ORION

Building well-being

Sustainability Report 2017

Contents

We are builders of well-being as manufacturers of pharmaceuticals, active pharmaceutical ingredients and diagnostic products

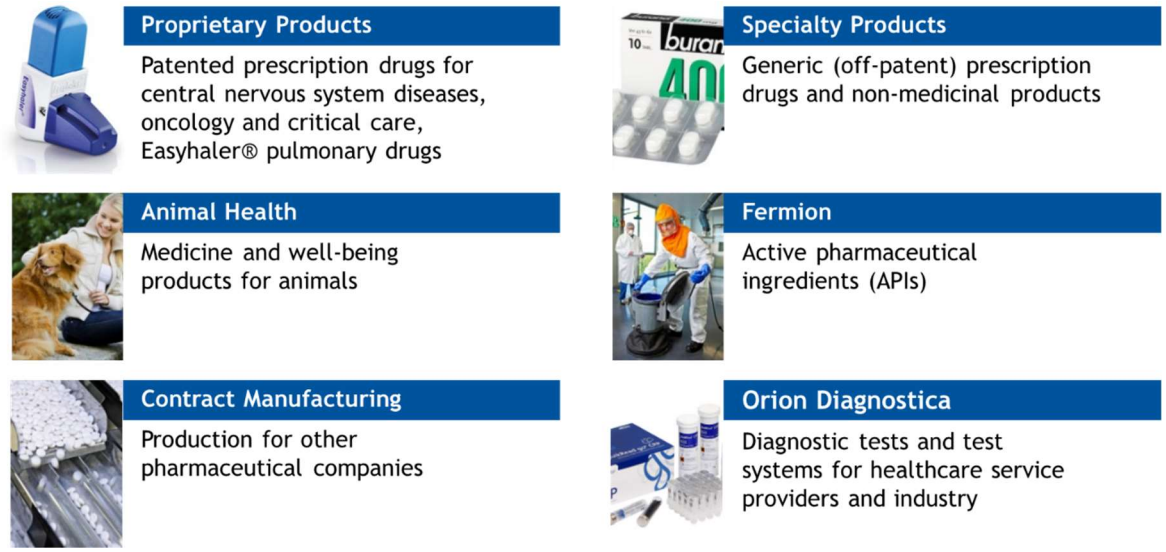
Orion is a Finnish company specialising in pharmaceuticals and diagnostic products – a globally operating builder of well-being. We develop, manufacture and market human and veterinary pharmaceuticals, active pharmaceutical ingredients and diagnostic tests and test systems. We also serve as a contract manufacturer to other pharmaceutical companies. We are engaged in continuously developing new drugs and treatment methods, the core therapy areas of our pharmaceutical R&D being central nervous system (CNS) disorders, oncology and respiratory diseases, for which we develop inhaled Easyhaler® pulmonary drugs.

Our mission is to build well-being by bringing drugs and diagnostic tests to market as well as test systems that give patients help and effective treatment for their illnesses. An effective drug also creates added value for the patient by improving their quality of life.

In 2017, Orion celebrated its 100th anniversary together with Finland which also celebrated its 100th anniversary as an independent state. Our roots are in Lääketehdas Orion Oy, established in 1917 for the manufacture of pharmaceuticals. Since then, we have evolved via many phases, and are now the leading pharmaceutical enterprise and one of the oldest and financially soundest companies in Finland.

In this Report only a short description of the Orion Group is given, in order to avoid overlapping with information given in our other public media. Our corporate website provides plenty of up-to-date information about us, our operations and our products and services at www.orion.fi/en. Our Code of Conduct, Group policies and information about sustainability and corporate governance are also available on our website.

The Group consists of the following businesses:



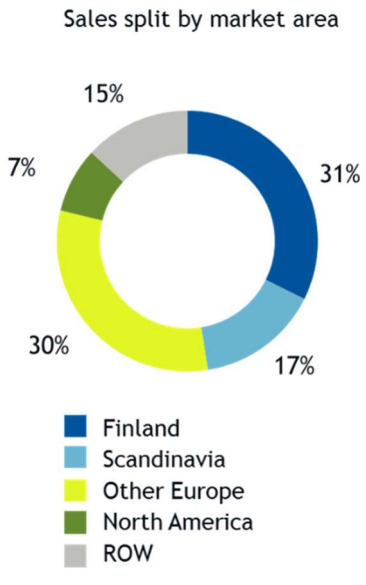
Our production plants and pharmaceutical research centres are located in Finland, and in addition to this we have a research unit in Nottingham, England. The largest of our sites is in Mankkaa, Espoo, where most of our operations are located and the Group and its parent company Orion Corporation are headquartered. Our own sales and marketing organisations cover almost all European countries. In markets outside Europe, we work in partnerships with other companies.

Operations and sites of the Orion Group

Finland	Headquarters and administration in Espoo
	Pharmaceutical manufacturing in Espoo, Turku, Kuopio and Salo
	Active pharmaceutical ingredient R&D in Espoo, manufacturing in Hanko and Oulu (Fermion)
	Diagnostics R&D and manufacturing in Espoo, operations in Oulu ended in September 2017 (Orion Diagnostica)
	Pharmaceutical research centres in Espoo and Turku
	Marketing: Espoo, Turku, Kuopio, Oulu and Tampere
UK	Sales unit
	Research & development in Nottingham, England
Europe	Orion Pharma subsidiaries and Orion Diagnostica sales units with sales and marketing operations in 26 countries
India	Support functions, Subsidiary FinOrion Pharma India Pvt. Ltd. in Mumbai
Rest of the World	Global partner network for sales

Our products are available in more than hundred countries. The Group's net sales in 2017 were about EUR 1,085 million. Finland contributed 31% of the net sales. Scandinavia and the rest of Europe accounted for 47%, and North America and the rest of the world accounted for 22%. Our customers include healthcare providers and professionals, consumers and other pharmaceutical companies. In healthcare, customers primarily include specialist doctors and general practitioners, vets, nurses, pharmacies, hospitals, healthcare centres, clinics and laboratories and their respective procurement organisations.

Orion Corporation, the parent company of the Group, is a public company whose shares are listed on Nasdaq Helsinki. At the end of 2017, the company had ~57,000 registered shareholders, of which 95% were households. Households held 40% of the entire stock. We publish quarterly information about the financial performance of the Orion Group. Our news releases and publications as well as information about our ownership base are shared in the Investors section of our corporate website.



The Group values and principles are the cornerstones of our operations and corporate responsibility

Our corporate values characterise our way of working within the Orion Group:

- mutual trust and respect
- quality, reliability and safety
- customer focus
- innovation
- achievement

These values unite our employees in the supply of products that promote well-being and health. The values are the cornerstone and we operate according to our values.

Orion is committed to operate in a responsible and sustainable manner and to enhance ethical working practices. Our Code of Conduct determines the basic principles our employees are expected to follow and to observe in their interactions with each other and with the stakeholders of our company, as well as with the society and environment. Every Orion employee is committed to follow the high ethical standards and business practices as outlined in the Group's Code of Conduct.

In addition to the above, Orion's operations and ways of working are subject to specifically determined company policies and numerous mandatory guidelines concerning our practices. All our policies have been approved by the Group's executive management, and they are applied Group-wide. Especially important are the Good Practices required to be followed by healthcare industries worldwide in the development and manufacture of pharmaceuticals and diagnostic products. Standard Operating Procedures (SOPs) are detailed internal guidelines, based on the Good Practices, providing details of the procedures to be applied in work phases, as well as related requirements and responsibilities.

In addition to the regulatory requirements by healthcare authorities, pharmaceutical companies are obliged by numerous commonly agreed industry rules and codes concerning marketing, R&D, and collaboration with healthcare professionals and patient organisations. Orion is committed to the codes of practice of EFPIA (European Federation of Pharmaceutical Industry Association) that are accessible on the EFPIA website at www.efpia.eu. Respectively, Fermion is a member of Cefic (The European Chemical industry Council, www cefic.org) and its sector group APIC (Active Pharmaceuticals Ingredients Committee, www.apic.cefic.org), and Orion Diagnostica is a member of MedTech Europe (www.medtecheurope.org).

Our corporate strategy emphasises a strong culture of working together, based on work that is significant and creates value for our customers. We want to be an excellent workplace and a responsible and attractive employer which takes care of the continuous development of the well-being and skills of our staff.

We are committed to continuously improving our performance in sustainability. We strive to achieve the high objectives we have set for managing matters related to the environment, occupational health and safety and human resources, and ensuring our operations are ethical. Patient safety is the guiding value in all Orion's operations. The Company ensures that the pharmaceutical products developed, manufactured and marketed are proven to be safe for their users when used correctly and effective for the indications for which they are approved, and consistent with the quality standards set for them.

The corporate responsibility function, which belongs to the Corporate Functions organisation, is managed and coordinated by the Corporate Responsibility Officer. She reports to Olli Huotari, Senior Vice President, Corporate Functions. Mr. Huotari is a member of the Orion Group's Executive Management Board and he reports to Timo Lappalainen, President and CEO. The Corporate Responsibility Officer's contact details are provided in the Contact Us section of our corporate website.

The following statement by the Executive Management Board of the Orion Group confirms our commitment to responsible operations and continuous development:

Orion is committed to responsibility and continuous improvement

The operations and activities in the Orion Group are based on compliance with laws and regulations, as well as with ethically acceptable operating practices. These principles, together with Orion's values and our dedication to 'Building well-being', are the key drivers for us in our approach to corporate responsibility in our daily work, in whatever we do.

With our strong devotion to promoting health, we aim to enhance trust in Orion as a company that cares for and contributes to the welfare of mankind. We are committed to sustainable development and constantly improving performance, aiming for the highest standards in the industry with respect to the environment, health, safety, business ethics and integrity.

We aim to be a trustworthy partner in terms of economic, social and environmental criteria. We also aim to be an attractive and solid workplace, respecting human rights and equality. Our commitment to responsibility allows us to expect the same from our business partners.

We expect our suppliers to demonstrate their commitment towards Orion's Supplier Code of Conduct and our requirements. We are committed to promoting responsible supply chain management. We are also committed to rigorously managing our global supply chain and monitoring our suppliers' environmental, health, safety (EHS) and ethical compliance through assessment questionnaires, undertaking risk-based EHS audits, ensuring that necessary corrective actions are agreed with the supplier and following implementation of actions.

Our principles of reporting on sustainability

The Report content is based on relevance

Our reporting period is one calendar year, and we publish a sustainability report on an annual basis. This Report is the 9th sustainability report of the Orion Group, the focus being on 2017. In the performance indicators, comparative data is provided for 2015-2016.

The Reports we have published so far are available in PDF files in the Sustainability section of our corporate website. The reports for 2009–2014 follow the guidelines and structure of the G3 framework of GRI (Global Reporting Initiative). In the latest reports, our focus is on the most relevant matters to our operations, with a reduced number of indicators using GRI framework as a guideline.

In the assessment of materiality, we have largely relied on the GRI framework, from which we have chosen the most relevant indicators for us. Additionally, we have established some Orion-specific indicators which reflect our practices and processes to assure the quality of our products and their safety to patients.

The basic materiality assessment was conducted in working groups consisting of persons with a good understanding and expertise in the area of sustainability they represent and who work interacting closely with representatives of our key stakeholder groups. In the assessments, we have also taken into account the feedback and questions received from our interest groups through various channels. The responsibility profiles drawn by company analysts are also important references of materiality and topics to which we are anticipated to attend in our reporting.

The prioritising, principles and boundaries used in this Report as well as the key stakeholder groups have been confirmed by Orion's Executive Management Board, which also approves the Report for publication.

Our report covers the entire Group

Our sustainability report principally covers Group-wide operations. The data represents all our operational locations and is reported according to the Group structure. As our environmental impact mainly comes from our manufacturing operations and because all our manufacturing units are located in Finland, we only include our Finnish sites in the data concerning environmental management.

The foreign operational units of the Orion Group are primarily marketing or liaison offices that market our pharmaceutical or diagnostic products, mainly in leased premises and with operations in the country which they are located in. Almost all of their employees are engaged in marketing except for a few employees working in support functions. Some reported personnel data only covers Finland due to the lack of data for the foreign subsidiaries. As the foreign units are relatively small however, their impact on the Group figures is minor.

The following organisational groupings are used in the data collection and reporting:

Orion Group

Orion Corporation

Pharmaceutical operations and Head Office functions in Espoo
Pharmaceutical operations in Turku
Pharmaceutical operations in Kuopio
Pharmaceutical operations in Salo
Foreign Orion Pharma marketing subsidiaries and FinOrion Pharma India Pvt. Ltd.

Orion Diagnostica Oy

Diagnostics R&D and operations in Espoo, R&D unit in Oulu closed in September 2017

Fermion Oy

API manufacturing in Hanko
API manufacturing in Oulu
API R&D unit in Espoo

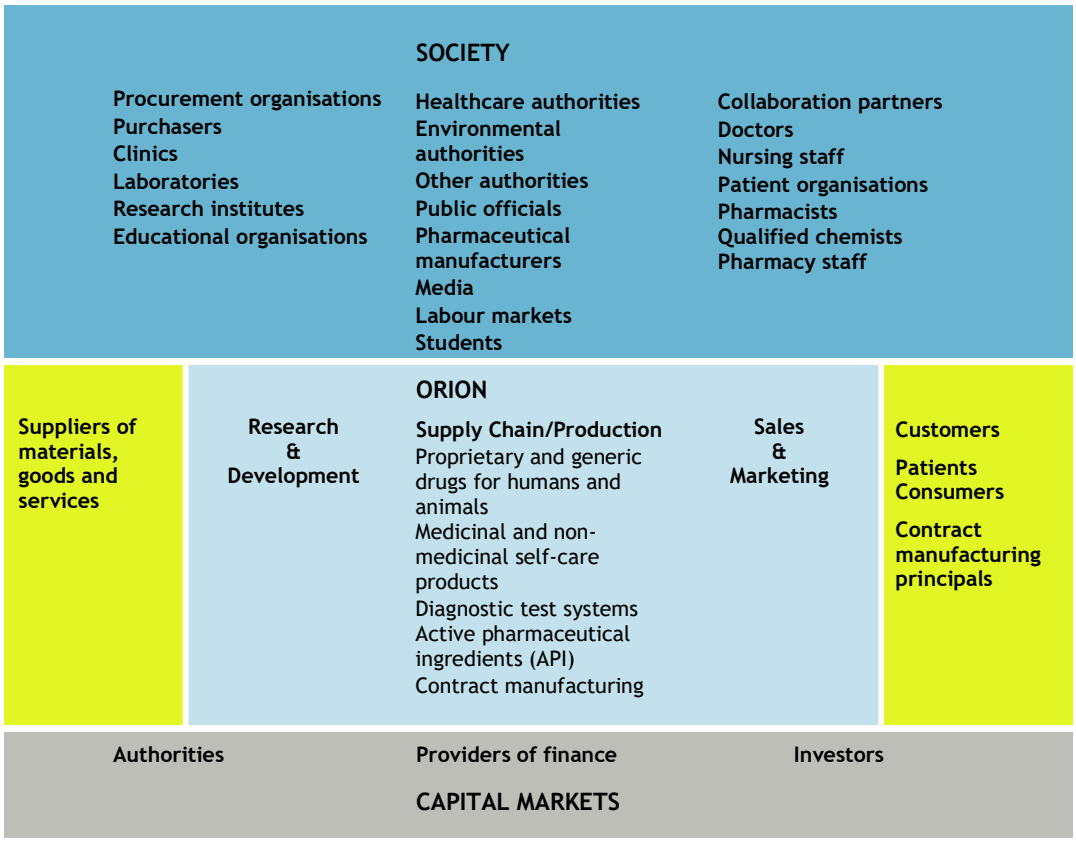
Our Report for 2017 does not include new items that would affect the comparability of the data reported for the preceding years. A note concerning comparability is given in the context of the data where necessary. No material changes have been made to the scope, boundary or measurement methods in comparison with the previous Report.

The Report has not been assured by a third party.

Our stakeholder groups

In doing business and performing our work, we are involved with a number of stakeholder groups which our Group and its representatives interact with, and which are both affected by our activities and can which directly or indirectly affect our performance and operating conditions.

The relevant stakeholders in view of our corporate responsibility have been determined in workshops held by the specialist employees involved with reporting sustainability at Orion. The assessment criteria included reasonable expectations of stakeholder groups towards us and their importance in relation to our business operations as a whole.



Our memberships in industry associations and advocacy organisations

The following industry associations and advocacy organisations are relevant to the Group, and the Orion Corporation and/or its subsidiaries are members thereof:

- Chemical Industry Federation of Finland / Confederation of Finnish Industries, EK
- EFPIA, European Federation of Pharmaceutical Industry Associations
- International Chamber of Commerce, Finnish Section
- Helsinki Region Chamber of Commerce
- Turku Chamber of Commerce
- Finnish Health Technology Association (FiHTA) / The Federation of Finnish Technology Industries
- Finpro ry
- The Association for Finnish Work
- Excellence Finland
- Sailab MedTech Finland ry and its national sister organisations in countries where Orion Diagnostica is present
- MedTech Europe, European Trade Association (medical technology industries)
- CEFIC (European Chemical Industry Council) and its sub-organisation APIC (Active Pharmaceutical Ingredients Committee – Cefic)

Our commitments to external initiatives

Orion is a member of the international **Responsible Care** programme, which is a voluntary environment, health and safety initiative of the chemical industry. The objective of the programme is to promote operations that are in line with sustainable development, from both social and environmental points of view. All participating companies are committed to continuously improving their health, safety and environmental performance and to developing their products and operations in a way that increases social well-being. The programme has participants in over 50 countries. The Chemical Industry Federation of Finland coordinates the membership of Finnish companies in Responsible Care, which reports on the performance on an annual basis at www.kemianteollisuus.fi/en.

We are also members of the Finnish **Energy Efficiency Agreement for Industries 2017–2025**. This is an extension period of the joint programme for the members of the Confederation of Finnish Industries (EK) that ended in 2016, with a goal of ensuring that the national energy efficiency improvement targets derived for Finland based on the EU Energy Efficiency Directive are reached. The programme also aims to significantly increase Finland's contribution towards achieving the EU-wide energy efficiency target set for 2030. Under the new programme, the savings target for 2025 is 7.5% of energy consumption in 2016, and the intermediate target is 4% by 2020.

We are a member of the FTSE4Good index

Orion Corporation has for a long time been included in sustainability indexes of companies listed on the Nasdaq Helsinki stock exchange (OMX GES Sustainability Finland GI, OMX GES Sustainability Finland PI, OMX GES Sustainability Finland Cap GI and OMX GES Sustainability Finland Cap PI).

Since 2016, our company has been included in the globally recognised FTSE4Good Index. The companies included in the index have been assessed to meet the globally acknowledged corporate standards of responsibility in environmental, social and governance practices.

FTSE4Good

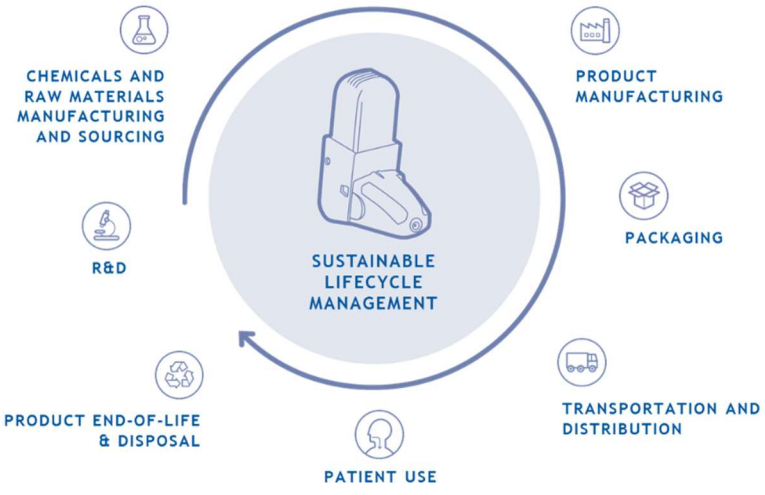
Sustainable pharmaceutical product lifecycle management

Sustainability at Orion means balancing social, economical and environmental factors and is a principle built into our common values. We consider these aspects during the entire life cycle of a product – from research and development through to manufacturing to patient use and product end-of-life disposal.

R&D

In our R&D activities, our commitment to building well-being means that we develop efficacious and safe medicinal treatments for unmet medical needs, representing innovation and the highest quality standards. We are committed to high ethical standards concerning pharmaceutical research and development.

We conduct environmental, health and safety risk assessments for all new products before manufacturing starts.



Chemicals and raw materials manufacturing and sourcing

Suppliers are required to comply with Good Practices (GxP) requirements, and in addition to this, according to our Supplier Code of Conduct we expect our suppliers to demonstrate their commitment to sustainable and ethical practices. We only purchase our materials from suppliers whose qualifications we have confirmed. We conduct GxP audits into the operations of our GxP critical business partners and suppliers. We always take and analyse samples of raw materials before approving them for production.

We manage and monitor our suppliers' environmental, health, safety (EHS) and ethical compliance as well. Our risk-based EHS programme conducted 30 EHS on-site audits in 2017.

Product manufacturing / Own factories

We have identified the most significant environmental aspects for the Orion Group and continuously improve our performance in this regard. Among other things, particular emphasis has been placed on continuously improving our waste water handling and focusing on occupational health and safety at our own factories. We are also committed to reaching the energy savings target for 2025, which is 7.5% of energy consumption in 2016. This means a saving of slightly over 12 GWh, 31% of which was achieved in 2017.

Our products are manufactured using qualified production equipment in a controlled production environment using validated production and quality control methods to ensure that each batch fulfils predetermined quality specifications. The data integrity of all manufacturing and quality control activities is reviewed in detail before a batch is released to market. We take immediate action if any deficiency with regards to product quality is detected.

Packaging

We minimise waste through package design and optimise shelf life, package sizes and material flows. Optimising shelf life is of particular importance to ensure that all the resources needed in manufacturing, packaging and transportation are not wasted.

Safety is important aspect also in packaging. Packaging plays an important role in protecting our products. We are implementing serialisation and tamper evidence features, new safety measures, to improve safety and traceability even further.

Transportation and distribution

In logistics, we use specialist service providers to meet our strict quality and reliability requirements. Our partners have measures in place to reduce their own environmental impact.

Patient Use

We conduct continuous safety monitoring, collect customer feedback and carry out benefit-risk evaluations throughout the entire lifespan of a product.

We also provide healthcare professionals with clear information on the appropriate use of our medicinal products.

Product end of life & disposal

We make sure that waste materials from our own operations are appropriately treated. Unused medicines should be returned to pharmacies to be disposed of appropriately and packaging materials should be taken to dedicated collection points for recycling.

Our efforts in the fight against antimicrobial resistance

Antibiotics are life-saving medicines and the cornerstone of managing bacterial infections. Unfortunately, antibiotics are widely overused and misused in both people and animals. Inappropriate use of antibiotics leads to antimicrobial resistance (AMR). As a result, antibiotics become ineffective and curing previously treatable infections becomes difficult. The World Health Organisation characterises AMR as one of the biggest threats to public health in the world today.

Antibiotics are widely overprescribed in primary healthcare in particular, where more than half of all patients with acute respiratory tract infections are treated with antibiotics. Most acute respiratory tract infections are caused by viruses and antibiotics are not needed to cure them. Antibiotics should only be prescribed when a bacterial infection is suspected.

Limiting unnecessary antibiotic prescriptions in primary healthcare settings is an important step in reducing bacterial resistance to antibiotics. Rapid diagnostics can support the optimal use of antibiotics, especially in point of care. Orion Diagnostica's diagnostic tests, QuikRead go CRP and QuikRead go Strep A tests support the doctor in identifying patients who need antibiotic treatment. In 2017, Orion Diagnostica launched a new website at www.tackleamr.com. The purpose of the website is to raise awareness of antibiotic resistance and the importance of prescribing and using antibiotics appropriately.

In addition to the diagnostics products, Orion is also known in the Nordic countries for veterinary medicines. For poultry, Orion's portfolio includes Broilact®, a unique Competitive Exclusion (CE) product providing a refined selection of bacteria that establish and develop a healthy adult type microflora in the intestine of chickens, turkeys, geese, pheasants, quails and partridges. General awareness and the restrictions on antibiotic use in poultry have increased the interest in this commercially available CE product.

Reducing the environmental impact from production of antibiotics and controlling risks at original source is also important. We reduce the environmental burden on waterways caused by our own operational sites by minimising the pharmaceutical residue emissions in our waste waters. We set ourselves ambitious targets a few years ago, and in 2017 we finished our project of improving our waste water management. Owing to the project, most of the waste waters from production and equipment washing that contain API residues are now being collected at the new pre-rinse water collection systems at our production sites and sent to treatment with a 100% reduction. All our waste water has also been treated appropriately in the waste water treatment plants in the past and not been directly conducted to natural waterways. Further information about this project is available in the *Water and effluents* section of this report.

Being responsible does not just mean continuously improving our own operational site processes but also being committed to rigorously managing and monitoring the sustainability of our global supply chain. We do this through assessment questionnaires, by undertaking risk-based EHS audits, ensuring that necessary corrective actions are agreed with suppliers and following implementation of actions. Further information about our responsible supply chain management is available in *Managing sustainability of our suppliers* section, and the results of EHS audits conducted in 2017 in the *Performance indicators of Product Responsibility* section.

Statement by CEO Timo Lappalainen

Orion is a globally operating Finnish developer of pharmaceuticals and diagnostic products – a builder of well-being. For us, responsible business is a prerequisite and a firm foundation for building a successful business. Managing, reporting and developing corporate responsibility and sustainability are an integral part of the continuous development of our company.

As a pharmaceutical company, we help patients to treat their diseases and improve well-being effectively and safely. The key focus of all Orion's operations and corporate responsibility is patient safety. We manage product safety and ensure business ethics as well as transparency in everything we do. We are committed and work continuously towards improving our performance in sustainability. In 2017, our emphasis in particular has been, among other things, on continuously improving our handling of waste water and focusing on the occupational health and safety of Orionees.

In 2017, we have made significant progress on waste water management and the reduction of pharmaceutical residue emissions. We had set ourselves ambitious targets a few years ago and last year we finished the project aimed at decreasing the environmental burden on waterways even further, even though of course we had already fulfilled the legal requirements before. We have improved waste water management and got the new pre-rinse water collection systems running at our production sites. Most of the active pharmaceutical ingredients containing waste water are now being collected and sent to treatment with a 100% reduction.

The work done to prevent accidents and injuries at Orion facilities is also leading to positive results. Our goal cannot be anything less than reaching the target of zero accidents, and we are confident that our commitment and efforts will bear fruit in the long run. During the course of the year, a Group-wide occupational safety network was set up, and we have been working on several programmes aimed especially at enhancing Group's safety culture. It is not sufficient simply to safeguard oneself; instead employees are encouraged to require this from their colleagues too. We want to promote a culture where Orionees intervene if they observe unsafe work practices and where it is everyone's duty to do so. Intervening is an act of caring, and we believe that this cultural change will assist us in our journey to zero accidents.

The amount of legal and stakeholder requirements are ever increasing, as are the number of instances which we are expected to report on. We continuously work on improving our reporting and becoming more transparent. We strongly believe that measuring our performance is in the essence of managing and being able to improve our performance in sustainability. In some occasions, we need to balance and make choices in selecting the most evident channels of reporting. This is done to secure more time and resources for continuous improvements.

As a member company of EFPIA, European Federation of Pharmaceutical Industries and Associations, Orion has agreed to publish details about our collaboration with healthcare professionals and compensation paid to them for the time working with us. In addition, every year we publish a summary report of our collaboration with patient organisations. We want to further enhance our trust and transparency in these aspects.

The themes of sustainability and the principles of continuous improvement towards our targets are deeply embedded in Orion's day-to-day work and corporate culture. To us, responsibility is a principle built into our common values. It reflects a caring attitude towards everything we do.

Timo Lappalainen
President and CEO

Product Responsibility

Patient safety is the guiding value in all Orion's operations and the essence of our corporate responsibility. Responsibility and caring are an integral, uncompromised and natural part of everything we do at Orion. The responsibility of the manufacturer and the manufacturer's principal for the safety, quality and uncompromised compliance with requirements extends through all the phases and functions included in research and development, procurement, manufacturing, marketing and communications. The legal and regulatory requirements of healthcare authorities, the primary purpose of which is to ensure patient safety, guide our activities in everything we do. In addition to this, we also follow the commonly agreed codes of harmonised practices applied by our industry internationally.

Our basic mission is to build sustained well-being by providing efficient, safe and competitive products for the diagnosis, prevention and treatment of illnesses. We promote health and quality of life with our products and by sharing guidance to consumers and healthcare professionals on the correct and proper use and storage of the products. The complementary education and training we offer to healthcare professionals, in particular to doctors and nurses as well as to pharmacy staff also fall within the scope of product responsibility, as does our support to patient organisations.

As a pharmaceutical company, we must ensure that the drugs and active pharmaceutical ingredients developed, manufactured and marketed by us are proven safe for their users, effective for the indications for which they are approved, and that they meet the quality requirements set for them as well as the needs of the customers and patients. As a manufacturer of diagnostics products, we are responsible for ensuring that the tests and test systems work as planned and produce reliable results for the patient's condition to support appropriate treatment decisions.

It is important from the point of view of our product responsibility that the information about a medicinal product we share to doctors, pharmacies and patients is in accordance with the product characteristics confirmed for it by regulatory medicinal authorities on the basis of the results of the research and the data collected in clinical use. It is also important that we provide the necessary guidelines for taking and storing the product correctly.

The guiding principles of the quality standards of our entire supply chain are based on full compliance with the EU-regulated good operating practices in manufacturing, laboratories, and R&D, and the efficiency and fluency of processes, product safety and consistent quality and high reliability of delivery. As our products are also sold outside the EU, we make sure that our operations are compliant with the good practices applicable in those countries.

In our pharmaceutical research and development operations we follow the relevant legislation, the relevant regulatory authorities' instructions and guidelines and the principles determined in our Pharmaceutical R&D Ethics Policy, which conforms to the Helsinki Declaration and the common, internationally-adopted codes of our industry.

As the manufacturer and the marketing authorisation holder, we are responsible for the quality and safety of our products. The Finnish Medicines Agency Fimea is the authority that inspects pharmaceutical and API plants and contract manufacturers in Finland according to the Pharmaceutical Products Act, also on behalf of the authorities of other EU member states. Moreover, healthcare authorities of many other countries continuously supervise our operations. The supervision and inspections also cover the pharmacovigilance and the operational premises, the R&D operations, as well as those products for which we act as a distributor when the marketing authorisation is held by another pharmaceutical company.

Orion Diagnostica follows the safety requirements concerning its products, such as the EU directive concerning IVD diagnostics, as well as the corresponding requirements of the US Food and Drug Administration (FDA) and other national regulators, and the ISO 9001 and ISO 13485 standards. The Finnish regulatory authority for diagnostic products is called Valvira.

Management of Product Responsibility

The basics of the management of our product responsibility are determined in the Quality Management System to ensure that each product batch released for sale is in accordance with the marketing authorisation, and based on this we continually monitor safety throughout each product's life cycle. We systematically follow the outcomes of the quality and safety monitoring, and in events of concern we instantly carry out the necessary procedures to ensure patient safety.

Management of pharmaceutical product responsibility

The management of product responsibility concerning pharmaceuticals is arranged as follows:

- **Chief Medical Officer (CMO)** is an experienced senior physician carrying the primary responsibility for the company's medical governance and medical ethics. The CMO is responsible for the safety of our study programmes, the assessment of medicinal benefit/risk balance and activities related to them. The CMO shall always prioritise the benefit for the patient. The CMO reports to the Senior Vice President, R&D, who is a member of the Orion Group's Executive Management Board.

- The Global Medical Affairs, headed by the **Vice President, CMO, Medical Affairs & Pharmacovigil,** in collaboration with the global marketing and sales organisations, is responsible for our compliance with the legal requirements concerning the marketing of pharmaceuticals in all those countries where Orion is present. The Global Medical Affairs reports to the Chief Medical Officer.

- **Qualified Person responsible for pharmacovigilance (QPPV)** is responsible for the establishment and the maintenance of the pharmacovigilance system of the marketing authorisation holder, as provided in EU directives 2001/83/EU and 2001/82/EU and, accordingly, in Section 30 of the Finnish Medicines Act. The QPPV shall act as a contact point for the regulatory authorities on a 24-hour basis for safety related issues. The QPPV in Orion is **Director, Global Drug Safety**, who reports to the Chief Medical Officer. The duties of the QPPV include the responsibility of our operational compliance with the international regulatory requirements concerning the monitoring the safety of medicines, regulatory reporting and actions related to the management of patient safety risks.

- The Accountable Director is, as provided in Section 9 of the Medicines Act, primarily responsible for ensuring that our medicinal products are manufactured in the correct way and that the quality requirements are met. In the Orion Group, the **Vice President, Quality Management**, who reports to the President and CEO, holds the position of the Accountable Director. The VP, Quality Management, is responsible for the compliance of our Quality Management System with the requirements of international regulatory authorities as well for the quality assurance and control of our products. In compliance with the Medicines Act, Fermion also has an accountable director who reports to the President of Fermion.

- The produced batches of medicines are released for sale by the so-called **Qualified Person** in our Quality Assurance organisation, whose professional qualifications are determined in EU directive 2001/83/EU and in the Finnish Medicines Act. Active pharmaceutical ingredient (API) batches are released for sale by independent Quality Assurance departments at each production site of Fermion. Correspondingly, the release of diagnostic products is also subject to an independent Quality Assurance organisation.

Tasks related to product responsibility are performed in cross-organisational working groups consisting of persons with a broad range of skills and competences necessary both in the product development phases and in commercial manufacturing.

The basis for the quality of a medicinal product and an API is built into the course of the research and development phases. The manufacturing methods and equipment are determined during these phases, as are the requirements for the raw materials and the product. Industrialisation is included as an elementary part in the product development phase, the purpose of which is to make sure that the manufacturing methods are applicable on an industrial production scale and that each production batch corresponds to the product described in the marketing application.

We purchase our materials from suppliers whose qualifications we have confirmed. Audits of their manufacturing sites are important steps in the process of selecting and monitoring our raw material suppliers as well as in ensuring the continued availability and consistent quality of the raw materials and the traceability of the documentation. In the qualification process for API suppliers, we also audit the manufacturers of the intermediate materials used in the manufacturing process of the API.

Before approving the raw materials for production, we always take and analyse samples of them. Packaging materials and the printed packaging information are also checked accordingly. To ensure the quality not only of our pharmaceutical preparations but also of other products, we carry out controls during the manufacturing phase. Samples are taken and analysed of each manufactured batch, and the documentation of the batch is checked before it is approved for sale. In the approval process we check that the batch has been manufactured in accordance with the marketing authorisations granted for the product by the authorities in different countries and that all the results of the analysis meet the requirements confirmed in the authorisations. When releasing products for sale, we use even stricter internal quality criteria in order to ensure the required quality throughout the entire shelf-life of the product. With the help of the batch documentation, all the materials and the phases of manufacturing, quality control, transportation and distribution can be traced without gaps.

The quality management procedures for APIs are described in the control strategy. The quality control methods are established at an early stage when the multi-staged manufacturing process is being developed, whereby the purity profile and the corresponding quality requirements for the ingredient are determined. The quality of the active ingredient is monitored throughout the manufacturing process, and all batches are analysed before they are released for sale.

Like the medicines and APIs, diagnostic products are also furnished with a batch code which we can use to make sure of the properness of the manufacturing phases, from the raw materials to the finished product. This traceability is extremely important when there is reason to find out if a manufacturing error has occurred.

Patient safety is a fundamental priority and a core value at Orion. We work to ensure the safety and optimal benefit/risk balance of our products throughout their lifecycles. We maintain a pharmacovigilance system required by legislation and regulatory requirements to monitor the safety of our medicines and to implement timely and effective risk mitigation actions when appropriate to ensure the safe use of our products and patient safety.

All customer complaints concerning our products are assessed, and the root causes are investigated. Centralised handling of the complaints enables us to form an overall picture based on the complaints concerning a single product over its entire life cycle, covering all phases from R&D until the end of its sales. This procedure also facilitates the assessment and follow-up of the impacts of corrective and preventive actions.

Pharmacovigilance

Pharmacovigilance is a science and activities relating to the detection, assessment, understanding and prevention of adverse drug reactions or any other drug-related problems. Our duty is to monitor the safety of our medicinal products throughout their life-cycles ever since the early R&D phases until the product is no more available on the market. Several functions of the company are involved in the pharmacovigilance processes coordinated by the Global Drug Safety organisation, which is a headquarter function. Appropriately qualified and trained experts are responsible for assessing and the activities related to managing the benefit/risk balance of the products. Our pharmacovigilance operations and Quality Management System are compliant with international regulatory requirements and guidelines. All data concerning the safety of our products is collected into a single point for assessment, continuous monitoring and reporting. In addition to data collected from clinical trials, the information which is monitored includes spontaneous reports and feedback from healthcare professionals, literature, regulatory authorities and patients about adverse effects, medication errors, interactions and overdoses, for example.

The core activities in the pharmacovigilance operations also include risk management plans, safety reporting to healthcare authorities, various periodic safety reviews and internal audits of pharmacovigilance activities. Orion prepares a Risk Management Plan (RMP) for all new medicines, which

describes what is known and not known about the medicine's safety and states what measures will be taken to prevent or minimise its risks. The authorities approve the RMP and the measures agreed in the RMP are implemented when the product is placed on the market. The measures are product-specific and can include e.g. additional materials or educational programmes for health care professionals to ensure the safe and correct use of the product or e.g. Post Authorisation Safety Studies (PASS) to obtain further information on a medicine's safety, or to measure the effectiveness of risk management measures. RMP is continuously maintained throughout the life cycle of the product.

Orion collects safety information on e.g. adverse effects worldwide and reports it to the relevant regulatory authorities. Both Orion and the regulatory authorities continuously evaluate the information to detect safety signals that might affect the benefit-risk balance of the products to identify any emerging safety issues at an early stage. In addition to continuous signal detection procedures, Orion periodically reviews the cumulative data. Periodic Safety Update Reports (PSURs) are prepared and submitted to the regulatory authorities. In the PSUR, all available safety information and the benefit-risk profile of the product are thoroughly evaluated and e.g. changes to the measures described in the RMPs or other risk minimisation measures will be proposed if necessary.

We work in continuous collaboration with authorities in evaluating the safety of our products and on the balance between risks and benefits. When necessary, we undertake actions to ensure patient safety and to ensure that our medicines are used correctly and safely. Such actions may include, for example, updating the information provided in the Summary of Product Characteristics and the Package Leaflet, communicating information to healthcare professionals or providing training, adding, e.g., contraindications or precautions and warnings to the medicines, or discontinuing sales. The possible actions are always taken in a controlled manner in collaboration with healthcare authorities.

Audits help to ensure operational quality

Manufacturing and sales of medicines and APIs are subject to certain regulatory permissions. During the authorisation procedure, the regulatory authorities have ensured that Orion has the appropriate qualities for the operations and that each drug released by Orion meets the specified requirements. The regulatory authorities for pharmaceuticals (Fimea in Finland) and those for healthcare equipment and supplies (Valvira in Finland) monitor and assess our research, supply chain and pharmacovigilance operations by means of regular inspections. In these inspections they also assess the effectiveness of the procedures we have in place for the follow-up and processing of adverse effects and complaints, and our readiness to withdraw a product from the market.

The inspections are conducted in the name of the medicinal authorities of the EU and other countries in the so-called PIC/S (Pharmaceutical Inspection Convention and Pharmaceutical Inspection Scheme) collaboration, which covers 49 countries. In addition, our operations are regularly monitored and inspected by authorities representing non-PIC/S countries, such as for example the US Food and Drug Administration, FDA.

First, however, we take our own initiative to proactively ensure and monitor the adequacy and compliance of our operations and facilities by means of internal control. We carry out systematic audits and management reviews of our own operations, and we continuously develop our internal procedures.

In addition to the authorities, our customers, partners and contract manufacturing principals also assess our ability to operate in compliance with the regulations and the commitments agreed in the contracts. In their inspections and audits they check the adequacy and regulatory compliance of our operations and facilities for our supply chain and R&D of pharmaceuticals, APIs and diagnostic products.

Correspondingly, we in turn monitor the adequacy and regulatory compliance of our sub-contractors, suppliers and other collaboration partners. In addition to assessments based on written enquiries, we carry out on-site audits of their facilities to make sure that the external parties involved in our supply chain, R&D and distribution meet the regulatory requirements and obligations mutually agreed upon in the collaboration contracts. We also follow up and monitor the fulfilment of the corrective actions of the shortcomings identified in the audits.

We withdraw the product in the event of defects

Medicinal products and APIs which do not comply with their specifications and which may cause harm to their users will immediately be withdrawn from sale and distribution, and from consumption if necessary. Depending on the seriousness of the case, the product is either withdrawn just from the wholesalers and retailers or also from patients as well. Similar measures are taken if there are deficiencies in the integrity of the data in the manufacturing documentation. We instantly report the events to the relevant regulatory authorities in all countries where the product is sold.

We have internal processes in place to support the prompt and proper initiation of recalls, prompt and accurate communication and efficient processing in such cases. The recall can be initiated at any time of the day if necessary. We also regularly test the efficiency and functionality of our recall procedures.

The criteria for recalls of diagnostic products are specified in the Quality Manual of Orion Diagnostica and the procedures are laid down in the internal guidelines on customer complaints and situations which are hazardous to customers. The key guidelines concern the handling of customer complaints, sales restrictions and recalling batches from the market. They also address country-specific guidelines, such as Vigilance Reporting in the United States.

All employees of the Orion Group are obliged to inform the local person responsible for pharmacovigilance about any adverse effect events they have become aware of. In addition, our phone operators have been trained to forward any queries requiring urgent action to the attention of our experts even outside office hours.

Progress in implementing tamper evidence features and serialisation

The EU Falsified Medicines Directive and the new system for verifying medications mandated as a result will apply as of 9 February 2019. The purpose of this regulation is to decrease the risk of falsified medicines reaching patients, and therefore increasing patient safety. Batches of medicines that are released for sale after 9 February 2019 will need to contain certain mandatory safety features – a unique identifier and an anti-tampering feature – on the outer packaging of human prescription drugs. Our first products containing tamber evidence feature are already on sale in pharmacies and we will continue to implement this regulation and ensure our products comply with it and similar existing and upcoming requirements in other markets.

Information about a medicine can only be shared based on the product's marketing authorisation

Pharmaceutical products may only be sold and used under a product-specific marketing authorisation granted by a pharmaceutical regulatory authority, and using the facts provided in the Summary of Product Characteristics (SPC) are confirmed for the product as part of the marketing authorisation. A marketing authorisation is granted and maintained valid for products which are safe to use for their indicated purpose, are proven to be therapeutically effective, appropriate for use as drugs, meet quality requirements and are appropriately manufactured and labelled. The authorisation also defines the product's indication, i.e. the purposes for which the medicine can be used.

The product-specific Package Leaflet (PL) must be found in every single retail package. Pharmaceutical legislation and regulatory authorities require that for products classified as drugs the pharmaceutical company may only provide information which is contained in the SPC. The product information leaflet in the package contains the main facts about the drug and its use as approved by authorities. The drug and health authorities maintain national and international drug databases, which contain up-to-date information for every product with a valid marketing authorisation. The information and arguments presented by the manufacturer and/or the marketer in any communication about the product must always conform in full with the information confirmed in the registered Product Information confirmed for the valid marketing authorisation.

In the EU, pharmaceutical companies are not allowed to communicate information about prescription drugs directly to consumers. Instead, this is the responsibility of healthcare professionals such as doctors and pharmacies as well as healthcare authorities. Marketing self-medication products directly to consumers is allowed under strictly regulated conditions.

We also aim to look after patient safety by sharing accurate and up-to-date information about the use, storage and safety of our products via our own marketing and corporate communications channels to the extent permitted by law and the commonly adopted industry codes.

For the sale of an API, Fermion shall provide its customers with registration materials (DMF, CEP) approved by regulatory authorities which form part of the marketing authorisation documentation concerning the medicine in which the API acts. For each batch, the customer shall receive the related supply documents, an analysis certificate and a safety data sheet concerning the substance. All packages are labelled with warning signs and information allowing it to be traced.

Regulations concerning diagnostic products require the product packages to contain all essential information about the product, the manufacturer, the purpose of the product as well as the storage and validity. The packaging contains appropriate warnings. The end user will always receive detailed user instructions with the package. Where required, an analysis certificate, information on tracing the product calibration and a safety data sheet is provided for each batch.

Our marketing and marketing communications practices are in line with EFPIA codes

In Europe, the practices applicable in the marketing of pharmaceuticals are recorded in the *EFPIA Code on the Promotion of prescription-only medicines to, and interactions with, Healthcare Professionals – EFPIA HCP Code,* adopted by the European Federation of Pharmaceutical Industries and Associations (EFPIA). The HCP Code determines the practices and obligations which are required to be followed by the EFPIA member companies in the marketing of prescription medicines and in other relationships with healthcare professionals.

Doctors and other healthcare professionals as well the organisations with whom they work are important collaboration partners for the pharmaceutical industry. They provide companies with valuable clinical expert knowledge for the development and improvement of medicinal treatments, which results in significant benefits for both individual patients and society. Healthcare professionals in turn can benefit from the forums for the further education and exchange of information offered by the pharmaceutical industry. In order to increase the transparency of the different forms of interaction and the related financial compensation, EFPIA has supplemented its set of principles with the HCP/HCO Disclosure Code, which obliges member companies to publicly disclose the details of transfers of value with healthcare professionals with the right to prescribe and deliver medicines on an individual basis for each identifiable recipient. Pursuant to the Disclosure Code, Orion started reporting the required data as of 2016, the first disclosure concerning events in 2015. The most recent disclosure report is available in the Sustainability section of our corporate website. Individual healthcare professionals however can prevent their names from being disclosed in the report based on their legal right to privacy.

As an EFPIA member company, Orion acknowledges the purpose and spirit of the EFPIA Codes, which is stated in the *EFPIA Leadership Statement on Ethical Practices* as follows:

> *As industry leaders, we are committed to working in partnership with all stakeholders to improve healthcare across Europe. In doing so, we are conscious of the importance of providing accurate, fair and objective information about our medicines to allow rational decisions to be made about their use. As such, we fully respect the role that EU legislation plays in regulating interactions between pharmaceutical companies and healthcare professionals.*

Our sales and marketing organisations for pharmaceuticals primarily follow the locally valid legislation concerning medicinal products, marketing, consumers and competition, the International Code on Advertising and Marketing Communication Practice as well as the Orion Group's Code of Conduct and internal guidelines, which correspond to the EFPIA Codes of Practice. The management responsibilities in our pharmaceutical sales and marketing operations have been arranged in accordance with the requirements provided in the relevant legislation (the Medicines Act in Finland) and the EFPIA codes.

We organise continuous training and regular testing for our sales and marketing organisation to ensure that those involved in marketing can manage and follow both the common codes and practices of our industry and our own practices and principles.

When preparing marketing communications and advertising material, we follow the procedures determined by healthcare authorities for checking and confirming the legal, regulatory and ethical compliance of the content before the material is released for use and publication.

The Global **Medical Affairs** is a headquarter function which coordinates and consults regarding the planning of marketing communication, and monitors the implementation of it in order to confirm its compliance with national and transnational regulations. Medical Affairs is independent from the Sales & Marketing department and reports to the Chief Medical Officer. In order to ensure that the promotional activities are in line with regulatory requirements, the specialists in the Medical Affairs organisation work closely together with the sales and brand managers and the sales organisation as well as with the non-Orion marketing partners who promote our products in their agreed territories.

Marketing of diagnostic products follows the recommendations of MedTech Europe

MedTech Europe, the European trade association representing the medical technology industries, has provided its member organisations with recommendations on how to market diagnostic products. As a member of SaiLab MedTech Finland ry, a Finnish association of manufacturers of hospital laboratory equipment, Orion Diagnostica follows both their recommendations and those of MedTech Europe. These recommendations do not include any sanctions. Our marketing communications guidelines concerning diagnostic products have been set up based on these recommendations.

Monitoring of customer satisfaction

We monitor customer satisfaction based on monthly market data and sales statistics. Changes in trends indicate changes in customer satisfaction with regard to the competitive situation. We make use of research reports published by independent market research organisations on studies and surveys of our industry. We also collect qualitative data on our key accounts by conducting customer and market segment-specific surveys, and use their results as guidance for strategic targets and operational development.

Transparent collaboration with patient organisations

As a pharmaceutical company, it is natural for us to collaborate with patient organisations. Here too, we follow the commonly agreed rules of our industry recorded in *the EFPIA PO Code*, which covers relationships between EFPIA corporate members and the patient organisations which operate in Europe.

The purpose of the Code is to ensure ethical and transparent collaboration with patient organisations. The Code emphasises the patient organisations' integrity and independence of pharmaceutical companies. Promotion of prescription-only medicines via patient organisations is prohibited. Direct and indirect support to patient organisations must be transparently disclosed, and the support must be provided without any terms restricting competition or the supported organisation's freedom of activity. A written agreement on the support must be made.

Group-wide annual summaries detailing our level of collaboration with patient organisations by country are presented in the Sustainability section of our corporate website.

Complementary references in the Sustainability section of our corporate website:

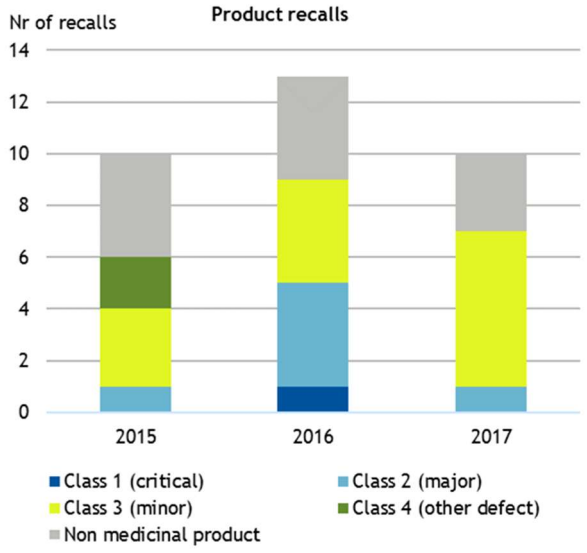
- Code of Conduct
- Expectations towards suppliers
- Our practices in approving suppliers
- Quality Policy
- Anti-corruption Policy
- Pharmaceutical R&D Ethics Policy
- Patient organisation collaboration
- Collaboration with healthcare professionals (in Finnish)

Performance indicators for Product Responsibility

The units of the Orion Group have determined objectives for the quality levels of their products. Our main metrics are product recalls due to quality defects and critical observations reported by third parties in their inspections and audits of our operations. We want to show an uncompromised level of quality and performance in our operations as standard. We also actively follow up and process the feedback from customers and consumers and use it as a basis for managing our operations, although we have not included it in our sustainability reporting.

Medicinal and non-medicinal product recalls

Recalls	2015	2016	2017
Medicinal product			
Class 1 (critical)	0	1	0
Class 2 (major)	1	4	1
Class 3 (minor)	3	4	6
Class 4 (other defect)	2	N/A	N/A
Non medicinal product	4	4	3
Product recalls total	**10**	**13**	**10**



Defects identified in medicinal products are classified as critical, major or minor, depending on the degree of severity.

Class 1 (critical): product defects that are or may be life-threatening or pose a serious health hazard to users.

Class 2 (major): product defects which may be harmful to the users or may affect medical treatment but which are not included in Class 1.

Class 3 (minor): product defects which are not likely to pose a significant health hazard to the users, but where the removal of the defective product from the market is otherwise justified.

Class 4 (other defect): product defects which are not harmful and where there is no need to recall defected products for safety reasons.

The reporting of recall events has been streamlined for 2017, and reporting from previous years adjusted accordingly. The number of product recalls performed in 2017 due to defects was lower than in the previous year. Altogether, 9 (13) recalls of product batches were performed.

One recall of medicinal products in 2017 was classified as Class 2, “major”. This defect was limited to a specific bulk batch of active pharmaceutical ingredients. The shelf life of this batch differed from other batches with regard to the impurities. The processing time and the procedures for storing the material during process stops were revised as corrective actions and the alert limits were tightened for impurities.

Six medicinal product recalls came under Class 3, “minor”. Four recalls were either due to an error in the text in the secondary packaging, an error in the barcode in the secondary packaging or a missing leaflet. Two recalls were related to the statement of non-compliance with GMP given to our contract manufacturer by the District Government of Upper Bavaria. This was due to the shortcomings quality management system and documentation. The recall was necessary; however, no shortcomings had been identified in terms of product quality nor in the analyses conducted for each batch or product shelf life. The contract manufacturer’s GMP certificate will not be issued without successful re-inspection. This factory is no longer used in our supply chain.

In addition, an unexpected crystal growth of the active pharmaceutical ingredient was discovered that exceeded the maximum value specified. All finished products manufactured from that API batch were recalled.

In addition to the medicinal products, three non-medicinal products were also recalled. Two recalls were due to cracked bottle caps and unusable bottles. Orion Diagnostica also carried out one recall from the wholesaler due to a minor defect related to the functionality of reagents used in diagnostic tests.

In the operations and functions of our Supply Chain organisation, major development programmes are underway to prevent product defects. Improvement measures taken in the different phases of the pharmaceutical manufacturing processes have shown good results, which are already reflected in our indicator listing the number and severity of product defects. They also result in an improved delivery reliability and customer satisfaction, as well as a lower number of rejected production batches and thus a reduced amount of hazardous waste and lower manufacturing costs.

The purpose of the Top Supply Chain project, the reason behind our improved performance, is to analyse the root causes of non-conformities, to implement corrective and preventive actions on a wide scale, and to perform all tasks right first time, which improves both product quality and productivity. Our purpose is to achieve a straightforward process in which unnecessary work is minimised and each person is aware of their role and responsibility for the outcome.

Audits of Orion's operations and sites conducted by third parties

Audits	2015	2016	2017
GxP and other audits by authorities	8	12	16
EHS audits by authorities [1]	N/A	0	3
GxP and other audits by partners	62	43	59
EHS audits by customers and partners [1]	N/A	0	3
Audits total	**70**	**55**	**81**
Critical observations	2	0	0

[1] EHS audits by authorities and by customers and partners are reported separately from 2016 onwards. In 2015, the number of EHS audits is embedded in GxP and other audit numbers.

In the inspections conducted into our sites and operations by medicinal authorities and our business partners, the investigators primarily check our compliance with the Good Practices (GxP) requirements, i.e. manufacturing (GMP), distribution (GDP), laboratory (GLP), clinical (GCP) and pharmacovigilance (GVP). Partners in particular are also paying increasing attention to the management of EHS affairs, i.e. the level of environmental protection and occupational health and safety.

The observations made in inspections and audits related to the Good Practices requirements are classified as either critical, major or minor based on their level of severity. The investigator may also recommend better procedures, instead of ones already adopted which may still be acceptable.

Critical: The practice involves a high risk to drug safety and/or drug quality. An essential violation of Good Practices.

Major: The practice may incur a risk to the safety or quality of a drug. Incompliant with Good Practices.

Minor: Drug safety is not compromised. A minor non-conformity with Good Practices.

Recommendation: The practice is compliant, but an improvement is recommended.

In the EHS audits, observations are also classified as critical, major or minor based on their severity.

Critical: The observation is currently causing serious and immediate risks in terms of EHS performance, or the observation violates essential laws and regulations.

Major: Unless managed properly, the observation may cause a serious risk in terms of EHS performance.

Minor: Minor issues with no serious risks in terms of EHS performance.

Authorities conducting GxP inspections mostly represent healthcare authorities, such as Fimea in Finland and the FDA in the U.S. Altogether, 11 (6) inspections were made into our pharmaceutical manufacturing sites, focusing on the regulatory GMP, GCP and GVP compliance. Fermion's manufacturing plants underwent 4 (4) inspections by healthcare authorities. Orion Diagnostica was inspected by Underwriters Laboratories to reconfirm the validity of the ISO 13485 and ISO 9001 certifications.

Our business partners, mainly customers, marketing partners and contract manufacturing principals, made a total of 59 (43) GVP and GMP audits, 34 (26) of which were conducted at Fermion's production sites in Hanko and Oulu. No critical observations were recorded in the audits.

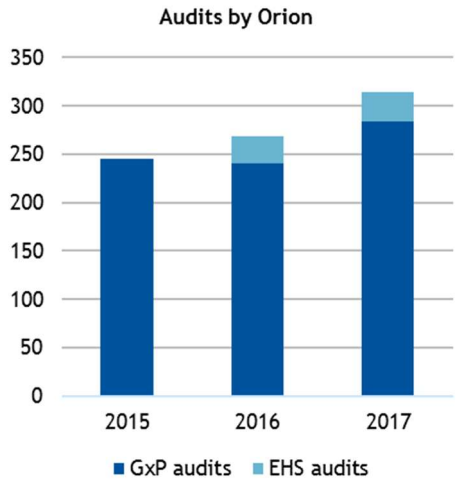
Inspections by third parties are a part of daily life of pharmaceutical companies, and as a matter of principle we are ready to welcome an auditor into our premises at any time. Every inspection is different depending on the kind of criteria the inspecting organisation works with. The inspectors also have different ways of working. It is quite normal for minor defects to be observed. After the inspection, the auditor is especially interested to see how the shortcomings that have been observed are amended and how they are prevented from recurring. As a rule, we take immediate action to correct even the most minor defects straight after each inspection. When planning corrective actions we also check to see if a corresponding defect can also be identified at other locations, regardless of where it was detected. The corrective actions are documented in detail and reported to the organisation which carried out the audit.

The observations made by inspectors may take some time to amend, which may cause delays to our production programmes. In the estimates concerning short-term risks and uncertainties, Orion's management points out accordingly that our broad product range may pose risks to the reliability of deliveries and make it challenging to maintain the high quality standards required in production. Any remedial actions that may be required may at least temporarily have effects that reduce delivery reliability and increase costs. Our product range also includes products manufactured by other pharmaceutical companies. Possible problems related to the delivery reliability or quality of the products originating from those manufacturers may cause a risk to our delivery reliability.

In addition to the GxP audits made by authorities and our partners, we also conduct regular internal audits at all our manufacturing sites in accordance with annual plans. The purpose of these audits is to make sure that operations are compliant with the regulatory requirements and meet the levels defined in the Quality Handbooks. In the internal audits, we evaluate our operational quality with the eyes of an independent external auditor. Similarly, we conduct also internal EHS audits on an annual basis.

Audits of the operations and sites of material and service suppliers and contract manufacturers conducted by Orion

Audits	2015	2016	2017
GxP audits	245	241	284
Critical observations	22	16	19
Rejections	5	5	4
EHS audits[1]	N/A	28	30
Critical observations	N/A	13	7
Rejections	N/A	0	1



[1] EHS audits reported separately from 2016 onwards. In the 2015 number of EHS audits, EHS critical observations and rejections are included in the GxP audit number.

In our own GxP audits into our suppliers and other business partners, we apply the same severity classification as is used by authorities and our partners when evaluating the results of their GxP inspections into our operations.

Although we have selected our business partners using strict GMP and EHS criteria, and regulatory authorities have audited them to confirm their compliance with GMP, we consider it important to check the eligibility and approvability of our existing partners and supplier candidates by carrying out regular surveys and audits.

Like in previous years, most of the 284 GxP audits we conducted in total in 2017 were carried out into operations of our GxP critical business partners and suppliers, such as API manufacturers, suppliers of raw materials and other materials, contract manufacturers and organisations providing clinical research services to us. The high number of critical observations shows that on-site audits are necessary.

The GxP audits we made in 2017 resulted in a total of 4 rejections, all of which were due to severe observations recorded in GMP audits. Strong justifications for a rejection are, for example, the risk of cross contamination and severe defects in the quality management systems, validation, documentation and data systems.

Environmental, health and safety audits are a tool that we use to manage and monitor a supplier's EHS compliance, also ensuring that necessary corrective actions are agreed with the supplier and following implementation of actions. During the course of the year, we conducted EHS audits at 30 sites in India and China and recorded 7 critical observations. Critical observations concerned fire and explosion safety as well as some issues with permits and licences as required by local authorities. One supplier was rejected due to challenges in connection with corrective actions related to audit findings. Although the amount of critical observations have decreased, the results of our EHS audits of the sites of Indian and Chinese suppliers in particular still suggest a need to further develop environmental and occupational health and safety at workplaces in these countries, where the suppliers for the pharmaceutical industry are increasingly located. Over the years we have also developed our system of categorising audit findings, therefore it is to be noted that the years reported are not directly comparable.

Environment

Management of environmental affairs

Our responsibility as a company is to recognise and manage our impact on the environment and drive the reduction of our business's environmental burden. Orion's environmental, health and safety policy (EHS policy) defines the Group-level commitment on how we manage environmental matters and promote the well-being of our workforce. Our EHS Management System for managing, monitoring and developing environmental matters also comprises energy efficiency, process safety and occupational health and safety. The EHS Management System ensures effective management and compliance with valid legislation, and also with other regulations and requirements concerning our operations. The environmental management system is built upon the principles set out in the ISO 14001 environmental standard. In the development of energy efficiency, we apply the principles of the ETJ+ energy management system and practices consistent with the ISO 50001 standard. In the management of occupational health and safety we apply OHSAS 18001 guidelines and the ISO 45001 standard that will replace the former one in the future. The management of EHS matters is monitored through annual internal audits. We are committed to continuously improving our performance in environmental, health and safety matters and strive to achieve the high objective we have set for managing them.

Managing the sustainability of our suppliers

Following of Good Practices is required in the development and manufacture of pharmaceutical products. Auditing our suppliers with regards to GxP requirements is an important step in selecting, monitoring and ensuring the continued availability and the consistent quality of the raw materials and making sure that the documentation is traceable. The quality of Orion's products is ensured through rigorous management of the entire supply chain, irrespective of where the raw materials are sourced and the products are manufactured.

Suppliers are required to comply with GxP requirements, and in addition to this we expect our suppliers to demonstrate their commitment towards Orion's Supplier Code of Conduct. We manage our global supply chain and monitor suppliers' environmental, health, safety (EHS) and ethical compliance, taking action if needed. We have a risk-based approach in managing sustainability in the supply chain. We use self-assessment questionnaires and undertake risk-based EHS on-site audits to assess suppliers in terms of sustainability. Our risk-based management of the supply chain means that we have identified and prioritised risks, that we manage risks and continuously develop our risk management. For audit observations, we ensure that the necessary corrective actions are agreed with suppliers and follow implementation of actions. We conduct risk-based on-site audits at our 1st tier suppliers but also at selected 2nd tier suppliers if appropriate. The on-site audits therefore are commonly carried out on formulated products of pharmaceutical substances, active pharmaceutical ingredients and at intermediate supplier sites. Indicators related to EHS audits are reported on in the *Product Responsibility* section of this report.

We continuously reduc of our environmental burden and the managing of social risks in our supply chain. We also see that collaboration at the industry level is key, and in late 2017 we applied for membership of the Pharmaceutical Supply Chain Initiative (PSCI), which is an industry initiative focusing on promoting and continuously improving the pharmaceutical supply chain in the areas of labour, ethics, environmental health and safety, and responsible procurement practices. We see that in addition to our own efforts, a common vision and shared responsibility is the key and an effective way to be able to improve the sustainability of the supply chain.

Environmental aspects, our approaches and targets

We have identified the most significant environmental aspects for the Orion Group and its businesses. These relate to the consumption of raw materials, energy and water, emissions into the air and waste water, and the amounts of waste created by our operations. Orion's most significant environmental aspects and the related approaches to continually improve our performance in them are as follows:

Material efficiency	We know the most central material flows in our production operations. We identify the items in need of development in order to minimise our waste flows. We forward our recyclable surplus materials for further recovery. We manufacture our products right the first time. We reduce the proportion of hazardous waste of our total waste.
Waste water management	We know the quality of our waste water. We reduce the environmental burden on waterways caused by our operational sites by minimising the residues of harmful chemicals in our waste water.
Energy efficiency	Our target is to improve the efficient use of energy and reduce our energy consumption by applying practices determined in our Energy Management System. We participate in the energy efficiency programmes pursued by industry associations which are relevant to us.
Emissions into air and climate change	We contribute towards the prevention of climate change by reducing our greenhouse gases, CO_2e and VOC emissions.
Managing sustainability of our suppliers	We expect our suppliers to demonstrate their commitment towards Orion's Supplier Code of Conduct and our own requirements. We are committed to improving the management and monitoring of environmental, health, safety and ethical issues in the supply chain.

We continuously measure and monitor matters related to the environment. The two key figures of sustainable environmental development are included in the strategic KPIs monitoring the implementation of our Group strategy.

- **Energy saving measures, MWh saved in our energy consumption**
  We are committed to the extension period of the joint Energy Efficiency Programme for members of the Confederation of Finnish Industries (EK). Under the new programme, the savings target for 2025 is 7.5% of energy consumption in 2016 and the intermediate target is 4% by 2020. For Orion, this means a saving target of slightly over 12 GWh.
- **Proportion of hazardous waste of our total waste**
  Our goal is to reduce the amount of hazardous waste in particular, but also our levels of total waste at the same time.

Measuring our performance is vital in managing sustainability and in monitoring the development. Some of the monitored items are obligatory, based on requirements specified in the local and site-specific environmental permits. Environmental and chemical safety authorities are examples of external instances to which we deliver regulatory follow-up data on our environmental performance. More importantly however, gathering data and assessing indicators is a tool for us to monitor and improve our own performance.

We aim to reduce the burden on the environment caused by our operations by implementing programmes and measures. We plan, choose, buy and invest predicting and considering the environmental risks and impacts of our solutions. The core principle behind this is material and resource efficiency: achieving more with less. To be successful, we manufacture our products right first time and use our resources – materials, labour, energy, water, time and money – as wisely as possible. In doing so, we also create a substantial economic benefit.

In addition to our activity programmes, we encourage the achievement of good results by keeping our processes up to date, investing in improved process technology and methods and a more efficient use and handling of chemicals and other manufacturing materials.

Environmental investments are made at our operational sites on an annual basis, either with the primary purpose of reducing our environmental burden or as part of major upgrading and replacement investments carried out in accordance with the Group's long-term investment plans. Risk assessments also provide guidance for the planning and implementation of our investments and other measures to reduce their environmental impact.

Legal and other environmental requirements

Elementary legislation to be attended to in the management of environmental affairs includes that concerning environmental protection, waste, chemicals and energy.

We produce pharmaceuticals and active pharmaceutical ingredients (APIs). All of the Group's production plants are in Finland, and the manufacturing plants have the valid environmental permits required for operations as required by the Finnish Environmental Protection Act. The prerequisites for granting an environmental permit include, among others, that the plant shall neither cause harm to health nor significant environmental degradation or the risk thereof. The environmental regulations and permits are location-specific. They provide the acceptable maximum levels of emissions into air, soil and water, as well as the methods and scopes for the measurement, monitoring and reporting of the items detailed in the permits to authorities. Orion Diagnostica's operations are not subject to an environmental permit. All production sites of the Orion Group have **contracts on the handling of industrial waste waters** with their local waste water treatment operator. The acceptable limits for the waste waters are determined in the contracts. We regularly monitor and analyse the quality of our waste waters.

All our sites are required to have **permits to store and handle hazardous chemicals**, with the exception of the pharmaceutical manufacturing sites in Kuopio and Salo, and Orion Diagnostica, as they do not handle hazardous chemicals on a broad scale.

In accordance with Finnish **waste legislation**, we aim to reduce waste, avoid producing waste and deliver usable fragments for re-use and recovery.

The Orion Group is subject to the provisions of the Finnish **Energy Efficiency Law**, which obliges us to improve energy efficiency continuously and to report on our actions and performance to the Finnish Energy Authority. Our Energy Management System helps us fulfil the requirements and the purpose of this legislation.

Fermion is the part of the Orion Group that is subject to the provisions of the **REACH Regulation** concerning Registration, Evaluation, Authorisation and Restriction of Chemicals, which require Fermion to register all solvents and intermediate products imported or produced by the company amounting to at least one tonne per year.

The **CLP legislation** (Classification, Labelling and Packaging of Substances and Mixtures) concerns the entire supply chain of Orion to a considerable extent. The purpose of CLP is to harmonise the classification and labelling system of chemicals within the EU.

We aim for the highest standards in the industry with respect to the environment. The minimum levels set in legislation, regulations and the environmental permits are usually not satisfactory targets for Orion in the management of environmental responsibility. We aim to be significantly better, and a higher target can often also prove to be more meaningful economically.

Environmental management responsibilities

In the Orion Group, the conformity of operations with the environmental management, which is an elementary component in the EHS Management System, is coordinated by the Director for EHS and Facility Management, and by the EHS organisation with its EHS Specialists reporting to him. He reports to the Senior Vice President, Supply Chain, who is a member of the Group's Executive Management Board. In Fermion, EHS activities are coordinated by a safety manager who reports to the President of Fermion. EHS activities in Orion Diagnostica are also coordinated by a safety manager. Both Fermion and Orion Diagnostica safety managers are members of the group-wide EHS

network. The core tasks of the EHS organisation in environmental management include, among other things, taking part in the preparation of continuous improvement programmes, external and internal EHS audits, guidelines and training sessions, following up of safety observations and the resulting corrective actions, risk assessments, investigations of events causing injury, EHS reporting and internal communications about EHS affairs.

The local site managers are responsible for arranging operations at the operational site in accordance with the EHS Management System. Each supervisor shall see to it that their subordinates are familiar with the guidelines concerning the reduction of our environmental impact. They shall also promote employees' commitment to our development goals and motivate them to take corrective actions to prevent damage to the environment.

The management teams of the business divisions and line functions are primarily in charge of environmental affairs within their operational units, observing the nature of the unit's operations, the regulatory and legal requirements, and the related environmental risks.

The units of the Group are also responsible for identifying the main environmental impact of their operations and to develop their operations and activities in an environmentally friendly manner. They also determine division and location-specific procedures for environmental damage and accidents, and document the main tasks and activities that have an impact on environmental safety. They also issue guidelines for them as well as establishing and maintaining operating procedures for the collection, processing and archiving of information related to environmental safety.

Acting according to our environmental principles in our daily work is the responsibility of each Orion employee.

Emergency preparedness and response

In the event of an emergency, pre-determined procedures have been put in place by the Group management for taking control of the event and its consequences and for normalising the situation. Depending on the severity and the nature of the situation, predefined procedures are in place. Preparedness plans in case of different kinds of accidents and other exceptional events are based on continuously following up and monitoring our operational environment.

Emergencies classified as the most serious category pose an imminent threat towards our company and, in the worst case, they could jeopardise our operations or people's health or safety and cause great damage and harm. The model of action established for the severest kind of emergencies stipulates that the Team for the Management of Exceptional Circumstances, chaired by the President and CEO and consisting of certain pre-defined persons, starts working in accordance with the Team's charter and shares tasks and guidelines applicable in the event of an emergency. The basic composition of the Team is complemented with other persons depending on the type of event.

In less critical events, i.e., in which the consequences and damages are assessed to be clearly minor compared to those in the most severe category, the most suitable operational model is used from the selection of models established.

In the Rescue Plans established for each operational site, potential accidents and exceptional events involving risks of environmental hazard or workplace safety are described, together with related instructions as well as matters and responsibilities concerning preparedness, rehearsals, training and communications.

In case of emergency, we eliminate the threat and the hazard as soon as possible based on our procedures to limit the damage to people and property, and we appoint appropriate persons to take care of the situation. We take care of internal and external communications to ensure that up-to-date and reliable information is available quickly and transparently. We also observe the role of the relevant public authorities in managing the event. In addition to this, we also take care of continued operations, staff arrangements and alternative or temporary operational arrangements. In 2017, no cases of emergency classified as serious were recorded.

Operating the EHS Management System

The following procedures are elementary in operating our EHS Management System and for predicting, preventing and observing exceptional events and situations and for taking corrective action:

- Regular EHS risk assessments for the identification of potential shortcomings and nonconformities
- Development programmes with objectives, action plans and progress monitoring
- Systematic data collection and evaluation of items within the scope of the EHS and Energy Management Systems
- Regular internal EHS audits in departments
- Audits conducted by regulatory authorities and our collaboration partners at our sites
- Overall assessment of the EHS and Energy Management Systems by the Group management in annual management reviews
- Safety observation system for reporting on acute and possible hazardous situations as well as for monitoring the progress of the corrective actions taken
- Notifications of and concerns regarding environmental harm and safety received from instances outside our Company, such as collaboration partners or neighbours

A team of EHS experts investigates the observations recognised in risk assessments and audits or in the safety observation system as well as the notifications received from external instances in collaboration with management and relevant experts. In this process, the causes and the degree of severity are also assessed, and the necessary actions are planned to eliminate the defect or to mitigate the harm, and to prevent a similar event from recurring.

We follow up the implementation, applicability and efficiency of our EHS Management System by means of regular internal site audits and also in the annual management reviews. The audits and management reviews help us identify needs to develop and improve our operations and the management system. In addition, we make sure that the system and our operations follow the principles set out in the ISO 14001 standard.

In its annual management review, the Group's executive management evaluates the applicability, sufficiency and efficiency of our EHS Management System. In the review, the management assesses things like the outcomes of the EHS audits, the results and the level of improvement of the EHS activities, the progress of the corrective and preventive actions taken, as well as the recent and upcoming changes in circumstances, requirements and obligations. In addition, the management evaluates our EHS Management System, Policy and targets, and considers possibilities for improvement and necessary changes.

Training and awareness

Training is part of our active EHS culture and plays an important role. We maintain and promote our staff's awareness of environmental, health and safety affairs as well as of our energy efficiency improvement programmes by providing information in our internal communication channels and by means of guidelines and various training events.

Supervisors have a special responsibility for ensuring that existing staff and new employees receive sufficient training on the safety procedures and environmental matters of the department and division they work in.

Complementary references in the Sustainability section of our corporate website:

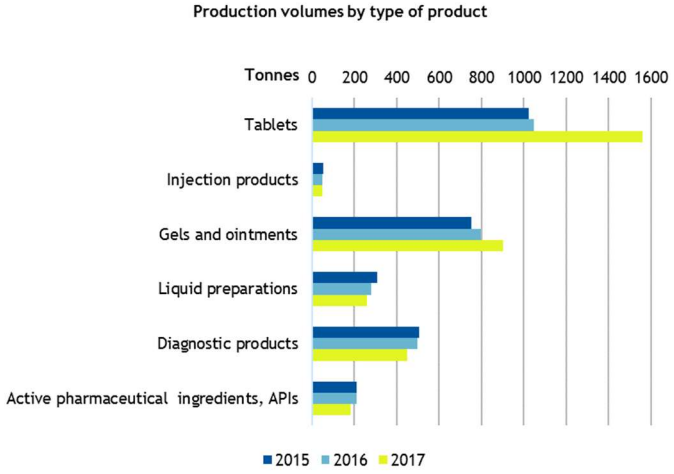
EHS Policy
Expectations towards suppliers
Our practices in approving suppliers

Indicators of environmental performance

Production output and use of materials

Production volumes by type of product[1]

Tonnes	2015	2016	2017
Tablets	1,024	1,047	1,561
Injection products	52	49	47
Gels and ointments	752	796	902
Liquid preparations	306	279	260
Diagnostic products	507	497	447
Active pharmaceutical ingredients, API	211	209	181



[1] The total production volume of the Orion Group cannot be converted into a commensurate unit of measure, because the product portfolio consists of various forms of products. Tablets in various forms are the most common pharmaceutical preparations produced. The table representatively indicates total production volumes of our typical product types in tonnes, which have been calculated using average conversion factors. In 2017, conversion factors have been adjusted, especially when related to tablets. The primary and secondary packages of the products are not included in the figures. Production volumes of inhalators are not disclosed due to company confidentiality.

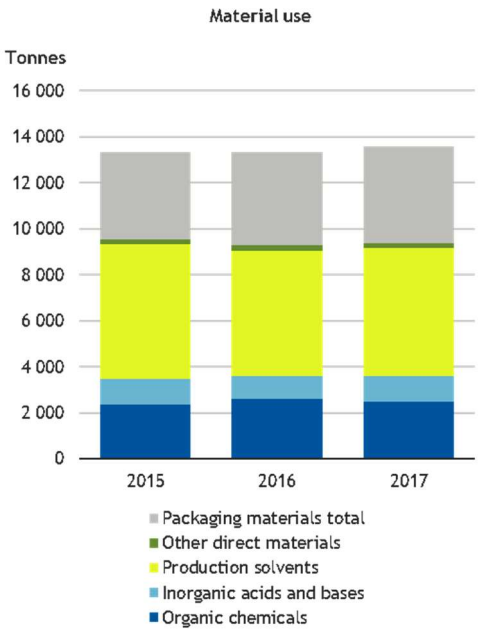
Using the number of retail packages as a measure, our output of medicinal products in 2017 came to over 58 million retail packages of pharmaceutical preparations produced. Our tablet packaging operations are increasingly being centralised into our packaging and logistics centre in Salo, where 32 million sales packages were produced. At our Espoo site, the facilities previously used for tablet packaging are being converted to the manufacture of Easyhaler products.

The combined production of active pharmaceutical ingredients (API) at Fermion's sites in Hanko and Oulu came to 181 million tonnes. The annual API production quantities depend on what APIs are included in the production programmes, as well as the phases ongoing in the manufacturing processes and their duration, with wide API-specific variations. An investment in a new API manufacturing facility is under way in Hanko, which when completed in 2018 will replace part of the old capacity, and along with which the total API production capacity of our Hanko site will grow to about 300 tonnes. This top ultra-modern plant will meet strict quality and regulatory requirements well into the future, enhancing our competitiveness in the global API markets dominated by Indian and Chinese manufacturers. Primarily, the facility will be dedicated for manufacturing the APIs for our proprietary medicinal products.

The pharmaceutical industry operates in global networks. As a result, it is not economically feasible to establish and maintain in-house manufacturing technologies for all the different types of products that we offer. Like is the case with other pharmaceutical companies, we also allocate our capacity and resources efficiently, sub-contracting some of our own products to other manufacturers.

Use of materials

Tonnes	2015	2016	2017
Manufacturing materials:			
Organic chemicals	2,367	2,610	2,485
Inorganic chemicals	195	193	167
Inorganic acids and bases	1,117	1,002	1,106
Production solvents	5,834	5,446	5,572
Laboratory solvents	11	10	17
Gases	11	28	34
Biological materials	4	5	4
Direct materials total	**9,538**	**9,295**	**9,385**
Packaging materials:			
Corrugated cardboard	369	462	627
Wooden packaging	511	589	597
Plastic packaging	1,497	1,500	1,498
Paper fibre-based consumer packaging	965	1,055	1,055
Glass packaging	315	289	289
Aluminium packaging	80	79	99
Other packaging materials	57	51	29
Packaging materials total	**3,793**	**4,024**	4,194
Use of materials total	**13,331**	**13,320**	**13,580**
Recycled solvents, tonnes	2,237	**1,815**	2,010
Share of total materials, %	17%	14%	15%



Use of materials by reporting unit 2017

Tonnes	Orion Group	Orion Corporation	Fermion Oy	Orion Diagnos-tica Oy
Inorganic acids and bases	1,106	196	910	1
Organic chemicals	2,485	1,548	935	3
Inorganic chemicals	167	116	51	1
Production solvents	5,572	210	5,361	0
Other direct materials	55	37	12	4
Direct materials total	**9,385**	**2,107**	**7,269**	**9**
Consumer packaging/wrapping	1,055	955	0	100
Corrugated cardboard packaging	627	582	0	45
Glass packaging	289	286	0	3
Wooden packaging	597	581	0	16
Plastic packaging	1,498	1,305	13	179
Other packaging materials	128	78	18	32
Packaging materials total	**4,194**	**3,787**	**31**	**375**
Materials total	**13,579**	**5,894**	**7,300**	**384**

The reported use of materials includes the substances and materials used by the company's own operations for pharmaceuticals, active pharmaceutical ingredients (APIs) and diagnostic tests and test systems (manufacturing, storage and transport to wholesalers), and part of the materials used in R&D. The use of materials is primarily dependent on the production volumes of finished products, but it is also affected by improvements in the manufacturing process and the amount of semi-finished products and intermediates sourced from external suppliers.

The tables do not include diagnostic test equipment belonging to Orion Diagnostica, which are manufactured by a sub-contractor. The devices' mechanical parts are made from plastics and metals and they contain electronics.

Fermion, which manufactures active pharmaceutical ingredients in chemical processes, uses most of **direct manufacturing raw materials** in our Group. Fermion accounted for 77% of the Group's total consumption of direct materials in 2017. Solvents account for the largest share of the total volume of materials used in the Group's production operations. In 2017, they represented 74% of Fermion's use of materials and 59% of the Group's total consumption of direct materials.

In the process of manufacturing medicines, the largest material group consists of organic chemicals, the share of which was 73% of the direct materials used by Orion Corporation and 26% of the Group's total direct materials. In the manufacture of medicines, 210 tonnes of solvents were used in 2017. In Espoo, the main solvent is ethanol, and most of it is used in tablet-coating processes and in the production of tablet masses. The Turku plant also uses mostly ethanol, and additionally several tonnes of isopropanol. A considerable proportion of solvents is used in the manufacturing of hormonal products.

The use of packaging materials increased by 4% compared to 2016. Over 90% of the total packaging materials were used for retail and wholesale packaging of medicines and 9% for packaging of diagnostic products. Fermion only accounted for about one percent of the Group total. Fermion's products are in the form of powder and they are delivered to customers in large sacks and fibre or plastic barrels, whereas products from Orion Corporation and Orion Diagnostica are distributed in wholesale and retail packages.

The materials used in 2017 for the many different types of packaging accounted for 31% of our Group's total material consumption. The most commonly used packaging materials include plastics, cardboard and other wood fibre-based materials, glass and aluminium. Plastics and glass are mostly used as primary packaging materials, which come into direct contact with the medicine. Aluminium is mostly used in blister packages, but is also used in the collars of injection bottles and some cream tubes. A very thin layer of aluminium film is contained in the bag protecting the Easyhaler inhaler in its retail packaging. Some of Orion Diagnostica's products are packed in aluminium folio bags.

Cardboard and liner are the most common materials of secondary packaging, which the primary packages are packed into. Cardboard and plastic film as well as bubble and cell plastics are the most common materials used in wholesale packaging.

Some solvents can be recycled at our own production sites

Regenerated solvents comprise the only relevant re-usable materials in the Orion Group. Solvents are regenerated and re-used by Fermion. Both Fermion's Hanko and Oulu plants retain some of their solvents and regenerate them in their distilleries. The Oulu plant re-uses the regenerated solvents in its production processes, whereas in Hanko part of the distillate is used as fuel in the plant's VOC combustion facility and thereby as an energy source for API processes. In 2017, regenerated solvents accounted for 37% of Fermion's total solvent consumption.

Our ability to use recycled auxiliary and excess materials in our own manufacturing processes is practically limited to Fermion's solvents, due to strict requirements concerning the quality, composition and purity of the materials used in the manufacturing of medicines. The purity and safety requirements also concern packaging. Usable materials that definitely do not contain residues of active ingredients are recycled.

Waste

Waste in all forms is an important aspect of our efforts to reduce our environmental burden. Our aims are aligned with the priority targets specified in the EU waste strategy, which are included in the Finnish Waste Act. These priorities include reducing generating waste and recycling the generated waste materials. Waste that cannot be re-used as material in our own operations is delivered to an appropriate third party to be used in another way whenever possible, such as for energy recovery. The amount of waste sent to landfill is kept to a minimum.

In the manufacture of pharmaceuticals, the tolerance for errors and defects is zero. A batch which fails to meet the specified requirements concerning quality and standard operating procedures is hazardous waste, and all input resources consumed in its production - materials, energy, time and labour - are lost. Therefore, it is essential to produce our products right the first time.

Fortum Waste Solutions takes care of our waste

Fortum Waste Solutions Oy, specialist provider of environmental management services, is our partner providing almost all the services we need for managing our waste. With practices established in collaboration with Fortum Waste Solutions, we make sure that waste is correctly sorted and handled at the sources of waste. With its efficient logistic infrastructure, our partner collects and transports our waste and treats the fractions in its advanced processes. Via Fortum Waste Solution's comprehensive recycling, recovery and re-use networks, all our re-usable and recoverable surplus materials are forwarded to third parties for further use.

Most of the Orion Group's waste is hazardous, and most of it comes from Fermion, which produces active pharmaceutical ingredients at its plants in Hanko and Oulu using synthetic methods of organic chemistry and handling great amounts of raw materials. Almost all waste from Fermion's processes is hazardous because it contains active pharmaceutical ingredients or other chemicals.

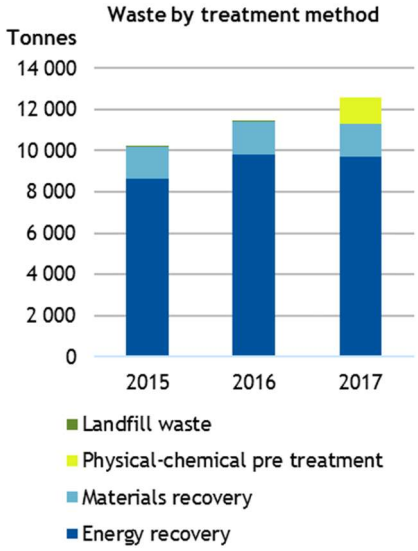
Hazardous waste also results from the manufacture of medicines, because those materials that contain or may contain active pharmaceutical ingredients or other chemical substances classified as hazardous shall be treated as hazardous. Typical materials treated as hazardous waste include drug waste, organic and inorganic chemicals and mixtures classified as hazardous or harmful, cytostatic, carcinogenic, accumulators, fluorescent tubes, halogenated solvents, lubricating oils, oil-containing fabrics and filters, mercury waste, adhesive and paint containers and ash from fuel oil tanks. We make sure that our hazardous waste materials are given appropriate further treatment, during which process they are made safe for both people and the environment.

In the pre-treatment processes, our partner sorts out those fractions of our hazardous waste that can be recycled for further use. Such materials include accumulators and batteries, refrigerating equipment, fluorescent tubes, electronic equipment and metals. Most of our hazardous waste can be used as fuel for generating energy. Fortum Waste Solutions incinerates our hazardous waste in its Riihimäki power plant, which is specialised in the destruction of hazardous waste at extremely high temperatures. The energy generated is utilised as district heating energy in the Riihimäki region. A minor part of our hazardous waste can be sorted into energy fractions combustible at lower temperatures. Some of our hazardous waste, especially waste fractions with a high water content, is sent to physical-chemical pre-treatment. These fractions are pre-treated by evaporation or drying before incineration.

The manufacturing processes of pharmaceutical products, APIs and diagnostic products differ very much from each other, and accordingly, the waste amount and types generated also differs. Our pharmaceutical product manufacturing sites in Espoo, Turku, Kuopio and Salo mainly generate non-hazardous fractions that are recovered either as materials or as energy. A considerable part of all our non-hazardous waste consists of different kinds of packaging materials.

Hazardous and non-hazardous waste

Tonnes	2015	2016	2017
Hazardous waste	7,681	8,772	10,006
Non-hazardous waste	2,536	2,628	2,592
Total	**10,217**	**11,400**	**12,598**
Share of hazardous of total waste	**75%**	**77%**	**79%**



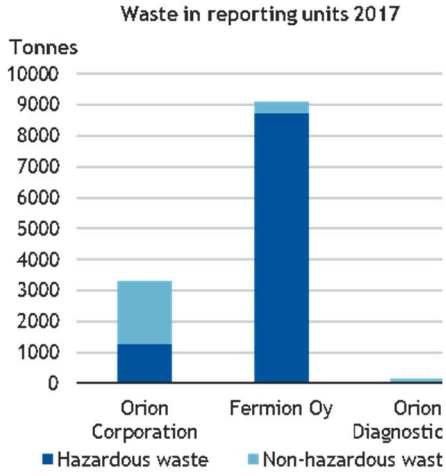
Waste by treatment method[1]

Tonnes	2015	2016	2017
Energy recovery	8,638	9,789	9,715
Materials recovery	1,565	1,606	1,614
Physical-chemical pre treatment			1,268
Landfill waste	14	4	0
Waste total	**10,217**	**11,400**	**12,598**

[1] *The waste treatment category "physical-chemical pre-treatment" was added in 2017*

Waste by reporting unit 2017

Tonnes	Orion Group	Orion Corpo-ration	Fermion Oy	Orion Diagnos-tica Oy
Hazardous waste	10,006	1,271	8,722	12
Non-hazardous waste	2,592	2,052	385	155
Waste total	**12,598**	**3,323**	**9,107**	**167**



One of the indicators included in the KPIs for monitoring the implementation of the Orion Group's strategy monitors the share of hazardous waste of our total waste. Our aim is to reduce hazardous waste especially, but along with that also total waste.

In 2017, our operations in Finland generated a total of about 12,600 tonnes of waste, which was 11% more than in 2016. The increase was due to the increased amount of hazardous waste from both production of pharmaceuticals and APIs. The increase came from the recovery of waters from the processes containing APIs, which since 2016 has been included in our reporting as a new hazardous waste type. In 2016, the Hanko plant started collecting such matter into a combustion tank. In addition to Hanko, API water collection systems were built at our sites in Oulu, Espoo and Turku during the course of 2017. This method of recovering and treating API waters has increased the amounts of hazardous waste, but on the positive side, considerably lower amounts of chemical substances are ending up in municipal effluent treatment plants as a result of being carried in our waste waters to combustion tanks. Read more about this project in the *Water and effluents* section in this report.

Fermion's direct manufacturing material flows are many times higher than those involved in the manufacture of pharmaceutical preparations. Fermion's total waste increased by 6% and its share of the Group's total waste in 2017 was about 72%. Overall, Fermion generated 6% more hazardous waste than in 2016. Fermion's share of the entire Group's hazardous waste was about 87%. Only 4% of Fermion's total waste was handled as non-hazardous.

Orion Corporation, comprising the pharmaceutical preparations business, accounted for about 26% of the Group's overall waste, with almost the same amount of total waste as in the previous year. The amount of hazardous fractions increased 132% due to the installation of API water collection systems. Other fractions in the hazardous waste consisted of drug waste, halogenated solutions and organic chemicals.

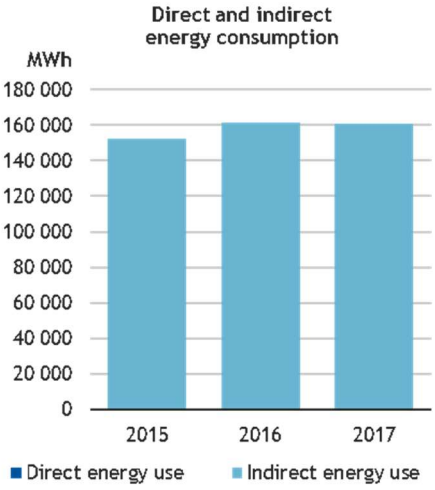
Orion Diagnostica's waste decreased by 8% from the previous year and 93% was non-hazardous. Of the Group total, waste from the diagnostics business only accounted for about 1%.

Of all the waste we produced in 2017, 0 (4) tonnes were deposited at landfill sites.

Energy

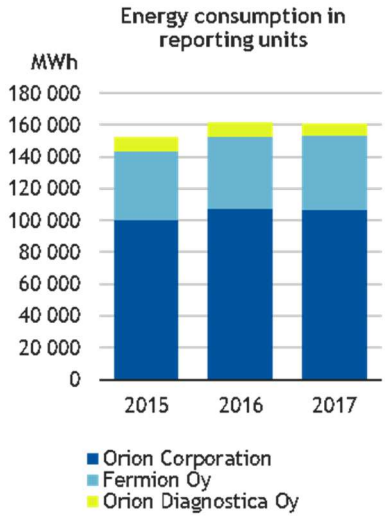
Direct and indirect energy consumption by primary energy source

MWh	2015	2016	2017
Heavy fuel oil	0	0	0
Light fuel oil	485	451	402
Direct energy total	**485**	**451**	**402**
District heat	47,744	55,160	48,512
Steam	35,057	36,310	42,186
Electricity	69,030	69,520	69,719
Indirect energy total	**151,831**	**160,990**	**160,416**
Energy total	**152,316**	**161,440**	**160,818**



Energy consumption by reporting unit 2015-2017

	MWh 2015	Share 2015	MWh 2016	Share 2016	MWh 2017	Share 2017
Orion Corporation	99,843	65%	107,507	67%	106,889	66%
Fermion Oy	43,495	29%	45,081	28%	46,097	29%
Orion Diag-nostica Oy	8,978	6%	8,852	5%	7,833	5%
Total	**152,316**	**100%**	**161,440**	**100%**	**160,818**	**100%**



Energy consumption in the reporting units by type of energy in 2017

MWh	Orion Corporation	Share[1]	Fermion Oy	Share[1]	Orion Diagn. Oy	Share[1]	Group total	Share[2]
Light fuel oil	402	>0%	0	0%	0	0%	**402**	**>0%**
Direct energy total	***402***	***>0%***	***0***	***0%***	***0***	***0%***	***402***	***>0%***
District heat	42,633	40%	2,582	6%	3,297	42%	**48,512**	**30%**
Electricity	45,635	43%	20,111	44%	3,973	51%	**69,719**	**43%**
Steam	18,218	17%	23,404	51%	563	7%	**42,186**	**26%**
Indirect energy total	***106,487***	*100%*	***46,097***	*100%*	***7,833***	*100%*	***160,416***	***100%***
Total	**106,889**	**100%**	**46,097**	**100%**	**7,833**	**100%**	**160,818**	**100%**

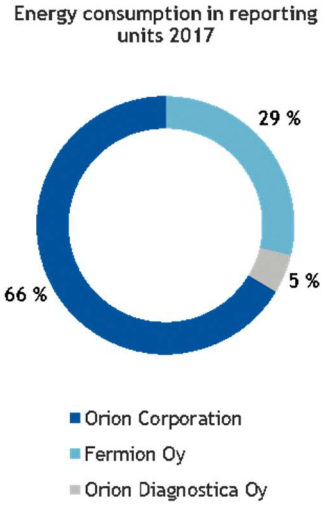
[1] *Share of total consumption by energy type*

[2] *Proportion of the Group's total energy consumption*

The reported energy consumption covers the Orion Group's properties in Finland except for those that do not contribute significantly to the total and have no production operations. The Group has no production plants outside Finland. Rented offices abroad are excluded from this report.

Our total absolute energy consumption in 2017, including electricity, heating and fuels consumed was 160,818 MWh, which is on a similar level to 2016. The consumption of natural gas, which is used to generate steam, increased by 16% while the consumption of district heat decreased 12%.

Orion Corporation, i.e. the pharmaceutical preparations business, accounted for 66% of our total energy consumption, Fermion 29% and Orion Diagnostica 5%.



Energy saved due to conservation and efficiency improvements

Energy saved MWh	2015	2016	2017
Electricity	0	33	-1,841
Heating energy	703	2,035	4,992
Fuels	1,692	0	574
Total energy saved	**2,395**	**2,068**	**3,725**

2017 Energy saved MWh[1]	Electricity	Heating energy	Fuels	Total energy saved
Orion Corporation and Orion Diagnostica Oy	-1,841	4,992	574	**3,725**
Fermion Oy	0	0	0	**0**
Total energy saved	**-1,841**	**4,992**	**574**	**3,725**

[1] Energy savings are estimates and are calculated in compliance with the guidelines of the Energy Authority.

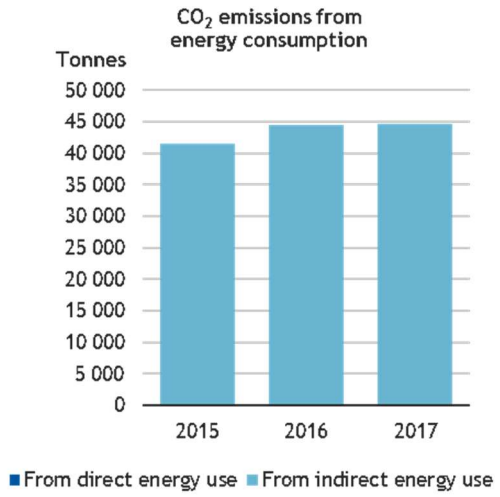
Orion is committed to the extension period of the joint Energy Efficiency Programme for the members of the Confederation of Finnish Industries (EK). In Finland, the programme's primary means is to fulfil the strict requirements based on the EU Energy Efficiency Directive. Under the new programme, the savings target for 2025 is 7.5% of energy consumption in 2016, and the intermediate target is 4% by 2020. For Orion, this means a saving of slightly over 12 GWh, 31% of which was achieved in 2017. The energy savings of 3,725 MWh were achieved through the savings measures and by improving energy efficiency at the Espoo site.

The improvements represent modern technology combined with a better understanding of the energy flows on premises, thus resulting in a more efficient usage of both heating and cooling energy. Furthermore, investments have been made in a more efficient exhaust air heat recovery. This has been done by using heat pumps, which use natural carbon dioxide as a refrigerant. This allows us to cool the exhaust air temperature below freezing point and hence recover more energy than in conventional solutions.

Our aim is to improve the efficient use of energy and reduce our energy consumption by applying the practices determined in our Energy Management System. We share best practices from across the group, and aim to take the advantages of excellent solutions by applying them at other locations where applicable.

CO_2 emissions from energy consumption

Tonnes CO_2	2015	2016	2017
From direct energy	128	120	107
From indirect energy	41,116	44,336	44,483
CO_2 emissions from energy total	**41,224**	**44,456**	**44,590**



CO_2 emissions of indirect energy by energy supplier and by type of energy

Tonnes CO_2	Type of energy	2015	2016	2017
Energia Myynti Suomi Oy[1]	electricity	19,752	19,311	20,065
Fortum Waste Solutions VOC Hanko	steam	4,046	4,074	4,167
Fortum Espoo	district heat	7,326	9,329	9,427
Adven Oy Espoo	steam	2,519	2,771	2,982
Adven Oy Hanko	steam	0	0	0
Adven Oy Oulu	steam	1,318	1,505	1,362
Kuopion Energia[2]	district heat	186	330	306
Turku Energia	steam and district heat	5,362	6,090	5,481
Salon Kaukolämpö	district heat	607	751	692
CO_2 emissions of indirect energy total		**41,116**	**44,336**	**44,483**

[1] The proportion of different sources of energy used to generate the purchased electricity is based on the so-called residual mix, the most recent one of which is published by the Energy Authority of Finland.

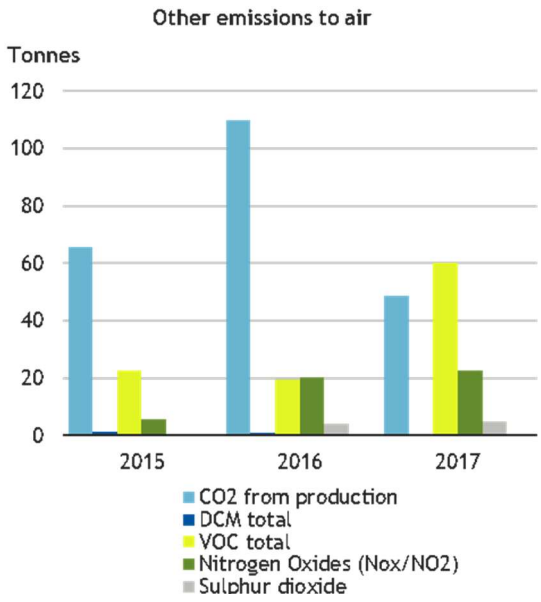
[2] CO_2 emissions from the district heating energy for Kuopion Energia for 2015 differ from those reported earlier.

The CO_2 emissions have been calculated for direct and indirect energy consumption at our Finnish locations. As of 2014, the CO_2 emissions from direct energy originate from the steam-generating boiler at our Kuopio site, which uses light fuel oil.

The CO_2 emissions from the Kuopio steam boiler of 107 tonnes have been calculated based on the emission factors of the fuel. The CO_2 emissions from electricity, purchased natural gas and district heating energy have been calculated using emission factors provided by our energy suppliers.

Other emissions to air

Tonnes	2015	2016	2017
CO_2 from production	66	110	49
Methylene chloride (DMC)	1	1	0
VOC total	23	19	60
Nitrogen oxides (NOx/NO_2)	6	20	23
Sulphur dioxide, SO_2	0.1	4	5
Particles	0.2	0.1	0.1



Strict limits concerning VOC emissions from the use of solvents are set in the local environmental permits for our manufacturing plants. Very stringent emission limits apply to methylene chloride, perchlorethylene, dimethylformamide, N-methylpyrrolidone and tetrahydrofurane. Fermion, which accounts for about 96% of the Group's total consumption of solvents, successfully controls its emissions.

Fermion's VOC emissions are now about 43 tonnes, against 9 tonnes in the previous year. The majority of the VOC emissions come from Fermion's Oulu site. Here, VOC emissions are treated in the facility operating according to cryogenic principles, in which the vaporised solvents are re-condensed into liquid form by means of liquid nitrogen. The increase in reported emissions is due to the replacement of Fermion's old VOC combustion facility which was based on catalytic oxidation and the upgrading of the entire exhaust system at the Oulu site in 2016. The VOC emissions from the pharmaceutical manufacturing operations in Espoo and Turku mainly originate from ethanol, which is used as the primary solvent in tablet coating processes and in the manufacture of tablet masses. The combined VOC emissions into air from these sites was 17 tonnes (11 tonnes in 2016).

The CO_2 emissions from production comprise those from the VOC combustion facility at our Espoo site.

The nitrogen oxides were emissions from the boiler facility in Espoo that uses natural gas, and from the VOC combustion facility at Fermion's Hanko plant. In addition, the sulphur dioxide came from the VOC facility in Hanko.

Environmental impact of transporting products and business travel

Specialist service providers meeting our strict quality and reliability requirements provide practically all the services we need for the transportation of materials and goods. Currently, we do not monitor or assess the environmental impact of the transportation of our goods, but we use responsible partners which have measures in place to reduce their own environmental impact.

Travelling for work is part of life for many Orion employees. We have centralised the travel arrangements in Finland and a few other European countries to one travel agency. The reported carbon dioxide emissions from the business flights taken by the Orion Group cover at least 83% of the employees. The business flights arranged by other travel agencies for employees at our foreign locations cannot be reported.

CO_2 emissions from business flights

1,000 miles	2015	2016	2017
Flights in Finland	644	644	726
International flights	7,854	9,322	8,993
Flights total	**8,498**	**9,967**	**9,719**

CO_2 emissions, tonnes	2015	2016	2017
Flights in Finland	155	156	175
International flights	1,445	1,702	1,637
CO_2 emissions from business flights total	**1,601**	**1,858**	**1,812**

Calculation of the CO_2 emissions:

Length of flight ≤ 590 miles 0.24 kg CO_2 / mile
Length of flight > 590 miles 0.18 kg CO_2 / mile
1 mile = 1.609344 km, unit in land miles

In 2017, Orion's employees flew about the same number of miles on business trips to in 2016. Travelling using domestic flights within Finland increased 13% while miles related to international flights decreased 4%.

CO_2 emissions of new company cars came to an average of 116 g/km

About 180 employees belonging to the Orion Group in Finland had a company car as an employment benefit in 2017. Our company car policy emphasises low emissions, fuel economy and traffic safety. Our CO_2 emission target for new company cars is 120 g/km by 2020. The target has been reached ahead of that, since the average CO_2 emissions of the new cars which went into use in 2017 was 116 g/km on average, against 122 g/km in 2016. As the average length of time a company car remains in service is three years, the average CO_2 emissions of the entire fleet in 2017 was 127 g/km and this figure is decreasing year on year.

Water and effluents

Withdrawal and consumption of water by reporting unit

1,000 m³	2015	2016	2017
Orion Corporation	178	183	188
Fermion Oy	84	71	59
Orion Diagnostica Oy	18	21	19
Total water from municipal supply	**280**	**275**	**266**

All water consumed by Orion is taken from local municipal water supply systems. There are significant differences in the volumes of water consumed between our units and locations and in the purpose behind this consumption due to the differing characteristics of their facilities and operations. Total consumption of water in 2017 decreased by about 3% from the previous year.

In Orion Corporation, water consumption increased by about 3%. Water consumption at the pharmaceutical manufacturing plant in Espoo came to about 109,000 m³, up by 5% from the previous year.

Medicines are manufactured in batches, and all process steps must meet very strict purity requirements throughout the supply chain. To prevent cross-contamination, the process equipment, accessories and lines are thoroughly cleaned with water after the all the batches of the product have been completed so that no residues remain of any substances used in the product. The more that separate batches of different medicines are produced in low quantities, the more washing must be done. Considerable amounts of water are also used by gas scrubbers, whose function is to capture evaporated solvents, mainly ethanol, and to decrease emissions of volatile organic compounds (VOC) into the air. In finished products, water is a substance in the composition of liquid solutions such as cough medicines and injections.

Fermion's water consumption showed a further decreasing trend, with 17% lower consumption than in the previous year, accounting for 22% of the Orion Group total. Water consumption decreased most in Hanko, namely by about 24%, and the site represents about 59% of Fermion's total water use. Fermion's annual water consumption varies depending on which active ingredients are manufactured during the course of the year as well as on the type and phase of the substances' manufacturing processes.

In Orion Diagnostica, water consumption decreased by 10%. A lot of water is needed in the manufacturing phases of reagents and buffers of our main diagnostic product, the QuikRead® test system for diagnosing infections.

Waste water quality is monitored in the way required in our environmental permits

Our production sites generate practically as much waste water as they consume fresh water. The waste waters are led to municipal water treatment plants either directly or after neutralisation, where solids and substances with biochemical oxygen demand (BOD) or chemical oxygen demand (COD) are removed. No waste waters from our sites are directly conducted to natural waterways. The exiting process waters of Fermion's Hanko plant are pre-treated in the adjacent biological treatment plant of Hangon Puhdistamo Oy, from which the treated water is conducted to the sea via the local municipal discharge pipe.

The burdening impact of our effluents is monitored in the ways specified in the site-specific environmental permits. The total annual loads are the averages of the results from samples taken a

few times during the year. Therefore the results may be distorted, because the emissions from production vary from one day to another. The levels of solids contained in our waste waters are low, whereas the values of biological and chemical oxygen demand, BOD and COD, are higher than the corresponding ones in community waste waters. This is mainly due to the high carbon content of the waste waters, which at the sites where pharmaceuticals are manufactured originate from the ethanol escaping via gas scrubbers into the exiting waters.

The total Group BOD in 2017 was about 200 tonnes, against 206 tonnes in 2016. COD came to about 391 tonnes (532), down by 26%. The nutrient loads in Orion Group's waste waters are relatively low. The total nitrogen load of 20,040 kg/year corresponds to the annual emissions of about 4,000 – 5,000 people (10-15 g/person/day) and the phosphorous load of 2,950 kg/year is equivalent to the nutrient emissions of about 3,000 people (3 g/person/day).

Significant progress on waste water management and the reduction of pharmaceutical residue emissions

One of the most significant environmental aspects of Orion Group's own production is waste water. We have set targets to reduce the environmental burden on waterways caused by our operational sites by minimising the residues of harmful chemicals in our waste waters even further. In 2017, Orion Group took a significant step forward regarding that aim as we finished the long project of improving the waste water management and got the new pre-rinse water collection systems running at our production sites.

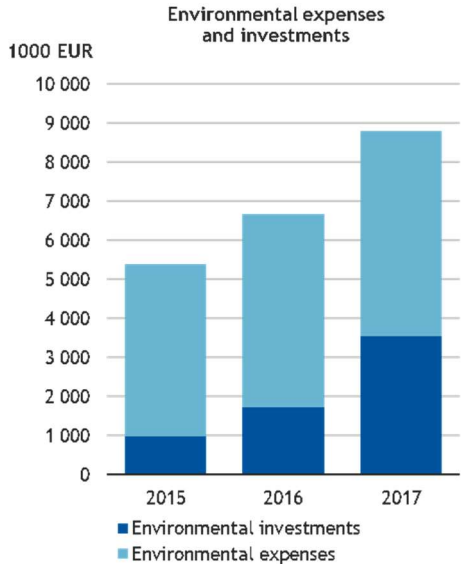
The project kicked off in 2013, and in 2014-2015 the team created project-related waste water emission mappings and conducted environmental risk assessments regarding the API emissions. In 2016, we sought feasible technical solutions and planned the new waste water management model with new internal emission criteria, setting ourselves stricter criteria than those required by authorities. During the course of 2017, we installed new waste water collection systems at our sites at Turku, Espoo, Hanko and Oulu. In the second half of 2017, we started our new collection system. As a result of the project, most of the waste waters from production and equipment washings that contain API residues are now being collected and sent for treatment by Fortum Waste Solution with a 100% reduction. Before, these were discharged to municipal waste water treatment plants and after treating then discharged in the Baltic Sea.

The energy needed to transport and treat the collected waste water is related to the amounts of the collected streams and the level of precision of the separations. In the future, we will be optimising our waste water management based on the experiences with the new systems and ensuring that our operations continuously abide by the principles of the industry's Best Available Techniques. With these systems, most of the harmful substances are eliminated from the waste waters led from our sites into municipal treatment plants. This recovery and treatment method however increases the volume of our hazardous waste.

Environmental expenditures and investments

Total environmental protection expenses and investments

EUR 1,000	2015	2016	2017
Environmental investments	980	1,710	3,550
Environmental protection expenses	4,384	4,957	5,238
Environmental expenditures total	**5,364**	**6,667**	**8,788**



Total environmental protection expenditure and investments by reporting organisational unit in 2017

EUR 1,000	Orion Group	Orion Corpo-ration	Fermion Oy	Orion Diagnos-tica Oy
Environmental investments	**3,550**	2,541	1,009	0
Environmental protection expenses	**5,238**	1,714	3,418	105
Environmental expenditures total	**8,788**	**4,255**	**4,427**	**105**

Our total environmental protection-related expenditures increased by 32% on the 2016 figure.

Environmental investments consist of projects for improving energy efficiency, the efficient and safe use of materials, consumption of water, and management of effluents, waste and emissions. Our environmental investments in 2017 came to about EUR 3.6 million (1.7 million in 2016). In 2017, investments were especially related to improvements to the waste water management in Espoo, Turku, Oulu and Hanko, energy efficiency in Espoo and oil separator systems in Hanko.

Environmental protection expenses consist of items relating to waste, waste water, and prevention of emissions into air and ground, noise abatement, energy efficiency, environmental permits as well as improvement of the environmental management in our operations in Finland. The greatest single cost item in 2017 was once again waste, at EUR 4.3 (3.9) million. Our annual waste bill is largely affected by the amount of hazardous waste, because it is notably more expensive to treat than non-hazardous fractions.

Waste water treatment also makes up a considerable share of our annual environmental expenditures. In 2017, our effluent treatment costs were about EUR 0.5 million.

Labour Practices and Decent Work

As a community of highly educated professionals, it is important for us to ensure that employees are committed to Orion as an employer and that they are satisfied with their work. We want our employees to feel motivated to develop themselves professionally and to feel that they are doing inspiring and meaningful work that corresponds to their skills in a well-managed and safe working environment in which people are treated equally and fairly.

Management of Labour Practices and Decent Work

Success by working together, with common values and harmonised practices

Orion is Finland's largest pharmaceutical employer and an international work environment for multi-talented people. Our workforce is made up of many nationalities and cultural backgrounds, but is unified by the common Orion business culture of succeeding together and our shared values and practices. We offer the opportunity to work in an international environment and provide varied and challenging career opportunities for experts in different fields. We are a responsible employer and constantly develop well-being at work and motivate our employees to continually develop their competences. We offer our employees a healthy and safe working environment and a smooth-operating working community. We also make sure that our employees have the necessary skills and mindset to implement the Group's strategy. We want every Orion employee to share our attitude of continuous renewal and to feel that his or her work is meaningful. Healthy and competent staff is a key factor in our success and the foundation of our corporate responsibility, which enables us to bring value to our customers and to meet the strict requirements of the pharmaceutical industry.

To our staff, our "Building well-being" mission means purposeful and responsible work, whereby we succeed by working together and which we are proud of together. Our staff are building Orion's future as a team, in the spirit of the Group's values and by implementing the Group strategy.

Succeeding Together!

- Our work is valuable and significant for the customer.
- We are a responsible employer.
- We want to be an excellent place to work and an attractive employer.
- We take responsibility for the continuous development of our occupational well-being and competence.

In human resources management, we operate according to effective legislation, collective agreements, security regulations and other obligations. We ensure responsible operations in relation to our employees and their working conditions by adhering to the Group's shared values, the procedures and responsibilities specified in our Corporate Governance Manual as well as the joint ethical principles and policies.

The core principles in human resources are outlined in the Human Resources Policy, which leans on our Group values. The ethical principles concerning our working community are outlined in the Code of Conduct of the Orion Group. The Code of Conduct applies to all our employees and businesses, and every individual employee is expected to follow it. All employees are also obliged to abide by the topic-specific corporate policies, which determine our main principles for ensuring responsible operations.

Our leadership principles, *Working together – the Orion way,* outline the Orion way of leading people and acting as a member of a working community. The following four themes are the most important: Leader as a Coach, Skills of Working Together and Personal Leadership, Customer-Focused Leadership, and Leadership in Collaborative Partnership.

Working together with staff, we are building a value-based corporate culture of succeeding together, which is characterised by open and constructive interaction and continual renewal.

Interaction between employees and management is respectful, transparent and unobstructed. Issues are handled quickly and constructively. Collaboration is forthright and takes place as part of the normal daily work and at meetings based on labour-related legislation.

Management responsibilities in human resources affairs and services

Human resources affairs and services are managed and coordinated by the Human Resources Department, which belongs to the Corporate Functions organisation. The Vice President, Human Resources, reports to the Senior Vice President, Corporate Functions, who is a member of the Orion Group Executive Management Board. The core tasks of the Human Resources Department include employment affairs and collaboration, payroll systems and rewarding, talent and competence management, recruitment and organisational renewal, and occupational well-being and healthcare.

Human Resources Policy emphasises equality and fairness

Our Code of Conduct emphasises respectful and courteous behaviour at the workplace. As it is outlined in our Code of Conduct, every Orion employee is entitled to good, courteous and respectful treatment by his or her supervisors, subordinates and fellow employees.

Each employee in the Orion Group shall have equal possibilities to succeed and develop in his/her own work. Age, sex, sexual orientation, religion or ethnic background may never, at any stage of the employment relationship, be considered a discriminating factor.

Members of our working community are responsible for treating everyone equally and fairly in daily operations and decision-making. This concerns everybody, not only persons in supervisory positions. Everyone is responsible for maintaining and promoting a good working atmosphere, behaving appropriately and respecting others.

The Human Resources Policy provides the framework for establishing equal opportunities plans in all countries where we have operations, observing the local country-specific legislation. Our sites in Finland follow an *Equality Plan* drawn up to broadly support and promote equality at the workplace in recruitment, payroll systems, in adapting people's working and private lives, and in educational opportunities. By equality, we also mean equality of the sexes. When developing working conditions and operational practices, we observe the aspects of equality. The working group for the development of equality at our Finnish sites consists of representatives of all employee groups and the employer. Both the supervisors and the employee representatives are obliged to react to recognised problems.

Gender does not play a role in determining salaries at Orion. In the Finnish operations, salary equality is assessed using a salary mapping method as specified in the Finnish Act on Equality between Women and Men. The outcome of the mapping is reviewed and assessed by Orion's management and employee representatives and, when necessary, corrective measures are agreed upon.

All our Finnish employees are covered by collective bargaining agreements

Orion adheres to current employment legislation and the applicable collective bargaining agreements valid in the country the employee works in. Collective bargaining agreements cover both blue collar and white collar employees at the Group's Finnish locations, about 59% of the workforce in Finland in 2017.

A so-called common pay record concerning exempts in the chemical industry is applied to our exempts. In addition to salary increases, the pay record covers several other terms, such as more extensive sick pay than that specified in the Employment Contracts Act, and paid maternity or paternity leave.

Ensuring human resources. Recruitment: We recruit people with potential, the right experience and attitude

The Orion Group offers tasks for a wide range of specialists in the fields of natural sciences, business, mathematics, technology, IT and the humanities. The educational background of persons recruited into production tasks varies widely depending on the requirements of the task, from comprehensive school to bachelor's and master's degrees from universities of applied sciences. Vocational study programmes in pharmaceuticals provide a good basic readiness for a variety of jobs

at Orion. Independently of their level of education, all our new employees receive a high-standard and comprehensive introduction into their work.

We invest in procedures, which enhance the image of our company as an excellent place to work and an attractive employer. Our success depends on our ability to employ and recruit the correct kind of professional people, our ability to identify persons and talents suitable for different development paths in order to further allow and support them to develop and train their skills, and to support and act for their well-being at work.

By means of resource planning, we ensure that the organisation has the required capabilities for the goals derived from our strategy and objectives, that the organisations are resourced purposefully and that the required deputy and back-up arrangements are in place to ensure uninterrupted operations.

In recruitment, we aim to find the best and motivated people and take both our current and future capability needs into consideration. Successful recruitment supports us in achieving our strategic business goals. Recruitment occasions also offer us opportunities to renew the competence of our organisation. To ensure that our recruitment is successful, we continuously develop the capabilities of our recruitment organisation and the quality of the recruitment process, applying up-to-date methods such as social media, case-by-case tailored recruitment channels and video interviews, for example.

When looking for people to fill new or open positions, Orionees with a suitable background are considered first. As a rule, the job is first announced on the Group's intranet for at least a week for our existing employees to apply. If no appropriate candidates can be found within the Group, the job is advertised in public channels. Job rotation is seen as a means for driving change and as an opportunity for professional development.

Summer jobs for the young

Every year, we offer summer job opportunities to over one hundred school boys and girls in different parts of the Group. In summer jobs and on-the-job training placements, they have an opportunity to become acquainted with our industry and our company. In return, they provide us with an opportunity to motivate and attract young people to educate themselves into vocations of our industry and to find their ways into our service. To us, summer jobs and on-the-job training also involve an opportunity to identify attractive talents who could make career in our service.

In addition to summer jobs, Orion has developed the *Phase 1* summer job programme, which offers possibilities to dozens of students approaching the completion of their studies to gain hands-on experience in the fields of natural, pharmaceutical, technical or economical sciences. Phase 1 has gained a great reputation, and in 2017 Orion received hundreds of applications from very talented students. Some students continued to work for Orion after finishing the Phase 1 programme.

Introduction to work

Supervisors are responsible for organising an adequate induction process for new employees, those starting in new roles and those returning from extended absences. Some organisations have particular employees trained to provide the necessary orientation. A set of documents help to make sure that that all the necessary items are discussed. In the onboarding process we also use *Orion eOnboarding*, an interactive web-based training programme which offers a comprehensive package of information about the Orion Group's strategy, products, operations and functions, organisation and people, operational codes and practices and the business environment. The service is accessible for all employees, offering them the chance to update their knowledge and understanding of the company and the working environment.

Ensuring competences. Talent management: We develop professional and leadership skills

Our aim is for the Group's employees to have the skills and the competencies required for the implementation of our strategy. Supervisors are also responsible for ensuring that everyone in their organisation is familiar with Orion's strategy and objectives, the department-level objectives derived from them as well as personal objectives. They also play a key role in the competence development of the organisation and the staff, which is why we continually invest in the quality and skills of our supervisors. Certainly, we also expect every individual employee to take responsibility for his or her own professional development.

Corporate level competence requirements derived from the strategy are determined annually in the People Day meeting of senior managers. The corresponding requirements of operational units and functions are determined by their management teams, and the requirements for departments and individual tasks are determined at departments and in the *Succeeding together!* discussions (generally known as Appraisal Discussions). In these occasions, the level of know-how is also assessed and the development needs are defined.

Competence development starts from our strategy and goals and the task-specific requirements derived from them. The planning starts from the Group's strategy and goals: what kind of skills and competence do we need for both short-term and long-term success. The strategic focus is on leadership and management skills, partnership management, business and financial skills and continuous improvement.

Means of developing supervisory skills include a Group-level training programme, *As a leader in Orion,* in which supervisors receive comprehensive training on their personal management skills and which also helps to assure that the Group's values and the Orion way of management is adopted. Supervisory training is provided to all supervisors in all countries. This is how the Orion management culture, policies and principles are equally implemented in all locations throughout the Group. Training is organised both in Finnish and in English, and it is mandatory for all managers in the Orion Group in all countries.

In addition to their ordinary professional skills, persons working in specialist positions also need many kinds of general abilities, such as an understanding of business, communication, collaboration, interaction and networking skills. To enhance these assets, among others, the *As a Specialist in Orion* training programme has been developed and is organised on an annual basis.

Persons in supervisory and specialist positions also receive Orion-tailored training in thematic issues which relate to the key competencies identified as strategic, such as leadership, business understanding, partnership management and continuous management or LEAN.

In 2017, Orion arranged tailored training days for managers in the Supply Chain, in R&D and in Fermion business units. We also arranged a 7-day training programme for supervisors in the Quality Management organisation that consisted of both LEAN and general supervisor training. We also make a special effort to carry out training at our India office. All managers in India received three days' training plus preparation and homework, and the entire staff were trained in self-leadership and time management.

In addition to the training sessions aimed at all supervisors and specialists, we arrange high-quality supplementary training in business and leadership to middle and top management.

In 2017, together with The Executive School of St. Gallen from Switzerland we arranged a Leadership training programme called Horizon 2017. The programme consisted of four modules: Leadership and Performance Management in a VUCA World, Design Thinking, Operational Excellence and Innovation and Exploration. The leading principle of the whole programme was Ambidextrous Leadership including both Exploration and Exploitation.

Most of our training is aimed at professional development on a wide scale, for which purpose we provide a wide range of development opportunities, from one-day seminars to long-term training programmes and supplementary training periods. Some of our training courses are compulsory, like for instance the internal supervisor training and many GMP and EHS-related courses.

Database helps us manage our employees' competence and training history

The employees' professional skills are a key element in securing the quality and safety of the products, as is the regulatory compliance of the manufacturing process. The regulatory requirement provides that all those employees whose performance directly or indirectly affects the quality or the safety of a medicine shall receive regular GMP (Good Manufacturing Practices) training and that conclusively traceable documentation is available on their competence, training history and familiarisation with the guidance concerning required operational practices. Our training data system helps us manage the competence requirements of individual tasks in our Supply Chain and Quality operations as well as information on the employees' qualifications and training history, with precise documentation.

We also encourage our employees to develop their skills using the various methods of professional development. Our toolbox for the development of skills and competence includes, for example, job rotation, 360 and 180-degree evaluations and the annexed feedback discussions, mentoring, learning at work and coaching.

In addition to the many internal training offerings, our employees are encouraged to study alongside work independently. Sponsorship from Orion can be awarded for such studies when, e.g., the education supports the employee in his/her current work or the changing requirements of the job. Subject to certain conditions, an employee can receive sponsorship from Orion for longer educational training, such as an MBA or academic post-graduate studies.

We apply *360 and 180-degree evaluations* in Orion across the board as tools for developing competences. In the 360-degree evaluation, supervisors receive personal feedback from their subordinates, colleagues and their own supervisor. In addition, representatives of our external partners can be asked to give feedback with the purpose of supporting the development of strategic partner collaboration. Employees in expert positions receive 180-degree feedback from their supervisors and colleagues. Team leaders acting with no formal supervisory position are also evaluated using a questionnaire.

The purpose of our *Talent Management* process is to promote every employee's career opportunities and development possibilities and to ensure that we have enough people with the ability to renew and change. Personal career and development wishes shall be discussed with the supervisor in the Succeeding together! discussion, for example. The management teams in the operational units and functions shall discuss the wishes of the respective organisations on an annual basis, and furthermore shall identify persons capable of supporting the company's success and renewal. At the annual People Day event senior management shall assess Orion's renewability and generally discuss the job rotation and career opportunities offered by the company.

Performance is reviewed and targets are set in the Succeeding Together! discussions

Performance reviews are conducted as a standard in the Orion Group, and the entire workforce is subject to them. The supervisors shall conduct personal performance reviews with their subordinates at least once a year as part of the "Succeeding Together!" discussions. In certain cases, the Discussion can take place in the form of a group discussion. As a general rule, white-collar employees and exempts hold the discussion in private with their supervisor.

In the Succeeding Together! discussions we emphasise equality and good interaction with others. In the discussions, goals are agreed upon and monitored and the employee's achievements in the past period are discussed as are the aspects where improvement is needed, and the skills necessary for successful performance are also considered. Concrete actions to promote skills and/or well-being at work are also agreed upon. In evaluating the past period, we also discuss how the Group's values and management principles have been met at work and in the working community as a whole. In addition to this, we create a culture of continuous feedback, which we regard as an important tool for operational development and a learning organisation. In 2017, Orion arranged a Feedback Day, including e.g. an external keynote speaker to highlight the importance of both positive and constructive feedback.

The performance review sessions of the exempts include an assessment of the employee's performance in relation to the objectives set for the year in the previous review for the purpose of the performance-based bonus, and new personal and department or project-specific targets are agreed upon together with the supervisor.

We reward good performance

We encourage our employees to achieve good results and commit to the company for the long term using various means of rewarding them. Rewarding shall be fair and in line with the Group-level principles. Salaries and employee benefits are country-specific and vary depending on national legislation, collective agreements, industry, location and the salary levels and remuneration structures of each country.

Monetary incentives and other employee benefits shall be of a sufficient level and scope to be competitive in comparison with the market salary of each position. Personal salary is determined based on the complexity of the duties and the individual's performance. Productivity, expertise, multiple talents, ambition to develop, initiative and cooperation skills are considered when assessing an employee's individual performance.

Occupational health, safety and well-being: We promote health & safety and well-being at work

By taking care of the occupational health, safety and well-being of staff at work, we aim to ensure that each employee is fit for work and is not exposed to occupational diseases by minimising and managing health risks. We want to provide our employees with a healthy and safe working environment and a smoothly functioning working community, which is characterised by an inspiring working atmosphere, good management and motivating colleagues.

We are committed to continuously improving our performance in sustainability, and have set two key performance indicators (KPIs) related to occupational health, safety and well-being to monitor the progress and the fulfilment of our Group-level strategic objectives.

- One of them is **LTI 1 (lost time incident rate 1)**, which measures the workplace injury rate as the proportion of working hours lost due to injuries leading to an absence of 1 or more days of the total actual working hours. Our target for 2017 was set at "less than 4". Naturally, the aim is to work towards a year with no incidents at all, since no one should get hurt in the workplace.
- The other metric indicates our ability to enhance our employees' working ability, measuring it as the proportion of the **total hours of absenteeism due to illness** of the total theoretical number of working hours.

Accordingly, our occupational safety and well-being activities focus on the prevention of hazardous situations and occupational diseases and injuries. Well-being actions at work also aim to promote and support the working and functioning capacities of each Orionee.

In accordance with our EHS Policy, our occupational health and safety activities are managed with the guiding principle of continuous improvement. The practices applied in the management and development of occupational health and safety are determined in the Group's EHS Management System. The EHS Management System is built upon the principles set out in the ISO standards and that, in addition to occupational health and safety comprises also the environmental affairs. In the EHS Management System, procedures are determined for predicting, preventing and identifying nonconformities and exceptional situations potentially hazardous to environment, occupational health or safety, and corrective actions to be taken. Emergency response procedures are featured in the description of environmental management approach.

In 2017, a Group-wide occupational safety network was set up and we have been working on several programmes especially to enhance the Group's safety culture. Orion is in a good position on the general scale of accident frequency, which serves as a measure of occupational safety. To raise the bar even higher, more than just a commitment from management, regulations and minimised risks is needed to improve. A change from a controlled culture to an even more responsible and caring atmosphere at the workplace is also required. To promote this change, a safety culture development project was launched in which people across the whole Group gathered to think of more efficient operating models. The biggest and most efficient change in the way people act was

seen in the so-called "you care by intervening" way of thinking, the adoption of which is clearly linked to the frequency of accidents. The lowest number of accidents take place in working communities where people are allowed to intervene if they observe unsafe practice and where it is everyone's duty to do so. It is not enough for employees just to safeguard themselves; instead they are allowed and encouraged to require this from others too.

Regular safety rounds, i.e. safety walks are used to listen to employees and to talk with them about safety matters related to their jobs and the workplace. In 2017, we improved our sharing of best practices and started to develop a Group-wide safety round model that promotes safety and safety culture even further. The aim is to move from safety walks more in the direction of safety talks, which means that there would also be more emphasis on interaction. We also continuously encourage employees to report their safety observations and the corrective actions taken via our online system. This is a valuable tool to help us prevent potential accidents from occuring and to follow the progress of the corrective actions taken.

Systematic assessments of the workplace, processes, working conditions and methods and the associated risks are carried out by the occupational health and work safety organisations in order to continuously develop working conditions and safety. In addition, we also develop our own practices and models to improve our risk management processes.

Training sessions are a part of an active safety culture and play an important role in the prevention of accidents. In 2017, we have made a better and more efficient use of online training and short digital occupational safety sessions. These have been well accepted and are considered an effective way of communicating.

Our aim is to help our employees to maintain their working ability, be healthy at work and avoid occupational illnesses. We offer our employees more comprehensive occupational health services than those required by law. Employees are given health check-ups depending on their age group to evaluate their fitness for work and to determine any need for measures to enhance it.

The operational models for *Early support, Treatment practices for the occupational healthcare for musculo-skeletal and mental disorders* as well as for the management of ageing employees are examples of the ways via which we promote well-being at work and enable the risks of disability to be better managed. *Managing difficult situations* is our model for facilitating and accelerating the analysis and resolution of conflict situations in the working community, as well as for following up the success of the solution.

Preventive occupational health activities include guidance, consultation and support, both to individual employees and working communities, to maintain their ability to work and function and to manage everyday life, as well as workplace surveys relating to health and safety.

We also encourage our employees to take care of their personal well-being. Employees can, e.g., take part in numerous recreational activities put on by staff clubs supported by the Company, participate in company-sponsored gyms and exercise in the Company’s fitness facilities. Sponsored culture vouchers can be used for sports and cultural activities. We also have a recreation area and cottages in Finland, where employees and their families can spend their free time. As an important factor of daily well-being, we consider high-quality workplace catering as one of our priorities.

In 2017, we also organised a tailored well-being course for employees with an increased risk of losing their working ability. The course included a preliminary health check, individual support, training days and a follow-up.

In addition to the two KPIs monitoring the fulfilment of our Group-level strategic objectives, we monitor our progress towards our health and well-being objectives with the help of a variety of other indicators, such as the response received from employee surveys. Particular attention is paid to absences due to musculo-skeletal problems.

Well-being at work is a sum of many factors

The well-being actions at work are versatile measures to develop the working communities and promote the capabilities of individuals to work and function. We are developing measures for well-being at work to meet the varied needs of working life. We have defined what we mean by employee well-being at Orion as follows:

- Well-being at Orion means that employees are able to do work matching their competences, with a feeling of doing valuable, rewarding, inspiring and meaningful work in a well-managed, safe and coequal working community and environment.
- Well-being at work is carried out and enhanced with co-operation from the management, superiors and every Orionee
- Under the principles of well-being, an employee feels comfortable, is active, has stamina and is energetic both at work and at home, and can deal with both change and misfortune.

Our ways of building well-being					
Leadership and management	**Possibilities of influencing employees' own work and the working community**	**Common rules at the workplace**	**Competence and development opportunities**	**Interactive operational models**	**Corporate culture**
We develop good and renewing leadership to safeguard our success.	We develop innovative solutions and operational models. This challenges all of us to dare to take on new opportunities in our daily work. We all take responsibility for our duties and the functionality of our working community.	We can trust each other and appreciate everyone's work. Confidence is built upon, promises are kept, and appreciation is built upon our ability to understand the significance of everyone's contribution to the whole.	We support and motivate our employees to continued development of their skills and readiness for change.	Collaboration is fluent in a healthy and functioning working community. Information is shared and interaction is effective in all directions. We dare to speak about problems, and we solve them constructively.	Building well-being!
Personal health and well-being					

Management responsibilities in Environmental, Health and Safety

In the Orion Group, the conformity of operations with the EHS System is coordinated by the Director for EHS and Facility Management, and the EHS organisation with its EHS Specialists reporting to him. He reports to the Senior Vice President, Supply Chain, who is a member of the Group's Executive Management Board. A safety manager who reports to the President of Fermion coordinates EHS activities in Fermion. EHS activities in Orion Diagnostica are also coordinated by a safety manager. Both Fermion and Orion Diagnostica's safety managers are members of the Group-wide safety network. Some of the core tasks of the EHS organisation in promoting occupational health and safety include, among other things, participating in the preparation of continuous improvement programmes, external and internal EHS audits, guidelines and training, following up on safety observations and subsequent corrective actions, risk assessments, investigating incidents causing injury, EHS reporting and internal communications about EHS affairs.

Occupational Health Services belongs to the HR services organisation headed by the Vice President, Human Resources, who reports to the Senior Vice President, Corporate Functions, the latter being a member of the Group's Executive Management Board.

Occupational Health and Safety Delegates supervise and monitor occupational safety at our operational sites. They report to Production Managers.

The local site managers are responsible for arranging operations at the operational site in accordance with the EHS Management System.

Supervisors shall take care of the safety of their subordinates as well as occupational safety guidelines and the necessary safety training. Supervisors shall also make sure that shortcomings in safety at the workplace are fixed.

As mandated by Finnish legislation, our Finnish units have so-called occupational health and safety committees in which all blue-collar and white-collar workers, i.e. approximately 59% of the total Finnish workforce, are represented.

Environmental, health and safety guidance and training

The general guidelines and principles concerning corporate safety and safe working are provided in the Group's Corporate Governance Manual, the Orion Management Guide and the Orion Security Guide as well as in more detailed function and location-specific guidelines. Task-specific aspects of safety are observed in the SOPs (standard operating procedure) defined in detail for individual tasks and work phases. All EHS guidelines are maintained in our internal information systems, which are accessible to all employees in the Group.

Training is part of active EHS culture and plays an important role. We emphasise the importance of each employee being aware of the health and safety risks that are involved in their duties, as well as how to avoid them. All employees are required to follow the safety instructions and act without posing a risk to either their own safety and/or that of other employees, and without causing damage to the company's property. We also encourage employees to report their observations of hazards to help manage potential risks. To ensure that staff act correctly and appropriately, we arrange regular training sessions as part of our good safety and security practices to avoid and prevent hazardous events, not only on the job but also anywhere else in the workplace.

Employee-employer relations and staff empowerment

Orion takes the opinions of employees into consideration in the decision-making process regarding human resources and implementing decisions related to human resources. Employee representatives mainly take part in preparing new practices or implementing changes to existing ones. In addition to mandatory employer-employee forums, our supervisors and HR department have regular informal meetings with employees and employee representatives. A good example of successful collaboration was the decision to make Orion a completely smoke-free workplace by 2018 which was successfully accomplished and which was initiated by the employee representatives.

Employee representation in the Group management is as a general rule agreed upon with employees. There is one employee representative on Orion's Executive Management Board, who is nominated by the staff groups. The representative however is not a member of the Executive Management Board. There are also employee representatives in the management teams of operational units and functions.

The Group appreciates the work and purpose of trade unions and employee representatives and collaborates with them with respect and openness.

Staff surveys help us identify the need for further development

With the help of regular staff surveys, we identify our strengths and need for development in terms of the implementation of our strategy. The staff survey is conducted Group-wide in every country in which we employ staff. The survey is an important tool for the development of working communities and for the collaboration between employees and management. Orion's executive management is strongly committed to not only conducting the survey but also to implementing measures for improvement which have been agreed upon based on the results. The high response rates show that the employees also consider the survey to be important. Our staff survey is called Succeeding together! – the survey was conducted in spring 2017 and the response rate across the entire Orion Group was 85%.

In addition to the employee surveys, we occasionally conduct more limited enquiries, surveys and mappings of topics where it is important to learn more or hear the employees' opinions in order to include them in the decision-making. We also follow the results of certain regular employer image surveys conducted by external research companies.

Complementary references in the Sustainability section of our corporate website:

- Human Resources Policy
- EHS Policy
- Code of Conduct
- Expectations towards suppliers
- Our practices in approving suppliers
- Anti-corruption Policy

Performance indicators concerning Labour

Absenteeism

Causes of absenteeism and working time lost due to absenteeism

Hours	2015	2016	2017
Paid sick leave	132,434	139,418	131,970
Unpaid absence from work due to illness	35,163	28,317	30,207
Paid absence from work due to child's illness	13,871	17,228	15,296
Unpaid absence from work due to child's illness	145	91	163
Total absence due to illness	**181,613**	**185,054**	**177,635**
Absence of 3 or more days due to injury at workplace	1,688	1,674	783
Absence of less than 3 days due to injury at workplace	224	56	166
Absence due to commuting injuries	1,696	1,408	716
Total absence due to injuries	**3,608**	**3,138**	**1,664**
Total work time lost due to absences	**185,221**	**188,192**	**179,299**
Absentee rate, all absences	**3.5%**	**3.5%**	**3.3%**
Absentee rate due to illness	**3.2%**	**3.1%**	**3.0%**
Absentee rate due to workplace injuries	**0.03%**	**0.03%**	**0.01%**
Actual working hours	4,474,220	4,517,674	4,637,686
Theoretical working hours	5,262,192	5,368,248	5,480,055

Absentee rate of all absences is calculated as the proportion of total working time lost of total theoretical working hours.

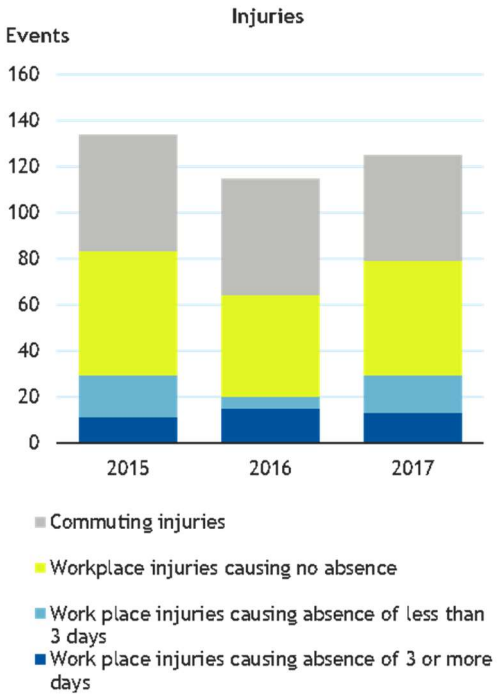
Absentee rate due to illness is presented as the proportion of absence hours due to illness of the total regular theoretical working hours.

Total work time lost due to injuries indicates the seriousness of workplace accidents.

Absentee rate due to injuries is presented as the proportion of working hours lost due to injuries having led to an absence of 3 or more days of the total regular theoretical working hours.

Injuries and fatalities

Injuries[1]	2015	2016	2017
Workplace injuries causing absence of 3 or more days	11	15	13
Workplace injuries causing absence of less than 3 days	18	5	16
Workplace injuries causing absence, total	**29**	**20**	**29**
Workplace injuries causing no absence	54	44	50
Workplace injuries total	**83**	**64**	**79**
Commuting injuries	51	51	46
Fatalities	0	0	0
All injury events total	**134**	**115**	**125**
Injury rate LTI 3	2.5	3.3	2.8
Injury rate LTI 1	6.5	4.4	6.3



Workplace injuries include injuries caused by accidents that occur at the workplace or its area, or at an external working area outside the primary workplace.

Commuting injuries include injuries caused by accidents that occur when employees are travelling between home and work.

The number of injuries causing absence from work indicates the level of occupational safety at the company.

Injury rate measures the number of workplace injuries per million working hours. It can be used to compare the injury risks of different industries, professional groups, etc. It is also referred to as the LTI Rate (Lost Time Injury Rate). In this report, injury rate LTI 3 includes workplace injuries which led to an absence of 3 or more days, and LTI 1 correspondingly those having led to an absence of 1 or more days.

The absences and injuries reported cover the staff working at the Group's Finnish locations. Corresponding statistics cannot be collected for the employees in foreign marketing organisations.

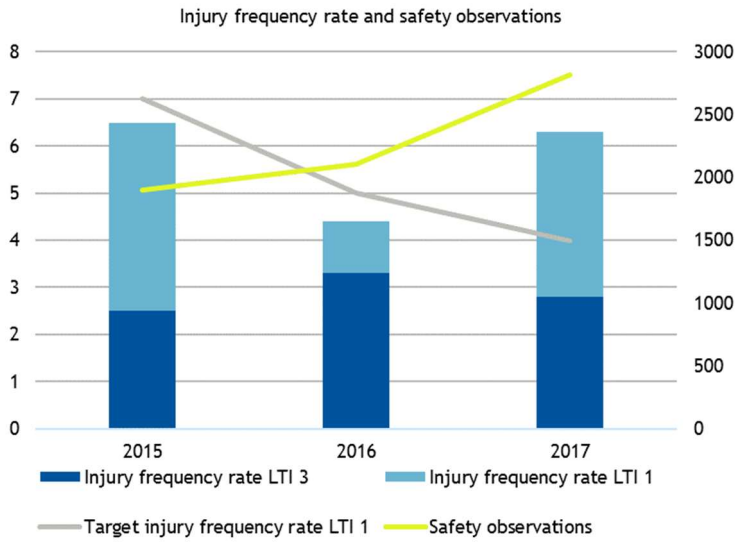
The work done to prevent accidents and injuries at our workplaces and taking care of the occupational health and well-being of staff at work is leading to positive results. We report and monitor indicators annually, however, it is even more important to follow the trends in the longer term.

In 2017, we improved our data quality regarding working hours, and working hours lost are now reported based on our enhanced working time management system. In 2017, only 1,664 (3,138 in 2016) working hours were lost because of injuries, which was 47% less than in 2016. The time lost due to commuting injuries and due to incidents at work both also declined somewhat. The number of workplace incidents has decreased slightly in the past three years, while working hours lost because of injuries has decreased substantially during the same period. The absentee rate due to illness, which indicates our ability to enhance our employees' working capability, was 3.0% (3.1% in 2016). The lost time incident rate, LTI 1, which includes all absences of at least one day due to a

[1] Reported injuries in 2015 and 2017 include events related to muscle or tendon pain if the work-related pain first appeared when the employee was performing a straining work-related motion. In 2016, these were excluded. This is due to the changes in the guidance from the Workers' Compensation Centre in Finland.

workplace injury and which is included in the metrics indicating the fulfilment of our strategic objectives, came to 6.3 after the previous year's 4.4. Therefore, we did not achieve our "less than 4" objective for 2017. Still, we are confident that our commitment and efforts towards continuously improving our performance will bear fruit in the long run. To us, a workplace without a single accident is a goal worth aiming at.

Most of the injuries occur in production departments, typically due to tripping and slipping, and when lifting. We take rapid action to amend spots requiring improvements and rearrangements. We also revisit the applicable guidelines and re-train people to perform their tasks correctly.



Our employees reported a total of 46 commuting injuries, i.e. ones that occurred on their way between their home and the workplace. Common events were sprains caused by slipping when walking, and falling off bicycles. Accidents with cars, motorbikes and mopeds were less frequent, and fortunately serious consequences were avoided.

Our system for recording safety observations collected as many as 2,800 (2,100) observations of different kinds of dangerous spots at our sites, and reported the information to the employer and the employees and for the purpose of corrective actions. The growing number shows that our employees have adopted the system as a handy and well-functioning channel for announcing spots and issues hazardous to health and safety. Reporting is made easy: the observations can be easily recorded into the database via the Group's intranet and be made accessible to those responsible for carrying out corrective action. With the help of the system, employees can also follow the progress of the actions.

Skills training

The training offerings comprises hundreds of educational events and courses on a wide range of topics related to job-specific tasks as well as practices in the workplace. Our annual financial input into the training and development of our employees' skills base varies somewhat. In 2017, we invested about EUR 2.2 million into training activity. The corresponding expenditure in 2016 was about EUR 1.8 million and in 2015 about EUR 2.0 million.

Preventive health and safety training

In 2017, the Group organised about 316 (300 in 2016) training courses focusing on environment, health and safety, with a total of 4,569 (4,600) attendants.

Personnel structure of the Orion Group

Details of the personnel structures and statistics for 2015-2017 are presented in the Tables section of this Report. In the review of our staff broken down into categories, the breakdowns are presented in amounts representing full-time equivalent numbers of employees, not true headcounts. The figures are calculated with the same accounting principles as those applied in the Group's IFRS financial reporting. In the graphics "Personnel by reporting unit", the item named "subsidiaries" includes the foreign Orion Pharma companies for marketing pharmaceuticals and diagnostic products, and FinOrion Pharma India.

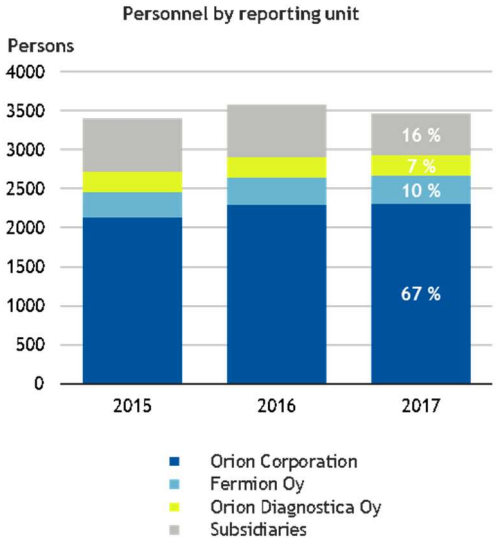
The personnel of the Orion Group's parent company Orion Corporation mostly consists of employees working in pharmaceutical manufacturing, research and development, marketing, business support functions and in financial administration, corporate functions and management.

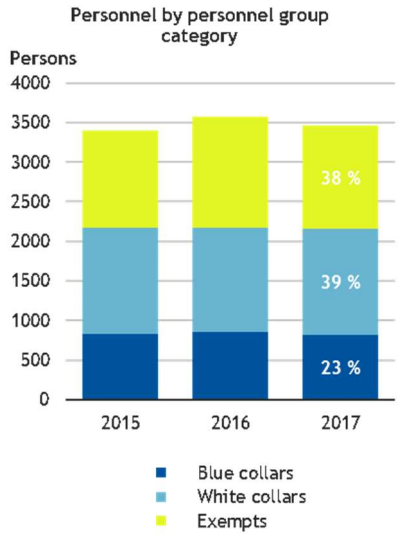
At the end of 2017, our Group employed about 3,464 people, about 19% of them working outside Finland in the Group's offices, most of which are located in Europe. About 90% of staff were in permanent employment.

The duration of employment at Orion is typically relatively long. The average duration of employment has exceeded 10 years for several years now, and in 2017 it was 11.1 years.

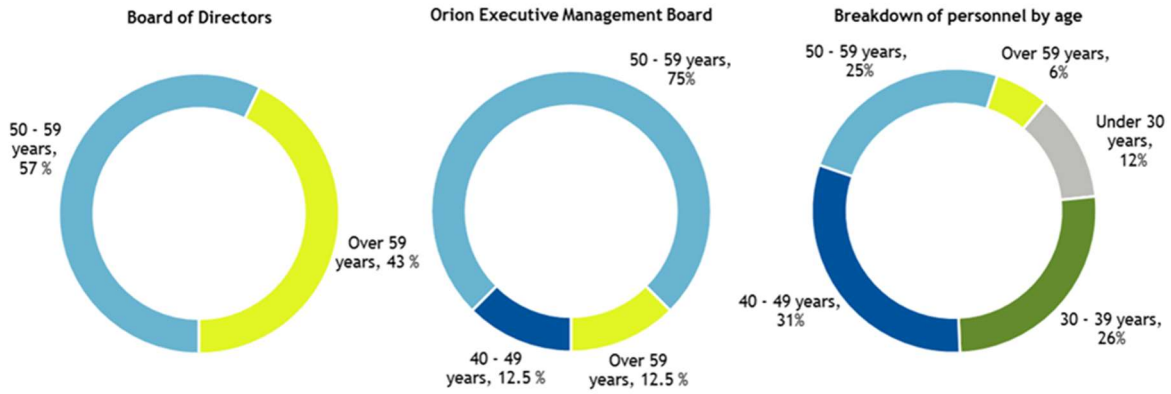
Employee turnover is higher among blue-collar workers than among white-collar workers and exempts. Since 2016, employee turnover has been reported as an average turnover calculated in the way recommended by the Finnish Accounting Board. The rate from 2015 has been adjusted comparatively.

From 2013-2017, Orion employees retired at an age about 2.4 years higher than the average in Finland. In 2017, the average retirement age in our company was 63.5 years, while the Finnish average was 61.2 years. In the Orion Group, the average age at which an employee claimed their old-age pension was 64.2. Exempts retired at an average age of 64.3 years, whilst the corresponding retirement age of blue-collar workers was 63.9 and white-collar workers 64.3 years.





Age breakdown at Orion 2017



The gender structure has also remained practically the same in the past three years, women representing approximately 61% and men 39% of the total workforce of the Group. In blue-collar positions, the proportion of women was 42% and that of men 58%. In exempts, i.e. senior salaried employees, 63% of the exempts were women and 37% men. In the white-collar group the share of women was 71% and men 29%.

Orion Diagnostica has the highest proportion of women, with 71% of employees being women. Fermion's gender structure is almost the opposite of that of Orion Diagnostica: 72% of the total workforce is men. The production processes in particular are predominantly the domain of male workers. In the production of pharmaceuticals and diagnostic products, a clear majority of employees are women. R&D is also a function dominated by women.

The gender structure of people in supervisory positions shows differences between the reporting units. In Orion Diagnostica, 61% of those in supervisory positions are women, while in Fermion supervisors are 80% men. The proportional difference is clearly narrower in the Orion Corporation and in the foreign subsidiaries. In supervisory positions however, the proportional difference compared to the gender structures of the reporting unit are somewhat in favour of men in spite of equal opportunities.

Economic Responsibility

Management of Economic Responsibility

In the Orion Group, economic responsibility means that we produce economic value added for both shareholders and other stakeholders, such as staff, customers and suppliers of goods and services. To this end, we develop our operations systematically and utilise our resources efficiently. We are proactive in dealing with this responsibility, with an aim to identify and manage the risks related to our operations and their further development in the best possible way. Good corporate governance required from listed companies is also part of our economic responsibility, as well as open and regular communication about the development of our financial performance and the factors affecting it.

Good financial performance is also necessary to enable us to attend to the other areas of corporate responsibility as a corporate citizen and to ensure sustained operational continuity in the future. The better we manage our finances and are able to provide employment, the more society will benefit from our economic added value.

Most of the key figures related to our economic responsibility are presented in our consolidated financial statements and interim reports, which are prepared in accordance with the International Financial Reporting Standards (IFRS). In the sustainability reports, we present some economic indicators, in addition to which selected additional key figures from the consolidated financial statements are provided in the Tables section of the report.

Management of economic responsibility

The management of our economic responsibility follows the general guidelines established in our Corporate Governance Manual. This involves responsibilities being clearly defined, objectives being set and monitored and internal control systems being organised appropriately. The administration of the Group's financial affairs is a headquarter function headed by the Chief Financial Officer, who is a member of the Group's Executive Management Board. The CFO reports to the President and CEO. The centralised financial administration comprises all financial affairs of the Group companies based in Finland, such as bookkeeping, payment transactions, internal and external financial reporting, Group financing, as well as all Group-level reporting and financial control of the business operations. In the Group's foreign subsidiaries, the financial affairs are mainly administrated locally in each country under the supervision of the Group headquarters.

Monitoring the financial development of the Company and supervising the financial reporting process are among the key duties of the Board of Directors and its Audit Committee.

Detailed descriptions of our corporate governance principles, risk management and internal control are presented in our regular financial statements and Corporate Governance Statements, which are accessible on the Corporate Governance pages in the "Orion Group" section of our corporate website.

Goals and performance

We aim to ensure the economic sustainability of our operations over the coming years. Our objectives for profit development and financial position have been set to ensure economic stability, to create a solid foundation for long-term profitable growth and to enable operations and profitability even in economically challenging times.

Through the financial objectives, we aim to develop the Group's shareholder value and ensure financial stability and profitable growth. Our financial objectives are:

- Growing net sales more rapidly than the growth of the pharmaceuticals market. Achieving this objective requires continuous investment in the development of the product portfolio.
- Maintaining profitability at a good level. The aim is operating profit that exceeds 25% of net sales.
- Keeping the equity ratio at least 50%.

- Distributing an annual dividend which will be at least EUR 1.30 per share in the next few years, and increasing the dividend in the long term.

According to our dividend policy, we take into account the distributable funds, the capital expenditure and other financial requirements in the medium and long term to achieve the financial objectives. In the challenging economic situation and the changes that have taken place in our business environment over the recent years, we have been able to grow steadily, operate profitably and pay good dividends to our shareholders.

We have paid the taxes due on the good and stable financial result regularly and on time. We have also always taken care of our pension commitments in full. In the comparison of financial performance, we have consistently been ranked among the best Finnish listed companies.

In our procurement activities, we give preference to goods and service suppliers who share our values regarding corporate responsibility. Their invoices for deliveries that meet the agreed terms are paid according to the agreed schedule. Correspondingly, we aim to minimise our own overdue trade receivables.

Orion is a company whose products are of significant social importance. As a workplace, we offer our employees the chance to develop, manufacture and sell products that promote well-being, health and quality of life, and we offer a fair compensation and good employee benefits in return.

Sustained economic success requires us being able to continuously ensure competitiveness and cost-effectiveness with the right strategy decisions and enhancement of procedures and the product portfolio. Our growth is based on a competitive diagnostic and pharmaceutical product portfolio, which the Group builds by actively developing new products in both our own R&D organisation and through wide-ranging cooperation with external parties.

Our shareholder base is quite diverse. The largest shareholder group consists of private Finnish households. At the end of 2017, Finnish shareholders held about 60% of the total shares and 91% of the total votes. Detailed information on the shareholder base is presented and updated on a monthly basis in the “Investors” section of our corporate website.

As a public listed company, we fulfil our disclosure obligations diligently. We also actively develop our corporate communications and aim to utilise different communication channels and tools in a versatile, yet purposeful manner. Our focus is on the good quality of the contents of our financial statements and our website to provide capital markets and shareholders with up-to-date information about the Group’s operations and performance. We also organise regular meetings with investors in various locations in Finland and abroad. A calendar can be seen under the “Investors” section of our corporate website containing both past and upcoming investor events and roadshows.

Principles concerning donations

Most of the annual donations made by the Orion Group for purposes of public interest are based on the decision by the Annual General Meeting to donate part of the distributable assets of Orion Corporation to medical research and other purposes of public interest. The Board of Directors decides on the allocation of the donations.

Donations are granted to non-profit organisations pursuant to principles determined in the Group’s donation policy. The focus of our support is on medical research, patient organisations and other non-profit organisations promoting healthcare, defence and veterans, environmental protection, children and youth, education and culture. As a main rule, the donations shall be made through Orion Corporation, the parent company. The evaluation of applications and the decisions on grants are centralised into the Board of Directors and the Group administration.

At Group level, the prioritised charitable organisation receiving financial support from us is *Plan*, which works to improve the living circumstances and quality of life of children in developing countries. As a corporate partner and sponsor of Plan, we support early childhood education of children in developing countries.

Information about our collaboration with patient organisations is reported on an annual basis in the Sustainability section of our corporate website. The reports provide details of each case of

collaboration, and they comprise all the countries in which we have our own marketing organisation for pharmaceuticals.

Co-operation partner in 2017

We at Orion and the Central Association of Carers in Finland celebrated Finland's centenary as an independent nation and Orion's own 100th jubilee year under the theme "Working together in support of carers" in 2017. As a co-operation partner, the Orion Group supported the work of the Central Association of Carers in Finland both financially and by providing information about their important work. Together we created also a Välittämö100 Web service, välittämö100.fi.

Via Välittämö100, individuals in Finland as well as organisations can donate services to carers and their families. The donations can include, for example, fixed-term newspaper or magazine subscriptions, gift cards for cruise ships, gym memberships or other types of service gift cards. Furthermore, Välittämö enables anyone to donate their own time to help carers with domestic chores such as tidying, cleaning or gardening, for example. Välittämö100 will also be in action throughout 2018, with the aim of having Välittämö consolidate its position as the home address of caring, where more and more Finns will arrive in the future. As of the end of 2017, 268 donations had been made, of which 90 were active and 178 had been reclaimed.

Indicators of economic performance

Information about the financial performance of the Orion Group is provided in the annual financial statements and interim reports, which are accessible via the Investors section of our corporate website. Selected financial key figures for 2015-2017 are provided in the Tables section of this Report.

Coverage of the Group's pension obligations

Our Group has pension plans in accordance with each country's local regulations and practices. In the defined contribution plans, we pay fixed contributions to separate entities, such as pension insurance companies in Finland, who manage the pensions. We have no legal or constructive obligations to pay further contributions if the recipient of the contribution is unable to pay the employee benefits. Our most important defined benefit pension plans are in Finland, where statutory insurance under the Employees' Pensions Act (TyEL) has been arranged through the Orion Pension Fund for the Group's clerical employees and supplementary pension security for some of the clerical employees.

Our pension obligations are listed under Note 12 "Pension assets and pension liabilities" of the Financial Statements 2017. At the end of 2017, our pension obligations totalled EUR 313.2 (323.2) million. We had a pension asset of EUR 55.2 (asset of 22.8) million from the Pension Fund and a liability of EUR 3.2 (liability of 3.2) million to other units.

Significant financial assistance received from government

EUR million	2015	2016	2017
Tekes grants	1.8	1.2	1.1

Orion has received funding for its development projects from the Finnish Funding Agency for Technology and Innovation (Tekes), which grants funding to Finnish companies and institutions to promote research, development and innovation as well as to share related risks. Some Tekes-funded projects are not public. The figures reported above are based on the Tekes annual reviews, and they contain both direct cash funding and project-specific loans.

The annual reviews and summaries of public projects receiving Tekes funding are available at http://www.tekes.fi/en. The total Tekes funding paid to units of the Orion Group in 2017 totalled EUR 1,135,886, of which pharmaceutical R&D projects of Orion Corporation accounted for EUR 971,450 and Orion Diagnostica Oy EUR 164,436.

Orion Corporation received Tekes funding for research of treatment approaches to certain cancers and central nervous system disorders. In 2017, we received Tekes funding for projects in which we studied *resistance mechanisms of novel cancer treatments* and *the role of a certain neurotransmitter system in the treatment of neurodegenerative disorders*. Both projects ended in 2016, but the remaining parts of the support granted for these projects were received in 2017. In addition, we received funding to conduct further study into *the roles of several neurotransmitter systems with a purpose to identify drug targets in the treatment of neurodegenerative disorders*. This project is planned to end in 2018. In 2017, a new research project was started and funding granted for the development of biomarker research and analysis platforms to support precision medicine development.

The EUR 164,436 in Tekes funding received by Orion Diagnostica covered expenses of a programme named *Personalised diagnostics and care, Get It Done,* which started in 2015 and is planned to end in 2018.

In 2017, Tekes also granted Orion EUR 241,100 in energy aid for investment projects to develop and replace part of the energy system with a low-carbon alternative.

Donations for purposes of public interest

EUR	2015	2016	2017
Donations	250,000	350,000	300,000

Most of the annual donations made by the Orion Group for purposes of public interest are based on the decision by the Annual General Meeting (AGM) to donate part of the distributable assets of Orion Corporation to medical research and other purposes of public interest. Therefore, note exception uses a reporting period from AGM to AGM and not a calendar year.

Patient organisations also belong to the scope of instances of public interest. In 2017, the total monetary value of our collaboration with patient organisations came to EUR 109,799 (EUR 130,194 in 2016). This sum is not included in the figures presented in the table above.

Human Rights

Management approach of Human Rights

Goals and performance

Orion's aim is to comply with human rights obligations in all our operations. We strive to ensure that there are no violations of them in our own operations or those of our subcontractors, suppliers and other collaboration partners. We are committed to and respect the principles and values of the United Nations Universal Declaration of Human Rights and Declaration on the Rights of Indigenous Peoples, and the principles in ILO conventions, and we expect the same from our partners.

Every Orion employee and everyone involved in the manufacturing of our products has the right to be treated well and with respect by supervisors, subordinates and colleagues. We do not accept discrimination in any form. We acknowledge the right of indigenous peoples to their cultural and spiritual values. We do not condone or tolerate the use of child labour or forced or compulsory labour in any of our operations, nor in any such operations of our suppliers that are related to our products.

We acknowledge our employees' freedom of association and their legal rights to memberships in labour organisations and collective agreements. Freedom of association is considered a personal matter of privacy. We respect the legal rights of the employees and their representative organisations and treat them openly and honestly. According to the Group's general principle of legal compliance, Orion follows the legislation and binding collective agreements. This is also recorded in our *Human Resources Policy*, which is part of the Group's mandatory Corporate Governance Manual.

Principles and values to respect human rights are embedded in our Code of Conduct that we expect all our staff to comply with. Correspondingly, the ethical guidelines of the Supplier Code of Conduct which applies to Orion's suppliers define the minimum requirements to which Orion expects its partners to be committed. In addition to regulatory requirements, they include key principles for business operations concerning sustainability, governance and ethics. The GxP-critical key and preferred-class suppliers in particular are requested to commit themselves to our Supplier Code of Conduct. We also systematically monitor the compliance of our material and service suppliers and their operations.

In selecting suppliers, we have a critical approach as regards so-called risk countries where there is a risk of human rights or labour rights violations and/or exploitation of child labour, and where national labour legislation is weak or poorly enforced. In countries where a better position for the employees is ensured by international labour norms and the ILO's central labour agreements, we require the supplier to conform to the ILO norms.

We encourage the staff to bring to the attention of the management their experiences, observations and suspicions suggesting a violation of human rights, as well as any other activity breaching the ethical codes. We aim to examine and handle the cases quickly, confidentially and impartially, and take appropriate, case-specific measures to stop behaviour and activity violating the principles.

For reporting any misconduct, primarily the route is to contact our own supervisor, the supervisor's supervisor, the Human Resources department or the Group Internal Audit. Orion has also a public whistleblowing channel that complements the usual communications and reporting channels.

Organisational responsibility

Every manager at every level of the organisation is responsible for ensuring that the human rights principles are upheld within Orion. Supervisors have an obligation to take the necessary action without delay if the rights are violated. We also emphasise the personal responsibility of every Orion employee to ensure that human rights are respected in the workplace.

The Group's Procurement and Quality Assurance organisations are responsible for following up and monitoring the suppliers' ability to meet our requirements and principles concerning our supply sources.

Training and awareness

All Orion managers receive training on human rights in mandatory supervisor training and in training which focuses on our Human Resources Policy and our procurement and investment principles. Employee rights, including freedom of association, are also discussed during supervisor training. As part of the Human Resources Policy, these rights are also regularly discussed in company-wide human resources information sessions.

The Code of Conduct of the Orion Group obliges all employees to behave and act in ways which respect human rights. Our employees' awareness of the content and spirit of the Code of Conduct as well as the corporate policies is promoted by ways of internal communication, in the context of our familiarisation processes and training courses, and as part of the web-based e-onboarding programme.

Monitoring and follow-up

We monitor compliance with human rights principles and react to any violation thereof with the same corporate governance practices as are applied to other corporate internal guidelines. Persons employed by the Orion Group are expected to be familiar with the Code of Conduct.

Orion manages risks in its supply chain through its due diligence practices. Suppliers' compliance with regulations and requirements is monitored through regular or random assessment questionnaires and undertaking risk-based audits of their facilities and operations. If an external party involved in our supply chain is observed to blatantly violate human rights principles, international agreements or legislation, we will undertake corrective action, or in an extreme case terminate the partnerships and replace the party with a compliant supplier. The main principles of our process in approving suppliers to our suppliers are described in the Sustainability section of our corporate website.

Our performance in Human Rights

Non-discrimination. We have no record of any violations of the discrimination ban during the review periods.

Freedom of association and collective bargaining. There are no such functions or activities in our Group in which the right to exercise freedom of association and collective bargaining is under risk.

Child labour. There have been no violations of employee rights or collective agreements during the review periods. There are no such operations within the Orion Group where the risk of using child labour is significant. We have no record of any situations where child labour has been used in relation to our own or our suppliers' operations during the review periods.

Forced and compulsory labour. We have no record of situations where forced or compulsory labour has been used in relation to our own or our suppliers' operations during the review periods.

Indigenous rights. No issues related to the rights of indigenous peoples in relation to our business have been brought to our attention during the review periods.

Complementary references in the Sustainability and Corporate Governance sections of our corporate website:

- Human Resources Policy
- Code of Conduct
- Pharmaceutical R&D Ethics Policy
- Anti-corruption Policy
- Expectations towards suppliers
- Our practices in approving suppliers
- Slavery and Human Trafficking Statement

Societal relations

Management of Societal relations

Goals and performance

The practices and methods pursued by Orion as regards community relations, social and political relations, restrictions of competition and corruption are derived from the general principles of our Corporate Governance Manual, according to which the operations of the Orion Group are based on compliance with the valid laws and regulations issued therein as well as with ethically acceptable operating principles.

This is also the guiding principle in our *Code of Conduct,* which defines the Group's ethical practices and commitment to complying with laws, ethically approved practices and respect for human rights. We expect all our staff in the Orion Group to comply with the Code of Conduct. All community relations are based on open and honest communication and interaction, in which both parties' expectations are considered.

We accept that reasonable gifts are part of normal business culture within the framework of legislation and ethically acceptable practices. The principles that are included in the Code of Conduct and our *Anti-Corruption Policy* require that employees refuse to offer or take a bribe, or any comparable benefit. Orion has zero tolerance of all forms of bribery and corruption in its business operations. Identifying and assessing risks relating to corruption is part of the comprehensive overall Group Risk Management. Among other things, assessing bribery risks is also a standard part of the preparation of all collaboration agreements.

According to the donation policy of the Group, when deciding on donations it must be confirmed that each donation adheres to applicable laws and regulations and ethically acceptable operating practices.

Our principal channel for influencing political decision-making is via relevant industry associations.

Political parties or associations do not receive support from Orion. Even though we do not participate in the activities of political parties as a company, we respect the legal right of our employees to take part in political action, which is considered a private matter.

Orion adheres to the current competitive legislation. We are in favour of fair competition and promotion thereof, and we aim to ensure that the objectives of applicable competitive legislation are honoured in our operations. We strive to avoid any breaches of competitive legislation.

Legal and regulatory compliance is the cornerstone of all our operations. We expect every employee to be aware of the legislation and regulations that apply to their work. It is the responsibility of managers and supervisors to ensure that up-to-date regulations are available and that the employees are made familiar with them.

Procedures

The divisions and organisations that make up the Group are responsible for managing authority relations in the areas that fall under the scope of their operations and responsibilities.

When we want to inform political decision-makers and authorities of our opinion, for example when new laws or regulations are being drafted, we aim to do so via channels such as national and international industry organisations. We are a member of the European Federation of Pharmaceutical Industries Associations (EFPIA) and the Chemical Industry Federation of Finland, which is part of the Confederation of Finnish Industries EK. As the voice of business, regional and central chambers of commerce as well as the International Chamber of Commerce ICC are also relevant channels for us. Orion Diagnostica is a member of MedTech Europe and Sailab MedTech Finland.

When necessary, our managers can approach decision-makers directly. In terms of being able to voice our opinion we consider good and appropriate relations to be important, especially with local decision-makers in the regions where we have an operational presence, with the relevant regulatory

authorities and, most importantly, with the national and municipal decision-makers and officials preparing decisions affecting the operating conditions of the healthcare industry.

In the relationships of our Pharmaceuticals business with Healthcare Professionals (HCPs) and Healthcare Organisations (HCOs), we follow the commonly agreed good practices provided in the European Federation of Pharmaceutical Industries and Associations (EFPIA) HCP/HCO Code. Collaboration between the pharmaceutical industry, HCPs and HCOs benefits patients. It is a relationship that has delivered numerous innovative medicines and changed the way many diseases impact patients' lives. Our work together ranges from clinical research to sharing best clinical practice. We believe that being transparent and publishing the compensation paid to HCPs and HCOs for the time spent working with us every year builds an understanding of this collaboration and helps foster trust with stakeholders. We publish payments to HCPs and HCOs in our corporate and regional webpages. Orion Diagnostica, in collaboration with HCPs and HCOs, follows a similar type of ethical codes to MedTech Europe and Sailab MedTech Finland.

We want to improve data transparency and as a pharmaceutical company, it is natural for Orion to support the work of patient organisations. Here, we follow the established industry practices based on the EFPIA Patient Organisation (PO) code. A summary report of our collaboration with patient organisations is published annually in the Sustainability section of our corporate website and indicator is included in our reporting for economic performance.

Most of the annual donations made by the Orion Group for purposes of public interest are based on the decision made at the Annual General Meeting to donate part of the distributable assets of Orion Corporation to medical research and other purposes of public interest. The Board of Directors decides on the allocation of the donations. This indicator is also included in our reporting for economic performance.

Organisational responsibilities

At the Group level, the Executive Management Board is responsible for community relations.

Training and awareness

The practices and means related to community relations, social and political influencing, competitive legislation and anti-corruption are dealt with in both the company guidelines, the supervisor and expert training, induction of new employees and other training and information sessions where it is natural to discuss these issues. These issues are also addressed in the Group's Code of Conduct.

The principles concerning anti-corruption are included in the Group's Code of Conduct and in the Anti-Corruption Policy, which unambiguously instruct the employees of the Orion Group to refuse to offer or take a bribe or any comparable benefit. Employees are regularly and systematically educated and trained about the purpose and importance of these principles. In 2017, a new web based training was launched that is compulsory for selected staff in the Orion Group. The number of members of staff receiving anti-corruption training in 2017 was 2,808.

Identifying and assessing risks relating to corruption is part of the comprehensive overall Group Risk Management. Assessing bribery risks is also a standard part of preparing for all collaboration agreements, among other things.

In addition to the principle of legal and ethical compliance and anti-corruption specified in our Corporate Governance Manual and the Code of Conduct, we also have defined specific *guidelines concerning competition law*, which every Group employee is expected to adhere to. We arrange training related to competitive legislation and agreements for all employees who are involved in making agreements or other tasks, which may fall under the scope of competition law.

In addition, Group-wide guidelines apply for agreements and documents signed in the names of the Orion Group companies. These guidelines are in place to ensure that all agreements are made with sufficient legal expertise and in writing that agreements are approved at the appropriate decision-making level based on their scope, and that only authorised signatories of the companies can sign agreements.

Our operations are very highly regulated by legislation and special regulations. We arrange a lot of training for our staff in areas related to regulatory compliance by means of courses, information sessions and self-learning. The employees are also expected to be pro-active in acquainting themselves with the relevant provisions.

Monitoring and follow-up

We monitor legal and regulatory compliance in the same ways as we monitor compliance with internal guidelines. We also react towards incompliance by applying the same procedures as are applied in the event of breaches of other internal guidelines.

Complementary references in the Sustainability section of our corporate website:

Code of Conduct
Anti-corruption Policy
Expectations towards suppliers
Our practices in approving suppliers

Compliance

In 2017, Orion did not have any monetary sanctions issued to us by ethical committees operating under national member associations of the EFPIA. In the comparative year 2016, we paid sanctions for two events and in 2015 similarly for two events of non-compliance with pharmaceutical marketing codes. These events are reported in our Sustainability Reports for 2016 and 2015.

No incidents of the following kind have been recorded in the years under review:

- Non-compliance with regulations and voluntary codes concerning the health and safety impacts of our products and services
- Non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle
- Breaches of customer privacy or losses of customer or research subject data
- Fines for non-compliance with laws and regulations concerning the provision and use of products and services
- Fines and non-monetary sanctions for non-compliance with environmental laws and regulations
- Incidents of corruption
- Legal actions for anti-competitive behaviour
- Violation of human rights

Tables

Key figures 2015-2017

Indicators of product responsibility	2015	2016	2017
Product recalls due to product defects, total	10	13	10
Product recalls due to product defects, medicinal product	6	9	7
Class 1 (Critical)	0	1	0
Class 2 (Major)	1	4	1
Class 3 (Minor)	3	4	6
Class 4 (Other defects)	2	N/A	N/A
Product recalls due to product defects, non-medicinal	4	4	3
Number of audits of Orion's operations	70	55	81
Audits by authorities	8	12	19
Audits by collaboration partners	62	43	62
Critical observations	2	0	0
Number of audits undertaken by Orion	245	269	314
Critical observations	22	29	26
Rejection	5	5	5
Number of customer complaints about the Pharmaceutical business (ppm) [1]			64

[1] The number of customer complaints about the operations of the Pharmaceuticals business is reported as the number per million packages (ppm).

Environmental indicators	2015	2016	2017
Use of materials total, tonnes:	13,331	13,320	13,580
Direct manufacturing materials	9,538	9,295	9,385
Packaging materials	3,793	4,025	4,194
Proportion of recycled materials (regenerated solvents) of	18%	14%	15%
Waste total, tonnes:	10,217	11,400	12,598
Energy recovery	8,638	9,789	9,715
Materials recovery	1,565	1,606	1,614
Physical-chemical pre treatment			1,268
Landfill waste	14	4	0
Energy consumption total, MWh:	152,316	161,440	160,818
Direct energy consumption total, MWh	485	451	402
Heavy fuel oil	0	0	0
Light fuel oil	485	451	402
Indirect energy consumption total, MWh	151,831	160,990	160,416
District heat	47,744	55,160	48,512
Steam	35,057	36,310	42,186
Electricity	60,030	69,520	69,719
Energy consumption by reporting unit, MWh:			
Orion Corporation	99,843	107,507	106,889
Fermion Oy	43,495	45,081	46,097
Orion Diagnostica Oy	8,978	8,852	7,833
Energy saved due to efficiency improvements, MWh:	2,395	2,068	3,725
Electricity	0	33	-1,841
Heat	703	2,035	4,992
Fuels	1,692	0	574
CO_2 emissions from energy consumption total, tonnes:	41,470	44,456	44,590
From direct energy	128	120	107
From indirect energy	41,341	44,336	44,483

Environmental indicators, continued	2015	2016	2017
Emissions into air from sources other than energy, tonnes:			
CO_2 from production	66	110	49
Methylene chloride (DMC)	1	1	0
Volatile organic compounds (VOC)	23	19	60
Nitrogen oxides, NOx	6	20	23
Sulphur dioxide, SO_2	0.1	4	5
Particles	0.2	0.1	0.1
Water withdrawal and consumption total, 1,000 m^3:	280	275	266
Orion Corporation	178	183	188
Fermion Oy	84	71	59
Orion Diagnostica Oy	18	21	19
Environmental expenditures and investments total, EUR 1,000:	5,364	6,667	8,788
Environmental investments	980	1,710	3,550
Environmental protection expenses	4,384	4,957	5,238

Personnel indicators	2015	2016	2017
Absenteeism due to illness, hours	181,613	185,054	177,635
Absentee rate due to illness	3.2%	3.1%	3.0%
Absenteeism due to injuries, hours	3,608	3,138	1,664
Work time lost due to absenteeism, hours	185,221	188,192	179,299
Absentee rate	3.5%	3.5%	3.3%
Injury events total	134	115	125
Workplace injuries causing absence of 3 or more days	11	15	13
Workplace injuries causing absence of less than 3 days	18	5	16
Workplace injuries causing absence, total	29	20	29
Workplace injuries causing no absence	54	44	50
Workplace injuries total	83	64	79
Commuting injuries	51	51	46
Fatalities	0	0	0
Injury rate LTI 1	6.5	4.4	6.3
Injury rate LTI 3	2.5	3.3	2.8
Actual working hours	4,474,220	4,517,647	4,637,686
Theoretical working hours	5,262,192	5,368,248	5,480,055

Personnel structure	2015	2016	2017
Personnel at the end of the period	3,401	3,469	3,464
Average personnel during the period	3,431	3,446	3,513
Number of employees by region as at 31 Dec:	3,401	3,469	3,464
Finland	2,723	2,796	2,802
Other Nordic countries	124	113	97
Germany	68	74	73
UK and Ireland	50	52	55
Russia	84	85	84
India	128	127	140
Other countries	224	222	213
Employees outside Finland total	678	673	662
Number of employees by reporting unit as at 31 Dec:	3,401	3,469	3,464
Orion Corporation	2,127	2,206	2,310
Fermion Oy	333	346	352
Orion Diagnostica Oy	263	284	262
Foreign subsidiaries	677	655	540
Number of employees by employee category as at 31 Dec.:	3,401	3,469	3,464
Blue collar	831	831	816
White collar	1,336	1,357	1,341
Exempts	1,234	1,281	1,307
Gender structure, all employees:			
Women	61 %	61 %	61 %
Men	39 %	39 %	39 %
Gender structure, blue collar:			
Women	42 %	42 %	42 %
Men	58 %	58 %	58 %
Gender structure, white collar:			
Women	70 %	63 %	71 %
Men	30 %	37 %	29 %
Gender structure, exempts:			
Women	63 %	70 %	63 %
Men	37 %	30 %	37 %
Age structure, all employees:			
Under 20 years	<1 %	1 %	0 %
20-29 years	14 %	11 %	12 %
30-39 years	28 %	27 %	26 %
40-49 years	32 %	32 %	31 %
50-59 years	21 %	24 %	25 %
Over 59 years	4 %	6 %	6 %
Employee turnover, average:	13.7 %	14.3 %	14.1 %
White collar and exempts	10.3 %	12.7 %	13.6 %
Blue collar	21.5 %	17.9 %	15.8 %
Employees with permanent employment contract as at 31 Dec.	2,926	3,205	3,113
Average duration of employment, years	11.1	11.0	11.1

Gender structures

Breakdown of staff by gender by reporting unit in 2017[1]

Employees (%)	Orion Group	Orion Corporation	Fermion Oy	Orion Diagnostica Oy	Foreign subsidiaries
Female	2113	1,478	99	186	346
	61%	64%	28%	71%	64%
Male	1,351	832	253	76	194
	39%	36%	72%	29%	36%
Total	**3,464**	**2,310**	**352**	**262**	**540**

[1] Breakdown corresponds to the true headcount's gender breakdown. The number of employees are reported as full-time equivalent numbers of employees applying the same accounting principles as those applied in the Group's IFRS financial reporting.

Breakdown of staff by gender of managers and supervisors in 2017[1]

	Orion Group	Orion Corporation	Fermion Oy	Orion Diagnostica Oy	Foreign subsi-diaries
Female	48%	55%	20%	61%	43%
Male	52%	45%	80%	39%	57%
Total	**100%**	**100%**	**100%**	**100%**	**100%**

[1] Breakdown corresponds to the true headcount's gender breakdown.

Gender breakdown, Board of Directors of Orion Corporation

Gender	2015	2016	2017
Female	1	2	3
Male	6	5	4
Total members	**7**	**7**	**7**

Gender breakdown, Orion Executive Management Board

Gender	2015	2016	2017
Female	3	3	3
Male	5	5	5
Total members	**8**	**8**	**8**

Age breakdown, Board of Directors of Orion Corporation

Age	2015	2016	2017
Under 50 years	1	0	0
50-59 years	1	2	4
60-65 years	4	5	3
Over 65 years	1	0	0
Total members	**7**	**7**	**7**

Age breakdown, Orion Executive Management Board

Age	2015	2016	2017
Under 50 years	4	2	1
50-59 years	4	4	6
Over 59 years	0	2	1
Total members	**8**	**8**	**8**

Financial performance	2015	2016	2017
Net sales, EUR million	1,015.6	1,073.5	1,084.6
International sales to external customers, EUR million	697.1	735.0	753.8
% of net sales	68.6 %	68.5 %	69.5 %
Operating profit, EUR million	266.6	314.6	293.0
% of net sales	26.2 %	29.3 %	27.0 %
Profit before taxes, EUR million	262.3	310.9	286.5
% of net sales	25.8 %	29.0 %	26.4 %
Income tax expense, EUR million	54.2	61.9	60.5
R&D expenses, EUR million	108.1	118.2	105.1
% of net sales	10.6 %	11.0 %	9.7 %
Capital expenditure, EUR million	44.5	51.1	76.5
% of net sales	4.4 %	4.8 %	7.1 %
Assets total, EUR million	1,047.4	1,062.9	1,055.5
Equity ratio, %	57.4 %	60.8 %	64.6 %
ROCE (before taxes), %	35.7 %	40.9 %	36.2 %
ROE (after taxes), %	37.5 %	40.3 %	34.2 %
Personnel expenses, EUR million	220.6	224.4	218.1
Financial assistance received from government, EUR million	1.8	1.2	1.1