix

☆☆☆☆☆
Commercial and Customer Service (West) Career...
1 lesson (about 30 mins)

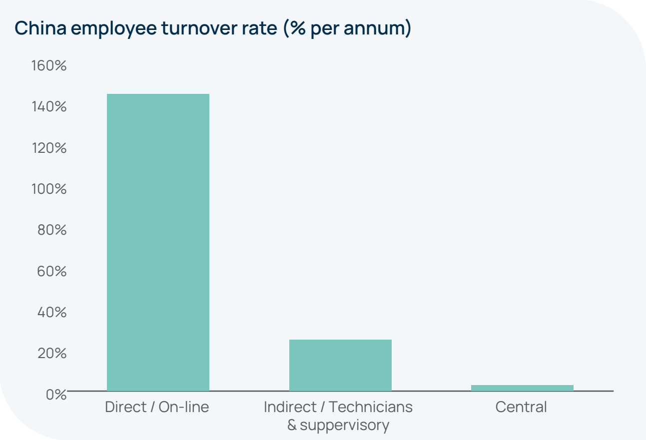
☆☆☆☆☆
Design Engineering Career Paths
1 lesson (about 30 mins)

☆☆☆☆☆
Finance Department Career Paths
1 lesson (about 30 mins)

Retention and staff turnover



Group employee turnover rate (% per annum)



China employee turnover rate (% per annum)

Group staff turnover rates declined in the year although remained high at 75%. This reflects the importance of China and its inherent higher staff turnover rates.

Employee turnover in the China factory reflects the transitory nature of many lower skilled workers and propensity for this cohort to move employer more often, with COVID also having an impact. The chart highlights the extreme levels of turnover in the direct (shop floor) workforce, which is common across the Asian region, against the much lower levels seen in the more technical areas (e.g. production managers) and central functions. This skew is further highlighted by the discrepancy in length of service with the average tenure of employment for 'leavers' in the year being 7 months whilst the average time for 'stayers' was over 6 years.

Strix looks to provide attractive packages to incentivise and retain staff. These include high quality off-site accommodation, transport, staff canteen and employee training along with job progression opportunities. In addition, the facility has moved from using third party contract employees to bringing all employees onto the company's own terms and conditions (offering benefits such as healthcare). This is expected to allow improved control over recruitment and assist retention.

Engagement and wellbeing

Chinese working cultures and practices are different, for instance the work force tends to be more transient, often involving employees living long distances away from their families in order to secure work.

We provide high quality off-site dormitory accommodation. This is provided at subsidized rates to all the employees, plus free high quality meals for employees in our modern canteen. Transport is provided through free shuttle buses for daily commute to all the employees. In summary, we look to make working at Strix a positive home-from-home experience.

From a welfare perspective we provide free health check to all the employees every year and our employees are entitled to above average levels of annual leave plus parental leave, marriage leave and compassionate leave. Acknowledging local tradition small gifts are offered to employees at festivals, such as Spring Festival, Mid-Autumn and Women's Day. In addition, in recognition of the time often spent away from families, we organize a range of employee trips.

Sustainability strategy continued

Purpose

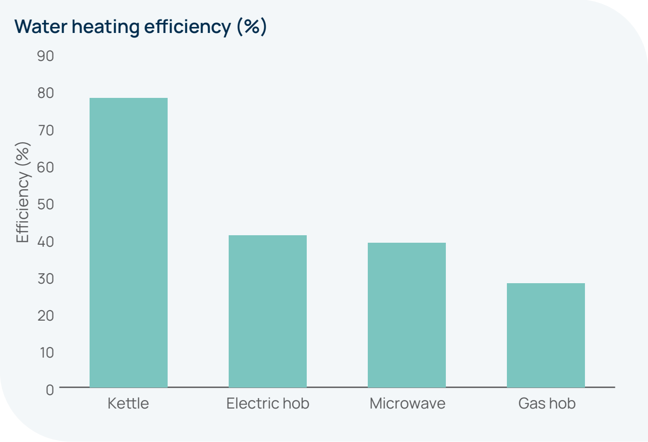
Strix mission - Shaping a safer, more sustainable future in the design and supply of innovative products that enhance customers' everyday lives. We do this by working smart every day to make the world's best quality and safest products for heating, cooling and filtering water.

Avoided emissions

A company's carbon footprint does not measure the company's contribution to decarbonisation by its partners and its customers. As a heating device the 'in-use' emissions are by far the greatest contributor to carbon generation. Quantifying the decarbonisation impact resulting from the use of the company's products and solutions against a reference scenario (avoided emissions) helps to convey a full picture of the company's contribution to global decarbonisation.

We calculate avoided emissions for all products and services sold in a financial year over the course of their entire use phase, this is consistent with the methodology used for calculating the Category 11 'use of sold products' emissions within Scope 3 accounting.

The key product for Strix is the kettle control which enables safe functioning of an electric kettle and the adoption of such water heating technology. The chart highlights the efficiency of key domestic water heating technologies. This clearly shows the kettle as the most efficient method, hardly surprising given that its sole design purpose is the boiling of water.


Water heating efficiency (%)

Strix controls therefore enable switching from other forms of heating to electric kettles, thereby reducing emissions. The kettle has an average lifespan of three and a half years over which time it will operate over 6,000 cycles. Assuming it is used in the UK (i.e. using UK grid emissions factors) suggests a kettle will emit 220 kgCO$_2$e over its lifetime which is nearly half the level of the main alternative in terms of a gas hob. Strix manufactured switches in 2022 translate to life time savings of c14mtCO$_2$e – equivalent to the lifetime emissions of 250,000 cars.

Avoiding plastic waste

The world 'consumes' 1.2 million plastic bottles every minute of which, according to the World Economic Forum, the recycling rate in 2020 was 27.2% (down from 28.7% in 2019). This would suggest that over 400 billion plastic bottles are discarded every year with a significant number inevitably ending up in the rivers and oceans. The world is waking up to the issue of plastic waste with increasing legislation on single use plastic items either through bans or recycling requirements.

Strix, primarily through its LAICA business, is playing its part in avoiding the proliferation of 'single-use' plastics whilst promoting recycling and responsible disposal. The combination of reusable filtered water systems and recycling programmes offer a significantly reduced environmental footprint than the single use alternatives.

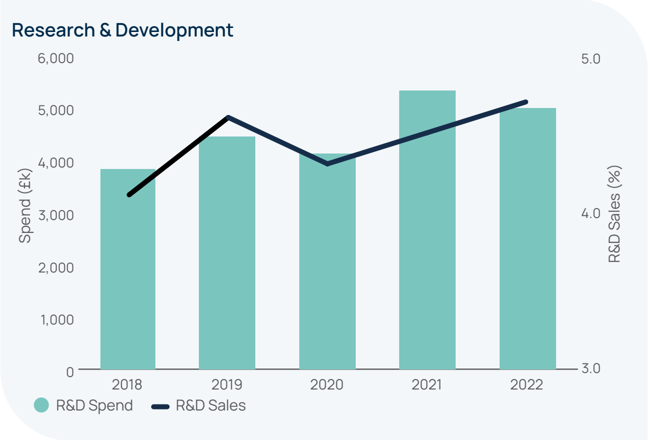
Strix sold over 4.5million filters in 2022. Each filter offers the capacity of over 100 plastic bottles suggesting that full utilisation of our filters could have potentially saved over 450 million plastic bottles.

Sustainability Driven Products

Our new product roadmap is aligned to our sustainability agenda.

- For kettle switches we look to reduce energy consumption through a range of developments such as variable switch-off temperatures, increased accuracy to avoid over-boiling or 'keep warm' functionality to reduce reboiling energy consumption. We also look at a range of solutions such as 'one cup' to reduce overfilling which is the single largest driver for wasted energy when boiling water.
- In the water category the focus is on filtration technologies to improve the quality of water whilst reducing the product footprint, hence ensuring customers get premium water with reduced environmental impact. Through Halosource technology we have taken this quality water mindset into the industrial and livestock markets. We also look to continually upgrade components of our filters, moving to materials offering a lower carbon footprint and greater recycling potential.
- In appliances, the focus is on creating products for sustainable living. Often this involves bringing together our thermal and water capabilities as seen in the range of single serving drinks dispensers. These solutions will be significantly enhanced through Billi and their hot tap product range. LAICA products are focused on the health segment.

Investment in research and development is key to developing such products and retaining our market leading positions. Whilst the level of spend is important, 2022 was a record at 4.7% of sales, so is the direction. This was highlighted in 2021 with the creation of the overarching role of Group CTO leading to the development of a strong and consistent new product roadmap.


Research & Development

Sustainability strategy continued

2022 key product introductions

2022 saw a variety of new products introduced across the Strix range. This included a number of novel products aimed at improved customer wellbeing and increased energy efficiency.

Aqua Optima Aurora – Aurora Instant Hot & Cold Filtered Water Dispenser

The Aqua Optima offers instant hot & boiling water at the press of a button. It is energy efficient by only boiling the water needed and only to the temperature that the type of drink requires. At the same time Strix heating technology ensures a fast delivery with minimum heat up times.

Evolve+ filters contain activated coconut carbon to absorb chlorine & ion exchange resin beads help prevent limescale build up whilst also removing impurities for a better tasting, higher quality water. Even better, the filters are returnable and recyclable.

The machine is Quiet Mark Accredited, the low noise making it ideal for open plan living. We are particularly pleased that the benefits of this dispenser have been recognised as winner of Housewares 'Sustainable Product of the Year 2022'.

Sustainability strategy continued

Dual Flo Kettle

Dual Flo™ is the first and only combined kettle and hot water dispenser on the market. Unlike other kettles, the innovative one cup dispense automatically pours the desired volume of boiling water straight into a cup, not only offering a hands free solution to making a hot drink but saving energy and reducing water waste by only boiling the exact amount of water required.

HYDROSMART+ METAL STOP tap filter

HYDROSMART + METAL STOP filter creates great tasting water that is free of undesirable substances direct from the home tap. The tap filter retains the mineral salts naturally present in the mains water and effectively reduces heavy metals, such as lead and cadmium, microplastics, sand, rust or suspended particles, chlorine and associated organic solvents.

Superfast Sterilizer-Dryer

The world's quickest 'superfast' sterilizer-dryer is powered by patented Strix technology, allowing busy parents to sterilize and dry baby bottles and accessories in just 10 minutes - under half the time of most other sterilizer-dryers on the market. Designed with parents in mind, the superfast sterilizer-dryer gives parents peace of mind, killing 99.9% of germs with natural steam.

Smart Glass Vacuum Sealer

The new smart cannisters help keep food fresh for up to four times longer. They are made of 100% recyclable glass which also better preserves the characteristics of food versus traditional plastic containers. The free LAICA home wellness app also help users organise their fresh food with reminders of expiry dates.

Safety

Strix remains committed to consumer safety and continues to prompt regulatory enforcement authorities to remove unsafe and poor quality products from its major markets. Four such actions were undertaken in 2022 resulting in product recalls and withdrawals. In addition, three intellectual property actions were conducted in the year.

Community

The introduction of two paid for charity days per employee in the West workforce has significantly increased the Group's ability to interact with the community. Actions have been targeted at the less fortunate and at the young, helping them develop the skills and experience required for the world of work, providing interactions and experience which is arguably more difficult to attain on the Isle of Man.

We have raised money for a range of charities including Save the Children, Macmillan Cancer Breast Cancer Awareness and Movember. We supported Isle Listen, a local charity during Mental Health Week. Activities included a range of imaginative events such as the Christmas decorate your desk competition in aid of Junior Achievement.

To promote young people and their prospects Strix employees undertook a variety of activities including:

- Supporting STEM Fest in the IOM, inspiring the younger generation about careers in Engineering. Our Engineering Director, Nick Gibbs, also became the new sector lead for the IOM Chamber's STEM Committee.
- Hosting a visit to our Headquarters for 75 children from years 3 and 4 from a local primary school. Our employees taught the children about how products are designed, prototyped and manufactured.
- Participating in the IOM Graduate Fair and Employment Skills Fair. Our Group HR Director, Emma Cox, featured on a "CV Surgery" panel, where she offered tips and tricks alongside other professionals on how to write an effective CV to local graduates.
- Supporting the Junior Achievement Company of the Year Programme where they mentor a team of young adults to run a business for a year. In 2022, Strix sponsored an award for Outstanding Team Member of the Year.
- Volunteering for local charity Junior Achievement by conducting classroom activities on topics such as CV's, interviews, getting a job.

China has been somewhat more internally focused due to the commissioning of the new factory, extended COVID issues and delivering employee development programmes. A new role has been created and assigned suggesting community developments will accelerate in 2023/4.

Biodiversity

Biodiversity and healthy ecosystems are a foundation for sustainable development. Sustainable development is crucial in reducing the impact of human activities on the planet and enhancing life for all in line with the 17 SDG goals. Biodiversity is arguably a more encompassing approach in the symbiotic relationship between human development and nature. Net zero has been a central pillar of Strix sustainability strategy as we play our part in addressing climate change. Bringing biodiversity onto the agenda promotes a proactive mind set on how the company can enhance nature and the planet we inhabit as much as addressing negative impacts. We also see this as an opportunity to position the Group for reporting under the TNFD (Taskforce on Nature related Financial Disclosures, similar to the carbon related TCFD) which is expected to be launched in 2023.

As part of an ESG initiative for 2022, we began to re-purpose the gardens at our Headquarters in the Isle of Man. This has included the development of wildflower plots, a dedicated bee yard and the introduction of a composting area.

Firstly, we developed 6 plots of land, approximately measuring up to 500 square meters dedicated to wildflowers. Four of these plots were sown with a mix of 100 percent wildflower annuals. These four plots contained over 30 different species of wildflower annuals. The two larger remaining plots were sown with a mixture of native wildflower perennial and native grasses. Furthermore, we have looked at rewilding an acre of grassland at the rear of the site with Hawthorne trees already starting to grow whilst birdlife is starting to benefit from more sympathetic trimming of the surrounding hedges. A composting area has been developed, where garden and kitchen waste can be broken down and reused to enrich many of the shrubs on the more cultivated areas of the site.

We also introduced four beehives on the grounds, within their own dedicated bee yard. These bees were locally sourced and relocated to the property. Our new neighbours offer not only nature benefits but also enhance employee wellbeing.

China has been focused on commissioning of the new facility and development of the solar arrays. With these now completed, plans are being developed to scope the confines with a project to incorporate benefits to the workforce and nature.

Governance

At Strix we set expectations of the highest standards which we expect to be carried out throughout the organisation. Our policies include:

- **Anti-Bribery and Corruption:** Zero-tolerance. In our Anti-Bribery and Corruption Policy Statement we explain our commitment to conduct business in an ethical and honest manner, also implementing and enforcing systems that ensure bribery is prevented.The company recognises that it has a duty to implement this policy and all employees (whether temporary, fixed-term or permanent, Officers, Directors or Trustees), consultants, trainees, agency staff, sponsors or any other person or persons associated with the company (including third parties), no matter where they are located, are expected to comply with it.
- **Anti-harassment and bullying.** A pleasant place to stay. Harassment or victimisation on the grounds of age, disability, gender reassignment, marriage and civil partnership, pregnancy or maternity, race, religion or belief, sex or sexual orientation is unacceptable in any circumstances. Harassment can take many forms ranging from tasteless jokes to abusive remarks, from pestering for sexual favours to threatening behaviour and actual physical abuse, including bullying behaviour. The company operates a zero tolerance stance in respect of all forms of harassment and seeks to ensure that the working environment is suitable for all its employees.
- **Anti slavery and human trafficking.** Free choice and fair compensation. We despise and fight any activity linked to slavery and human trafficking. Strix and any Covered Person shall not knowingly hire any forced labour or make any person work against their own will and will ensure all such persons or employees are fairly compensated for their time and effort freely put forth.
- **Whistleblowing.** Should our employees meet issues concerning breaches of the law, serious misconduct to another person, health and safety or financial malpractice, our Group-wide Policy provides them with guidelines as to actions that they may take to raise such issues.

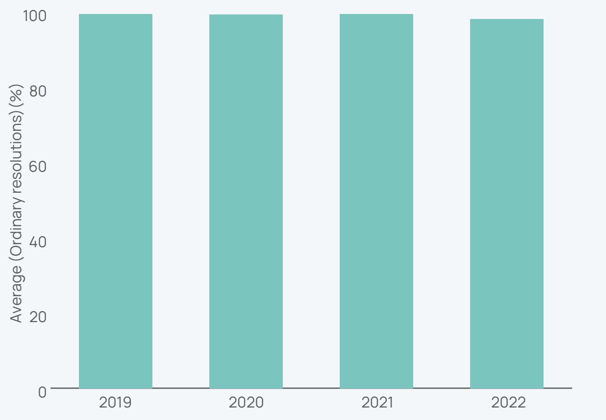
Board and policies

The Board is committed to effective corporate governance as the basis for delivering long-term value growth and for meeting shareholder expectations for leadership and oversight of the business. Strix applies the principles of the Quoted Companies Alliance Corporate Governance Code (the 'QCA Code') as the Board believes that adherence to the QCA Code provides a strong foundation for delivering shareholder value and serves to mitigate and minimise risks.

The executive team's long term incentive plans are aligned to our sustainability agenda and targets. The remuneration committee has set energy reduction target, in line with the Group's KPIs for 15% of the LTIP award. This is in line with recommendations from the TCFD whilst also reflecting the increasing importance of sustainability to shareholders and the Group's overall strategic direction.

The Board looks to continue two-way dialogue with all shareholders through presentations and meetings and to incorporate their views as appropriate. Perhaps the best feedback comes from the voting patterns at the AGM where ordinary resolutions averaged 98% of votes in favour in 2022.

AGM Voting – Average % voting for general resolutions



Certification

We see certification as a key part of the strategy to be 'best-in-class' ensuring that our processes are in line with the best practices and assisting our drive for continued improvement across all aspects of the business.

The new Chinese plant achieved full ISO accreditations in 2021 whilst LAICA achieved ISO14001 in 2022 and was awarded 45001 in early 2023. We are pleased to have the key ISO standards achieved at all our plants. That said, welcoming Billi into the family there is work to be done to ensure their full accreditation compliance, which will be a focus of 2023. The new Chinese facility has also achieved ISO50001 for Energy management, important for our primary manufacturing facility and a core element to delivering our energy intensity reduction KPI. In 2023, we will weigh up the benefits of adopting ISO50001 at other plants across the group.

	ISO 9001	ISO 14001	ISO 45001	ISO 50001	ISO 13485	ISO 17025
	Quality systems	**Environmental management**	**Occupational H&S**	**Energy management**	**Medical devices**	**Test & calibration**
Ronaldsway (IOM)	✓	✓	✓			✓
Ramsey (IOM)	✓	✓	✓			
China	✓	✓	✓	✓		
LAICA	✓	✓	✓		✓	

Task Force on Climate-related Financial Disclosures ('TCFD')

Reflecting Strix approach for best governance and the importance placed on sustainability, the group reported under TCFD as required for fully listed companies.

Governance	
Board oversight	Climate issues are assessed by the full Board reflecting the weighting which the Directors place on the risks and opportunities along with the relative size of the Board and scale of the Group. Richard Sells, Non-Executive Director, provides additional oversight on leveraging his career at Electrolux and its long held focus on sustainability. Along with the CEO they provide the key conduit from the operations to the Board. Board meetings are held a minimum of six times a year with sustainability, including climate-related issues, both opportunities and risk, a constant agenda item. Climate risks are consolidated into the annual Operational Board Risk Committee review for the Group. The board provides the final sign-off on the Group's sustainability and hence climate targets and the associated investment. The board is also responsible for overall strategy and ensuring that investment is aligned to the sustainability objectives with the recent acquisition of Billi providing a high profile example of such alignment. The remuneration committee, comprises of the three independent board directors, is responsible for the executive team's remuneration including LTIPs. Within the executive LTIPs this includes targets associated with the Group's sustainability agenda, including emissions related elements, along with monitoring of subsequent achievement.
Management's role	The Operations Board provides the key executive management forum for climate change and sustainability. It is chaired by Harry Kyriacou,Chief Commercial Officer & Managing Director Consumer Goods, overseen by the CEO and includes personnel responsible for engineering, commercial, technology, health & safety, human resources and finance. In terms of climate risk matters, Matt Thomas, Divisional Operations and Project Delivery Director, has a key role in respect to climate change, responsible for assimilating climate-related data. He is supported with both internal and external resources. Climate opportunities for new products are again prioritised across the Operations Board and led by the Group's CTO, Ceyda Gibson. The Group continually looks to enhance its new product development programme along sustainability driven corridors enhanced by through life cycle analysis, carbon accounting, circular economy, consumer safety and potential legislative changes.

Strategy	**Event**	**Time horizon**	**Risk description and impact on the business**	**Mitigating factors and opportunities**
Climate-related risks and opportunities In assessing our risks and opportunities we look to consider timescales of short (0-2 Years), Medium (2-8 years) and long term (8+ years). However, given the timescales of environmental impacts it is arguably unrealistic to compartmentalise into such distinct and relatively short time spans.	Extreme weather events	Medium/long term	There is a risk of physical damage to property, plant, machinery and equipment as a result of flooding, storms, heatwaves, snow storms and other extreme weather events across the Group's various locations. Note that Zengcheng, Guangzhou (where the Group's main factory is located) rarely sees typhoon conditions due to its inland location although extreme wind conditions were recorded in 2015, therefore such a risk has been included.	The new Chinese factory is designed to withstand the local conditions, free from temporary structures such as tin sheet roofing. Notification will normally come from the local government and/or media outlets meaning time to make any additional arrangements to reduce risk and reduce potential loss. If weather systems transpire to give an increased likelihood of flooding, information would be readily available from local government or media outlets allowing for enough time to put in place flood defences such as sand bags. We also have the opportunity to move critical equipment/materials/supplies to a higher floor.
	Business disruptions	Medium/long term	There is risk that manufacturing operations will be halted due to physical damage from extreme weather occurrences at locations where our factories are based in (Isle of Man, China and Italy)	A detailed recovery plan has been documented as part of the Group's Business Continuity Plan which is overseen by the recovery management team. Procedures relate to communications and information exchange, recovery process phase, clean-up process, pollution prevention, and restoration (including insurance claims and compensations). Restoration procedures include plan maintenance, back-ups, testing and emergency sources of power generation.

TCFD continued

Strategy	Event	Time horizon	Risk description and impact on the business	Mitigating factors and opportunities
Climate-related risks and opportunities continued	Financial outlay for accessibility to renewable energy	Medium term	There is risk of significant financial outlays in accessibility to renewable energy, particularly at the Group's main manufacturing plant in China given the Chinese climate commitments (Net zero by 2060). To become carbon neutral through purchasing carbon credits would cost the Group over £1m a year at current pricing levels rising to over £6m by 2050 assuming Network for Greening the Financial System (NGFS) pricing scenarios aligned with the Paris Agreement.	This is mitigated by the Group avoiding purchase of carbon credits and achieving its ESG strategic KPI of net zero Scope 1 & 2 emissions by 2023. Over 10% of the new factory's energy is now powered by solar energy, with the remaining energy consumption from renewable energy sources starting in 2022. All of the energy in our Isle of Man office and factory is from renewable energy sources. Plans are underway for solar installations to provide 100% of required electricity at LAICA by 2023/24. Financial impacts have been included in our budgeting process and forecasts.
	Climate policies and carbon pricing	Medium term	As a result of measures introduced during the Paris Agreement, various jurisdictions resolved to take measures to curb carbon emissions through implementing and enforcing policies relating to climate change in order to achieve low-carbon economies. These could include carbon pricing. These actions could increase costs and impact margins if not passed on.	Through investment in solar and long term contracts for renewable energy Strix internal operations have largely been protected from such potential risks. The key are of exposure is likely to be in the supply chain, hence our work on Scope 3 and increasing dialogue with key suppliers to ensure that they have mitigation strategies in place where appropriate.
	Changes to technologies on manufacturing processes to align to climate change goals	Medium/long term	As a manufacturing and engineering Group, technological changes relating to energy saving, low-carbon transportation, and increasing use of non-fossil fuels or other technologies that help reduce carbon emissions are needed to meet policy goals, which would therefore involve changes to current existing manufacturing processes and technologies that could be more expensive	We continue our drive in the use of automation. This requires greater energy usage but has other significant benefits in improving quality, reducing scrap, etc. Combined with the use of renewable power, management see such a shift as a double win in terms of sustainability. In addition, the new factory has been successfully audited and certified to ISO 9001, ISO 14001, ISO 45001 with added ISO 50001 to the certification portfolio.
	Climate opportunities	Medium term	National governments are pledging to decarbonise energy consumption requiring a shift toward renewables, and therefore electricity as the primary source of power. There is also increasing legislation on efficiency labelling and recycling.	Kettles are the most efficient method of boiling water and use electricity, hence are likely to benefit from the decarbonisation shift away from gas. As the technology leader regulation tends to be positive for Strix. The portfolio of kettle switches is increasingly configured around the opportunities for power saving and carbon reduction. The acquisition of Billi in hot taps provides Strix with a complete range of drinking water heating products for the home. The company continues to work with customers and monitor potential legislation (such as the European Ecodesign or 'right to repair' regulations) to ensure full and early compliance.
	Financing costs	Short/medium term	Lenders, both banks and bondholders, are increasingly looking to link debt coupons to achieving sustainability targets. For industrial companies at least one target is generally linked to emissions. Hence the potential penalised higher rate or benefit of lower rates on the Group's debt.	Early dialogue with key lenders combined with a sustainability strategy designed to ensure that relevant hurdles and targets are achieved.

TCFD continued

Strategy	Event	Time horizon	Risk description and impact on the business	Mitigating factors and opportunities
Climate-related risks and opportunities continued	Increased investor scrutiny	Short/medium term	There is increased focus on climate change by our equity investors and other stakeholders. This is evidenced by the rise in ESG funds and the drive to provide consolidated emissions transparency for individual funds.	Our sustainability agenda has been accelerated in recent years, including establishing future roadmaps and targets. From an emissions perspective we aim to achieve Scope 1&2 'net zero' by 2023 and started developing our Scope 3 supply chain emissions inventory in 2022 which opens an additional avenue for making a difference. With the 'in use' dominating Scope 3 our new product direction includes improved efficiency to reduce energy usage and hence emissions. Our sustainability report provides full transparency to all stakeholders.
Impact on the organisation's businesses, strategy and financial planning	In terms of risk, Strix has developed a range of business contingency plans, including detailed recovery strategies for all manufacturing operations. This includes understanding both lengthy internal supply lines and understanding and mitigating risks within the supply chain. Our kettle switches are key to the most efficient method of boiling water which should provide benefit from rising energy prices and the shift from alternative fuels, e.g. gas to electricity. New developments such as Aurora and Dual Flo are designed to produce single servings to provide greater efficiency and reduce waste. Similarly, our water category and associated filters increase the quality of drinking water whilst reducing the use of single use plastic containers and associated waste. These trends are driving the direction of our new product development with R&D expected to grow alongside the business remaining at around 5% of sales.			
Resilience of the organisation's strategy	Our current assessment has been based on the Paris Agreement 1.5°C scenario. Management see little likelihood of negative impact on Group assets but are working on its resilience, in particular suppliers and supply chains which are relatively lengthy. From a risk operations perspective Strix has developed a range of business contingency plans, including detailed recovery strategies for all manufacturing operations. A key risk to our 'net zero strategy' is access to renewable energy (electricity) supply to our key manufacturing plants, particularly China. To counter such risks Strix has invested approaching £1m in a solar system in China which will provide over 10% of the electricity supply required and signed long-term contracts for renewable energy. A similar strategy has been implemented in Isle of Man and with similar strategies planned for LAICA in Italy. 2023 will see the integration of Billi which include a review of their business interruption plans and climate change mitigation strategy. Further scenario analysis is planned for the 2023 financial year.			

Risk management	
Identifying and assessing climate-related risks	Internal research and external assistance is combined to provide a full understanding of the potential risk avenues and opportunities. Input is garnered from across the Group's operations as well as externally from customers and suppliers – a process which will accelerate as work on Scope 3 emissions expands. These risks are incorporated into our risk software. The Group assesses the potential financial implication where appropriate and the cost of mitigation. This is best evidenced in the solar and renewable power purchase agreements in China. Neither were the lowest cost option of the status quo but provided additional sustainability and risk mitigation.
Managing climate-related risks and opportunities	Risks are managed relative to the likelihood and potential severity to the Group. Hence, the global shift to reduce emissions is highly likely (or happening) and hence our accelerated actions in this area. Weather related impact has been assessed and a more measured approach of a contingency plan and insurance applied to reflect the level of risk and mitigate potential impact. These actions form part of the Group's overall risk policy with key risks identified logged within the Group's risk registry (see page the Report & Accounts for further details). Opportunities follow a similar pattern based on the scale of the opportunity and a set of metrics of internal measures to assess our ability to compete/benefit from such avenues.
Climate-related risk integration	Climate change has become a clear reality and now seen in Strix as 'business as usual' and part of the ongoing environment in which the company operates. In addition, whilst complex, we are a small business with a flat structure and short lines of communication. The focus on climate change risks has clearly risen up our agenda in recent years, as have our actions, and is now an integral part of the overall business planning and management.

TCFD continued

Metrics and targets

Key metrics used

Significant work was undertaken in 2022 to expand our carbon footprint analysis through development of Scope 3 supply chain emissions, previously only business travel was reported. This is in addition to internal orientated Scope 1 & 2 emissions historically reported. These have been calculated using the GHG Protocol, the internationally recognised standard for corporate carbon reporting. Absolute and intensity (per £m) are used for both emissions and energy consumption to provide more prescient analysis as the Group expands and ensure that our focus remains on energy usage as well as emissions. Historically, the Group has used 'location based' analysis but have added 'market based' approach in 2023. We believe that this provides a more accurate picture of the Group's emissions and the impact of the recent investments made and actions taken. The additional of a full, independent audit is seen as unwarranted given the steps in place to achieve net zero Scope 1 & 2 emissions from 2023.

Disclosures

ISO		2020	2021	2022
Scope 1	tCO$_2$e	107	265	273
Scope 2	tCO$_2$e	5,269	7,430	5,883
Scope 1&2	tCO$_2$e	5,376	7,695	6,156
Scope 3	tCO$_2$e	93	573,895	410,096
Scope 1&2 intensity	tCO$_2$e/£m	56.4	64.4	59.2
Energy usage	MWh	10,569	15,666	14,052
Energy usage intensity	MWh/£m	111	131	135

Further details available on page 26

Targets

Strix is targeting net zero Scope 1 & 2 by 2023 predominantly (latest expectations over 97%) due to the removal of the use of fossil fuels in the energy used. This is being achieved through internally generated solar power and the purchase of renewable energy which are now in place for all Strix facilities. In addition, management is targeting 3% improvement in energy intensity (energy use to sales) to further reduce risk. These targets exclude Billi which was acquired in November 2022 where action plans will be developed in 2023 and enunciated in the next reporting cycle.

Our Scope 3 work in 2022 has given us a good initial understanding of our footprint. The key element is the 'in use' phase, reflecting the kettle as an energy consumptive heating device. The laws of physics therefore limit the impact which Strix can on the Scope 3 inventory. We are therefore focusing on other areas which may have less impact but where Strix can actively make an impact although. However, given the dominance of the 'in-use' element we have not set targets for the Group.

Full disclosure of our sustainability KPIs. Performance and targets is shown on page 5.

Sustainability metrics

The following table summarises the group's core sustainability metrics over the last five years. Note that 2021 energy and emissions performance was particularly impacted by the dual running of the Chinese plants as the new factory was commissioned through the year.

		2018	2019	2020	2021	2022
Environmental						
Energy usage & emissions						
Scope 1	tCO$_2$e	173	187	107	265	273
Scope 2	tCO$_2$e	5,791	5,912	5,269	7,430	5,883
Total Scope 1&2 (location based)	tCO$_2$e	5,964	6,099	5,376	7,695	6,156
Scope 3	tCO$_2$e	1,014	1,014	93	573,895	410,096
Total group emissions	tCO$_2$e	6,978	7,113	5,468	581,590	416,252
Scope 1&2 intensity	tCO$_2$e/£m	63.6	63.0	56.4	64.4	59.2
Energy usage						
Other	MWh	815	875	432	1,040	1,169
Electricity purchased	MWh	10,988	11,285	10,137	14,626	11,690
Renewable electricity generated	MWh					1,193
Energy usage	MWh	11,803	12,160	10,569	15,666	14,052
Energy intensity	MWh/£m	125.9	125.5	110.9	131.2	135.1
Proportion of electricity generated in-house	%	0.0	0.0	0.0	0.0	9.3
UK (inc IOM)						
Scope 1&2 emissions UK	tCO$_2$e	462	456	347	403	309
Scope 1&2 emissions UK/Group	%	7.7	7.5	6.5	5.2	5.0
Energy UK	MWh	1698	1812	1458	1685	1388
Energy UK/Group	%	14.4	14.9	13.8	10.8	9.9
Waste & recycling						
Hazardous	tonnes	0	0	0	0	0
Chemical	tonnes	49.4	41.9	32.9	32.9	42.4
Normal (metal, plastic cardboard)	tonnes	1465	1414	1552	1,936	1,259
Total waste	tonnes	1,514	1,456	1,585	1,969	1,301
Intensity	t/£m	16.2	15.0	16.6	16.5	12.5
Recycled waste	tonnes	1,462	1,411	1,546	1,873	1,225
Recycled	%	96.5	96.9	97.5	95.1	94.1
Waste to landfill	tonnes	0	0	0	12.9	9.7

		2018	2019	2020	2021	2022
Water						
Consumption	m^3	35,108	36,429	30,936	46,848	34,600
Intensity	m^3/£m	374	376	325	392	333
Social						
Health & Safety						
Number of lost time accidents		14	25	7	11	9
Lost time injury frequency rate	per 200,000 hours	1.6	2.2	0.7	0.9	1.0
3 Year rolling average lost time injury frequency rate	per 200,000 hours		2.2	1.5	1.3	0.9
Severity rate	Hours lost/accident	85.7	31.8	36.6	128.2	43.6
Lost time rate	Hours lost/1000 hours worked	0.68	0.35	0.13	0.61	0.22
Number of fatalities		0	0	0	0	0
Diversity						
Women on the Board	%	25	20	20	20	20
Women in management roles	%	18.2	19.5	23	27.3	27.3
Women in the organisation	%	60	60	60	60	50.8
Employee turnover						
Group	%				160	75
China	%				194	92
Employee training	Hours/employee				14	18
Research & development				6.9	13.6	9.5
R&D spend	£k	3,820	4,439	4,117	5,324	4,986
R&D/Sales	%	4.1	4.6	4.3	4.5	4.7
Governance						
AGM						
Ordinary resolutions (% votes for)	%		99.3	99.2	99.3	98.0
All resolutions (% votes for)	%		98.9	98.9	99.1	98.1

Innovative & Sustainable Technology

Strix Group Plc

Forrest House
Ronaldsway
Isle of Man
IM9 2RG

Tel: +44 (0)1624 829 829
Email: info@strix.com

www.strixplc.com