nanosonics

Infection Prevention. For Life.

2019 ESG REPORT

Environmental, Social and Governance (ESG)

Our commitment to ESG

Nanosonics' mission is to improve the safety of patients, clinics, their staff and the environment by transforming the way infection prevention practices are understood and conducted, and introducing innovating technologies that deliver improved standards of care.

Nanosonics recognises that to achieve this goal we must seek simultaneously to understand and minimise our environmental impacts; meet our social responsibilities to our employees, customers and the broader community; and maintain high standards of corporate governance.

This year, as the Company has continued to grow, we have further developed our framework for ESG disclosure. We have undertaken our first materiality analysis to identify the environmental, social and governance topics which are most material for the Company and its key stakeholders. These will inform our business strategy and new product development priorities as well as guiding the content of this ESG report. Our work has been guided by the leading frameworks for ESG disclosure which have been developed over the past decade.

Nanosonics is proud to offer technology that protects over 70,000 patients every day from the risk of a healthcare associated infection from ultrasound procedures, reducing the burden on the healthcare system in the communities in which we operate. Further, the adoption of Nanosonics' technology means healthcare staff at thousands of customer sites are no longer exposed to the toxic chemicals previously used for ultrasound probe reprocessing. As our geographic footprint extends in North America, Europe, the Middle East and Asia Pacific, we are extending these benefits to more and more patients and healthcare staff.

Michael Kavanagh
CEO and President

Environmental, Social and Governance (ESG)

Corporate governance and ESG

The Board is committed to ensuring that its policies and practices reflect good corporate governance consistent with the Australian Securities Exchange (ASX) Listing Rules and the ASX Corporate Governance Principles and Recommendations.

The Corporate Governance Statement sets out Nanosonics' key corporate governance principles and practices, and the extent to which the Company has followed the recommendations set by the ASX Corporate Governance Council during the 2018/19 reporting period.

The Board and the Executive Team have responsibility for ensuring that ESG is integrated across the Company's operations, and that ESG reporting is balanced, fair and accurate. The Board is supported in this by the Audit & Risk Committee and its three other committees: the Nomination Committee, the Remuneration & People Committee, and the R&D and Innovation Committee.

Nanosonics' corporate governance framework is elaborated in its policies:

- Code of Conduct and Ethics
- Securities Trading Policy
- Clawback Policy
- Anti-Bribery and Anti-Corruption Policy
- Speak Up Policy
- Environmental Policy
- Privacy Policy
- Diversity Policy
- Continuous Disclosure and Shareholder Communications Policy
- Share Ownership Policy

Nanosonics' approach to strong corporate governance includes adherence to all applicable local and international laws, regulations and standards.

Stakeholder engagement

Nanosonics' key stakeholders are those groups, organisations or individuals who are potentially significantly affected by the Company's operations, products or services; or whose actions can reasonably be expected to affect the ability of the Company to implement its strategies or achieve its objectives. Nanosonics seeks to engage effectively with key stakeholders on topics relevant to them so as to understand and respond to their needs and concerns, and to inform them about Nanosonics' products and services.

Nanosonics has identified its key stakeholders and areas of interest. These are set out in the table below.

Key stakeholders identified by Nanosonics	Selected key ESG areas of interest for Nanosonics' stakeholders
Customers, including distributors, resellers and ultrasound probe manufacturers	• Public health and infection prevention • Price • Product safety • Ease of use • Fit within and streamline the clinical workflow
Suppliers	• Legal compliance • Ethical business practices
Investors/shareholders	• Financial performance (revenue and profitability) • Competitors in the market • Nanosonics' pipeline of new products • FDA and other regulatory approvals • ESG issues and risk management
Employees	• Gender equality • Diversity • Training and education • Safe and rewarding workplace
Government and regulatory authorities	• Product efficacy, safety and quality • WHS compliance • Ethical marketing • Tax strategy
Healthcare professionals and patients in hospitals in medical centres	• Reduction in healthcare associated infection through infection prevention technology • Ethical marketing • WHS compliance • Pipeline of new products solving unmet needs in infection prevention
Community and key opinion leaders	• Infection prevention • Ethical marketing • WHS compliance • Pipeline of new products solving unmet needs in infection prevention

Materiality assessment

In accordance with recognised frameworks for ESG reporting, Nanosonics has undertaken a comprehensive materiality assessment based on indicative responses provided by management on behalf of the Company's stakeholders. The intention is that in the near term, representatives of the Company's stakeholder groups will also provide responses.

The process was guided by an external consultant and comprised the following steps:

- Setting the context considering industry, environmental, social and regulatory trends
- Analysis of annual, sustainability and other relevant reports from benchmark companies, and the assessment frameworks of ESG rating agencies
- Identification of topics that have already been identified by Nanosonics through recent reports, briefings, presentations and other mechanisms
- Consideration of ESG topics listed in GRI and SASB standards

The following list of potential material topics was compiled through this process. Topics were assessed according to their importance to Nanosonics' key stakeholders and their impact on the Company, economy, society and the environment.

This ESG report focuses on the priority topics that have been identified.

Potential material topics identified by Nanosonics

- Addressing an unmet need in patient care
- Business ethics
- Business strategy, including strategic partnerships/relationships
- Collaboration/partnerships
- Competitiveness in the market
- Compliance with laws, including modern slavery and conflict minerals
- Contributions to the community
- Consultation with customers on product development
- Consultation with infection control peak bodies
- Customer education
- Diversity, equal opportunity and non-discrimination
- Economic value generated and distributed (as described by GRI)
- Enhancing customer experience
- Ensuring traceability
- Entering new markets
- Ethical marketing
- Fair trading and competition
- Labour, environmental and social practices in the supply chain
- Political contributions
- Product safety and quality
- Regulation and relationships with regulatory bodies
- Talent recruitment and retention
- Tax strategy
- Training and education
- Work, health and safety

Environmental, Social and Governance (ESG)

Providing access to new technologies for infection prevention and better patient care

Nanosonics has developed a novel high level disinfection technology, trophon, to address the critical and unmet needs of the many and increasing number of patients who undergo ultrasound procedures every day.

Ultrasound diagnosis technology continues to grow as an important medical diagnostic and therapeutic procedure throughout the world. For example, ultrasound is used routinely in obstetrics and gynaecology, radiology, cardiology, critical care and the operating theatre, along with many other specialty areas of care.

Healthcare associated infections (HAIs) are a significant healthcare issue worldwide and are considered the most frequent adverse event in healthcare.[1] HAIs cause significant patient morbidity and mortality and are a large burden upon the healthcare system, the economy and broader society.

As reusable medical devices, ultrasound probes present a potential source of cross-infection in hospitals and medical practices where pathogenic organisms can be spread from one patient to another. Studies have linked the increased use of ultrasound procedures to an increased incidence of cross-infection.[2]

Risk of cross-contamination with ultrasound probes is well established:

- 0.9-9% of barrier sheaths and condoms leak[3]
- A meta-analysis has shown that 12.9% of tranducers are contaminated with pathogenic bacteria following routine disinfection[4]
- HPV, a known cause of cervical cancer, has been found on up to 7.5% of transvaginal ultrasound transducers following routine disinfection[5]
- A fatal case of Hepatitis B and non-fatal case of Hepatitis C have been attributed to improper ultrasound transducer disinfection[6,7]
- Ultrasound transducer handles are not routinely disinfected and can harbour harmful pathogens, including MRSA[8]
- Six-year population-level study demonstrates increased risk of infection and antibiotic prescriptions following semi-critical ultrasound procedures[2]

Pathogenic bacteria, viruses and fungi can survive on the surface of ultrasound probes for extended periods if the probes are not cleaned and disinfected effectively.

If ultrasound probes are not correctly disinfected, there is a risk of transmission of potentially harmful infectious agents such as multi-drug resistant bacteria, blood borne viruses (e.g. hep B, HIV) or sexually transmitted infections such as chlamydia, gonorrhoea or human papillomavirus.

Higher risk ultrasound procedures such as those where the ultrasound may contact broken skin, mucous membranes or sterile tissue require a minimum of high level disinfection. The sensitive electronics in ultrasound probes mean they cannot generally undergo sterilisation in a steam autoclave and thus must be addressed though low temperature methods such as high level disinfection. Many high level disinfection processes involve the use of potentially hazardous chemicals which can pose a health risk to patients and staff through direct contact or inhalation.

References

1. Currie, K., *et al.* (2018). "Understanding the patient experience of health care–associated infection: A qualitative systematic review." American Journal of Infection Control 46(8): 936-942. 2. Scott D, Fletcher E, Kane H, *et al.* Risk of infection following semi-invasive ultrasound procedures in Scotland, 2010 to 2016: A retrospective cohort study using linked national datasets. Ultrasound. 2018;26(3):10. 3. Vickery K, Gorgis VZ, Burdach J, *et al.* Evaluation of an automated high-level disinfection technology for ultrasound transducers. J Infect Public Health. 2014;7(2):153-60. 4. Leroy S. Infectious risk of endovaginal and transrectal ultrasonography: systematic review and meta-analysis. J Hosp Infect. 2013;83(2):99-106. 5. Ma ST, Yeung AC, Chan PK, *et al.* Transvaginal ultrasound probe contamination by the human papillomavirus in the emergency department. Emerg Med J. 2013;30(6):472-5. 6. Ferhi K, Roupret M, Mozer P, *et al.* Hepatitis C transmission after prostate biopsy. Case Rep Urol. 2013;2013:797248. 7. Medicines and Healthcare products Regulatory Agency (MHRA). Medical Device Alert. Reusable transoesophageal echocardiography, transvaginal and transrectal ultrasound probes (transducers) Document: MDA/2012/037. 2012. 8. Ngu A, McNally G, Patel D, *et al.* Reducing Transmission Risk Through High-Level Disinfection of Transvaginal Ultrasound Transducer Handles. Infect Control Hosp Epidemiol. 2015;36(5):1-4.

Nanosonics' patented trophon technology provides a new and effective way to achieve high level disinfection of ultrasound probes which does not damage the sensitive probe surface, nor expose patients, staff or the environment to dangerous chemicals.

It works by generating a sonically activated, supercharged hydrogen peroxide (H2O2) mist within the chamber. The probe is held in the chamber where the mist accesses all surfaces of the probe and its handle, killing bacteria, mycobacteria, viruses and fungi. Additionally, trophon has been demonstrated to inactivate forming *Clostridium difficile* spores in laboratory tests and has also been demonstrated to be effective in inactivating the cancer-causing human papillomavirus.

The trophon reprocessing standard contributes to the efficient workflow of the hospital or medical centre through a fast seven-minute cycle. Digital traceability RFID technology (AcuTrace™) captures and records operator, probe and cycle data to meet customer compliance requirements.

Nanosonics produces a range of accessories and consumable products across the reprocessing cycle. These include companion wipes facilitating the cleaning of organic material, microbial load, gel and other soils on the surface of probes before the high level disinfection process delivered by the trophon device, probe covers and connectivity solutions and services to allow customers to manage their reprocessing records.

Nanosonics' strategy for geographic expansion of access to its technology

To meet the increasing global demand for access to Nanosonics' technology, the Company is actively expanding the geographic footprint of its trophon sales and marketing activities globally through direct and distributor channels.

Nanosonics is the market leader in a number of critical and influential global markets, setting the standard of care in Australia/New Zealand and North America. The Company's global footprint also spans Europe, Asia Pacific including Japan, and the Middle East.

Innovation to deliver improved standards of patient care

Innovation is at the core of Nanosonics' business strategy and day-to-day operations. The cutting edge technology used in trophon has disrupted the disinfection market and was the first major innovation in ultrasound probe high level disinfection for more than 20 years.

Nanosonics consults closely with customers in the development of new products and the further development of existing product lines, responding to the needs of patients and healthcare providers.

Nanosonics protects it unique technology through coverage by 14 patent families. Most are active through to 2025 and in many cases beyond, including patents relating to the consumables which go out to 2029. It has an active program to continue to protect the IP in its technology.

Nanosonics has a large research and development team based in Australia with activities across mechanical, electrical, systems and software engineering, microbiology and chemistry.

It has an active R&D program, including the further evolution of the trophon2 technology and the development of new products for infection prevention in the clinical setting. Nanosonics has a dedicated team of clinical and microbiology specialists focused on ongoing research contributing to increasing knowledge, understanding and education in fields relevant to infection prevention for existing and new technologies.

Research and development expenditure continued to increase year on year to $11.4 million in FY19; an increase of 15% over the previous year (2018: $9.9 million).

Ensuring product safety, quality and reliability

Nanosonics is vigilant about the safety of its products from the R&D phase through to their use in the care of patients, and the final disposal of products and recycling of parts.

Patients and staff are protected throughout the probe disinfection process. The trophon delivers nebulised hydrogen peroxide within a sealed chamber. The hydrogen peroxide is supplied and added to the chamber in a sealed cartridge and is ultimately broken down into harmless water and oxygen following the disinfection process.

Nanosonics conducts extensive laboratory testing to validate the effectiveness of its products. The trophon technology goes beyond the minimum subset of microorganisms mandated by the regulatory authorities to have efficacy against a broad range of infectious pathogens.

Nanosonics' ISO 13485 compliant Quality Management System is vitally important to its continuing success in the production of advanced high level disinfection technology.

TROPHON IS PROVEN EFFECTIVE AGAINST A WIDE RANGE OF MICROORGANISMS

Vegetative bacteria

Carbapenem-resistant *Escherichia coli*

Enterococcus hirae

Methicillin-resistant *Staphylococcus aureus*

Neisseria gonorrhoeae

Pseudomonas aeruginosa

Staphylococcus aureus

Vancomycin-resistant Enterococcus

Mycobacteria

Mycobacterium terrae

Mycobacterium avium

Bacterial endospores

Bacillus cereus

Bacillus subtilis subsp. spizizenii

Geobacillus stearothermophilus

Fungi

Candida albicans

Aspergillus (niger)

Viruses

Adenovirus

Hepatitis C virus surrogate (Bovine viral diarrhea virus)

Human hepatitis B virus surrogate (Duck hepatitis B virus)

Human immunodeficiency virus

Human papillomavirus (HPV16 and HPV18)

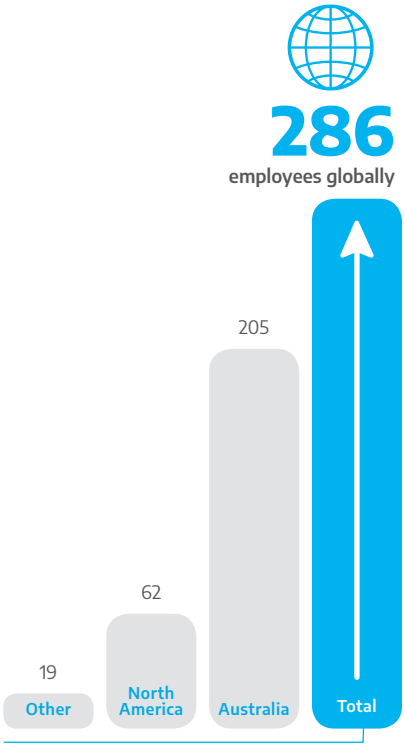
Poliovirus

Chlamydia

Chlamydia trachomatis

Environmental, Social and Governance

In the past year Nanosonics' workforce increased by 27% to 286 employees globally to meet the needs of the growing business.



LOCATION/NUMBER OF EMPLOYEES (30 JUNE 2019)

Nanosonics' workforce increased

27%

women represented

36%

30% in senior management positions (2018: 29%)

17% at Board level (2018: 17%)

Engaging our people in an inclusive, safe and healthy workplace

This year the Company completed its first employee engagement survey, "Your Voice: Make it Heard". The completion rate was 84.9% (industry average being 72%) and it contained a number of important insights as well as confirming a high level of employee satisfaction and engagement.

Nanosonics' Diversity Policy encourages diversity at all levels of the organisation as a means of facilitating an appropriate mix of skills and talent to conduct its business. It believes that the pursuit of diversity in the workplace increases its ability to attract, retain and develop the best talent available, creates an engaged workforce, delivers the highest quality services to its customers, enhances individual work-life balance, encourages personal achievement, improves co-operation and assists in the optimisation of organisational performance.

Subject to the size and operations of the Company, the Board is committed to setting appropriate measurable objectives for the long-term goal of improving gender representation across all levels of the organisation.

During the year, the Company made progress against its FY19 diversity objectives relating to hiring (appointing a dedicated talent acquisition manager who applied defined selection criteria for all roles in line with the Company's anti-discrimination principles), training (two female senior executives were provided financial support and workplace flexibility), career advancement (female senior manager attended mentoring program to assisting career development) and the work environment (bullying and harassment training for all staff) which were set.

As at 30 June 2019, women represented 36% (2018: 35%) of Nanosonics' workforce, 30% in senior management positions (2018: 29%) and 17% at Board level (2018: 17%). Nanosonics defines senior management for this purpose as those who directly report to the CEO and those positions that report to the CEO's direct reports.

There have been 10 Internships/Graduate roles during the reporting period; four female and six male.

There are 30 nationalities represented across the organisation.

Nanosonics supports its employees to further develop their professional capabilities in order to extend their roles in the Company. To date there are four female staff undertaking professional leadership development or higher level tertiary education in management.

Nanosonics is an equal opportunity employer and remunerates women and men equally. Gender pay equality is achieved through a formal process of salary benchmarking all roles according to the role and the industry. Management is held accountable for ensuring pay equity outcomes from the formal remuneration review process.

The Company has a WHS Committee which oversees the Company's WHS safety metrics and goals. In FY19, 100% of staff received relevant WHS training, which included laboratory safety training, chemical awareness training, and education and support focused on active prevention strategies to prevent repetitive strain injuries and musculoskeletal disorders. There were 12 minor incidents reported in the period (all of which were closed) and no time was lost due to any workplace injury.

The Company's diversity objective for FY20 are as follows:

- The pay for a specific job type and level will be the same regardless of gender or cultural background taking relevant experience and skills into consideration
- Target 30% women at Board level and improve the current 30% for senior management
- Integrate diversity principles into the Company's recruitment framework by incorporating a diversity statement on all job advertisements globally and ensuring training for all hiring managers on diversity awareness, recognising unconscious bias, inclusive job description writing and best practice recruitment activities
- Seek to ensure the Company has a balanced selection of final round candidates, taking into account the principles of diversity (as described in the Company's Diversity Policy), for all Board and senior management roles, and seek to ensure there is diversity in the selection panel for each
- Target that 50% of all interns who are offered positions with the Company from the Nanosonics University Program are women
- Continue to implement programs that prepare selected high potential females to take on senior roles within the business both in operational and specialist support areas

Ensuring a culture of ethical behaviour

Nanosonics' Code of Conduct and Ethics sets out the obligations placed on all of its directors, executives, employees, advisors, contractors and consultants. They are expected to act with integrity and objectivity and to maintain the highest possible ethical standards in the Company's interactions with its stakeholders and the environment in which the Company operates.

Nanosonics does not tolerate any form of harassment or discrimination against personnel, customers, suppliers or other third parties.

Bribery and corruption

Like all industry participants, Nanosonics' activities could potentially expose the Company and staff to the risk of bribery and corruption. Nanosonics conducts business in an ethical and honest way and considers the risk to be low.

Nanosonics' Anti-bribery and Anti-corruption Policy applies "zero tolerance" to acts of bribery and corruption by Nanosonics staff and third party representatives. There were no reports of bribery and corruption notified in 2018/19.

Speak Up policy

Staff who raise a concern about possible bribery and corruption, fraudulent, illegal or other behaviour by other Nanosonics staff, that is contrary to the Company's policies, may raise their concern through line management. Where this is not suitable, they may contact a Speak Up Investigation Officer or access the Nanosonics Speak Up Portal. All concerns will be investigated while protecting the complainant from personal or financial disadvantage. During the year, there were no concerns reported in accordance with the policy.

Privacy and data security

Nanosonics is committed to protecting the privacy of personal and third party information and complies with the Privacy Act 1988 and other applicable legislation in all countries where it operates. It follows a Privacy Policy covering the collection, storage and use of personal information concerning individuals and formal contractual arrangements with third parties.

There have been no breaches of this policy reported in 2018/19.

Political contributions

Nanosonics makes no political contributions.

Anti-competitive behaviour

Nanosonics acts fairly and honestly when competing in the market. It complies with the anti-competitive behaviour provisions of the Australia Competition and Consumer Act and other applicable legislation in all countries where it operates. In particular it maintains high standards regarding the quality of the information it provides about its products and their use through advertising and product labelling.

Our supply chain

Nanosonics' trophon technology is assembled and tested ready for market at its site in Lane Cove West, Sydney. The component structural and electronic parts and accessories are sourced from local and international suppliers.

The hydrogen peroxide responsible for the trophon disinfection process is safely contained in cartridges which fit inside the trophon chamber ready for use.

Nanosonics recognises the growing pressure from stakeholders and regulators to extend its watch on its social and environmental impacts to take account of its supply chain.

The Australian Modern Slavery Act 2018 became effective on 1 January 2019 requiring businesses, including Nanosonics, to report annually on their efforts to identify and address any slavery risks in their operations and supply chains. Nanosonics' first report will be due by the end of 2020 and work has commenced to identify how risks of modern slavery practices may be present in its operations and supply chains.

Protecting the environment

Nanosonics is committed to minimising its impact on the environment at all stages throughout the life cycle of its products. This is elaborated on in its Environment, Health, Safety and Sustainability Policy.

Nanosonics is responsible for a very low level of natural resource consumption, including energy and water in the production and use of its products. It has minimal impact on the environment through emissions or the disposal of waste. Nanosonics leases accommodation at Lane Cove which includes supply of electricity through renewable sources and water and these are not metered separately.

Nanosonics ensures minimum environmental impact during operation of the trophon. Hydrogen peroxide used is broken down following the disinfection process to water and oxygen. Extensive leak testing is undertaken to ensure safety of the environment as well as patients and staff.

Nanosonics' response to climate change

The science of climate change is unequivocal and recent reports of the Intergovernmental Panel on Climate Change have emphasised the imperative to limit the further increase in the global average surface temperature to below 2.0°C, preferably below 1.5°C. This is being incorporated into international practice through the Paris Agreement on Climate Change to which Australia is a signatory.

Nanosonics does not belong to one of the industry sectors identified as facing the highest climate change risks. Nevertheless it recognises that there are transition risks such as regulatory, supply chain, and transportation risks which may impact future operations. It continues to be mindful of emerging government policies and advances in scientific understanding which may indicate emerging climate change risks or opportunities for Nanosonics. Whilst its operations make only a very small contribution to greenhouse gas emissions, Nanosonics utilises energy from solar panels on the roof of its Lane Cove premises.

Contributions to the community

As a good corporate citizen, Nanosonics seeks to make contributions to the communities in which it operates which go beyond its specific contributions to patient care and the economic value distributed through payments to employees, shareholders, government and suppliers.

Nanosonics encourages and supports employees to undertake charity events and fundraising initiatives throughout the year by providing entry fees, raffle prizes, and often matching amounts raised. It also supports workplace giving via a Corporate Citizen Program which enables employees to select a charity and have donations automatically deducted from their remuneration.

Financial performance

The Company's strong financial performance, reported elsewhere in this Annual Report, provides an indication of the direct economic value generated for the communities in which the Company operates. Economic value is also distributed through its operating costs, employee wages and benefits and payments to the government (i.e. taxes).

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