Oxford NANOPORE Technologies

SUSTAINABILITY REPORT 2022

Our Sustainable Impact

nanoporetech.com

About this report

About Oxford Nanopore Technologies

Oxford Nanopore Technologies' goal is to bring the widest benefits to society through enabling the analysis of anything, by anyone, anywhere. The company has developed a new generation of nanopore-based sensing technology for real-time, high-performance, accessible and scalable analysis of DNA and RNA. The technology is used in more than 120 countries to understand the biology of humans and diseases such as cancer, plants, animals, bacteria, viruses and whole environments. Oxford Nanopore Technologies' products are intended for molecular biology applications and are not intended for diagnostic purposes.

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This report, Our Sustainable Impact 2022, outlines our sustainability strategy and related policies, our approach to responsible growth and covers our activities for the 2022 financial year.

This report considers sustainability issues that are priorities for our business and the way in which we address these. Our intention is to continue to report on sustainability topics on an annual basis. This report should be read alongside our Annual Report 2022.

We support the United Nations' Sustainable Development Goals (UNSDGs) and believe that we play a role in contributing to solve these global development challenges. We show how our strategy links to the SDGs, and our related contributions, **on pages 12 and 13.**

Letter from Board Chair: Duncan Tatton-Brown

Duncan Tatton-Brown
Board Chair

Beyond the wider impact of our products for the scientific community, I'm proud that having a positive impact on the world is embedded in our identity.

Introducing Oxford Nanopore Technologies' Inaugural Sustainability Report

I am pleased to present Oxford Nanopore's first-ever Sustainability Report. 'Our Sustainable Impact 2022' highlights the progress made in our environmental, social, and governance (ESG) initiatives over the past year and outlines our future commitments.

A foundation in impact

One of Oxford Nanopore's founding principles is to create tangible impact, making it an exhilarating time to be part of a company that empowers diverse scientific communities to explore, comprehend, and utilise rich biological data across various disciplines. Within our growing customer community, 2022 was an exciting year of record-breaking science: the Telomere-to-Telomere Consortium finished and published the first truly complete human genome assembly, comprising over three billion base pairs. Only a few months later, a Stanford University team developed a workflow for ultra-rapid nanopore sequencing that resulted in the actionable characterisation of genetic disease in under eight hours. We are incredibly proud of these trailblazing teams and of our technology's impact on human health and the wider world.

In 2022, we took further strides towards making genomics more accessible to more scientific communities around the world. Last year we rolled out the palm-sized PromethION™ 2 Solo, the world's most accessible high-output sequencing device, enabling anyone, anywhere to access human-scale genomic data at the highest levels of accuracy. We also enhanced our shipping and logistics capabilities, ensuring more timely and reliable access to our products and consumables. Additionally, we hosted our first hybrid customer conference, London Calling, connecting thousands of global scientists for three days of collaboration, learning, and inspiration.

Growing sustainably

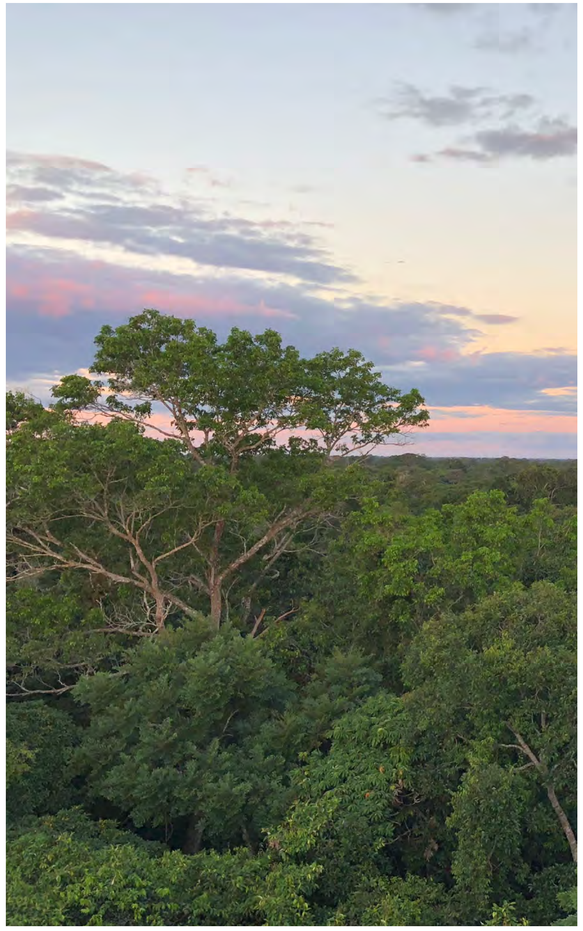
Beyond the wider impact of our products for the scientific community, I'm proud that having a positive impact on the world is embedded in our identity. As such, and as a high-growth company, we are also committed to scaling sustainably. Under the leadership of Dr. Gordon Sanghera, we have continued to build on progress made across all categories of ESG performance while expanding our operations. In 2022, we successfully reduced carbon dioxide equivalent (CO_2e) emissions per million pounds (GBP) of revenue by nearly 25% and achieved full compliance with the Corporate Governance Code. This mindset also encompasses protecting the social aspects of ESG, encapsulating our culture and people, and ensuring that as our team grows, so too do opportunities for development, learning, and personal growth.

Looking ahead

In my first year as Chair of Oxford Nanopore and our initial year as a public company, we have diligently served customers, partners, and shareholders while empowering our teams to grow the business and fulfil our ambitious vision. It is still early in Oxford Nanopore's sustainability journey; we recognise there is work to be done, and we are committed to building on the progress made to date. Thank you for joining us on this journey.

Duncan Tatton-Brown
Board Chair

May 2023



Who we are, what we do

Our goal is to bring the widest benefits to society through enabling the analysis of anything, by anyone, anywhere. We deliver high-performance innovations that enable broad scientific communities to access, understand and use biological information for research, and enable sustainable, accessible impact in health, food, agriculture and environments.

Oxford Nanopore Technologies plc was founded in 2005 as a spin-out from the University of Oxford. The company now employs more than 1,000 people across R&D, commercial, and operational functions, with users in 120 countries, and was listed on the London Stock Exchange in 2021.

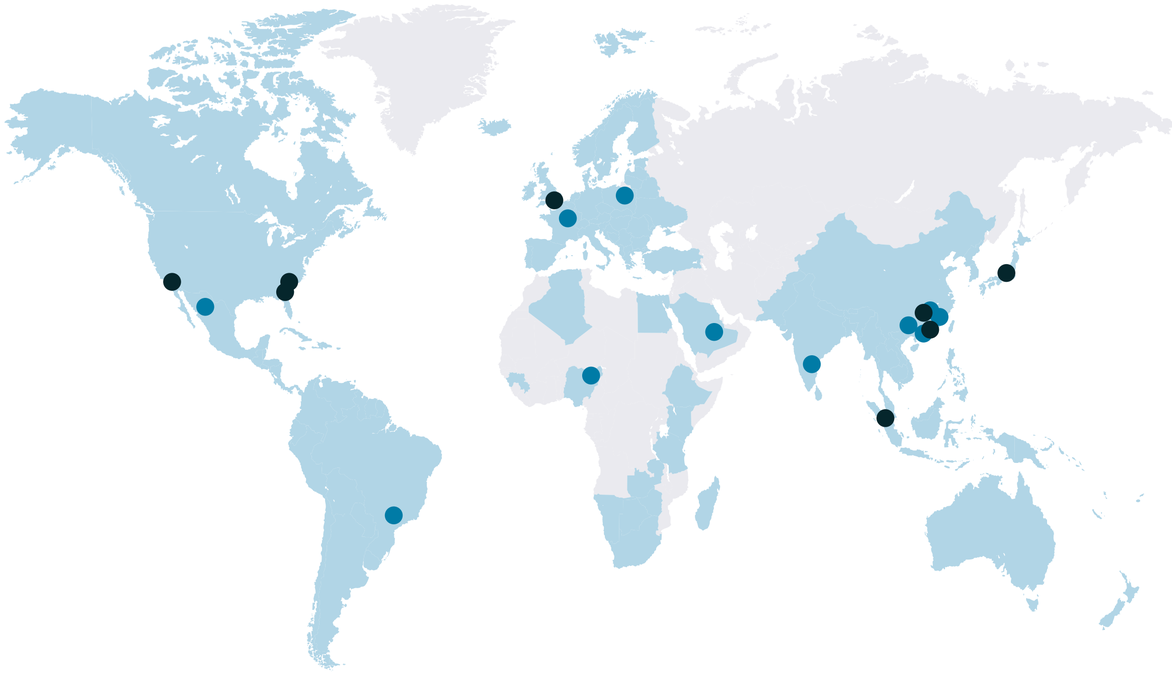
We have developed, commercialised, and continue to innovate a new generation of sensing technology that uses nanopores — nano-scale holes — embedded in high-tech electronics, to perform comprehensive analyses of single molecules. Our first products sequence DNA/RNA, and we intend to adapt the technology for the sequencing of proteins and other molecules.

Global footprint

Customers
8,283

Countries served
>120

Peer-reviewed publications[1]
>8,600



The impact of our technology

Enabling high-impact scientific research

Sequence data is used throughout scientific research, whether in university, government, or industrial research groups, to help biologists answer a range of questions. The impact of our technology can be felt across the world and in a range of scientific disciplines, including research into human genetics, cancer, plants, animals and the environment.

A global impact beyond research

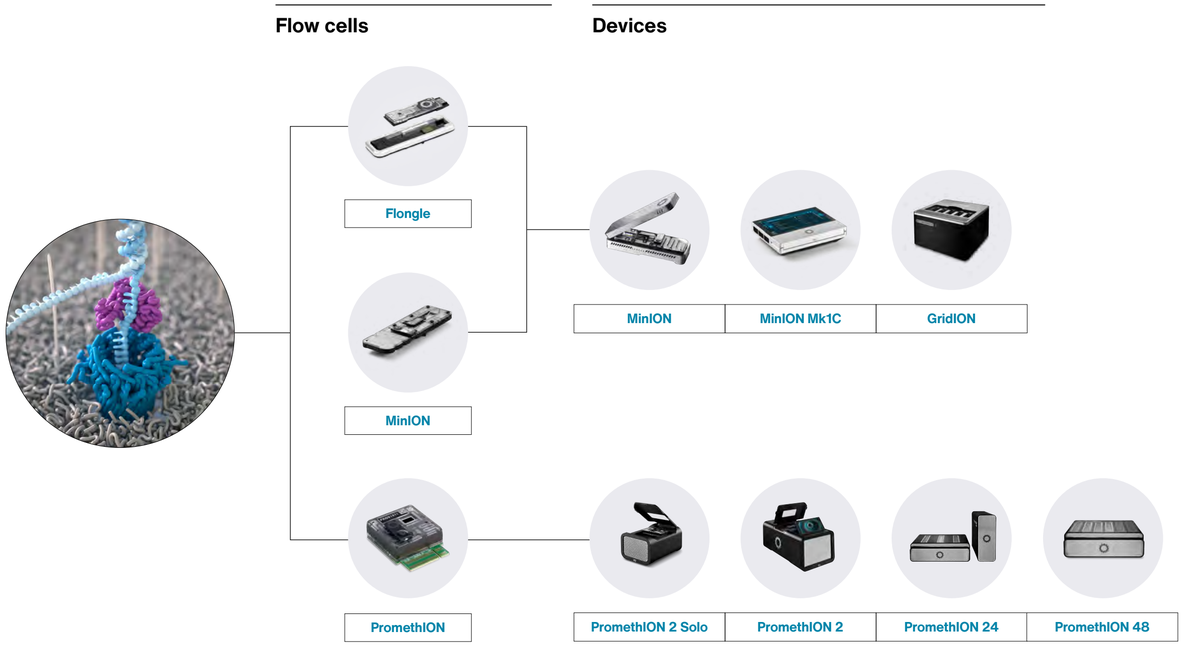
Outside scientific research, DNA/RNA information can be used to support 'real-life' decision making, whether that is in healthcare, industrial, or other environments. Oxford Nanopore is in the foothills of enabling these use cases; our goal is to drive new applications that have a profound, positive impact on society, by providing a new generation of accessible technology.

References:

[1] Reported on a cumulative basis as of May 2023

Who we are, what we do

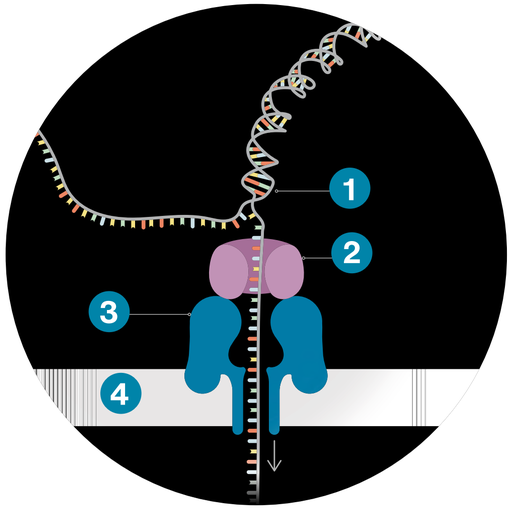
Oxford Nanopore sensing technology: Our first application – DNA/RNA sequencing



Watch our video explaining the process

How it works

All Oxford Nanopore sequencing devices use flow cells that contain an array of tiny holes — nanopores — embedded in an electro-resistant membrane. Each nanopore corresponds to its own electrode connected to a channel and sensor chip, which measures the electric current that flows through the nanopore.



1. The nanopore processes the length of the DNA or RNA fragment presented to it. The user can control fragment length through the library preparation protocol utilised, enabling experiments to characterise anything from ultra-long fragments of DNA to short fragments originating from cell-free DNA in blood.
2. An enzyme motor controls the speed at which the DNA or RNA strand passes through the nanopore. Once the DNA or RNA has passed through, the motor protein detaches and the nanopore is ready to accept the next fragment.
3. When a molecule passes through the nanopore the current is disrupted. Fluctuations in the current are decoded using basecalling algorithms to determine the DNA or RNA sequence in real time.
4. An electrically resistant membrane means all current must pass through the nanopore.

One core technology at any scale

Our nanopore-based sequencing chemistry is integrated into consumable flow cells, which include arrays ranging from tens to thousands of electronic sensing channels. Users may deploy a range of different devices with these flow cells, which are designed to support any level of sequencing experiment, from go-anywhere, on-demand small analyses to ultra-high output projects, such as human population-scale sequencing. All devices can run the same nanopore-based sequencing chemistries, enabling users to scale their applications according to their needs.

Who we are, what we do

A technology with benefits that drive increased impact for broader communities

Features	Direct sequencing of DNA and RNA	PCR free, no amplification bias	Read length-agnostic	Real-time analysis	Chemistry on bespoke electronics
Benefits	Richer information including epigenetics	Simpler workflows, richer information including epigenetics	One platform for any sample; see the true scope in your biology	Rapid results Intelligent analysis (e.g. adaptive sampling)	Scalable, from small to large formats low-cost
Impact	Enabling greater scientific knowledge about disease	More insights to fuel scientific discovery	Unlocking more secrets of the genome	Providing answers to critical questions, faster	Lowering barriers to accessing genomic data, globally

Applications of our technology

Life science research: Understanding the biology of any organism

Human genetics | Cancer | Plants | Animals | Microbial organisms

As a foundation for emerging real-world impact:

Health

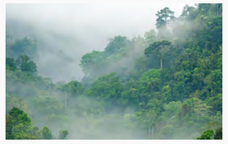
Oncology
Human disease
Infectious disease
Immunology and transplant
Reproductive health

Agriculture

Livestock
Crops

Industry

Biomanufacturing
Food safety



Environment

Biodiversity
eDNA

Biosecurity

Pathogen surveillance

Education

Genomics literacy

Consumer

Our vision, mission and values

Our vision

To enable the analysis of anything, by anyone, anywhere.

Our mission

We deliver highly differentiated, high-performance products and platforms that enable broad scientific communities to explore novel biological information and deploy it in an accessible and sustainable way to transform research, health, food, agriculture and the environment. Creating positive, lasting impact is at the core of what we do.

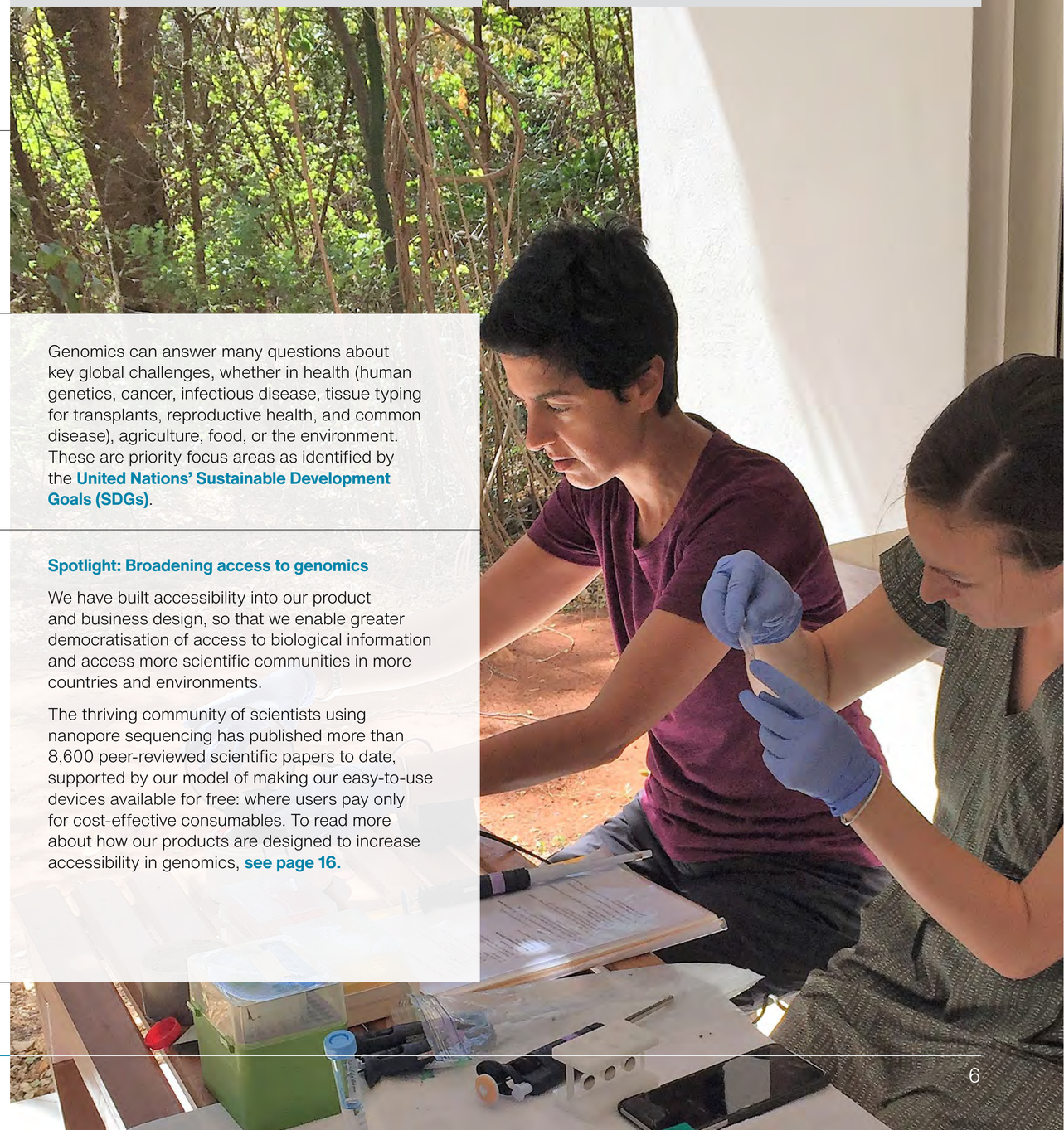
Our values

We are a mission-driven company, and we are guided by clear values that motivate our teams to deliver accessible, high-performance products that have positive, global impact. We have ambitious goals to develop market-leading, disruptive technology and grow customer communities around the world and across disciplines.

With a clear vision and ambitious mindset, our culture is guided by the following values that we look for, and encourage in our teams:

With a strong and ambitious culture, we value

- Determination
- Judgement
- Ability to positively contribute



Genomics can answer many questions about key global challenges, whether in health (human genetics, cancer, infectious disease, tissue typing for transplants, reproductive health, and common disease), agriculture, food, or the environment. These are priority focus areas as identified by the **United Nations' Sustainable Development Goals (SDGs)**.

Spotlight: Broadening access to genomics

We have built accessibility into our product and business design, so that we enable greater democratisation of access to biological information and access more scientific communities in more countries and environments.

The thriving community of scientists using nanopore sequencing has published more than 8,600 peer-reviewed scientific papers to date, supported by our model of making our easy-to-use devices available for free: where users pay only for cost-effective consumables. To read more about how our products are designed to increase accessibility in genomics, **see page 16.**

Broadening access

CASE STUDY

Responding to outbreaks and preventing the next pandemic: Cambodia

When it comes to detecting and getting ahead of the next pandemic, speed is critical. Dr. Erik Karlsson, Deputy Head of the Virology Unit at the Institute Pasteur in Cambodia, works in locations throughout the region to sequence bird and animal samples, and other biological material, in order to track, trace, and mitigate a range of potential pathogens that pose deadly threats to humans such as avian influenza virus, dengue virus, rabies virus, and more. As the Director of the National Influenza Center and Regional World Health Organisation (WHO) H5 Reference Library, as well as Coordinator of a WHO Global COVID-19 Referral Laboratory, his team is integral to the ongoing global response to COVID-19 and other viral outbreaks, including avian influenza A/H5N1.

Earlier this year, Erik's team used the Oxford Nanopore MinION™ device to sequence a case of A/H5N1 in Cambodia in less than 24 hours.
The specific variant was identified as one common in wild birds and poultry in the region for 10+ years, and had spilled over into an 11-year-old girl and her father. There is no evidence that the virus can spread easily between people, however, identifying it quickly meant that Erik and his team were able to alert public health officials and global health experts, allowing for greater understanding of these cases.

Early Warning is a crucial component of what Erik does to break transmission and protect animal and human health. The Virology Unit at IPC relies on field-forward and lab-based real-time nanopore sequencing using MinIONS and GridIONS™ to carry out their work; sequencing material from bats, rats, birds, humans, and other organisms to spot viruses before they emerge. Erik commented that having rapid and easy ways to sequence biological data in less developed countries such as Cambodia and throughout Southeast Asia is paramount to getting ahead of the next coronavirus or A/H5N1 outbreak.

Find out more here

Related SDGs

CASE STUDY

How portable sequencing is tackling loss of biodiversity

Loss of biodiversity is one of the most urgent crises facing our planet — more than 40,000 species are threatened with extinction today[2].

Sequencing is a critical tool for understanding the biology, development, and environmental interaction of endangered species. Genomic insights can help with existing conservation work by providing information on species identity, genetic disease risk, and how an organism has evolved. It is also crucial for identifying the DNA sequence of critically endangered species for future knowledge before more species are lost.

Nanopore sequencing technology is helping researchers around the world to support conservation in remote locations through the ORG.one programme — which was established in 2021 to support the sequencing of critically endangered species, through the provision of free-of-charge consumables.

Conservation biology relies on ongoing monitoring and is therefore dependent on community support and local participation. Due to the accessibility and portable nature of nanopore sequencing technology, it can be used to carry out rapid sequencing of critically endangered species close to their origin and with the involvement of local communities.

Since the ORG.one programme began, more than 50 critically endangered species have been sequenced, including the Brown-headed spider monkey in Ecuador and the European sturgeon in the Netherlands. Ultimately, the aim of the programme is to develop an active and distributed community of conservationists, scientists, and bioinformaticians to support the generation and communication of open data for conservation genomics.

Find out more here

Related SDGs

References:

[2] https://www.iucnredlist.org/

Our mission in action

CASE STUDY

A new frontier in rare disease characterisation

There are around 7,000 known rare genetic conditions affecting about 400 million people around the world. While three-quarters of rare diseases affect children, close to one-third of the children do not live to see their fifth birthday[3]. Current methods of clinical testing for rare genetic conditions can take months or years to complete, and after this full workup, around 50% of children remain undiagnosed[4].

Danny Miller from the University of Washington, USA, is working to identify genetic conditions more effectively, while reducing the time it takes to make a genetic diagnosis. He has been using nanopore technology to identify disease-causing variants in clinical research samples not identified by standard testing and believes it has the potential to end the 'diagnostic odyssey' that many families with rare genetic disorders have found themselves on.

Using a flexible, computational targeted sequencing approach, he was able to look at specific regions of the genome in real-time for analysis — a method only possible using nanopore technology. Using this targeted-sequencing approach, his team clarified complex structural genomic changes and identified missing genomic variants. In addition, they could generate these results quickly — in one case, in just three hours from birth.

Danny argues that this approach offers the potential to be used as a single sequencing test to replace nearly all other clinical genetic tests offered today. This would in turn reduce cost, reduce wait times, increase treatment options, and allow patients and families to make more informed healthcare decisions.

Find out more here

Related SDGs 3 GOOD HEALTH AND WELL-BEING

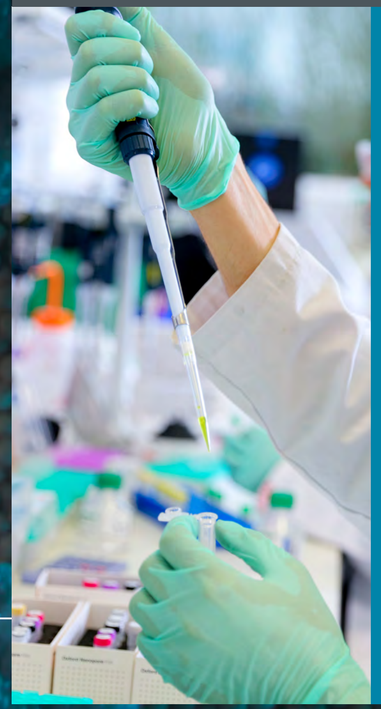
References:

[3] https://bioresource.nihr.ac.uk/using-our-bioresource/our-cohorts/rare-diseases-bioresource/

[4] https://www.cell.com/ajhg/fulltext/S0002-9297(21)00230-5

Using nanopore technology to identify disease-causing variants in clinical research samples not identified by standard testing has the potential to end the 'diagnostic odyssey' on which many families with rare genetic disorders have found themselves.

CASE STUDY



A truly complete human genome

The Human Genome Project was launched in 1990 and yet more than 30 years later the full sequence of the human genome was still incomplete.

Until 2021, it wasn't possible to see around 8% of the human genome. This missing information was not overlooked due to its lack of importance, but rather due to technological limitations.

Addressing this, Karen Miga from the University of California, Santa Cruz and the Telomere-to-Telomere (T2T) Consortium finished the first truly complete 3.055 billion base pair sequence of a human genome, representing the largest improvement to the human reference genome since its initial release in 2003.

Oxford Nanopore 'ultra-long reads', where the technology can uniquely sequence megabase-long fragments of DNA in one continuous analysis, were vital in being able to bring the assembly together — spanning some of the most complex regions of the human genome, which until that time had been unresolved. This complete human genome will enable researchers to see the full picture and therefore gain more insights about health and disease.

The authors concluded that '*The complete, telomere-to-telomere assembly of a human genome marks a new era of genomics where no region of the genome is beyond reach.*'

Related SDGs 3 GOOD HEALTH AND WELL-BEING

Find out more here

A note from our CEO: Dr. Gordon Sanghera

Dr. Gordon Sanghera
Chief Executive Officer

We are in a phase of rapid international growth, as our technology is used by more scientists to answer more biological questions. We are committed to growing responsibly.

A vision rooted in impact and sustainability

Oxford Nanopore was founded in 2005 with a goal of developing and deploying a new generation of electronics-based molecular sensing technology. In 2014, we released our first version of this: MinION - a DNA/RNA sequencing platform that provides highly accurate, information-rich genetic information with unprecedented accessibility, which is enshrined in our technology design and business model.

Our vision is to enable the analysis of anything by anyone, anywhere. This vision has framed our role in expanding the reach and uses of our technology, to empower broad communities of scientific users in answering a wide range of essential biological questions. This scientific work by the research community is the foundation for the development of future analysis methods to address real-world problems in health (e.g. human genetics, cancer, infectious disease, public health), food and agriculture, the environment, education, and more.

Our goal is to have a profoundly positive and sustainable impact on society by enabling our customers to access the advanced scientific data to support their work, whether in fundamental scientific research or subsequent uses in health, food/agriculture, or the environment. We do this by breaking down barriers to acquiring and using our sophisticated sequencing tools. After our initial decade of fundamental R&D that resulted in novel technology features for broad communities — such as portability and the ability to sequence longer fragments of DNA/RNA — we have also invested deeply in continuous improvement of our technology.

We strive to ensure that its accessibility is matched by the quality and comprehensive nature of the data generated on Oxford Nanopore sequencers. We are proud of the incredible innovation and productivity of our technology's user community, who have published thousands of peer-reviewed papers in scientific journals using nanopore sequencing.

We are in a phase of rapid international growth, as our technology is used by more scientists to answer more biological questions. We are committed to growing responsibly. Alongside our business strategy, grounded in positive global impact, we are also committed to building environmental, social, and governance (ESG) considerations into our products and our business operations. This is to ensure that we manage environmental impacts, as well as addressing risks in the business and in the delivery of our vision.

This year, we are introducing a new sustainability strategy — **product, planet, people** — that encapsulates the consistency of our wider business strategy and sustainability outcomes. Climate change, food security, and human health are defining issues of our time that Oxford Nanopore can positively impact. In particular, the window for climate action is closing rapidly. We are adapting to, and mitigating against, climate change risks and impacts, through commitments to improved efficiencies throughout Oxford Nanopore's operations, including in our product packaging, facilities, and value chain.

Our products are already designed to minimise packaging and waste, to dramatically reduce dependencies on cold chain shipping, and to include recycling of key components into our business processes. Beyond our environmental footprint, we recognise that the success of our products is only possible through the strength of our team. We are incredibly proud of our people and the dynamic, interdisciplinary culture we have created and continue to foster through a variety of talent development programmes, which we introduced and strengthened in this last year.

Although we are still in the foothills of our ESG journey, we are committed to building sustainability considerations into the foundations of our long-term growth. Our first Sustainability Report provides an update on our progress throughout 2022. I hope you find it informative.

Dr. Gordon Sanghera
Chief Executive Officer

May 2023

Our sustainable impact | 2022 Highlights

Product

We continued to design and support products that enable scientific communities to make a positive impact in biological sciences, and onward uses in health, food/agriculture and environmental analyses

91 tonnes

Overall, in 2022 across all our products and services, we were able to source 91 tonnes (79%) of packaging from recycled materials

We approved a new Conflict Minerals Policy to document our commitment to sourcing components and materials from companies that share our values for human rights, integrity, and environmental responsibility. This includes the responsible sourcing of minerals through our global supply chain

13.7 tonnes

We continued to insulate our products with Woolcool® and make the best use of Crēdo™ Boxes (reusable iceless insulating containers), resulting in a reduction in plastic use of 13.7 tonnes

We continued to build on accessibility by establishing improved logistics, for example through a collaboration with UPS Healthcare, furthering our mission to enable product utilisation by anyone, anywhere

59%

more than half of our shipped disposable flow cells

Our return programme for used products continues to grow and, in 2022, we saw a 19% year on year increase in the percentage returned to us. We successfully received back more than half of our shipped disposable flow cells (59%) and we were able to reuse one-fifth of those for external customers, R&D activities, and in Configuration Test Cells (CTCs)

Planet

LED lighting

We introduced LED lighting at two facilities on our Oxford campus, with plans to expand this programme in 2023

For the first time, in 2022, we reported against Task Force on Climate-related Financial Disclosures (TCFD) and completed a full Scope 3 emissions assessment

2.5% CO_2e reduction

We successfully reduced the number of tonnes of CO_2e emitted per million pounds (£m) of revenue by approximately 25.47% in 2022. For 2023, we are targeting a reduction of 2.5%

In December 2022, we published a new company-wide Environment, Health, and Safety (EHS) Policy, committing to provide safe and healthy working conditions, by eliminating hazards and occupational health risks and reducing our impact on the environment, through pollution prevention and waste minimisation

Environmental training

In 2022, environmental training was provided to employees through EHS inductions, management training, communications via our internal Resource Centre, and through discussions at the EHS Steering Committee meetings. We are planning on further expanding our environmental training in 2023

We continue to support and drive the ORG.one programme, designed to support sequencing of critically endangered species; 50 species have now been sequenced in this programme

People

42 Employee representatives

In September 2022, we launched Values in Action, a global collaboration to increase inclusivity by optimising connectivity for all of our people, wherever they work for Oxford Nanopore. This framework creates an employee pathway for everyone in the company to contribute their voice through 42 employee representatives, selected with extensive inclusion criteria

In July 2022, we launched our Mastery series of leadership, management, and personal development programmes: a suite of modular content that supports personal effectiveness through to strategic thought leadership

In September 2022, we launched a three-year commitment to the Broadening Horizons initiative with the Royal Society of Chemistry to sponsor the promotion of careers in chemistry for under-represented minority graduates and PhD postgraduates

8,832 total training hours

In 2022, 8,832 total training hours were completed, of which 1,353 hours were completed through LinkedIn Learning

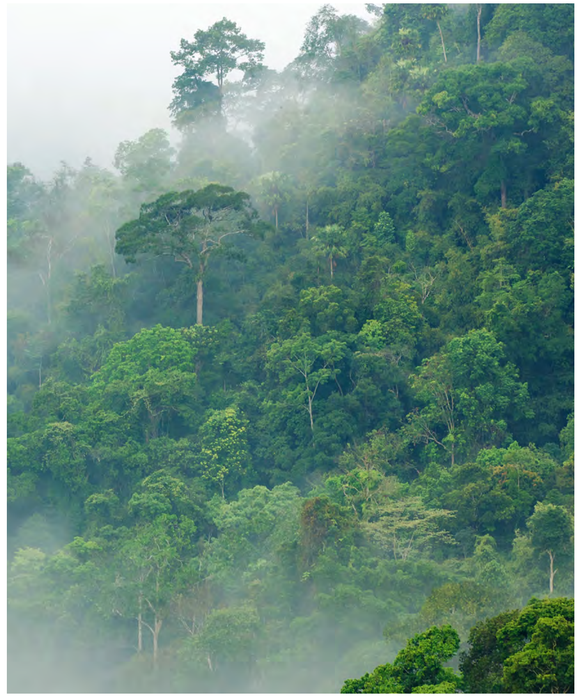
42% female

Across our employees, the gender split at the end of 2022 was 42% female, which is 2% higher than 2021

Governance

Full compliance with the Corporate Governance Code

We are committed to high standards of corporate governance and in 2022, following the appointment of Wendy Becker as Senior Independent Director and Duncan Tatton-Brown as our new Chair, we achieved full compliance with the Corporate Governance Code



Sustainability strategy

Our business strategy

We are focused on delivering sustainable, long-term growth by making sequencing more valuable and more accessible to genomics researchers worldwide, building on research advances with methods that provide actionable insights for real-world problems across health, agriculture, food, and the environment.

Our long-term growth strategy is based on three strategic pillars:

- Disruptive innovation
- Commercial execution
- Operational excellence

These strategic priorities are designed to create sustainable long-term growth by expanding our market share, growing existing markets, and by creating entirely new markets.

Our sustainability strategy

Alongside our business strategy, this year we are launching our sustainability strategy as part of our commitment to apply a sustainability-embedded mindset to our entire value chain — from our products to our team, and to our global footprint.

Inspired by the United Nations' Sustainable Development Goals

Our sustainability strategy is inspired by the United Nations' Sustainable Development Goals (UNSDGs). Our strategy takes into account the positive, global impact of our products, while acknowledging that we do not operate in isolation and must also account for the wider social, environmental, and economic implications of our wider business operations and value chain.

Focus area 1:

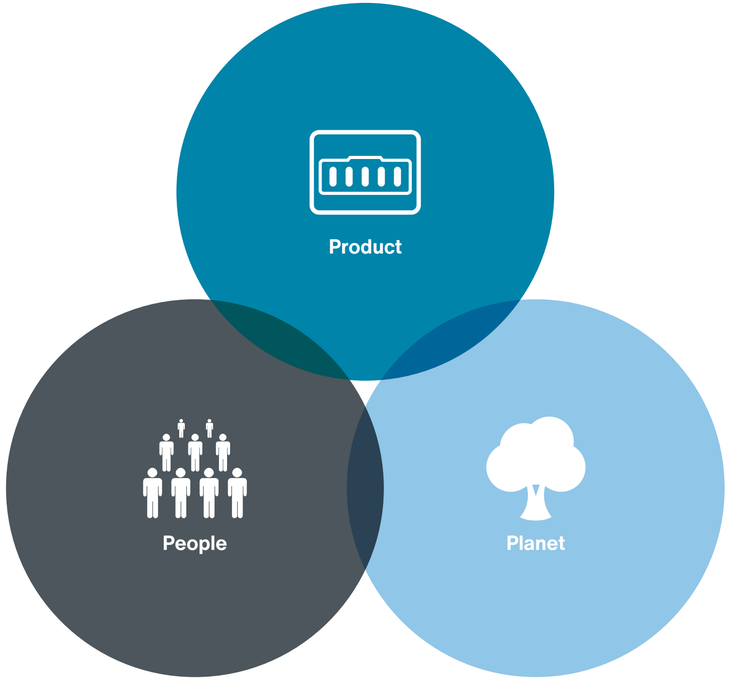
Accessibility and impact

Design our business and innovate our products to increase accessibility within the broader scientific communities who are driving solutions to global challenges in health, food and the environment

Focus area 2:

Sustainable innovation

Continuous innovation of our technology through creative and flexible approaches to maintain our competitive advantage without sacrificing our core values



Focus area 4:

Inclusivity and wellbeing

Promote a culture that is inclusive, embraces diversity and prioritises the development of our people and their wellbeing

Focus area 3:

Responsible scaling

Maintain high growth in a responsible way by protecting the planet through energy efficiency and ensuring that our commitment to sustainable practices extends beyond our internal operations and distribution to encompass our entire value chain

United Nations' Sustainable Development Goals

To ensure alignment with the global sustainability agenda, in 2022 we sought to better understand which UN Sustainable Development Goals (SDGs) and related targets matter most to Oxford Nanopore. This process resulted in the development of clear commitments for 2023 that map back to relevant UN targets – and build on progress made in 2022.

Focus area	SDG Goal	Relevant UN targets	Our relevant commitments	2022 highlights
Product		3.3 3.9 3.b 14.1 14.2 14.3 14.a 15.4 15.5 15.6	• Continue to establish global support and logistics to enable ongoing accessibility • Continue to improve on product design and performance, to enable more scientific discovery • Host an accessible, international nanopore community meeting to maximise opportunity for global scientific community access and engagement	• We continued to design and support products that enable scientific communities to make a positive impact in biological sciences • We continued to build on accessibility by establishing improved logistics • We continue to support and drive the ORG.one programme
Planet		7.3	• Reduce the carbon intensity of our operations • Carry out further analysis with a view of preparing a detailed plan by the end of 2023 that will set out how we will achieve net zero	• We successfully reduced the number of tonnes CO_2e emitted per £m revenue by about 25% in 2022 • We introduced LED lighting at two facilities on our Oxford campus

Planet		12.2
		12.4
		12.5
		12.6
			• Minimise the environmental impact of our product packaging by:
			  - Further investing in recyclable materials and packaging
			  - Minimising packaging weight
			  - For sub-components, using reusable packaging for transport where feasible
			  - If using plastics, selecting those that are recyclable
			• Strengthen our supply chain loops
			• Align our EHS programmes with the international standards for the environment and occupational health and safety by 2024
			• Continue to work with key suppliers on social and environmental factors
			• Further embed a culture of ESG awareness with suppliers
				• Across all of our products and services, we were able to source 91 tonnes (79%) of packaging from recycled materials
				• We continued to insulate our products with Woolcool® and make the best use of Crēdo™ Boxes
				• Our return programme for used products continues to grow
				• We approved a new Conflict Minerals Policy
				• We reported against TCFD and completed a full Scope 3 emissions assessment
				• We published a new company-wide Environment, Health, and Safety (EHS) Policy
				• Environmental training was provided to employees

Focus area	SDG Goal	Relevant UN targets	Our relevant commitments	2022 highlights
People		10.2 10.3 10.4	• Embed the Values in Action programme to support an employee-engagement culture • Continue to strengthen the skills of our employees • Create an environment in which individual differences and contributions are recognised and valued • Provide a working environment that promotes dignity and respect for all • Provide training, development, and progression opportunities for all • Understand equality in the workplace is good management practice • Review all of our employment practices and procedures • Review our recruitment practices • Have clear reporting procedures	• We launched Values in Action, a global collaboration to increase inclusivity by optimising connectivity for all of our people • We launched our Mastery series of leadership, management and personal development programmes • We launched a three-year commitment to the Broadening Horizons initiative with the Royal Society of Chemistry, to sponsor the promotion of careers in chemistry for under-represented minority graduates and PhD postgraduates • 8,832 total training hours were completed in 2022
People		5.5 5.b	• Increase its Board gender diversity to at least 40% female representation within three years of IPO	• The gender split for all employees at the end of 2022 was 42% female which is 2% higher than 2021

Sustainability governance

Key principles and governance highlights for 2022

We are committed to conducting all of our business in an honest and ethical manner, and we are proud of our ethical standards. These values and our approach to sustainability is directly linked to our business strategy and our vision to achieve the analysis of anything, by anyone, anywhere. Robust corporate governance and embedding a culture of risk identification and mitigation is a key part of achieving our strategy:

- We voluntarily comply with the UK Corporate Governance Code and, following the appointments of Duncan Tatton-Brown as our new Board Chair and Wendy Becker as Senior Independent Director, we are currently fully compliant with the Code
- We have policies and procedures in place that reflect our ethical standards. In 2022, the Board approved a new Conflict Minerals Policy to document our commitment to sourcing components and minerals from companies that share our values for human rights, integrity, and environmental responsibility. This includes the responsible sourcing of minerals through our global supply chain.

Sustainability governance structure

Board

The Board has overall responsibility for sustainability. This includes overseeing performance, and evaluating and monitoring risks. The Board will review our Sustainability Reports prior to publication. ESG and sustainability is an agenda item for the Board at least twice each year. The Board is supported by the Audit and Risk Committee.

Operating Committee

The Operating Committee's role is to develop the Company's purpose, values, objectives, culture, and strategic and long-range plans. The Operating Committee also discusses and considers risks and reviews the Sustainability Report prior to approval by the Board.

EHS Committee

An operational and strategic pathway feeds into the Board through the Operating Committee supported by the EHS Steering Committee.

The EHS Steering Committee meets on a biannual basis and is a cross-functional committee led by Gordon Sanghera (CEO), which has responsibility at management-level over all environmental, health, and safety issues facing Oxford Nanopore, including climate-related risks and opportunities.

Product

14 Product
15 Accessibility
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21 Sustainable innovation

Product

Accessibility

Our commitments: Accessibility and impact

Guiding principle

Design our business and innovate our products to broaden accessibility to global scientific communities who are driving understanding and solutions to challenges in health, food, and the environment.

Commitments

- Continue to iterate on product design to develop smaller, easier to use, and lower cost formats to enable more people in broader communities to use the technology
- Continue to establish global support and logistics to fulfil our vision to enable anyone, anywhere to use Oxford Nanopore products
- Host an ISO 20121-accredited Nanopore Community meeting in 2023, in a hybrid format, to maximise opportunity for global scientific community access and engagement
- Introduce strategies to enable people earlier in their learning journey to use sequencing to learn about biology, with the goal of broadening communities who could use sequencing to answer real-world problems

Related SDGs

Our commitments: Sustainable innovation

Guiding principle

Continuous innovation of our technology through creative and flexible approaches to maintaining our competitive advantage without sacrificing our core values.

Commitments

- Minimise the environmental impact of our product packaging by:
  - Further investing in recyclable materials and packaging, committing to maintaining approximately 80% of packaging from recycled or other sustainably sourced material in 2023 and looking for opportunities to improve where possible
  - Minimising packaging weight, while ensuring the protection of the product
  - For sub-components, using reusable packaging for transport where feasible
  - If using plastics, selecting those that are recyclable
  - Compiling data on all packaging weights by types and material component and continuing to reduce packaging variability to reduce packaging waste
- Strengthen our supply chain loops by identifying opportunities to replace disposables with reusables in all points of the value chain

Related SDGs

Product

Accessibility and impact

Focus area: Accessibility and impact

With a goal to increase access to genomics and optimise for positive, global impact, we have designed our business model and innovated our products to broaden accessibility for global scientific communities who are driving solutions to challenges in health, food, and the environment. Our vision is to put these tools directly into the hands of existing scientific communities so that researchers no longer need to rely on external partners to perform their experiments.

Accessibility

The cost, size, and complexity of traditional sequencing technologies have historically made genomic insight inaccessible to much of the world. We have brought technologies to the market that increase access to high-quality sequencing by making available the devices for free and charging for flow cells (the consumable cartridges that contain the technology and chemistry needed for nanopore-based sequencing and are run in conjunction with Oxford Nanopore's devices), in addition to consumables and software licenses. These devices are easy to use, portable, and scalable, making nanopore sequencing technology accessible to anyone, anywhere.

Accessibility at Oxford Nanopore also involves disrupting the technology access model within hierarchical institutional structures in wealthier economies. Traditionally, funding has been centred around a smaller number of institutions. These may operate as service providers as well as research institutions; generally, researchers would send their samples through these central laboratories. This often causes significant time delays, removing the ability for real-time insights and rapid trial-and-error, which is useful in the scientific process. The accessibility of Oxford Nanopore technology not only removes the need for this centralised processing, enabling rapid, high-throughput insights, but it also empowers researchers in broader institutions to access their own sequencing technology and to drive their own research agendas.

> *Our vision is to put these tools directly into the hands of existing scientific communities, so that researchers no longer need to rely on external partners to perform their experiments.*

Accessibility

CASE STUDY

Increasing access through improved logistics

In 2022, we further improved access to our devices and flow cells through a collaboration with UPS Healthcare. We signed a fulfilment agreement that currently serves the Americas, enabling Oxford Nanopore's flow cells to be stored in UPS Healthcare's distribution facility in Louisville, Kentucky.

In 2023, we further extended our collaboration with UPS Healthcare to accelerate the delivery of our products and consumables across the Asia Pacific region.

This logistics collaboration means that by tapping on UPS's specialised healthcare logistics solutions, more Oxford Nanopore customers are enjoying faster delivery with less complexity, removing many customer pain points, and leaving more time to pursue high-impact, time-sensitive genomics research and discovery in areas such as human disease, cancer, agriculture, and more.

Beyond increasing access to our products, we have also increased access to knowledge-sharing through engagement with the genomics research and nanopore community.

Accessibility

CASE STUDY

Nanopore Community Meetings

In celebration of the nanopore community and the continuous scientific success to come from researchers using the technology, Oxford Nanopore hosts two flagship events each year – London Calling and the Nanopore Community Meeting (NCM). In 2022, we held two community meetings in London and New York for 3-day conferences during which a diverse array of scientists across a breadth of research areas networked, shared knowledge and took the stage to speak about their research using nanopore sequencing. These annual conferences provide a platform for researchers and scientists to demonstrate innovative approaches to common challenges and push one another to break boundaries in their work. This also helps us to further shape our technology with a permissive model that facilitates and encourages innovation on our platform. In the last year we significantly increased access to these events by offering a hybrid component to these in-person events, drawing more than 5,000 registrants online for our London event and 4,000 registrants online in New York.

These annual conferences provide a platform for researchers to demonstrate innovative approaches to common challenges and push one another to break boundaries.

CASE STUDY

Putting early career researchers on the main stage

Science can be very hierarchical, as with every career. At London Calling and NCM we have focused on breaking down these barriers and promoting the voices of young scientists who often drive the work. The events see researchers from around the globe come together in-person and online to share their latest research, collaborate, and provide feedback directly to members of the nanopore team, providing a platform for researchers and scientists to demonstrate innovative approaches to common challenges and push one another to break boundaries in their work. This also helps us to further shape our technology with a permissive model that facilitates and encourages innovation on our platform.

Ever since the inception of these events, researchers from all stages of their careers — from student to professor — have been provided the platform to share their findings. In 2018, in addition to integrating early career researchers in the agenda, a standalone Spotlight session was created to specifically showcase work from that group.

The Spotlight session guarantees three early career researchers the chance to present their work at these events. They pitch their presentations in just two minutes to the main auditorium and the audience vote for the speaker whose talk they would like to hear in full in the opening plenary session on the following day.

It is always a close-run battle and the creativity in these pitches never fails to amaze. Rest assured, the runners up get to present their full talks in a dedicated breaktime session. All of the Spotlight speakers receive support throughout the process to ensure their voices are heard across our channels, which have attracted thousands of online delegates as well as the in-person audience, plus on-demand viewers beyond the close of the events.

Product

Impact

Oxford Nanopore's technology is positioned to provide solutions to many of the world's greatest challenges. Scientists continue to use our technology in more traditional laboratory environments in universities, industry, or government facilities but many are also expanding the reach of science by sequencing in new environments such as jungles, deserts, in the Antarctic, and on the International Space Station. Our thesis is: if we can enable the use of sequencing in these diverse environments, this paves the way for future utilisation in other diverse environments, such as clinics or pharmacies and from farms to forks.

Our technology provides a more comprehensive insight into genomics, with the ability to read short to long fragments of DNA, as well as being able to look directly at the individual bases that make up DNA and RNA in a way not possible using other sequencing technologies. As a result, a new generation of research is pushing biological science further than previously possible.

Find out more here

	Impact in biomedical research and human health	Why is this important?	
Impact in biomedical research and human health	**Infectious disease:** rapidly understanding the genomic sequence of pathogens can identify the disease and any drug-resistance characteristics. Oxford Nanopore's technology rapidly characterises pathogens, on-demand and in environments near the sample	Lower respiratory infections remain the fourth most common cause of death. Infectious diseases, including tuberculosis, viral hepatitis, rare disease, and sexually-transmitted infections were estimated to have killed four million people in 2020	Source information here
	Human genetics: from discovery of new drug targets for various diseases, to understanding the cause of rare disease and characterising tissue for rapid transplants, the impact of comprehensive genomic insights is broad	It is estimated that 5.3% of newborns will suffer from a genetic disorder and 34% of all disease-causing variation is made up of variants that are larger than a single base-pair substitution, making long sequencing reads vital	Source information here
	Cancer: DNA/RNA is altered in cancer. Understanding those changes can help design improved treatment pathways and identify new drug candidates. Oxford Nanopore's technology provides the most comprehensive characterisation of cancer DNA, including methylation (chemical modification of the DNA), and 'liquid biopsy' samples that identify cancer markers directly from blood	Cancer is a leading cause of death worldwide, accounting for nearly 10 million deaths in 2020, or nearly one in six deaths. Worldwide there will be 27.5 million new cases of cancer each year by 2040. Many cancers can be cured if detected early and treated effectively	Source information here
Food security and agriculture	Genomics can help grow more efficient crop/livestock, reduce food spoilage, and enable quality assurance. Oxford Nanopore's technology provides accessible, high-performance analyses to users in broad environments	Around 795 million people face hunger daily, and more than two billion people lack vital micronutrients, affecting their health and life expectancy. In addition, 30% of food production is lost to pests and pathogens	Source information here
Environment	Oxford Nanopore's technology is enabling researchers to find out quickly, and often *in situ*, if a species is endangered and how to support its conservation. Our technology also delivers insights into changing environments, such as the ocean microbiome	Three-quarters of the land-based environment and about 66% of the marine environment have been significantly altered by human actions and one million species are now threatened with extinction. Loss of biodiversity is therefore shown to be not only an environmental issue but also a developmental, economic, security, social, and moral issue as well	Source information here

Product

Impact

CASE STUDY

Rapid, in-surgery tumour profiling

The prognosis and suitability of brain tumour patients for surgery are currently determined with imaging and biopsies. These approaches can be inaccurate, invasive, and time-intensive: it is generally not possible to tell the type of tumour a patient has until weeks afterwards, which may be too late to intervene appropriately, particularly in the case of aggressive tumours.

Luna Djirackor from Oslo University Hospital in Norway used the MinION device to analyse more than 100 tumour samples and, in just a couple of hours, obtained results to match those returned weeks later by current methods. The approach also correctly classified tumour tissue that had given inconclusive histology results, suggesting that even on really small pieces of tissue without much tumour the nanopore data could deliver the correct result.

Luna then tested the same approach on intraoperative samples, demonstrating the ability to classify brain tumours in as little as 91 minutes — quick enough for results to be returned to the operating table during brain surgery. Strikingly, in 60% of the samples sequenced in the study, the information obtained would have altered the pre-planned surgical strategy, demonstrating how this approach has the potential to significantly improve surgical outcomes in the future.

Related SDGs

Impact

CASE STUDY

Improving organ transplant success rates

Organ transplantation has been a huge success over the last 50 years; however, most transplants are typically short lived. The average survival rate post kidney transplant, for example, is only about 12 years[5] and many fail within the first few years due to rejection, predominantly antibody-mediated rejection, which results from patient antibodies binding to antigens on the donor tissue.

Karen Sherwood and Paul Keown from the University of British Colombia, Canada, are part of a team working to both better characterise organs for transplantation and monitor the immune response in individuals after transplantation, with the aim of increasing organ donation success rates.

The team developed a simple workflow that utilises the MinION device to rapidly sequence the antigens on the donor tissue to check for compatibility prior to transplantation — something that has not existed as a single solution to date.

The protocol the team developed is applicable to time-sensitive applications, such as deceased donor typing, enabling better assessments of compatibility. The technology enables significantly shorter turnaround time for multiple samples, and at a lower cost than existing solutions.

Karen commented that nanopore sequencing offers '*tremendous potential for speed, depth, and flexibility in both discovery and delivery sciences, and is approaching the point of clinical application*'.

This team is just one of many applying nanopore sequencing to tissue typing. Last year, in recognition of a shift to nanopore sequencing in this space, global transplantation diagnostic company, Omixon, released NanoTYPE — a kit to specifically support tissue typing using nanopore sequencing.

Find out more here

Related SDGs

References:

[5] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6379008/

CASE STUDY

Sequencing to fundamentally change critical care

It took teams of scientists around the globe 13 years and three billion dollars to sequence the first human genome. In 2021, a team led by scientists at Stanford University, USA, used Oxford Nanopore's PromethION 48 device to break the record for the fastest whole human genome ever sequenced — it took just five hours and two minutes.

Such rapid, whole-genome sequencing has the potential to enable the identification of rare genetic disorders in critically ill patients faster than ever before.

Traditionally, characterisation of variants that cause genetic disease using whole-genome sequencing has taken days or weeks to return a result. In time-critical contexts, this approach has therefore not been viable to date. In a study, the team at Stanford sequenced 12 unique research samples from patients aged between three months to 57 years using their rapid workflow and identified disease-causing variants in as little as seven hours and 18 minutes.

A disease-causing or likely disease-causing mutation was identified in five of the 12 samples analysed. According to the team, this 'informed clinical management (including sympathectomy, heart transplantation, screening, and changes in medication) for each of the five patients or their family members'.

Find out more here

In 2021, a team led by scientists at Stanford University, USA, used Oxford Nanopore's PromethION 48 device to break the record for the fastest whole human genome ever sequenced — it took just five hours and two minutes.

Product

Sustainable innovation

Focus area: Sustainable innovation

Reduction in plastic use
13.7 tonnes

Resource efficiency and materials

We are committed to conducting our operations and producing our devices in the most sustainable and resource-efficient manner possible. Oxford Nanopore products use very little power to operate relative to the output in sequencing data, making them inherently energy efficient. We analysed the energy consumption of Oxford Nanopore's product range at max power consumption, meaning all positions on the instrument simultaneously acquiring raw sequencing data and basecalling with the highest accuracy models in real time. In this theoretical analysis, we found that power consumption ranged from .135 kW for the MinION Mk1B up to 3.4 kW for a PromethION 48. By comparison, the average dishwasher uses about .91 kWh per dishwashing cycle.

We have focused on internal processes, switching the packaging material in our distribution process, as well as increasing circularity in the life cycle of our products. Oxford Nanopore is further committed to improving the environmental performance of our products.

We are constantly reviewing and optimising our manufacturing processes and use of materials to reduce our environmental impact.

In 2022, we maximised the circularity of our raw materials to deliver resource efficiency by taking back 5.2 tonnes of our used products (3.3 tonnes of devices; 1.9 tonnes of consumables). In 2021, we took back 5.5 tonnes (3.8 tonnes of devices; 1.7 tonnes of consumables).

We have allocated 'return bins' since 2020 to make recycling used flow cells even easier for our customers. This minimises the transportation of return items and enables us to recycle some of the electronic components and finite materials. The programme continues to grow and, in 2022, we saw a 19% year-on-year increase in the percentage returned to us. We successfully received back more than half of our shipped flow cells (59%) and we were able to reuse a fifth of those for external customers, R&D activities, and in Configuration Test Cells (CTCs). The remainder are either kept for future use or the electronic components and finite materials are recycled. Any materials that cannot be reused are responsibly disposed.

> *Oxford Nanopore is committed to improving the environmental performance of our products. We are constantly reviewing and optimising our manufacturing processes and use of materials to reduce our environmental impact.*

Boosting innovation

We continue to integrate sustainability into our product design and delivery as new materials and components become available. We consider and respond to environmental issues throughout every stage of our product lifecycle, and our high-efficiency products play a role in helping the economy move to a low-carbon future.

Packaging

As part of our ongoing efforts to increase the accessibility of our products to communities around the world, we have worked toward the goal of removing our reliance on cold chain distribution. That said our products still need to be kept within a certain temperature range during distribution. Conventional cooling methods commonly found in the biotechnology industry typically consist of single-use non-recyclable polystyrene containers filled with dry ice or cold packs, the disposal of which has significant negative impacts on the environment.

To ensure our packing is as recyclable and sustainable as possible, starting in 2017, we began insulating our products with Woolcool®, a recyclable cardboard container with a wool-based insulator to keep products at the required temperature, without the need for polystyrene. In 2022, we continued to insulate our products with Woolcool® and make best use of Crēdo™ Boxes (reusable iceless insulating containers) resulting in a reduction in plastic use of 13.7 tonnes. From the 24.3 tonnes of packaging material we purchased for our primary products, 19.8 tonnes (82%) were renewable (made from a natural resource that can be replenished). Overall, in 2022 across all of our products and services, we were able to source 91 tonnes (79%) of packaging from recycled materials.

Additionally, the nanopore development team has worked to deliver reagent kits that are suitable for ambient or cool shipping. This enables them to be shipped alongside our consumable flow cells and reduces the number of parcels required to ship to end-users by 50%, compared to other technologies that have to ship their consumables and reagents separately.

Product

Sustainable innovation

Quality

Oxford Nanopore is committed to providing high-quality products. We have a Quality Management System in place, which was certified to ISO 9001:2015 in 2022, enabling more customers who may be operating in regulated environments to work with nanopore sequencing.

Our Quality Policy outlines our commitment to:

- Meet and exceed customer expectations to deliver high-quality products and services
- Maintain compliance to applicable external regulations and standards
- Ensure through quality system feedback processes that the voice of the customer (internal and external) is heard throughout the organisation so opportunities for improvement are identified and acted upon

Responsible sourcing

Our commitment to sustainable practices extends beyond our internal operations and distribution, to encompass our entire value chain. Oxford Nanopore seeks to work with worldwide suppliers who operate under principles that are similar to our business conduct and ethics.

Supply Chain Code of Conduct

Oxford Nanopore has a Supply Chain Code of Conduct in place, and we have implemented robust, risk- based requirements and internal processes to ensure all suppliers comply. It is important that Oxford Nanopore works with suppliers who have a consistent set of ethical standards who conduct business legally, fairly, and with integrity. All suppliers must comply with the laws of applicable legal systems and apply the United Nations Guiding Principles on Business and Human Rights to all business operations, which we monitor through a combination of self-assessment questionnaires, onsite or remote audits and third-party web verification to identify potential infringement/risks.

Suppliers are assessed against the Supply Chain Code of Conduct criteria and are audited and scored to ensure they can evidence their adherence to our policies. Where scores are low, those suppliers are re-audited sooner than those with higher scores. We also conduct an annual analysis to ensure the suppliers' own policies are up to date. This is conducted by Tim Cowper (CFO), who then reports on the level of compliance to our Board of Directors.

We monitor all suppliers from a third-party monitoring perspective, and we carry out additional verification for key suppliers, which include those within the top 50% of spend and meet other criteria such as high-sourcing risk, high-supply risk, executive visibility, include elements of intellectual property critical to the Company.

In 2022, all key suppliers (covering 48% of total spend) completed a range of questionnaires covering social and environmental factors, including human rights, forced and child labour, anti-bribery and anti-corruption, conflicts of interest, environmental protection, and health and safety. All key suppliers, other than one new key supplier, have responded to the questionnaires. Within that group, we have identified seven suppliers with areas for improvement and have engaged with them on these matters.

Environmental factors, such as the reduction of waste, pollution, water, and energy use, are included within our Supply Chain Code of Conduct. In 2022, we worked with our suppliers to improve their environmental performance by collecting and reusing our Winchester bottles, which contain materials used in our production process, rather than them being incinerated. We also use pre-conditioned reusable boxes for our cold chain shipments from the UK to the USA and plan on extending this to most of our distribution hubs in the future. These boxes can be used an unlimited number of times as long as the shipper integrity is maintained.

We are implementing a new supply chain risk monitoring system that will automate some of our supplier audit processes, allowing us to increase our audit coverage of suppliers and obtain more relevant and substantial data, by using a combination of questionnaires, publicly available information, and subscription databases. The solution is a combination of systems and processes which will, in the future, allow us to not only look into a larger number of suppliers but also into the second, third, and fourth tiers of key supplier supply chains.

Conflict minerals

Oxford Nanopore is committed to the responsible sourcing of minerals throughout its global supply chain. We have a Conflict Minerals Policy in place, approved by the Board. Oxford Nanopore is not mandated to directly register with The U.S. Securities and Exchange Commission ('SEC') on its dealings with conflict minerals. However, as a responsible organisation, we aim to follow best practice in all of our dealings. We routinely evaluate our suppliers to ensure that they are adhering to our expectations and values. We will immediately suspend or discontinue engagement with any suppliers where we identify a reasonable risk that they are sourcing from, or linked to, any party committing human rights abuses.

Product

CASE STUDY

Innovating to enable greater ease-of-use outside the lab

Our goal is to enable the analysis of anything by anyone, anywhere. MinION was designed to be portable and therefore accessible to a much wider breadth of users than other sequencing platforms.

Since MinION was launched, the research and development teams have worked to innovate further in this space and develop products and consumables that work alongside MinION to ensure ease-of-use outside of the lab environment.

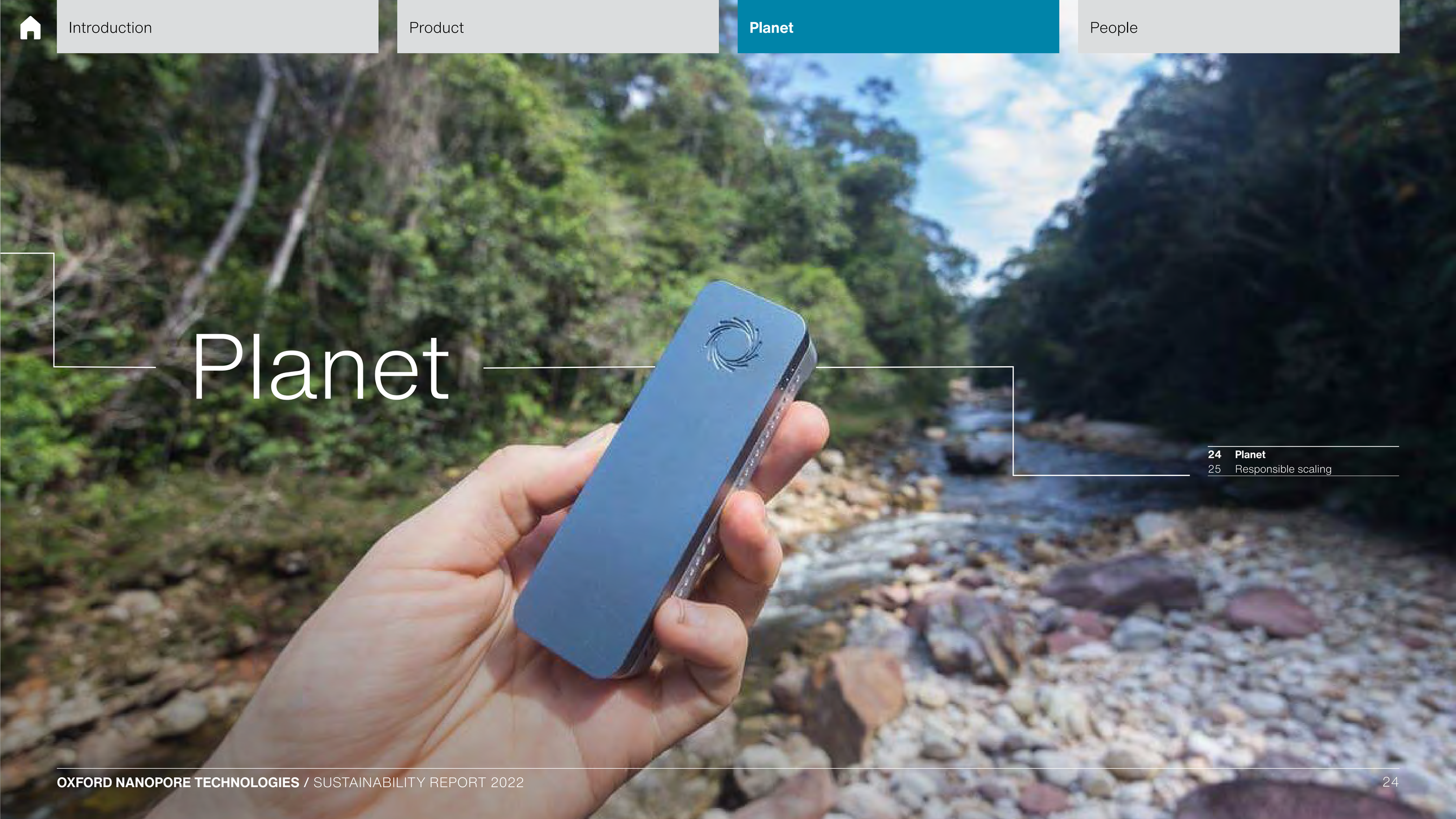
One such innovation to come out of this work was VolTRAX™ — an automated library preparation device that quite simply removed the need for a laboratory. Voltrax is now evolving — and this spring, we announced an extension of its capabilities to not only enable portable library prep in the field but also streamline the entire sequencing process from nucleic acid extraction and library preparation to nanopore sequencing, facilitated by an integrated flow cell. Called the TraxION™, this portable, sustainable and efficient device eliminates the need for pipettes and provides an innovative alternative to traditional laboratory equipment.

Further to providing a portable sample preparation option for in-field sequencing, our portable solution simplifies the sample preparation process, making nanopore sequencing more accessible to non-scientists. The device therefore has the potential to bring sequencing to communities who would benefit from sequencing information but do not have the expertise or infrastructure in place, and to more classrooms around the world.

We are continually innovating to meet the needs of different customers, while reducing the environmental impact of our technology. This product line has been successfully used by a number of customers in farflung environments around the globe, for example, to sequence bacteria associated with permafrost thaw in Alaska and bat microbiomes in the Gobi desert.

The handheld device is designed as an alternative to a range of laboratory equipment making it inherently more sustainable, whilst enabling reproducible and portable sample preparation.

Planet



24 Planet
25 Responsible scaling

Planet

Responsible scaling

Our commitments: Responsible scaling

Guiding principle

Maintaining high growth in a responsible way, by protecting the planet through energy efficiency, product design, and ensuring that our commitment to sustainable practices extends beyond our internal operations and distribution to encompass our entire value chain.

Commitments

- Reduce the carbon intensity of our operations by identifying projects to reduce carbon emissions with an updated target to reduce the tonnes of CO_2e emitted per £m revenue by 2.5% in 2023
- Carry out further analysis with a view of preparing a detailed plan by the end of 2023 that will set out how we will achieve net zero
- Align our EHS programmes with the international standards for the environment (ISO 14001) and occupational health and safety (ISO 45001) by 2024
- Continue to work with key suppliers on social and environmental factors, ensuring all key suppliers (covering 48% of total spend) meet our standards on factors, including human rights, environmental protection, health and safety, and more
- Further embed a culture of ESG awareness with suppliers by updating our procurement process to focus on ESG and risk

Related SDGs

Focus area: Responsible scaling

At Oxford Nanopore, our devices contribute to research designed to analyse, assess, and develop solutions and strategies to address the impacts of climate change, which affect us all globally.

We are committed to protecting the environment and reducing our impact within all of our operations.

We are adapting to, and mitigating against, climate change risks and impacts, through commitments to improved efficiencies throughout Oxford Nanopore's operations, including in our buildings and value chain. Our commitment to transparency includes the disclosure of our carbon emissions and reporting against the Task Force on Climate-related Financial Disclosures (TCFD) recommendations, which includes details of our oversight, risk assessment, and strategy of climate-related issues.

Our full TCFD can be found in our 2022 Annual Report.

View here

Managing environmental performance

Our EHS Policy sets out our environmental arrangements, and the Board has ultimate responsibility for Company environmental matters. The EHS Policy applies to all employees. In 2022, environmental training was provided to employees through EHS inductions, management training, communications via our internal Resource Centre, and through discussions at the EHS Steering Committee meetings. We are planning on further expanding our environmental training in 2023.

We strive to improve our environmental performance throughout all of Oxford Nanopore's global operations. We are committed to pollution prevention; the reduction of waste, releases, emissions, and water use; and to the efficient use of energy.

Oxford Nanopore also has an environmental team which was formed late 2022, whose aim is to facilitate the implementation of employee ideas to improve the environmental performance of Oxford Nanopore.

Oxford Nanopore has incurred no environmental fines or penalties in the current and last three fiscal years.

Planet

Responsible scaling

Energy and greenhouse gas emissions

Oxford Nanopore Technologies is a rapidly growing company; however, we wish to scale responsibly and have committed to reduce the carbon intensity of our operations. With support from a number of environmental consultants, we have begun to recognise opportunities to understand and improve sustainability, and we have placed a specific focus on identifying projects to reduce carbon emissions.

For the year ending 31 December 2022, we aimed to reduce the tonnes of CO_2e emitted per £m revenue by 2%. We have successfully reduced tonnes of CO_2e emitted per £m revenue by 25.47% in 2022.

In 2023, we have set an updated target to reduce the tonnes of CO_2e emitted per £m revenue by 2.5%.

During the year, we have commenced installing LED lighting at two facilities on our Oxford campus and we will be implementing further LED upgrades within our operations in 2023. We are also investigating the feasibility of solar panel installations for a number of our facilities.

We have undergone an Energy Savings Opportunities Scheme (ESOS) to determine where energy efficiency improvements and reductions are possible at our headquarters in Oxford, while also encouraging employees to join workplace energy reduction initiatives, such as our 'Cycle to Work' commuter bicycle programme. Additionally, we are analysing our shipping and distribution process, to increase energy efficiency and reduce emissions related to our distribution chain.

All directly charged metered electricity was generated by REGO renewable wind sources through our supplier EON/NPower. This accounts for approximately 87% of our total electricity supply. To calculate our emissions and energy usage data, we have followed the 2019 UK Government environmental reporting guidance. We have used the GHG Protocol Corporate Accounting and Reporting Standard (revised edition) and emission factors from the UK Government's GHG Conversion Factors for Company Reporting 2019. In 2022, for the first time, we are reporting against all material categories of our Scope 3 emissions. Our reporting of Scope 1 and 2 emissions and energy data covers 100% of our global operations. Furthermore, our reporting of Scope 3 emissions covers 100% of our upstream and downstream value chain.

The change in emissions data year on year is due to increased throughput and energy saving efforts.

Energy consumption and emissions data

Emissions (tCO_2e)	**FY22**			FY21		
	UK	**Global (excl UK)**	**Total**	UK	Global (excl UK)	Total
Scope 1 (tCO_2e)	**403**	**45**	**448**	358	35	393
Scope 2 – location based (tCO_2e)	**1,118**	**165**	**1,283**	1,094	84	1,178
Total Scope 1 and 2 (location)	**1,521**	**210**	**1,731**	1,452	118	1,570
Intensity ratio (tCO_2e per £m revenue)– Scope 1 and 2	-	-	**8.72**	-	-	11.7
Total energy consumption	**7,710,813**	**706,002**	**8,416,815**	6,450,022	516,349	6,978,599

Energy consumption (renewable/non-renewable)

Energy (kWh)	**FY22**	FY21
Total renewable energy consumption	**4,956,743**	4,373,704
Total non-renewable energy consumption	**3,460,073**	2,604,895

Planet

Scope 3 emissions (tCO_2e)

Category	FY22 (tCO_2e)
Purchased goods and services	49,014
Capital goods	-
Fuel-and-energy-related activities (not included in Scope 1 or 2)	489
Upstream transportation and distribution	204
Waste generated in operations	66
Business travel	1,078
Employee commuting	1,057
Upstream leased assets	420
Total Upstream Scope 3	**52,328**
Downstream transportation and distribution	1,053
Processing of sold products	-
Use of sold products	479
End-of-life treatment of sold products	37
Downstream leased assets	-
Franchises	-
Investments	306
Total Downstream Scope 3	**1,875**
Total Scope 3	**54,203**
Total Scope 1, 2 and 3 (location)	**55,934**

Water consumption

Oxford Nanopore's operations are not particularly water intensive; however, we are expanding our environmental risk management process to assess and prioritise risk. This will allow us to assess and manage the impact that our water use has on the environment.

Water consumption

	2022	2021	2020
Freshwater usage (m3)	4,311.26	2,557.61	3,304.14

The above water consumption data covers four locations at our Oxford and Harwell campuses.

Waste management

Within all of our operations, we aim to reduce, reuse, and recycle waste, both hazardous and non-hazardous. Our EHS management system covers waste and hazardous materials, with our offices and labs including recycling facilities for paper and other recyclable items. The cafe at Oxford Nanopore headquarters does not offer single-use plastics, instead providing paper takeaway materials, larger condiment bottles, and metal cutlery. Each of our employees has access to a reusable porcelain cup.

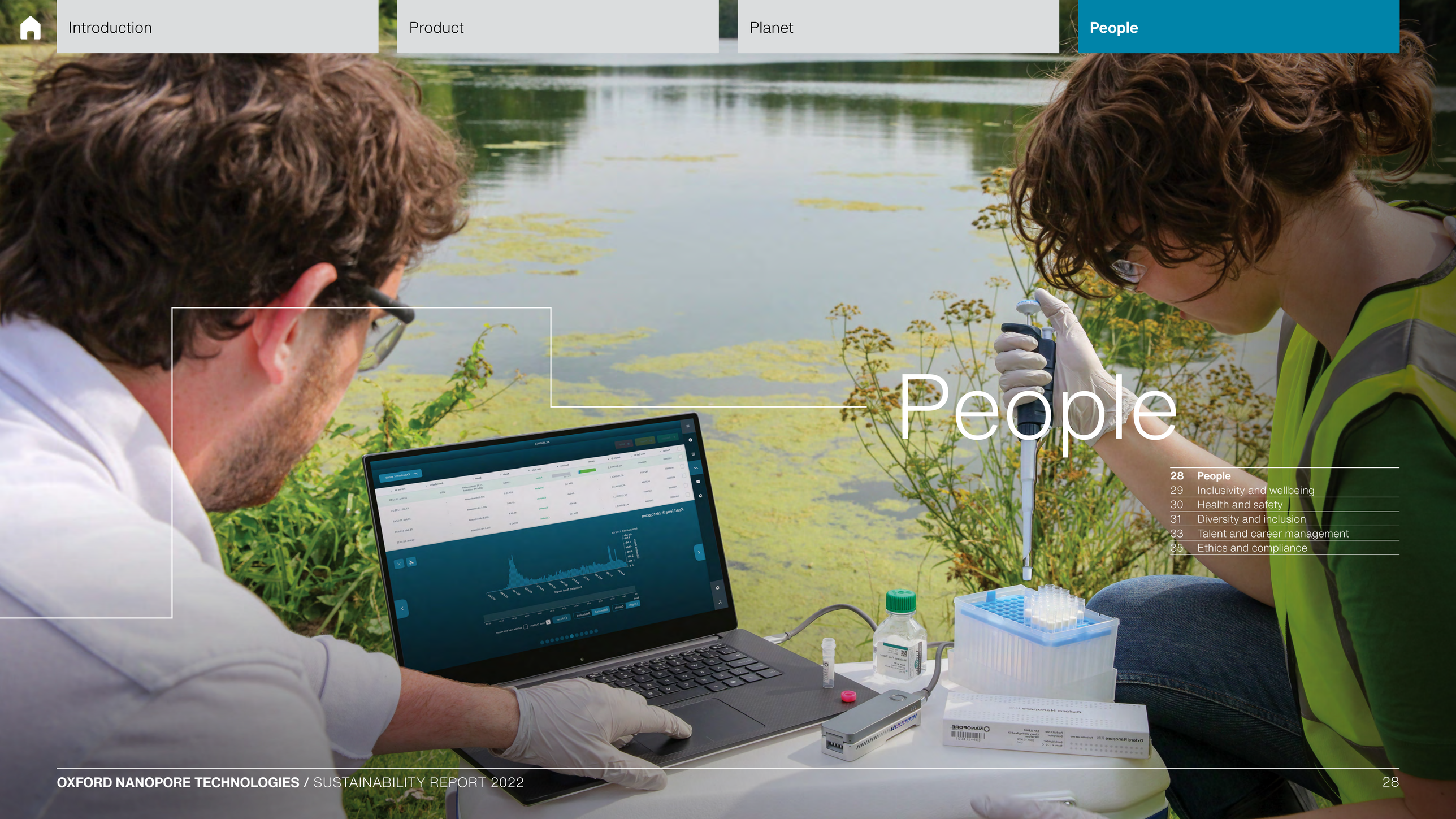
We also reduce the waste associated with distribution through the use of Woolcool®, a recyclable cardboard container with a wool-based insulator, which keeps devices at the required temperature without the need for polystyrene. We also encourage customers to return their used products in the same packaging, which allows us to reuse or recycle the materials, creating a closed-loop system.

Another process in place to reduce waste is our Winchester bottle collection scheme. Previously incinerated, the bottles are now collected by our suppliers and sent for recycling. In addition, we resold a significant number of our used FPGAs (semiconductors) and GPUs (graphics processors) from returned devices to third parties, rather than disposing them.

All businesses have a duty of care to ensure they segregate, store and transport waste appropriately and securely. We have recently introduced a total waste management process. This will allow us to increase waste segregation options, establish a waste hierarchy, and provide us with transparent waste data and metrics, while also reducing costs.

Total Scope 3 emissions (tCO_2e)

54,203



People

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People

Inclusivity and wellbeing

Commitments: Inclusivity and wellbeing

Guiding principle

Promoting a culture that is inclusive, embraces diversity, and prioritises the development of our people and their wellbeing.

Commitments

- Embed the Values in Action programme to support an employee-engagement culture, where employees have a voice to contribute ideas that support key decisions
- Implement variable pay arrangements to promote the furthering of our societal impact and our inclusive work environment
- Continue to strengthen the skills of our employees through ongoing customised learning and development

Related SDGs

Focus area: Inclusivity and wellbeing

Health and safety is of paramount importance to us as a responsible employer. We strive to safeguard all of our employees' health, safety, and wellbeing, including visitors and contractors. Our EHS Policy sets out our arrangements for health and safety with the Board having ultimate responsibility and accountability. Performance against the objectives of the EHS policy is reviewed at least every six months at the Oxford Nanopore EHS Steering Committee meetings.

Leaders at all levels of the organisation have been trained and are required to communicate Oxford Nanopore's health and safety expectations and ensure appropriate resources are provided to achieve a high health and safety performance standard. Oxford Nanopore is committed to ensuring awareness about health and safety issues through our internal Oxford Nanopore Resources Centre which is available to all employees, managerial meetings, committees, and EHS representatives. Oxford Nanopore is committed to providing safe and healthy working conditions and implementing EHS objectives that drive continuous improvement of EHS programmes and performance across all aspects of the business. This includes collaboration with employees on EHS issues. All employees are responsible for their health and safety through compliance with Oxford Nanopore's EHS policy, procedures, and EHS performance expectations. Employees are also responsible for the health and safety of their colleagues, contractors, and visitors by highlighting and reporting health and safety risks and concerns, and where safe to do so, taking action.

Safety first

Oxford Nanopore is in the process of developing an EHS management system, and we are continuing to align our EHS programmes with the international standards for the environment (ISO 14001) and occupational health and safety (ISO 45001) with the objective to be certified during 2024.

We provide all of our employees with health and safety training, including general and role specific EHS training. General training includes EHS induction, manual handling, ergonomics, fire and evacuation procedures. Employees are also given specific training based upon their role, such as managerial responsibilities and accountability awareness, best laboratory practices, first aid and fire marshal training.

Safety performance

We are committed to preventing occupational accidents, diseases, and illnesses, to ultimately achieve an accident-free workplace. Health and safety hazards are identified and associated controls enacted; the process is documented and disseminated through formal risk assessments.

Health and safety metrics are recorded using a cloud-based EHS management system, EcoOnline and we actively encourage the reporting of injuries, incidents, improvement suggestions, near misses, and hazards. There have been no fatalities of employees or contractors in 2022 and in all prior years.

People

Health and safety

EcoOnline implementation

In June 2022, we introduced a cloud-based portal to track and report all of our EHS activities. EcoOnline has provided Oxford Nanopore with a unified and centralised platform to report and circulate our environment, health, and safety information. EcoOnline allows us to review any reported incidents internally to help raise awareness, learn from them, and drive behaviour change to improve the safety of employees. Dashboards are available to all staff, so they are aware of reporting. Managers now have access to their team's reporting and are made aware of matters at the time of the report. This helps provide Oxford Nanopore with a transparent process for EHS and motivates employees to report and take action where safe to do so, ultimately improving the EHS performance of Oxford Nanopore.

We also recently introduced EHS inspections, which has allowed Oxford Nanopore to better understand performance and prioritise areas for improvements and best practice. Reporting over the last six months has significantly increased, indicating the generally positive culture and highlighting the ease and adoption of the reporting system. Environmental modules have been purchased and will be implemented in the first half of 2023. This will aim to include environmental data such as energy, water, and waste, where available. We expect a similar response to this aspect of the platform as to the currently available modules.

Overall, EcoOnline has helped department heads and employees engage with EHS, providing transparent information to senior leaders. The reporting and notification system has worked well, alerting us to issues rapidly, and having all EHS-related reporting in a single platform provides us with unity and clarity for all levels of management and employment.

In our financial year 2022, we only had one reported incidence of Reporting of Injuries, Diseases, and Dangerous Occurrences (RIDDOR) making our RIDDOR rate 0.046.

Health and wellbeing

We believe that our employees' wellbeing is a critical component to the company's success, and we look after our employees, support their training and development, recognise cultural differences, respect their human rights, and promote a fair working environment with equal opportunities for all.

Both physical and mental wellbeing are of importance to us, and we take steps to proactively assist all of our employees. We aim to make sure that we provide them with the support they need to stay healthy and to have easy access to help, advice, and treatment when they may need it.

We have various programmes and provide a range of benefits to support their health and wellbeing, including private medical insurance and an Employee Assistance Programme (EAP). The EAP is an employee benefit designed to help employees deal with personal and professional problems, which could be affecting their home or work life, health, and general wellbeing.

We consistently review the range of support we provide, and to continue our focus on employees' mental health, we will provide Mental Health First Aid (MHFA) training to selected employees in 2023.

Our people believe in our purpose and vision. Effective engagement aligns employees with our strong culture and core values, ensuring everyone works together towards a shared vision.

CASE STUDY

Values in Action (ViA)

With a distributed, growing team of more than 1,000 employees, we launched ViA in September 2022 as a global collaboration with senior sponsorship from each strategic business unit and region to increase inclusivity by optimising connectivity for all of our people, wherever they work for Oxford Nanopore. It is a framework that will create an employee pathway for everyone in the company to contribute their voice to expressing and evolving our culture and employee experience through 42 employee representatives, selected with extensive inclusion criteria.

Six interest groups, 'pods', will be established to represent the core themes that drive a highly engaged and impactful organisation (see table).

These pods will be supported in their activity by our senior leadership team, through two roles:

- Business unit advocates, who will help pod members navigate contacts and themes in a specific business area
- Sponsors, who will mentor a specific pod and support emergent ideas for the benefit of the wider organisation

Each quarter, members of the different pods will join Gordon Sanghera (CEO) in a Hub meeting, where they will be able to share their thoughts and creative solutions to enrich our working environment and champion our collective success, and set goals for implementation.

Diversity and inclusion	**Environment / sustainability**
Wellbeing	**Social and community**
Internal comms	**Development / careers**

People

Diversity and inclusion

Focus area: Inclusivity and wellbeing

Engagement

It is important to us that we engage with our employees. Sarah Gordon Wild is Oxford Nanopore's designated Non-Executive Director with responsibility for employee engagement and inclusion. The Values in Action (ViA) community will also be an opportunity for Sarah Gordon Wild to engage with employees, to explore and validate the lived culture and Values in Action of our organisation, and report back to the wider Board.

At Oxford Nanopore, we actively recruit people from diverse backgrounds with varied experience and perspectives, who truly reflect the global scientific community we serve. Diversity is reflected across our entire business practices; there are currently 55 different nationalities employed at Oxford Nanopore. Our ambition is to build and maintain a diverse, equitable, and inclusive culture in the workplace and across Oxford Nanopore's value chain.

We value people as individuals with diverse opinions, cultures, lifestyles, and circumstances and believe in equality of opportunity, following practices that are free from unfair and unlawful discrimination. We are committed to creating a supportive and inclusive environment where respect and understanding are fostered, and the diversity of both people and perspective is positively valued.

Oxford Nanopore has an Equality and Diversity Policy in place, applicable to all employees. The Board has overall responsibility for this policy.

Additionally, we set up a Diversity and Inclusion (D&I) Framework in 2020. This outlines the commitments and actions that will continue to maintain and foster Oxford Nanopore's diverse and inclusive culture that permeates our workplace and across our value chain. We offer monthly programmes that bring in external researchers to discuss how they are using our products, helping educate our employees with diverse backgrounds and different experience levels. We broadly support employees who wish to perform scientific outreach, and we are commencing more formal programmes. For example, in 2022, we launched a commitment to donate £25,000 per annum for three years to the Broadening Horizons initiative with the Royal Society of Chemistry. The Broadening Horizons initiative sponsors the promotion of careers in chemistry to under-represented, minority graduates and PhD postgraduates.

When creating our D&I framework, we completed an internal evaluation, holding focus groups with employees to learn directly from them. The focus group findings showed that employees immensely valued flexible working hours and days, but also revealed that employees were seeking increased transparency around hiring, employee surveys to provide direct feedback, and increased employee development opportunities. As a result, we are examining ways to improve Values in Action around how to provide a framework for all employees to contribute to topics such as D&I and internal knowledge sharing.

Oxford Nanopore is committed to non-discrimination. We recruit the best, regardless of gender, race, social background, religion or belief, sex, sexual orientation, gender reassignment, marital or civil partnership status, pregnancy and maternity, age, disability, political opinion, trade union membership, or sensitive medical conditions.

We have clear procedures in place that enable candidates for jobs and employees to raise a grievance or make a complaint if they feel that they have been unfairly treated.

> *We value people as individuals with diverse opinions, cultures, lifestyles, and circumstances and believe in equality of opportunity.*

Our commitments: Diversity

- Create an environment in which individual differences and your contributions are recognised and valued
- Provide a working environment that promotes dignity and respect for all, where no form of intimidation, bullying, or harassment is tolerated
- Provide training, development, and progression opportunities for all
- Understand equality in the workplace is good management practice
- Review and update all of our employment practices and procedures to ensure fairness
- Review and update our recruitment practices to ensure they are fair, consistent, and free from unconscious bias
- Monitor and review this policy annually
- Have clear procedures that enable candidates for jobs and employees to raise a grievance or make a complaint if they feel unfairly treated
- Treating breaches of our equality and diversity policy as misconduct which could lead to disciplinary proceedings

People

Diversity and inclusion

Focus area: Inclusivity and wellbeing

Oxford Nanopore will also ensure through its recruitment and selection policy that the structure, design, and requirements of jobs do not discriminate but promote the diversity and inclusion our business needs to be successful. We appreciate that more and more of our people are striving for greater flexibility in how they manage and deliver their work, and we are open and supportive to flexible and smart arrangements that support the needs of our people and the overall business.

We have many examples of flexible working arrangements including reduced hours and the ability to work from home, to support the diverse nature and realise the full potential of our employees. We offer enhanced maternity and paternity leave and actively engage in wellbeing and support programmes. We will not tolerate victimisation, bullying, or harassment in any form.

Oxford Nanopore is an equal opportunities employer and is committed to recruiting people from diverse backgrounds, including people with disabilities. Any person who identifies as having a disability is given fair consideration for a vacancy against the requirements of the role, and where possible, we make reasonable accommodations for employees who identify as having a disability. All employees are given the same training, development, and job opportunities.

Should any employee experience a situation where they become disabled during their employment, we would ensure all efforts are made to retrain and adjust the employee's environments and/or working patterns where possible to allow them to continue to maximise their potential.

We provide support and D&I training to managers and senior leaders to ensure our practices are free from bias. We have further developed D&I training and education for all employees. During 2022, training on equal opportunities has been completed by employees through leadership programmes, specific coaching, and crucial conversation modules.

We will ensure that all employees, male or female, have the right to the same contractual pay and benefits for carrying out the same work, work rated as equivalent work, or work of equal value. As a UK company, we must comply with regulations on gender pay gap reporting. Data is very important to track and evaluate our progress. We have progressed on our goal to close the gap.

Oxford Nanopore is committed to, and recognises the benefits of, diversity at all levels throughout the organisation. We place great importance on ensuring the members of the board reflect diversity in its broadest sense and believe that greater diversity is essential to deliver our company strategy. We adopted a Board Diversity Policy in 2021.

The Board meets the target on ethnic diversity representation on the Board as set out in the Parker Review.

Oxford Nanopore has a commitment to increase its Board gender diversity to at least 40% female representation within three years of its initial public offering. We also meet the proposed FCA recommendation that at least one of its senior board positions is held by a female director.

Gender diversity statistics 2022

	Male	Female	Total	% Male	% Female
Board	8	2	10	80	20
Operating Committee	7	4	11	64	36
Operating Committee direct reports (excluding admin support)	32	25	57	58	42
All employees	596	423	1,019	58	42

Across our employees, the gender split at the end of 2022 was 42% female which is 2% higher than 2021.

Board 10 (people)

80% **Male**

20% **Female**

Operating Committee (11 people)

64% **Male**

36% **Female**

All employees (1,019 people)

58% **Male**

42% **Female**

People

Talent and career management

Our goal is to attract, develop, and retain talent at Oxford Nanopore, as well as inspire and nurture the next generation of scientists, through provision of accessible technology and educational support. To strengthen these efforts, we conduct a number of internal and external programmes.

The Nomination Committee is responsible for ensuring that appropriate talent development programmes are in place to maximise the potential of our employees.

We have worked to maintain a culture that incentivises and rewards excellence, while encouraging long-term relationships with Oxford Nanopore, resulting in our low employee turnover rates. In 2022, our employee turnover rate was 12% (2021: 6%).

As our employee base has grown two-fold over the past five years, we have worked to maintain a culture that incentivises and rewards excellence, while encouraging long-term employee retention. It is noteworthy that the overwhelming majority of our executive team has a long-standing involvement with Oxford Nanopore, with an average tenure for senior leadership of approximately eight years. We were pleased to celebrate Loyalty Awards in 2022 with the CEO and 57 employees, who received recognition for their 10 years of service and a monetary award.

Training

We are committed to offering training for all employee levels, providing opportunities for our employees to engage in life-long learning. LinkedIn Learning is a resource offered to all employees worldwide, with the exception of China where another solution is being sourced. This allows unlimited access to personal effectiveness, management, and skills-based learning.

In 2022, 8,832 total training hours were completed, 1,353 of which were completed through LinkedIn Learning, with the rest from essential skills and mandatory learning.

In-house development activities were completed by 477 employees, which included:

- Mastery programmes – Manager Mastery and My Mastery
- Leadership mastery (Senior Leadership Programme and Global onboarding Pilot)
- High Performing Teams
- Mentoring

In July 2022, we launched our Mastery series of leadership, management, and personal development programmes: a suite of modular content that supports personal effectiveness through to strategic thought leadership. During the third and fourth quarters of 2022, 539 colleagues — about 45% of all employees — had undertaken a development activity provided by this programme.

Career development

We are committed to promoting career development. 41 senior leaders are signed up to the Senior Leadership Development Programme, which was delivered in-house and exclusively to Oxford Nanopore delegates by executive and organisational development consultancy The Butcher Bailey Partnership. The programme allowed for thought leadership and strategic input from delegates of other industries and backgrounds, testing perspectives, biases, and ability to apply learning for the benefit of all of Oxford Nanopore.

Our focus on employee growth is complemented by a focus on annual and mid-year performance and development reviews. In 2022, all employees completed at least one annual review, where manager conversation guides and drop-in training calls were used to ensure every employee received a fair and consistent review. High performing teams were supported by Acumen Executive Coaching to continue to promote collaboration and effectiveness. Acumen continues to support Oxford Nanopore with one-to-one developmental coaching for senior leaders and high-potential employees. They support senior team coaching activities and have led a pilot initiative to enhance the onboarding experience, cultural immersion, and acceleration of contribution by new senior leaders joining our organisation. We are firm believers that providing employees with feedback and resources will lay a solid foundation for their growth.

In 2023, we will continue to expand organisational development opportunities with the launch of four strategic programmes that will align to promote professional excellence through industry recognised programmes with Six Sigma, Gartner's Supply Chain, Challenger's Sales Enablement and INSEAD's Blue Ocean strategy; these programmes are not only designed to support career development, but to enable growth of the company through strategically appropriate market approaches and additional de-risking strategies.

Internships and apprenticeships

In addition to our highly successful R&D annual internships, hosting 19 undergraduate and post-doctoral researchers, we sponsor the RSC Broadening Horizons programme, which actively promotes careers in chemistry for under-represented candidates, especially those from disadvantaged backgrounds. Eight candidates have been prioritised for our 2023 intern programme as part of our commitment to further support and empower our culture of inclusion.

In 2022, we supported two apprenticeship contracts within our production area. As part of our long-term Early Careers/ Future Talent strategy, initial relationship building was undertaken with local Apprenticeship and TLevel providers, as research to inform programme design, with an aim to launch a comprehensive programme in 2023.

Total training hours

8,832hrs

People

Talent and career management

CASE STUDY

Mentoring at Oxford Nanopore

For Omnia Mohamed, a Protein Biochemist from the Biologics Development Team, Oxford Nanopore's mentorship programme has helped her find her footing, strengthen her voice as a professional, and chart her career path within the company. When Omnia joined Oxford Nanopore straight out of university, she navigated self-doubt, in addition to an abrupt transition from student to full-time working professional. Three years into the job, she was encouraged to sign up for the mentorship programme and started working with talent development director Helen Cresswell. Helen provided a safe space for Omnia to talk through her career, share concerns, and seek out advice. With Helen's help and the support and guidance of her current management team, Omnia was able to identify that she wanted: a customer-facing role and the opportunity to live and work abroad.

Omnia is now getting ready to move to the UAE to join the commercial services team. Omnia has been with Oxford Nanopore for four years and is really enjoying the work. '*I've always been a shy person, and the mentoring programme really helped me get out of my comfort zone. I now have more clarity and confidence to grow and achieve my goals*,' she said.

CASE STUDY

Leadership development at Oxford Nanopore

For Cameron Knight, a Senior Director of Product Test and Validation, an invitation to participate in a senior leadership course provided a new lens to view his role within a company that has served as home for the past 14 years.

Cameron joined Oxford Nanopore early in his career — and he's grown as a person and as a leader during that time. When he was invited to take part in the course, led by the Butcher Bailey Partnership, for senior directors and above, he was curious and did not know what to expect. In a series of eight full-day workshops held over three-months, Cameron and his 11-person cohort were invited to learn new leadership and communication skills, hear from the company's senior leadership, and get to better know colleagues.

Cameron said the course empowered him to take ownership of his role as a leader within the business, to propagate Oxford Nanopore's unique culture as the company scales, and deliver its vision in the way that CEO Gordon Sanghera might have done single-handedly in the earlier days.

Describing the experience as '*transformative*', Cameron said he learned more about himself, how he leads, and techniques to manage his teams more effectively. '*To me, the opportunity to participate in this leadership course is the clearest illustration that the company is planning for the long term and is investing in what it sees as some of the priorities to deliver its long-term vision,*' he said.

People

Ethics and compliance

Oxford Nanopore has policies and codes of conduct in place to ensure consistent ethics and compliance governance. These include but are not limited to: a Code of Conduct, Oxford Nanopore's Anti-Bribery and Corruption Policy, Modern Slavery Statement, Whistleblowing Policy, Anti-Facilitation of Tax Evasion Policy, Conflicts of Interest Policy, Privacy Policy, Data Retention Policy, and Securities Dealing Code.

In 2022, training was provided to all employees on data protection, whistleblowing, insider dealing, modern slavery, anti-bribery and corruption, and the anti-facilitation of tax evasion. In addition, all new employees are required to read and agree to our compliance policies.

Modern slavery

Oxford Nanopore supports the Modern Slavery Act 2015 and is committed to ensuring that slavery, human trafficking, child labour, forced labour, or any other abuse of human rights has no place in its business or its supply chain. All employees who engage in purchasing activities are trained to ensure they are aware of the Modern Slavery Act and both the company's, and their own responsibilities. The Board is ultimately responsible for compliance. We have published our Modern Slavery Statement on its website.

We have delivered training in a number of areas of human rights, including modern slavery. Our modern slavery statement confirms that Oxford Nanopore is committed to ensuring that slavery, human trafficking, child labour, or any other abuse of human rights has no place in our business or supply chain.

Whistleblowing

Oxford Nanopore is committed to an open environment where employees can raise any issue about any aspect of our business.

Our Whistleblowing Policy applies to all employees, contractors, and temporary workers, working for and on behalf of the Company, including any connected entity or subsidiary, subject to applicable local laws that impose any additional requirements on the Company.

A confidential and anonymous incident reporting facility is available 24 hours a day, seven days a week. It is provided by an independent specialist company called SafeCall. SafeCall runs in every country that we operate in, other than China. Whistleblowing claims from China can be reported to our General Counsel. SafeCall is available in the local languages of the locations it operates in.

Any potential incidents that are reported, via the anonymous reporting facility or directly to individual line managers or leadership, are followed up and investigations are launched where appropriate. Ongoing investigations and their outcomes are subsequently reported to the Audit and Risk Committee. Oxford Nanopore protects employees who are whistleblowers from any detrimental treatment resulting from any whistleblowing, providing they acted in good faith. In the UK, whistleblowers are protected against dismissal or detriment by the Public Interest Disclosure Act 1998.

No incidents were reported during 2022 or 2021.

Anti-bribery and corruption (ABC)

We are committed to conducting all of our business in an honest and ethical manner, and we are proud of our ethical standards. We have a zero-tolerance approach to bribery and corruption at all levels with the organisation globally and expects high standards of integrity from our people, agents, consultants, interns, and subcontractors, and any other person associated with us in business dealing and relationships worldwide. The Board is ultimately accountable for the Company's Anti-Bribery and Corruption Policy, and the responsibility for reviewing the Company's systems and controls for preventing these are delegated to the Audit and Risk Committee.

Our Anti-Bribery and Corruption Policy, including our policy on gifts and hospitality, is available for all of our people to access on our internal policy hub. The Policy is mandatory and should be considered an integral element of the Group's workplace rules.

What is bribery?

Bribery is an inducement or reward offered, promised, provided, or accepted in order to improperly gain any financial, commercial, contractual, regulatory, or personal advantage, which may constitute an offence under the Act, namely:

- Giving or offering a bribe
- Receiving or requesting a bribe
- Bribing a foreign public official

Oxford Nanopore prohibits bribery. The following are examples of conduct that are prohibited under the policy:

- Making unofficial payments to officials in order to obtain any permission, permit, or stamp particularly in connection with importing or exporting goods
- Appointing any third-party or supplier to act on behalf of the Group who you know or have good reason to believe to have engaged in any corrupt or unlawful conduct including any offences under the Act
- Paying any third-party for the purposes of being a 'fixer' to open doors and make connections for us locally or overseas or in return for a business favour or advantage, or paying an unexpected or additional fee or commission to 'facilitate' a service
- Offering a potential customer tickets to a major sporting event, but only if they agree to do business with the Group
- A supplier gives your relative a job but makes it clear that in return they expect you to use your influence within the Group to ensure we continue to do business with them

It is important to note that the above examples are non-exhaustive and have been provided for illustrative purposes only. Any other similarly corrupt behaviour is also prohibited.

> *In FY22, no employees left Oxford Nanopore due to non-compliance with our Anti-Bribery and Corruption Policy.*

People

Ethics and compliance

Facilitation payments

Facilitation payments ('facilitating', 'speed', 'back-hander' or 'grease' payments) are any payments, usually small cash payments made to low-level officials, as a bribe to secure or expedite the performance of a routine or necessary action or level of service. Facilitation payments are prohibited and our employees or related third parties must never offer, pay, solicit, or accept bribes in any form, including facilitation payments.

Gifts

The policy does not prohibit normal and appropriate gifts and hospitality (given and received) to or from third parties unless otherwise specifically stated in the policy. The intention behind the gift or hospitality should always be considered and the expectation is that gifts and hospitality offered or accepted should be modest, proportionate (including in respect of frequency and appropriateness of timing), and at all times consistent with customary business practice.

Suppliers

Where there is a significant bribery risk, all areas of the business must consult with the General Counsel in relation to appropriate anti-bribery compliance measures before:

- Appointing a new supplier
- Entering into a partnership
- Appointing an agent to work on the Company's behalf
- Entering into a new contract, or amending the terms of an existing contract

Political and charitable donations

No member of Oxford Nanopore makes contributions or donations (whether in cash or in kind) to political organisations or independent political candidates, nor do we incur any political expenditure. We respect the right of individual employees to make personal contributions, provided they are not made in any way to obtain advantage in a business transaction and/or do not in any way connect Oxford Nanopore with such contributions.

In 2022, we made no political contributions or donations.

Charitable contributions may only be given to recognised non-profit charitable organisations.

All charitable donations given on behalf of the Company must be:

- Transparent, not used as a scheme to conceal bribery and properly recorded in our books and records
- Receipted or have a letter of acknowledgement from the charity to ensure that the donations receive the proper tax treatment
- Be compliant with local law, regulations, or local or internal policies

Compliance

We take compliance with the policy very seriously. Any employee who breaches the policy may face disciplinary action up to and including dismissal for gross misconduct. In the financial year 2022, no employees left Oxford Nanopore due to non-compliance with our Anti-Bribery and Corruption Policy.

Training

We provide mandatory online training to ensure our people understand all elements of the Anti-Bribery and Corruption Policy.

Human rights

We support the principles set out in the UN Declaration of Human Rights. We respect and uphold human rights and fully comply with applicable human rights legislation in all the countries in which we operate. This includes upholding the right to freedom of association and collective bargaining, equal remuneration, minimum living wages, prohibition of child labour and forced labour, and protection against discrimination.

Information systems and technology (IS&T)

Oxford Nanopore considers that it has appropriately robust and secure information technology systems and has a Data Privacy Policy in place.

Responsibilities:

- The Board is responsible for ensuring that Oxford Nanopore has appropriate technical and organisational measures in place to ensure compliance with the GDPR and all other relevant data protection legislation, and to be able to demonstrate compliance
- All Oxford Nanopore users are responsible for complying with the policy, and for consulting the Data Protection Officer (DPO) if they need clarification, guidance, or support
- Oxford Nanopore's DPO, Andy Davies, is responsible for overseeing the implementation of this policy and for monitoring compliance with all relevant legislation, and with this and all other relevant policies
- Oxford Nanopore 'Data Owners' are responsible for ensuring the compliance of their part of the business with the policy, and with the Company's information security policies and controls

We have processes in place to reduce risk such as internal vulnerability testing on a regular basis, and penetration testing. Oxford Nanopore is certified to ISO 27001:2013, Information Security Management System and is also now certified to ISO 22301:2019, Business Continuity Management System. Business continuity plans and incident response procedures are in place and tested at least every three years. Regular cybersecurity training and awareness is provided to staff with at least an annual requirement to read Company policies.

Tax transparency

We are committed to acting with integrity and transparency in all tax matters and is committed to anti-facilitation of tax evasion as part of its Corporate Governance policies. We have policies and procedures in place designed to promote and commit to compliance with all applicable tax laws and regulations, which are continually reviewed as we expand our operations in existing and new jurisdictions. The Board approved the prevention of facilitation of tax evasion policy and any changes to the policy. Oxford Nanopore operates in a transparent manner, committing not to transfer value to low tax jurisdictions and not use tax structures for tax avoidance. Oxford Nanopore does not operate in any countries blacklisted or grey listed by the EU as at 14 February 2023.

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