Sustainability Report 2016

ORION 100

Building well-being. Together.

Contents

This Report is available in the Sustainability section of the Orion Group's website, at www.orion.fi/en

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

Orion is a Finnish company specialising in pharmaceuticals and diagnostic tests – a globally operating builder of well-being. We develop, manufacture and market human and veterinary pharmaceuticals, active pharmaceutical ingredients and diagnostic tests. 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 to markets drugs and diagnostic tests that give patients help and an effective treatment for their illnesses. An effective drug also creates added value for the patient by improving the quality of life.

Year 2017 marks the 100th anniversary of Orion. Our roots are in Lääketehdas Orion Oy, established in 1917 for the manufacture of pharmaceuticals. Since those times, we have evolved via many phases, now being the leading pharmaceutical enterprise and one of the oldest and financially soundest companies in Finland. During the centenary year, we demonstrate in many and visible ways how we contribute to building well-being in our home country, Finland, which also in 2017 celebrates its 100th anniversary as an independent state. As a co-operation partner under the Suomi Finland 100 theme, the Orion Group supports the work of carers both financially and by providing information about their important work.

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 and our operations, at www.orion.fi/en. In the section named “Orion Group”, an overall description of the Group as well as information about our products and services, strategy, financial performance, ownership base and corporate governance can be found. Information specifically related to sustainability is provided in the sub-section titled “Sustainability”, where also our Code of Conduct and our Group policies are available. The most elementary corporate risks and their management are dealt with in the “Corporate Governance” section of the website, as well as in the Corporate Governance Statement confirmed by the Board of Directors on 8 February 2017.

The operational structure of the Group consists of the following businesses:

Proprietary Products	Patented prescription drugs for central nervous system diseases, oncology and critical care, Easyhaler® pulmonary drugs
Specialty Products	Generic (off-patent) prescription products and self-care products
Animal Health	Veterinary medicines and products for pets and production animals
Fermion	Active pharmaceutical ingredients
Orion Diagnostica	Diagnostic test systems for healthcare service providers and industry

All our production plants and pharmaceutical research centres are located in Finland, except the research unit in Nottingmham, England. The largest one of our sites is in Mankkaa, Espoo, where most of our operations are present and also the Group and its parent company Orion Corporation are headquartered. Our own marketing organisation covers almost all European countries. In markets outside Europe, we work in partnerships with other companies.

Operations and sites of the Orion Group in Finland

- Headquarters and administration in Espoo
- Pharmaceutical manufacturing in Espoo, Turku, Kuopio and Salo
- Active pharmaceutical ingredient manufacturing in Hanko and Oulu (Fermion)
- Diagnostics manufacturing in Espoo and Oulu (Orion Diagnostica)
- Pharmaceutical research centres in Espoo and Turku
- Marketing: Espoo, Turku, Kuopio, Oulu and Tampere

Outside Finland

Orion Pharma subsidiaries and Orion Diagnostica sales units with sales and marketing operations in 26 countries in Europe

R&D unit in Nottingham, England

Subsidiary FinOrion Pharma India Pvt. Ltd. In Mumbai, India

Our products are available in more than a hundred countries. The Group's net sales in 2016 were about EUR 1,076 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%.

At the end of 2016, the Group had 3,469 employees, of whom 2,796 in Finland and 673 in the foreign subsidiaries.

Our customers include healthcare providers and professionals, consumers and other pharmaceutical companies. In healthcare, the customers primarily include specialist doctors and general practitioners, vets, pharmacies, hospitals, healthcare centres, clinics and laboratories and their respective procurement organisations.

The operational structure of the Orion Group has remained almost unchanged since the summer of 2006, when the previous Orion demerged and the current Orion started as a new company concentrating on pharmaceuticals and diagnostics.

Orion Corporation, the parent company of the Group, is a public company whose shares are listed on Nasdaq Helsinki. At the end of 2016, the company had 48,547 registered shareholders, of which 96% were households. Households held 39% of the entire share stock. Details on the shareholder base are provided in the Investors section on our corporate website. Most of the data is updated on a monthly basis.

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 corner stone. In addition to them, every Orion employee is committed to following the high ethical standards and business practices determined in the Group's Code of Conduct. They are the basic rules our employees are anticipated to observe in interaction with each other and the stakeholders of our company, as well as with society and environment.

In addition to above, operations and working in Orion are subject to specifically determined company policies and numerous mandatory guidelines concerning our practices. All our policies have been launched and confirmed by the Group's executive management, and they are meant to be followed all over the Group. Especially important are the Good Practices required to be globally followed by healthcare industries 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 Associations, which are accessible on the EFPIA website, www.efpia.eu.

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 taking care of the continuous development of the well-being and skills of our personnel.

We aim to continuously improve our operations with solutions and actions that support sustainable development. The heaviest aspect in our corporate responsibility is patient safety, the core of which is to make sure that our products are safe when used correctly. Also important to us is to manage our environmental impacts. In our working communities, we promote well-being by targetfully developing safety and motivation at work.

Corporate responsibility as well as the sustainability reporting and its development belong to the responsibilities of 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 following statement by the Executive Management Board of the Orion Group confirms our commitment to responsible operation 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 highest standards in the industry with respect to the environment, health and safety.*
>
> *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.*

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 for each calendar year. This Report is the 8th sustainability report of the Orion Group, the focus being on 2016. In the performance indicators, comparative data is provided for 2014—2015.

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.

In the assessment of materiality, we have largely leant on the broad basic menu of the GRI framework from which we have chosen the most relevant ones 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 good understanding and expertise of the area of sustainability they represent and who work in broad and regular interaction 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.

In 2016, we launched a new system specifically tailored for our own needs for managing the indicator data reported in our sustainability reports as well as to environmental authorities and other instances, such as the Responsible Care programme. The reporting process and details of the data collection into the system are documented in a handbook.

The contact person for sustainability-related questions is the Corporate Responsibility Officer, whose contact details are provided in the Contact Us section of our corporate website.

Our report covers the entire Group

Our sustainability report principally covers Group-wide operations. Measurement data is gathered from each operational location and grouped according to the Group structure. The indicators show our performance covering the entire Group when relevant. As our environmental impacts mainly come from our manufacturing operations, and because all our manufacturing units are located in Finland, we only include our Finnish sites into 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 they are located in. Almost all of their employees are engaged in marketing except for a few employees working in support functions. Some information about the personnel structure is only calculated for Finland due to the lack of facts for the foreign subsidiaries. As the foreign units are relatively small, their impact on the Group figures is minor, however.

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

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 operations in Espoo, including R&D unit in Oulu
- Fermion Oy
  - API manufacturing in Hanko
  - API manufacturing in Oulu
  - API R&D unit in Espoo

Our Report for 2016 does not include such new items as 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 company profile has, however, been shortened from the previous ones by eliminating such descriptions as are provided with up-to-date details on our corporate website and/or in other publications.

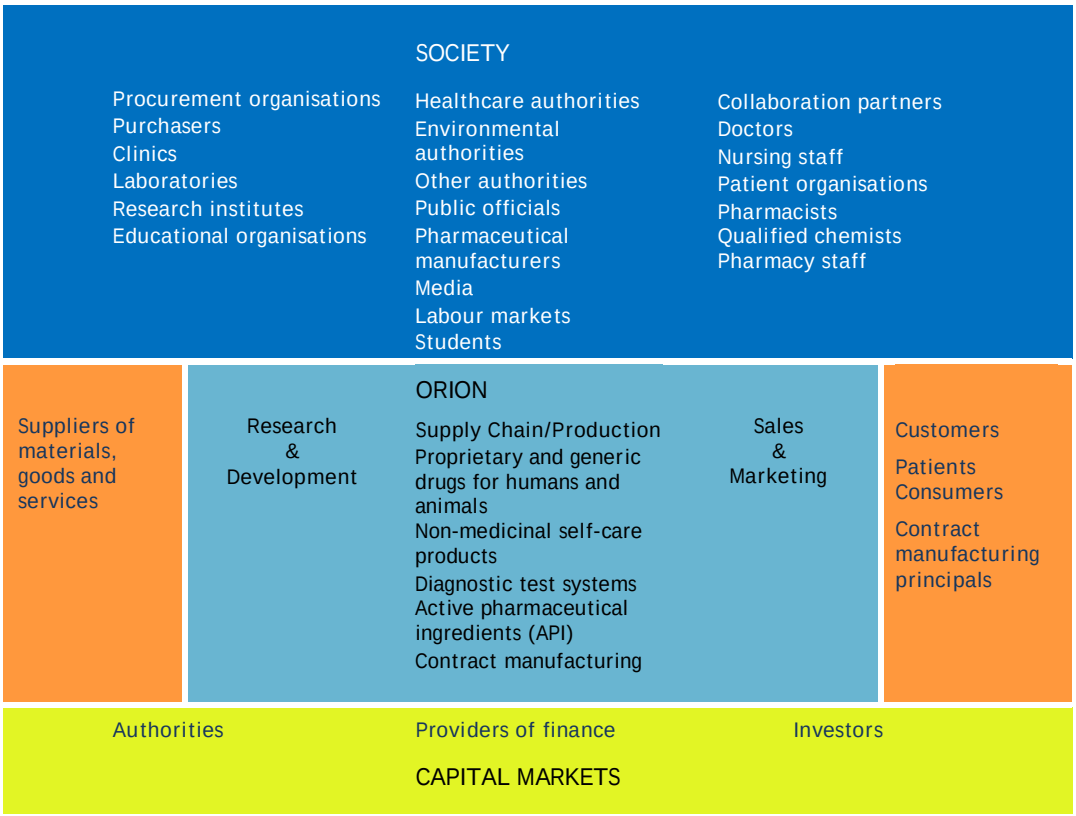
No assurance has been sought for this Report from external assurance providers.

Our stakeholder groups

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

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

We engage with our stakeholder groups in various ways. We have not established such engagement mechanisms or forums which specifically focus on topics of sustainability.



Our memberships in industry associations and advocacy organisations

The following industry associations and advocacy organisations are relevant to the Group and 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
- Association for Finnish Work
- Excellence Finland
- Sailab ry and its national sister organisations in countries where Orion Diagnostica has presence
- Terveysteknologian liitto ry – FiHTA
- EDMA, European Diagnostic Manufacturing Association
- 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, form both the 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. Finnish companies' membership in Responsible Care is coordinated by the Chemical Industry Federation of Finland 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. The currently ongoing agreement scheme follows the one that ended in 2016, with a goal to ensure the achievement of the national energy efficiency improvement targets derived for Finland from those set in the EU Energy Efficiency Directive. The programme also aims to significantly enforce Finland's contribution to achieving the EU-wide energy efficiency target set for 2030. The 9-year agreement period 2017–2025 is divided into two sub-periods, years 2017–2020 and 2021–2025. The energy saving target for the full programme is 7.5%.

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 Ethical Finland, OMX GES Ethical Nordic, OMX GES Sustainability Finland GI, OMX GES Sustainability Finland PI, OMX GES Sustainability Finland Cap GI and OMX GES Sustainability Finland Cap PI).

In 2016, our company was 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

Statement by CEO Timo Lappalainen

When we eight years ago started reporting on corporate responsibility, we faced perhaps the greatest challenges from inside the Orion Group. Reporting was partly conceived pointless, as it was self evident to us that we operate responsibly in every respect because it is the prerequisite for our existence as a company and the continuity of our business. Today, the handling, reporting and development of matters of responsibility and sustainability are an integral part of the daily development of our company.

Transparency and ethical and sustainable principles are emphasized in our business. Orion's operational business model is strongly based on collaboration with various organizations operating in our field of industry. This means that we carry the responsibility of our overall operational quality, regardless of which part of the value chain is performed by ourselves and which part is done in collaboration with our partners. We can build well-being by working in partnerships with supply sources and service providers who aim at the same high performance level as we do. It is important not only to us but to the entire pharmaceutical industry that all parties extensively care about the societal and environmental impacts of their activities. Errors cannot be completely avoided, but to us it is a matter of honour to learn from them and to do our best to prevent the reoccurrence of corresponding ones. This is especially highlighted in the procedures via which we ensure the quality and safety of our products.

The regulations concerning marketing of pharmaceuticals and the commonly agreed practices of our industry determine those ways and means of communication with which we share information about our products and their proper use to patients and healthcare professionals. Our industry-specific self-regulation mechanisms function efficiently: even the slightest departure of the codes is taken under the loop.

Healthcare professionals engaged in patient work and research are key links in the value chain of pharmaceutical research and marketing. They deserve a fair compensation for their expert services. Pharmaceutical companies, for their part, have an important role in continuing education of healthcare professionals. Transparency is a word repeated in the anticipations and requirements towards our industry. The purpose of openness is to create and further enhance trust. The member companies of EFPIA, European Federation of Pharmaceutical Industries and Associations, have commonly agreed to publish details about their collaboration with healthcare professionals and compensation paid for their services.

The themes of sustainability and the principles of continuous improvement towards targets are deeply rooted in the daily work and corporate culture of Orion. The value base of our company, which is turning 100 years this year, is firmly standing on the ground of mutual respect, appreciation and trust from which we receive our vital energy. To us, responsibility is a self-evident principle built in our common values which reflect a caring attitude towards everything we do.

Timo Lappalainen
President and CEO

Product Responsibility

We consider product responsibility to be our priority among the many aspects of corporate responsibility. As a manufacturer of pharmaceuticals, active pharmaceutical ingredients (API) and diagnostic products, we emphasise our responsibility for the safety of our products. Responsibility and caring are an integral, uncompromised and natural part of everything we do at Orion. Product safety is linked to all our activities. 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 by healthcare authorities, the primary purpose of which is to ensure patient safety, are guiding our activities in everything we do. In addition, 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 their correct and proper use and storing. The complementary education and training we offer to healthcare professionals, in particular to doctors and nurses as well as to pharmacy personnel, as well as our support to patient organisations also fall within the scope of product responsibility.

As a pharmaceutical company we must ensure that the drugs and active ingredients developed, manufactured and marketed by us are proven to be safe, effective in the indications they are approved for, 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 work as planned and produce reliable results of the patient's condition to support appropriate treatment decisions.

Important from the point of view of our product responsibility is that the information we share about a medicinal product to doctors, pharmacies and patients is in accordance with the product characteristics confirmed for it by regulatory medicinal authorities on the basis of the research results and data collected in clinical use. Also important is that we provide the necessary guidelines for taking and keeping 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 efficiency and fluency of processes, product safety and consistent quality and high delivery reliability. As our products are also sold beyond the EU area, 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 relevant legislation, regulatory authorities' instructions and guidelines, and the principles determined in our Pharmaceutical R&D Ethics Policy which are in conformity with 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 the other EU member countries. Moreover, our operations are continuously supervised by healthcare authorities of many other countries. 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 the marketing authorisation holder being 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 ones 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 Valvira.

Management of Product Responsibility

The basics of the management of our product responsibility are determined in the Quality Management System, by the help of which we make sure that each product batch released for sale is in accordance with the marketing authorisation, and based on which 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 undertake the necessary procedures to ensure patient safety.

Management of pharmaceutical product responsibility

The management of product responsibility concerning pharmaceuticals is arranged in the following way:

- 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.
- 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, Drug Safety, who reports to the Chief Medical Officer and the Medical Director. 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 Medical Director, in collaboration with the Medical Marketing Department and the marketing and sales organisation, carries the responsibility of our compliance with the legal requirements concerning the marketing of pharmaceuticals in all those countries where Orion is present. The Medical Director reports to the Senior Vice President, Pharmaceuctical R&D, and the Chief Medical Officer.
- 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 position of the Accountable Director is held by the Vice President, Quality Management, who reports to the President and CEO. 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 in the course of the research and development phases. The manufacturing methods and equipment as well as the requirements for the raw materials and the product are determined in these phases. Industrialisation is included in the product development phase as an elementary part, 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 stabile quality of the raw materials and the

traceability of the documentation. In the qualification process of API suppliers, we also inspect the manufacturers of the intermediate materials used in the manufacturing process of the API.

Before approving the raw materials into production we take and analyse samples of them. Packaging materials and the printed packaging information are also checked in a corresponding way. To ensure the quality of not only our pharmaceutical preparations but also other products, we make controls in the manufacturing phases. Samples are taken and analysed of each manufactured batch, and the documentation of the batch is checked before approval 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 authorities in different countries and that all analysis results 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 for the entire shelf-life of the product. By the help of the batch documentation, all materials and all phases of manufacturing, quality control, transportation and distribution are traceable without gaps.

The quality management procedures for APIs are described in the control strategy. The quality control methods are already established 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 medicines and APIs, also diagnostic products are furnished with a batch code with which we can make sure of the properness of the manufacturing phases from 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 core value at Orion. We work to ensure the safety and optimal benefit/risk balance of our products throughout their lifecycles. We 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 related 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 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 Drug Safety organisation, which is a Headquarter function. Appropriately qualified and trained experts are responsible for the assessment and activities related to the management of 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 monitored information includes spontaneous reports and feedback from healthcare professionals, literature, regulatory authorities and patients about adverse effects, medication errors, interactions and over-doses, 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 pharmaco-vigilance activities. We work in continuous collaboration with authorities in the evaluation of the safety of our products and the balance between risks and benefits. When necessary, we undertake actions to ensure patient safety and the correct and safe use of our medicines. Such actions may include, for example, updating of the information provided in the summary of product characteristics and the product information leaflet, communicating information to or training of healthcare professionals, adding, e.g., contraindications or precautions and warnings to the medicines, or discontinuation of 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. In 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 in 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 markets.

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 48 countries. In addition, our operations are regularly monitored and inspected by authorities representing non-PIC/S countries, such as the US Food and Drug Administration, FDA, for example.

First of all, however, we take 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 authorities, also our customers, partners and contract manufacturing principals 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 make on-site audits in their facilities to make sure that external parties involved in our supply chain, R&D and distribution meet the regulatory requirements and obligations mutually agreed on in the collaboration contracts. We also follow up and monitor the fulfilment of the corrective actions of the shortcomings identified in the audits.

In events of defects we withdraw the product

Medicinal products and APIs which fail to comply with their specifications and may cause danger or severe harm to their users are recalled by us from the market without delay. Depending on the seriousness of the case, the product is withdrawn either from the wholesalers and retailers only, or also from patients. We instantly report the events to the regulatory authorities in all those countries where the product is sold.

We have the systems in place to enable a prompt initiation of a recall procedure, and prompt and accurate communications. 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 in internal guidelines on customer complaints and situations hazardous to customers. The key guidelines concern handling of customer complaints, sales restrictions and recalling batches from the market. They also address country-specific guidelines, such as Warnings and Sales restrictions in Canada and Vigilance Reporting in the United States.

All employees of the Orion Group have the obligation to inform the Quality Assurance organisation 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.

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

Pharmaceutical products can be sold and used only under a product-specific marketing authorisation granted by a pharmaceutical regulatory authority, and using the facts provided in the Summary of Product Characteristics, SPC, 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, proven to be therapeutically effective, appropriate 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 Patient Information Leaflet, PIL, must be found in every single retail package. Pharmaceutical legislation and regulatory authorities demand that, for products classified as drugs, the pharmaceutical company may only provide information contained in the SPC, and exclusively that. The product information leaflet in the package contains the main facts about the drug and its use in the form 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 be in full conformity with the information confirmed in the registered Product Information confirmed for the basis of the valid marketing authorisation.

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

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

For the sale of an API, Fermion shall provide its customer 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 receives the related supply documents, an analysis certificate and a safety data sheet concerning the substance. All packages are labelled with warning signs and traceability information.

Regulations concerning diagnostic products require that the product packages contain all essential information about the product, manufacturer, and purpose of the product, storage and validity. The packaging contains appropriate warnings. The end user will always receive detailed user instructions with the package. When required, an analysis certificate, information on product calibration traceability 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 parties 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 at large. Healthcare professionals, in turn, can benefit from the forums for additional 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 obligates 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. Individual healthcare professionals can, however, prohibit the disclosure of their names in the report on the basis of their legal right to protected 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* in the following words:

> *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 relevant legislation (Medicines Act in Finland) and the EFPIA codes.

We arrange continued training to and regular testing in our sales and marketing organisation to ensure that the persons engaged in marketing 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 Medical Affairs organisation is a headquarter function which coordinates and consults marketing communication planning, and monitors its implementation in order to confirm its compliance with national and transnational regulations. Medical Affairs is independent from the Sales & Marketing and reports to the Chief Medical Officer. In order to see to it that the promotional activities are in line with regulatory requirements, the specialists in the Medical Affairs organisation work in intensive collaboration with the sales and brand managers, 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 recommendations of EDMA and EUCOMED

For the marketing of diagnostic products, recommendations have been provided by EDMA to its member organisations. As a member of SaiLab, a Finnish association of manufacturers of hospital laboratory equipment, Orion Diagnostica follows both them and those of the European Medical Device Association EUCOMED. No sanctions are included in these recommendations. Our marketing communications guidelines concerning diagnostic products have been determined observing these recommendations.

Monitoring of customer satisfaction

We monitor customer satisfaction on the basis of monthly market data and sales statistics. Changes in trends indicate changes in customer satisfaction in relation to the competitive situation. We make use of research reports available from 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, applying 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. In these activities too, we follow the commonly agreed rules of our industry recorded in *the EFPIA PO Code*, which covers relationships between EFPIA corporate members and 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 of the forms of our 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:

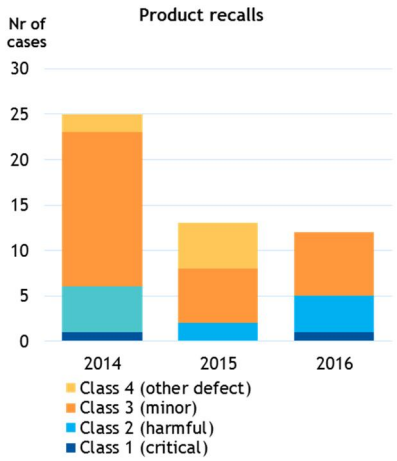
- Quality Policy
- Code of Conduct
- Anticipations towards suppliers
- Our practices in approving suppliers
- Anti-corruption Policy
- Pharmaceutical R&D Ethics Policy

Performance indicators of Product Responsibility

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

Product recalls and product defects

Events	2014	2015	2016
Class 1 (critical)	1	0	1
Class 2 (harmful)	5	2	4
Class 3 (minor)	17	6	7
Class 4 (other defect)	2	5	0
Product recalls total	25	13	12



Defects identified in medicinal products are classified as critical, harmful 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 (Harmful): product defects that is or may be harmful to the users or may affect medical treatment, but which are not included in Class 1.

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

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

The number of product recalls implemented in 2016 due to defects declined by one from the previous year. Altogether 8 (12) withdrawals of medicines were executed, one of which was classified into severity class 1 “critical”. In this case, one batch of a product was withdrawn due to a risk that its sales packages could possibly contain two different dose strengths.

Four withdrawals in 2016 were classified into severity class 2 “harmful”. One of them comprised four batches of an injectable product, the pH value in which was observed to deviate from the specifications to be met during the validity period of the batches. Along with the withdrawal, also the product’s validity period was shortened. Batches of a product sold in the form of capsules were recalled as one of its manufacturing substances was observed not to meet quality specifications throughout the product’s validity period. Also, the product in these batches suggested weakened stability. Another capsule product was withdrawn due to undue microbiological growth pathogens found in the product. An injectable preparation used in hospitals was withdrawn as a precautionary measure after a tiny impurity was detected in one vial.

Three recalls fell into class 3 “minor”. During the stability follow-up of one product, the solubility of the tablets did not meet the specifications. The API content and the preservative substance in a medicinal emulsion failed to meet the specifications until the end of the product’s shelf life. Information about the batch and its validity period printed on the sales packages of a certain medicinal preparation was observed to wear out during the use of the product, and also capping problems were recognised.

Orion Diagnostica executed four withdrawals due to minor defects, most of which were related to stability of reagents used in diagnostic tests.

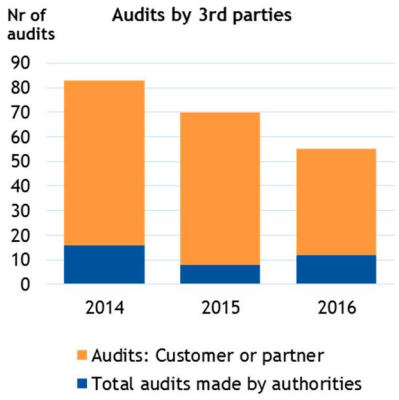
In the operations and functions of our Supply Chain organisation, major development programmes have been underway to prevent product defects. The number of recalls due to product defects decreased further from that recorded in 2015, when it already came down to half of the level of 2014. Improvement measures taken in all phases of the pharmaceutical manufacturing processes have led to good results, which are already reflected in our indicator of the number and severity of product defects. They also result in improved delivery reliability and customer satisfaction, as well as a lower number of rejected production batches and thus, also reduced amounts of hazardous waste. The improved performance is also readable in the Income Statement as lower manufacturing costs.

The purpose of the Top Supply Chain project, the factor behind our improved performance, is to dig into the root causes of nonconformities, to implement corrective and preventive actions on a wide scale, and to perform all tasks with the right first time principle, whereby both product quality and productivity are improved. Our purpose is to achieve a straight forward total process in which unnecessary work is minimised and every person is aware of his/her role and responsibility for the outcome.

In addition to product recalls we also report to authorities those events in which the defect is so insignificant that a recall is not implemented. The number of this kind of cases has also decreased from the previous years.

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

Inspections	2014	2015	2016
Inspections by authorities	16	8	12
Inspections by partners	67	62	43
Inspections total	83	70	55
Critical observations	0	2	0



In the inspections conducted by medicinal authorities and our business partners into our sites and operations, the investigators primarily check our compliance with the Good Practices requirements. Partners in particular are also paying increasing attention to the management of EHS affairs, i.e. the level environmental, occupational health and safety.

The observations are classified based on their severity as critical, major or minor. The investigator may also propose a more recommendable procedure instead of an adopted although acceptable one.

> 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 drug safety or quality. Incompliance with Good Practices.
>
> Minor: Drug safety is not compromised. A minor nonconformity with Good Practices.
>
> Recommendation: The practice is compliant, but an improvement is recommended.

Of the altogether 55 inspections made in 2016 (70 in 2015) into the facilities and locations of the Orion Group, 12 (8) ones were conducted by authorities, mostly representing healthcare authorities, such as the Finnish Fimea and the US FDA. Altogether 6 (7) inspections were made into our pharmaceutical manufacturing sites, all of them focusing on the regulatory GMP compliance. Fermion's manufacturing plants underwent 4 (0) 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 made altogether 43 (62) inspections, 26 (33) of which were conducted at Fermion's production sites in Hanko and Oulu. Our pharmaceutical manufacturing and R&D operations had altogether 24 (27) inspections by our partners, mainly customers, marketing partners and contract manufacturing principals. No critical observations were recorded in the inspections.

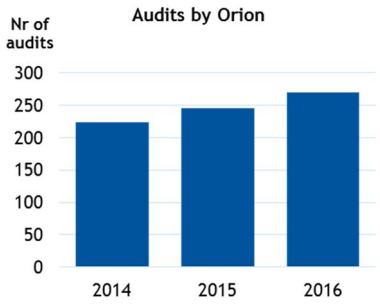
Inspections by third parties belong to our work days, and principally we are ready to welcome an auditor into our premises at any time. Every inspection is an individual event depending on what kind of criteria the inspecting organisation works with. The inspectors also have different ways of working. It is quite normal that minor defects are observed. After the inspection, the auditor is especially interested to see how the observed shortcomings are amended and how they are prevented from recurring. As a rule, we undertake immediate actions to correct even the least significant defects instantly after each inspection. When planning corrective actions we also check if a corresponding defect can be identified in other locations too, regardless of where the defect was detected. The corrective actions are documented in detail and reported to the organisation which carried the audit.

Inspectors may record observations the amendment of which may cause delays in our production programmes. In the estimates concerning near-term risks and uncertainties, Orion's management accordingly points out that our broad product range may cause risks to the delivery reliability and make it challenging to maintain the high quality standard 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 of those manufacturers may cause a risk to our delivery reliability.

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

Inspections of material and service suppliers' and contract manufacturers' operations and sites conducted by Orion

Audits	2014	2015	2016
Audits total	227	245	269
Critical observations	56	22	29
Rejections	1	5	5



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

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

Like in the previous years, most of the altogether 269 inspections we conducted in 2016 were carried into operations of our GxP critical business partners and sources of supply, such as API manufacturers, suppliers of raw materials and other materials, contract manufacturers and organisations providing clinical research services to us. The high and increasing number of critical observations shows that on-site audits are necessary.

The inspections we made in 2016 led to altogether 5 rejections, all of which due to severe observations recorded in GMP inspections. Strong reasons for rejections are, for example, risks of cross contamination and severe defects in the quality management systems, validation, documentation and data systems.

We paid increased attention to the overall operational quality of our sources of supply, adding more effort to the evaluation of the level of their environmental, health and safety management. During the year, we conducted EHS inspections at 28 sites in India and China, and recorded as many as 13 critical observations. Most of them concerned the handling and storing of flammable liquids and the related risks of fire. Critical shortcomings were also observed in overall ATEX safety, i.e. in areas where the risk of explosion is high, as well as in rescue arrangements. The results of our EHS audits especially of the sites of Indian and Chinese suppliers are signalling of the need to further develop environmental and occupational health and safety at work places in these countries where the sources of supply for the pharmaceutical industry are increasingly located.

Environment

Management of environmental affairs

Our aim is to have the impacts of our operations on the environment under the best possible control by applying management principles and operational practices determined in the EHS Management System of the Orion Group. The EHS System comprises environmental affairs, energy efficiency, occupational health and safety, and process safety. The Group-level general principles are described in the EHS Handbook confirmed by the Group's executive management. Due to their operational characteristics, Fermion and Orion Diagnostica have some practices differing from the general principles. The EHS Handbook is complemented by numerous work phase and task-specific internal guidelines providing the particular EHS aspects to be attended in performing the task.

Our EHS System is based on compliance with legislation, statutes and regulations as well as our internal guidelines. The environmental management system is built upon the principles set out in the ISO 14001 environmental standard. In the management of occupational health and safety we apply the OHSAS 18001 guidelines, and the ISO 45001 standard after it has replaced the former one. In the development of our energy efficiency we apply the principles of the ETJ+ energy management system and practices determined in the ISO 50001 standard. As a basic principle, we aim to improve our operations and performance continually and towards predefined targets.

Our EHS Policy determines as a Group-level commitment how all units and organisations belonging to the Orion Group shall promote the well-being of the environment and our workplaces as well as the efficient use of the resources needed in the Group's operations, such as energy, water and materials. The EHS Policy is accessible in the Sustainability section of our corporate website.

Environmental aspects, our approaches and targets

The following environmental aspects identified as the most significant ones for the Orion Group and its businesses, 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 needing development to minimise our waste flows. We forward our recyclable surplus materials for further re-use purposes. We manufacture our products right first time. We reduce the proportion of hazardous waste of our total waste.
Waste water management	We know the quality of our waste waters. We reduce the environmental burden on waterways caused by our operational sites by minimising the residues of harmful chemicals in our waste waters.
Energy efficiency	We targetfully improve the efficient use of energy and reduce our energy consumption applying practices determined in our Energy Management System. We participate in the energy efficiency programmes pursued by industry associations relevant to us.
Emissions into air and climate change	We contribute to the prevention of climate change by reducing CO_2 and VOC emissions into air.
Supplier approval process and management	In the selection and management of our suppliers and collaboration partners we pay attention to their ability to meet the required levels of EHS affairs management.

Two metrics of sustainable environmental development are included in the strategic KPIs monitoring the implementation of our Group strategy. One of the metrics measures the MW hours saved in our energy consumption. The new goals for this metric will be set when the new national energy efficiency target for Finnish industries has been set. The other strategic environmental indicator follows the proportion of hazardous waste of our total waste. Our goal is to reduce the amount of hazardous waste especially, but also total waste along with that.

We assess our performance both in the light of our targets and requirements and our earlier performance. Important purposes of measurement and follow-up data include our internal ones, such as the on-going development programs aimed to show continual improvement in our environmental performance, the internal KPIs attached to our Group strategy and the indicators in our Sustainability Reports. Part of the monitored items is 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. Other important external instances receiving EHS reports from us are those organisations which collect performance data from companies committed to voluntary initiatives and programmes.

We aim to reduce the burden caused by our operations on the environment by implementing programmes and actions aiming at continual improvement. We plan, choose, buy and invest predicting and considering the environmental risks and impacts of our solutions. The carrying principle here is the core of material and resource efficiency: to achieve 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. By doing so we also create substantial economic added value.

In addition to activity programmes, we promote the achievement of good results by maintaining our processes up to date, by investing in improved process technology and methods and 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 to reduce 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 give guidance for the planning and implementation of our investments and other measures to reduce environmental impacts.

The Orion Group does not own or manage any land or real estate which are used in manufacturing and are of high biodiversity value, nor do we operate adjacent to any areas classified as such.

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.

Production of pharmaceuticals and their active substances is the kind of activity for which environmental permits are required, as provided in the Finnish Environmental Protection Decree. The prerequisites for granting an environmental permit include, among others, that the plant shall neither cause harm to health nor significant environmental degradation or its risk. The environmental regulations and permits are location-specific. They provide the acceptable maximum levels for emissions into air, soil and water, as well as the methods and scopes for the measurement, monitoring and reporting the items detailed in the permits. 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 the Finnish waste legislation, we aim to reduce waste, avoid producing waste and deliver usable fragments for re-use.

The Orion Group is subject to the provisions of the Finnish energy efficiency legislation, which obligates us to improve energy efficiency continually 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 in amounts of 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.

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 significantly better performance levels than those required by our environmental permits. A higher target can often prove more meaningful than the minimum level, also in terms of economy.

Environmental management responsibilities

In the Orion Group, the conformity of environmental management, which is an elementary component in 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. In Fermion, EHS activities are coordinated by a safety manager who reports to the President of Fermion. Core tasks of the EHS organisation in the promotion of environmental safety include, among other things, participation in the preparation of continual improvement programmes, external and internal EHS inspections, guidelines and trainings, follow-up of safety observations and consequent corrective actions, risk assessments, investigations of injury events, 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 System. Each supervisor shall see to it that their subordinates are familiar with the guidelines concerning the reduction of our harmful environmental impacts. They also shall promote employees' commitment to our development goals and motivate them to take correct actions to prevent environmental damage.

The management responsibilities are specified in the reference documentation of the EHS Handbook as well as in job descriptions. The management teams of the business divisions and line functions are primarily in charge for 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 responsible for identifying the main environmental impacts 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 establish and maintain operating procedures for the collecting, processing and archiving of information related to environmental safety.

Each Orion employee's obligation is to act according to our environmental principles in their daily work.

Emergency preparedness and response

In events of emergency we follow pre-determined procedures confirmed by the Group management for taking the event and its consequences under control and for normalising the situation. The preparedness and procedures are defined in separate specific instructions. Applicable procedures are undertaken depending on the severity and the nature of the situation. Preparedness plans in case of different kinds of accidents and other exceptional events are based on continual follow-up and monitoring of our operational environment.

Emergencies classified into the most serious category pose an imminent threat towards our company and, in the worst case, they can jeopardise our operations, peoples' health or safety, and cause great damage and harm. The model of action established for the severest kind of emergencies provides that the Team for the Management of Exceptional Circumstances, chaired by the President and CEO and consisting of certain predefined persons, starts working in accordance with the Team's charter, task sharing and guidelines applicable in the acute event. The basic composition of the Team is complemented with other persons depending on the event.

In less critical events, i.e., in which the consequences and damages are evaluated to be clearly minor than those in the severest category, the best suited operational model is applied from the menu of ones established for them.

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 events of emergency it is important to eliminate the threat and the hazard as soon as possible, to limit the damage to people and property and to appoint appropriate persons to take care of the event. Especially important is to take care of internal and external communications so that up-to-date and reliable information is rapidly and transparently available to the ones needing it. Also the role of the relevant public authorities in managing the event shall be observed. In addition, we must take care of continued operations, personnel arrangements, and alternative or temporary operational arrangements.

Operating the EHS System

The following procedures are elementary in operating the EHS 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 inspections in departments
- Inspections 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 over 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 inspections or in the safety observation system as well as the notifications received from external instances, in collaboration with the management and relevant experts. In this process, also the causes and the degree of severity are assessed, and the necessary actions are planned to eliminate the defect or to mitigate the harm, and to prevent the recurrence of a corresponding event.

We follow up the implementation, applicability and efficiency of our EHS System by means of regular internal site inspections and in the annual management reviews. The inspections and management reviews help us identify needs to develop and improve our operations and the system. In addition, we make sure that the system and our operations are in conformity with the requirements of the ISO 14001 standard. The internal EHS inspections are conducted according to an inspection plan by our EHS organisation in collaboration with the management of the concerned department or function and representatives of the occupational safety organisation.

In its annual management review, the Group's executive management evaluates the applicability, sufficiency and efficiency of our EHS System in an annual review. In the review, the management assesses things like the outcomes of the EHS inspections, 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 System, Policy and targets, and considers improvement possibilities and necessary changes.

Training and awareness

We maintain and promote the personnel's awareness of environmental and health and safety affairs as well as our energy efficiency improvement programmes by providing information in our internal communication channels, and with guidelines and various educational events.

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

The general principles are provided in the EHS Handbook, in the Group's Corporate Governance Manual, the Management Guide, the Safety Guide, and in unit and site-specific activity programmes. Particular department and function-specific aspects are observed in the guidelines concerning the procedures to be followed in individual tasks and duties.

Complementary references in the Sustainability section of our corporate website:

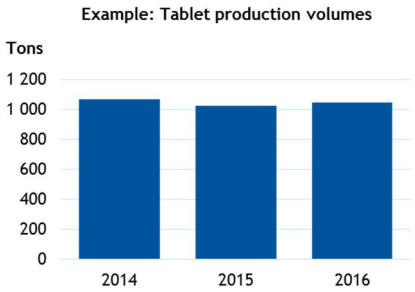
EHS Policy
Anticipations towards Suppliers
Our practices in approving suppliers

Indicators of environmental performance

Production output and use of materials

Production volumes by type of product

Ton	2014	2015	2016
Tablets	1 066	1 024	1 047
Injection products	55	52	49
Gels and ointments	762	752	796
Liquid preparations	265	306	279
Diagnostic products	515	507	497
Active pharmaceutical ingredients, API	240	211	209



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 above table representatively indicates total production volumes of our typical product types in tonnes, which have been calculated using calculatory average conversion factors. The primary and secondary packages of the products are not included in the figures.

Using the number of retail packages as a measure, our output of medicinal products in 2016 came to a somewhat higher level than in the previous year with 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 already almost 30 million sales packages were produced. At our Espoo site, the facilities previously used for tablet packaging are being converted for the manufacture of Easyhaler products.

The combined production of active pharmaceutical ingredients (API) of Fermion's sites in Hanko and Oulu came to about 209 million tonnes, almost the same as in 2015. Volumes of finished products decreased slightly in Oulu, while they grew in Hanko. 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 ton. This top modern plant meets the strict quality and regulatory requirements far out to 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 way of calculating Orion Diagnostica's production volumes has been changed, due to which the comparative ones for 2014 and 2015 differ from those reported in our earlier Sustainability Reports.

The pharmaceutical industry operates in global networks. As a fact, it is not economically feasible to establish and maintain in-house manufacturing technologies for all the numerous different types of products in the offering. In the manner of other pharmaceutical companies, we also allocate our capacity and resources efficiently, having part of our own products sub-contracted by other manufacturers.

Materials use

Ton	2014	2015	2016
Manufacturing materials:			
Organic chemicals	2 822	2 367	2 610
Inorganic chemicals	146	195	193
Inorganic acids and bases	1 218	1 117	1 002
Production solvents	5 321	5 834	5 446
Laboratory solvents	13	11	10
Gases	8	11	28
Biological materials	5	4	5
Direct materials total	9 533	9 538	9 295
Packaging materials:			
Corrugated cardboard	402	369	462
Wooden packaging	522	511	589
Plastic packaging	1 568	1 497	1 500
Paper fibre-based consumer packaging	947	965	1 055
Glass packaging	288	315	289
Aluminium packaging	84	80	79
Other packaging materials	58	57	51
Packaging materials total	3 869	3 793	4 024
Materials use total	13 402	13 331	13 320
Recycled solvents, ton	2 498	2 237	1 815
Share of total materials, %	15%	17%	14%

Materials use by reporting unit 2016

Ton	Orion Group	Orion Corporation	Fermion Oy	Orion Diagnos-tica Oy
Inorganic acids and bases	1 002	83	918	1
Organic chemicals	2 610	1 644	960	6
Inorganic chemicals	193	115	77	1
Production solvents	5 446	280	5 166	0
Other direct materials	44	29	6	8
Direct materials total	9 295	2 151	7 127	16
Consumer packaging/wrapping	102	0	0	102
Corrugated cardboard packaging	1 415	1 365	0	49
Glass packaging	289	286	0	3
Wooden packaging	589	573	0	17
Plastic packaging	1 500	1 300	13	187
Other packaging materials	130	58	40	31
Packaging materials total	4 025	3 582	53	389
Materials total	13 320	5 734	7 180	405

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

The tables above do not include the diagnostic test equipment of Orion Diagnostica, which are manufactured by a sub-contractor. The devices are made from plastics and metals and they contain a lot of electronics.

The heaviest user of direct manufacturing raw materials in our Group is Fermion, which manufactures active pharmaceutical ingredients in chemical processes. Fermion accounted for about 77% of the Group's total consumption of direct materials in 2016. Solvents account for the largest share of the total volume of materials used in Group's production operations. In 2016, they represented 72% of Fermion's materials use and about 59% of the Group's total consumption of direct materials. Fermion's solvent consumption decreased by about 7% to 5,166 tonnes from the previous year's 5,550. The Group's consumption of organic chemicals and inorganic acids and bases decreased by about 10%.

In the manufacturing processes of medicines, the largest material group consists of organic chemicals, the share of which was about 76% of the direct materials used by Orion Corporation and about 27% of the Group's total direct materials. Orion Corporation accounted for about 63% and Fermion for about 37% of the Group's total organic chemicals consumption. Like in the previous years, less than 1% of the total was consumed by Orion Diagnostica.

In the manufacture of medicines, somewhat less solvents were consumed than in the previous year, about 280 tonnes. 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 some tonnes of isopropanol. A considerable proportion of them is used in the manufacturing of hormonal products.

The use of packaging materials increased by 6% from that in 2015. Over 89% of the total packaging materials were used for retail and wholesale packaging of medicines and 10% 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 the products of Orion Corporation and Orion Diagnostica are distributed in wholesale and retail packages.

The materials used in 2016 for the many different types of packaging accounted for approximately 30% of our Group's total material consumption, the same proportion as in 2015. 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. The same amount of plastic materials were used in the packaging of pharmaceutical preparations as in 2015, whereas glass packaging decreased by about 8%. Aluminium is mostly used in blister packages. It is also used in the collars of injection bottles and some cream tubes. A very thin aluminium film layer is contained in the bag protecting the Easyhaler inhalator in its retail package. Part of Orion Diagnostica's products is packed in aluminium folio bags.

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

In the packaging of pharmaceutical products we follow the internationally applied quality requirements concerning packaging of pharmaceuticals determined in the European, US and Japanese pharmacopoeias, among others. Guidelines are also provided by the European Medicines Agency EMA, the US Food and Drug Administration, FDA, and the International Committee of Harmonisation, ICH.

Part of solvents can be recycled in our own production

Regenerated solvents comprise the only relevant re-usable materials in the Orion Group. Solvents are regenerated and re-used by Fermion. Both the Hanko and Oulu plants of Fermion retain part 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 of API processes. In 2016, regenerated solvents accounted for 35% of Fermion's total solvent consumption.

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

Waste

Waste in all forms is an important object in 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 avoiding the production of waste and recycling the produced waste materials. Waste which cannot be re-used as material in our own operations is delivered to an appropriate third party for use in another way whenever possible, such as for energy. The amount of landfill waste is minimised.

Waste is in direct relationship with the efficiency of materials use. Materials efficiency is affected by a complex combination of a variety of factors. In simplified terms it means high output in proportion to the input resources – more with less. In the manufacture of pharmaceuticals, the tolerance of 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 for its production – materials, energy, time and labour – are lost.

Ekokem takes care of our waste

Ekokem Oy, specialist providers of environmental management services, is our partner providing almost all the services we need for managing our waste. With practices established in collaboration with Ekokem we make sure that waste is correctly sorted and handled at the sources of waste. With its efficient logistic

infrastructure, Ekokem collects and transports our waste and treats the fractions in its advanced processes. Via Ekokem's comprehensive recycling and re-use networks, all our re-usable 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.

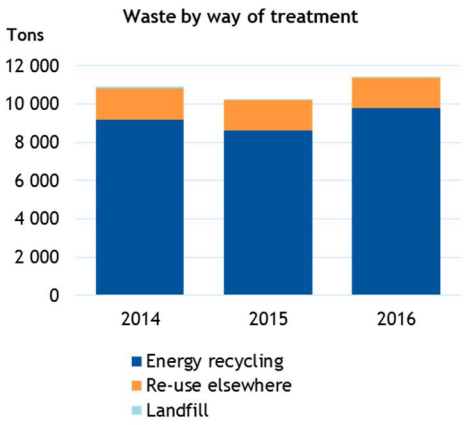
Hazardous waste also results from the manufacture of medicines, because such materials which contain or may contain active ingredients or other chemical substances classified as hazardous shall be treated as hazardous. Typical materials treated as hazardous waste include drug waste, organic and inorganic chemicals and mixtures classified as hazardous or harmful, cytostatics, carcinogenics, batteries, fluorescent tubes, halogenated solvents, lubricating oils, oil-containing fabrics and filters, mercury waste, adhesive and paint containers and ash from fuel oil tanks.

In its pre-treatment processes, Ekokem 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. Ekokem incinerates our hazardous waste in its Riihimäki power plant which is specialised in the destruction of hazardous waste in extremely high temperatures. The generated energy 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.

The manufacturing processes of pharmaceutical products, their active ingredients and diagnostic products differ very much from each other, and accordingly, they also generate waste and emissions differently, both in terms of amounts and types. Our manufacturing sites in Espoo, Turku, Kuopio and Salo mainly generate mainly generate non-hazardous re-usable and energy fractions. A considerable part of all our non-hazardous waste consists of different kinds of packaging materials.

Hazardous and non-hazardous waste

Ton	2014	2015	2016
Hazardous waste	8 352	7 681	8 772
Non-hazardous waste	2 569	2 536	2 628
Total	10 921	10 217	11 400
Share of hazardous of total waste	76%	75%	77%

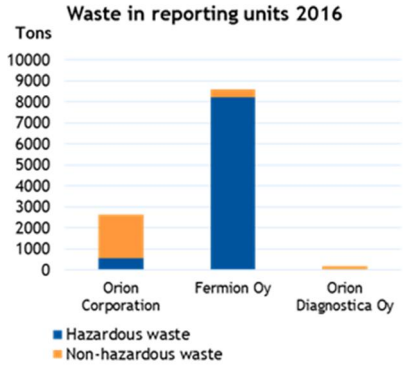


Waste by disposal method

Ton	2014	2015	2016
Re-use as energy	9 164	8 638	9 789
Re-use elsewhere	1 685	1 565	1 606
Landfill waste	71	14	4
Waste total	10 921	10 217	11 400

Waste by reporting unit 2016

Ton	Orion Group	Orion Corpo-ration	Fermion Oy	Orion Diagnos-tica Oy
Hazardous waste	8 772	549	8 199	23
Non-hazardous waste	2 628	2 067	402	158
Waste total	11 400	2 616	8 601	181



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 2016, our operations in Finland generated altogether about 11,400 tonnes waste, which was about 1,182 tonnes or almost 12% more than in 2015. The turn upwards was due to the increased amount of hazardous waste from Fermion. The increase came from higher production volumes of a certain active pharmaceutical ingredient as well as from API contained waters recovered from the processes, which is 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 will be built at our sites in Oulu, Espoo and Turku, in the course of 2017. This recovery and treatment method of API waters increases the amounts of hazardous waste, but on the positive side, considerably lower amounts of chemical substances are carried in our waste waters into municipal effluent treatment plants.

Fermion's direct manufacturing material flows are multiple compared to those in the manufacture of pharmaceutical preparations. Fermion's total waste increased by 17% and its share of the Group's total waste in 2016 was about 75%. Due to factors mentioned above, over 1,200 tonnes, or 14%, more hazardous waste than in 2015 was generated in Hanko, due to which on the Group total increased by over 12%. Fermion's share of the entire Group's hazardous waste was about 93%. Only 5% 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 all waste, with almost the same amount of total waste as in the previous year. The amount of hazardous fractions now decreased by one-third and it mainly consisted of drug waste, halogenated solutions and organic chemicals.

Orion Diagnostica's waste increased by 11% from the previous year, but was mainly non-hazardous. Hazardous waste increased, however, by 77% and its share of Orion Diagnostica's total waste rose to 13% from the previous year's 8%. Of the Group total, the diagnostics business only accounted for about 1.5%.

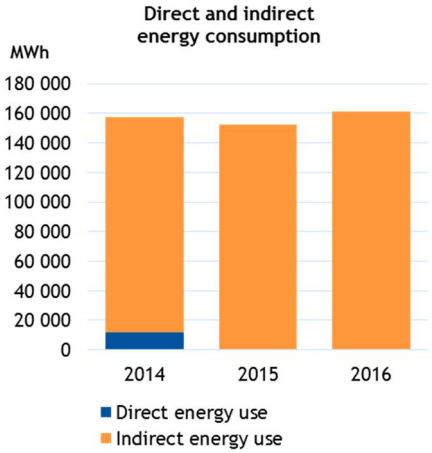
In the above table titled "Waste by disposal method", the proportion of our hazardous waste that can be used for generating energy is included in item "re-use as energy", and the amounts delivered further to third parties are included in item "re-use elsewhere".

Of all the waste we produced in 2016, only about 4 (14) tonnes were deposited at landfill sites.

Energy

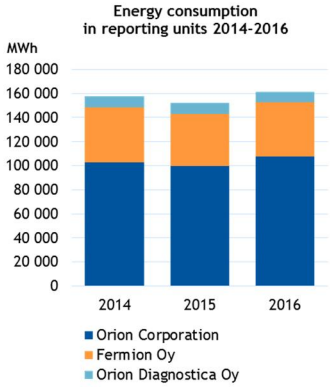
Direct and indirect energy consumption by primary energy source

MWh	2014	2015	2016
Heavy fuel oil	11 500	0	0
Light fuel oil	464	485	451
Direct energy total	11 964	485	451
District heat	50 445	47 744	55 160
Steam	24 755	35 057	36 310
Electricity	70 552	69 030	69 520
Indirect energy total	145 752	151 831	160 990
Energy total	157 716	152 316	161 440



Energy consumption by reporting unit 2014–2016

	MWh 2014	Share 2014	MWh 2015	Share 2015	MWh 2016	Share 2016
Orion Corporation	102 974	65%	99 843	65%	107 507	67%
Fermion Oy	45 531	29%	43 495	29%	45 081	28%
Orion Diagnostica Oy	9 212	6%	8 978	6%	8 852	5%
Total	157 716	100%	152 316	100%	161 440	100%



Energy consumption in the reporting units by type of energy and their proportion of the Group's total energy consumption in 2016

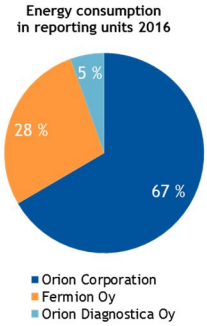
MWh	Orion Corporation	Share 1)	Fermion Oy	Share 1)	Orion Diagn. Oy	Share 1)	Group total	Break-down 2)
Light fuel oil	451	>0%	0	0%	0	0%	451	>0%
Direct energy total	*451*	>0%	*0*	*0%*	*0*	*0%*	*451*	*>0%*
District heat	43 211	40%	7 447	17%	4 503	51%	55 160	34%
Electricity	46 197	43%	19 317	43%	4 006	45%	69 520	42%
Steam	17 649	16%	18 318	41%	343	4%	36 310	22%
Indirect energy total	*107 056*	*100%*	*45 081*	*100%*	*8 852*	*100%*	*160 990*	*100%*
Total	107 507	100%	45 081	100%	8 852	100%	161 440	100%

1) Share of total consumption of energy type
2) Proportion of the Group's total energy consumption

The reported energy consumption includes our operational sites in Finland. The Group has no production plants outside Finland. Our foreign marketing organisations work in rented office premises, and reliable information about their heating energy and electricity consumption cannot be collected.

Our total energy consumption in 2016 increased by about 6%, mostly due to the increased consumption of district heating energy by over 15%. A slight impact also came from steam, the consumption of which grew by just under 4%. The consumption of electricity remained at the comparative years' level.

Orion Corporation, i.e. the pharmaceutical preparations business, accounted for about 67% of our total energy consumption. Total energy consumption increased by close to 8%, district heating being the form of energy that increased most, by almost 20%. Steam consumption grew by about 6%. The pharmaceuticals manufacturing sites accounted for about 78% of the Group's total district heating energy, almost half of the steam and for about 66% of the total electricity. Within Orion Corporation, energy consumption grew most in Espoo, by about 10%.



Fermion accounted for about 28% of the Group's energy consumption. Fermion's energy consumption rose by about 5%, mostly due to the 5% rise in electricity use in Hanko. Energy consumption at the Oulu plant decreased by over 2%. The consumption of steam in Fermion has decreased considerably in the past few years, and it went on decreasing somewhat at both sites. Fermion purchases steam to its Oulu site from the local, low-emission boiler facility of Adven Oy. The Hanko site takes all its steam from the adjacent facility for the treatment of waste gases from the processes (later called "VOC combustion facility"), which is operated by Ekokem Oy.

Orion Diagnostica's energy consumption decreased slightly, mainly due to lower consumption of district heating energy than in the previous year.

All electricity to our Finnish locations is procured from Energia Myynti Suomi Oy. The proportion of different sources of energy used for the generation of the purchased electricity follows the breakdown reported by NordPool for electricity supplied in the Nordic area.

District heating is purchased to our sites from local energy suppliers. Fermion receives most of its heating energy from energy generating facilities located adjacent to its sites. Part of the heating energy in Hanko is taken from the VOC combustion facility.

Energy saved due to conservation and efficiency improvements

Energy saved MWh	2014	2015	2016
Electricity	627	0	0
Heating energy	200	703	2 021
Fuels	0	1 692	0
Total energy saved	827	2 395	2 021

2016 Energy saved MWh	Electricity	Heating energy	Fuels	Total energy saved
Orion Corporation and Orion Diagnostica Oy	0	2 021	0	2 021
Fermion Oy	0	0	0	0
Total energy saved	0	2 021	0	2 021

The Orion Group with its operations in Finland was a member of the Energy Efficiency Programme which was coordinated by the Confederation of Finnish Industries EK and which ended at the end of 2016. The aim of this programme was to cut energy consumption by 9% by 2016 from the 2005 level. As of the start of 2017, we joined the further programme which extends until 2025. In Finland, these Programmes are the primary means for fulfilling the strict requirements based on the EU Energy Efficiency Directive. The principles in the new programme are almost the same as those in the former one, the energy saving target being 7.5% by 2025 from the baseline year 2016. To Orion this means about 12,000 MWh in saved energy. An interim target of 4% has been set to be reached by 2020 in the programme.

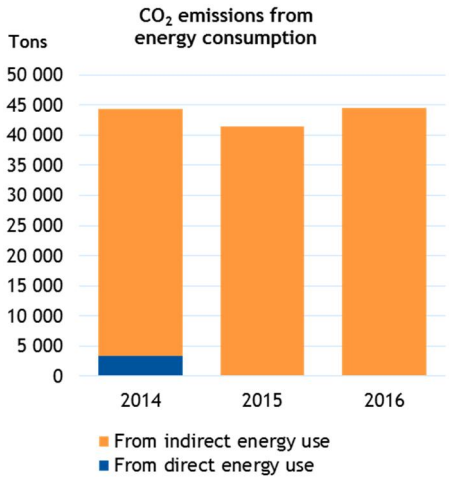
The member companies report annual details on their progress into a database maintained by Motiva Oy. The figures indicating our energy efficiency are sourced from the Motiva database, and they comprise the activities implemented in the review periods. The megawatts saved are estimated outcomes calculated using the guidelines provided by the Finnish Energy Authority.

We keep on looking for relevant slots for improvement and additional savings. We also aim to multiply the advantages of excellent solutions by applying them at other locations where applicable. Our Energy Management System which comprises the Finnish operations of the Orion Group and which is based on the so-called ETJ+ framework, determines the principles, actions, practices and responsibilities with which we aim to take care of not only the obligations of the Energy Efficiency Law, which entered into force in 2015, but, also and above all, our progress towards the goals set in our energy policy. The ETJ+ framework, which is approved by the Finnish Energy Authority, is very close to the practices determined in the ISO 50001 standard.

The emphasis of our energy efficiency investments in 2016 was on our Turku facility, where a project was completed to utilise groundwater in both heating and cooling. With the investment, about 1,650 MWh are estimated to be saved in heating energy. Also in Turku, the renovation of the office building was completed, with about 370 MWh heating energy estimated to be saved via the smart constructions and house-technical solutions applied. The office renovations in Turku and a minor one in Hanko also included solutions saving about 6 MWh electricity. In Espoo, major energy efficiency investments were being prepared with a purpose to start in 2017. At Fermion in Hanko, a completely new API plant is being built, into which the best available technology is applied all over. In this sizeable project, optimised energy consumption is one of the most central focuses of attention in the planning of the energy intensive processes.

CO_2 emissions from energy consumption

Ton CO_2	2014	2015	2016
From direct energy	3 402	128	120
From indirect energy	40 984	41 116	44 336
CO_2 emissions from energy total	44 386	41 224	44 456



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

Ton CO_2	Type of energy	2014	2015	2016
Energia Myynti Suomi Oy	electricity	19 703	19 752	19 311
Ekokem VOC Hanko	steam	4 413	4 046	4 074
Fortum Espoo	district heat	7 712	7 326	9 329
Adven Oy Espoo	steam	148	2 519	2 771
Adven Oy Hanko	steam	14	-	-
Adven Oy Oulu	steam	1 591	1 318	1 505
Kuopion Energia [1)]	district heat	167	186	330
Turku Energia	steam and district heat	6 385	5 362	6 090
Salon Kaukolämpö	district heat	852	607	751
CO_2 emissions of indirect energy total		40 984	41 116	44 336

1) CO_2 emissions from district heating energy of Kuopion Energia for 2014 and 2015 differ from those reported earlier.

The CO_2 emissions have been calculated for direct and indirect energy consumption in 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. Until and including 2014, direct energy also included the steam generated with the boiler facility of our Espoo site. Operating of this boiler plant was outsourced to Adven Oy in late 2014 in connection with the change of its fuel system from heavy fuel oil to natural gas.

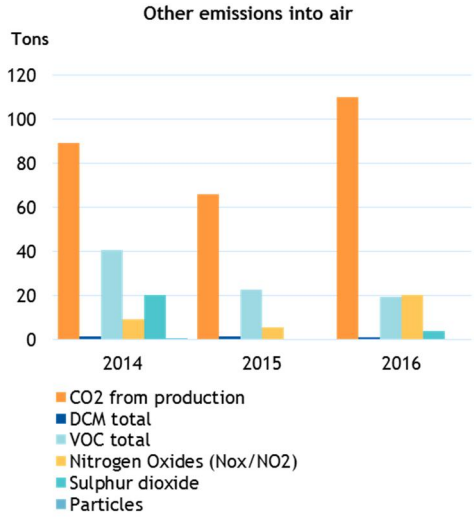
The CO_2 emissions from the Kuopio steam boiler, 120 tonnes, have been calculated based on the emission factors of the fuel. The CO_2 emissions from electricity, purchased steam and district heating energy have been calculated using emission factors provided by our energy suppliers. There are great differences in the coefficients between the energy suppliers and even between their power plants.

All electricity to our Finnish locations is procured from Energia Myynti Suomi Oy. The supply contract includes no requirements concerning the origins of the electricity. Of the electricity consumed in 2016, about 42.9% (44.2% in 2015) was produced with fossil fuels and/or peat, 11.3% (9.4%) using renewable energy, and 45.8% (46.4%) with nuclear energy. The split is based on the so-called residual mix, the most recent one of which was published by the Energy Authority of Finland on 23 June 2016.

As a whole, our CO_2 emissions increased by about 7% from those in 2015, while our energy consumption rose by about 6%. Our electricity consumption came to the previous year's level, but due to the slightly more favourable residual mix than in the previous year, the corresponding CO_2 emissions decreased by about 2%. CO_2 emissions from district heat increased by 20% from the previous year, while the consumption increased by about 16%. CO_2 emissions from steam decreased by about 15% although the consumption rose by about 4%.

Other emissions to air

Ton	2014	2015	2016
CO_2 from production	89	66	110
Methylene chloride (DMC)	1	1	0
VOC total	41	23	14
Nitrogen oxides (NOx/NO_2)	9	6	20
Sulphur dioxide, SO_2	20	0.1	4
Particles	1	0.2	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 95% of the Group's total solvent consumption, has, however, been very successful in getting its emissions under efficient control.

Fermion's VOC emissions were now about 4 tonnes only, against 7 tonnes in the previous year. The progress is very good in view of Fermion's high consumption of solvents. In the summer of 2016, Fermion's old VOC combustion facility in Oulu, which was based on catalytic oxidation, was replaced with a new one operating with a completely different, cryogenic principle, in which the vaporized solvents are re-condensed into liquid form by means of liquid nitrogen. The new facility has shown excellent performance.

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, 11 tonnes (15 tonnes in 2015), came down to about one-third of the level reported for 2015.

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

The nitrogen oxides were emissions from the boiler facility in Espoo which, as of late 2014 uses natural gas, and from the VOC combustion facility of Fermion's Hanko plant. Also the sulphur dioxide came from the VOC facility in Hanko.

Significant environmental impacts of transporting products and business travelling

Practically all services we need for the transportation of materials and goods are provided by specialist service providers meeting our strict quality and reliability requirements. We do not have reliable methods for assessing and monitoring the environmental impacts of the transportation of our goods.

Travelling at work belongs to the jobs of many Orion employees as an elementary feature. We have centralised the travel arrangements of all our Finnish units to CWT Kaleva Travel, which delivers the calculatory carbon dioxide emissions from the business flights of the Orion Group's Finnish employees. The business flights arranged by other travel agencies for the employees of our foreign locations cannot be reported.

CO_2 emissions from business flights

1 000 miles	2014	2015	2016
Flights in Finland	583	644	644
International flights	7 425	7 854	9 322
Flights total	8 008	8 498	9 967

CO_2 emissions, ton	2014	2015	2016
Flights in Finland	141	155	156
International flights	1 362	1 445	1 702
CO_2 emissions from business flights total	1 503	1 601	1 858

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 2016, Orion's employees flew about 17% more miles in business than in 2015, and the increase came from international flights. The total CO_2 emissions from all the flown miles grew by 16%. Travelling in Finland using domestic flight connections, as well as the corresponding CO_2 emissions remained at the previous year's level.

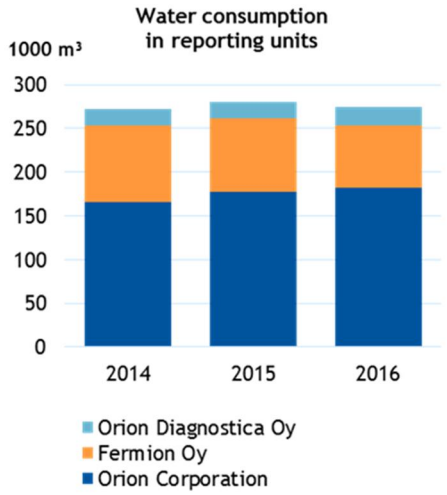
CO_2 emissions of new company cars came to an average of 122 g/km

About 180 employees in the Orion Group's service in Finland had a company car as an employment benefit in 2016. 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 is being reached ahead of that, the average CO_2 emissions of the new cars taken into use in 2016 being 122 g/km, against 126 g/km in 2015. The average exchange interval being three years, the average CO_2 emissions of the entire fleet are decreasing year after year.

Water and effluents

Water withdrawal and consumption by reporting unit

1 000 m³	2014	2015	2016
Orion Corporation	166	178	183
Fermion Oy	88	84	71
Orion Diagnostica Oy	19	18	21
Total water from municipal supply	272	280	275



All water consumed by Orion is taken from local municipal water supply systems. There are significant differences in the purposes and volumes of water consumption between our units and locations due to the differing characteristics of their facilities and operations. Total consumption of water in 2016 decreased by about 2% from that of the previous year.

In Orion Corporation, water consumption increased by about 3%. Water consumption at the pharmaceutical manufacturing operations in Espoo came to about 103,000 m^3, up by 7% from the previous year. Water consumption in Turku grew by about 2%, whereas it decreased in Kuopio and Salo, where the annual amounts are considerably lower than in Espoo and Turku. The share of Orion Corporation of the Group's total water consumption was close to 67%.

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 completion of all the batches of the product so that no residues of any substances used in the product remain. The more small batches of different medicines are produced, the more washing must be done. Considerable amounts of water are also used by gas scrubbers, the task of which is to capture evaporated solvents, mainly ethanol, and to decrease emissions of volatile organic compounds (VOC) into 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 almost 16% lower consumption than in the previous year. Water consumption decreased relatively most in Hanko, about 17%, the site representing about 62% of Fermion's total water use. Consequently, Fermion's share of the Orion Group total also continued to decrease, now being 26%. Fermion's annual water consumption varies depending on which active ingredients are manufactured in the course of the year as well as on the type and phase of the substances' manufacturing processes.

In Orion Diagnostica, water consumption grew by 15%. A lot of water is needed in the manufacturing phases 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 either directly or after neutralisation to municipal water treatment plants, 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. Fermion's process waste waters contain high levels of nitrogen, but most of the nitrogenous compounds evaporate into air as nitrogen during the pre-treatment phase.

The burdening impact of our effluents is monitored in the ways specified in the site-specific environmental permits. The total annual loads are averages calculated of the results from samples taken a few times during the year. Thus, 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 pharmaceuticals manufacturing sites originates from the ethanol escaping via gas scrubbers into the exiting waters.

The Group total of BOD in 2016 was about 206 tonnes, against 216 tonnes in 2015. COD came to about 532 tonnes (418), up by 27%. Fermion went on showing further decreased BOD and COD, and its share of the Group's total impact decreased by almost 10 percentage units to about 40%. The burden of effluents has been eased since the recovery of API waters was started in Hanko. The share of Orion Corporation grew correspondingly, and this was mainly due to the almost doubled chemical oxygen demand of the effluents from the pharmaceutical manufacturing operations in Turku. In Espoo, both COD and BOD decreased. In fact, they have declined considerably since the gas scrubbers were replaced with a VOC combustion facility which incinerates a major share of the ethanol gases. In Turku, the VOC gases from ethanol are uptaken with gas scrubbers.

Actions started to improve the quality of our waste waters

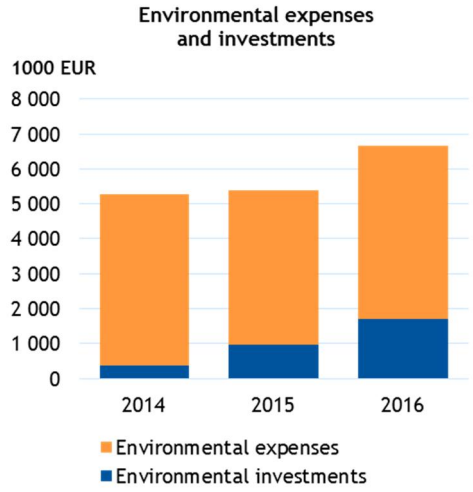
At all our production sites, active pharmaceutical ingredients and chemicals used as intermediates and detergents escape into the waste waters from the washing and cleaning of the manufacturing processes and equipment. Our waste waters meet the requirements set in our local environmental permits, but we aim to achieve a quality which shows a considerably lighter burdening impact on effluent treatment plants. Based on the mappings done in 2015, feasible technical solutions were planned in 2016 for the prevention of active pharmaceutical ingredients from being carried into effluent treatment plants along with our waste waters. We have evaluated the API burden of our sites and also updated our internal emission criteria.

The API content of waste waters conducted to Hangon Puhdistamo was cut by the means already implemented in Hanko. In the course of 2017, work goes on to build collection systems at our manufacturing sites for the retainment of waters containing APIs and chemicals from our production and laboratories, to be pre-treated and incinerated by Ekokem. On the upside, most of the harmful substances are eliminated with these systems from the waste waters led from our sites to municipal treatment plants. On the down side, however, the volume of hazardous waste will increase.

Environmental expenditures and investments

Total environmental protection expenses and investments

EUR 1 000	2014	2015	2016
Environmental investments	358	980	1 710
Environmental protection expenses	4 920	4 384	4 957
Environmental expenditures total	5 278	5 364	6 667



Total environmental protection expenditures and investments by reported organisational unit, in 2016

EUR 1 000	Orion Group	Orion Corpo-ration	Fermion Oy	Orion Diagnos-tica Oy
Environmental investments	1 710	366	1 344	0
Environmental protection expenses	4 957	1 620	3 228	109
Environmental expenditures total	6 667	1 987	4 572	109

Our total environmental protection–related expenditures increased by about 16% from those in 2015.

Environmental investments consist of projects for improving energy efficiency, efficient and safe use of materials, consumption of water, and management of effluents, waste and emissions. Our environmental investments in 2016 came to about EUR 1.7 million (1.0 million in 2015). The most significant project reducing our environmental load was the replacement of the unsatisfactorily operating VOC combustion facility of Fermion's Oulu site with a new one which operates with a cryogenic principle. Another major project was the energy efficiency investment completed in Turku to utilise ground water in both heating and cooling.

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 environmental management in our operations in Finland. The greatest single cost item in 2016 was, again, waste, about EUR 3.9 (3.9) million. The expenses came to the previous year's level, although the total waste grew by 12%. 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. Fermion's waste

expenses were close to the previous year's level, although its total waste increased by about 17%. The waste bill covering the operations of Orion Corporation came down by 15% from the previous year, although the total waste volume came to the previous year's level. The lower costs were mainly due to the fact that about 35% less hazardous waste was generated than in the previous year.

Waste water treatment also makes a considerable share of our annual environmental expenditures. In 2016, our effluent treatment costs were about EUR 0.7 million.

Labour Practices and Decent Work

As a working community of highly educated professionals it is important for us to ensure that employees are committed to Orion as their employer, and that they are satisfied with their work assignments. We want our employees to feel that they are motivated to develop themselves professionally and that they are doing inspiring and meaningful work that corresponds to their skills in a well-managed and safe working community 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. The personnel represents 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 chances to work in an international environment and varied and challenging career opportunities for experts in different disciplines. We carry responsibility for our employees and motivate them to continually develop their competence and well-being at work. 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 to implement the Group's strategy. We want every Orion employee to experience that their work is meaningful for the best of our customers.

To our personnel our mission "Building well-being" means purposeful and responsible work in which we succeed by working together and which we are also proud of together. Our personnel is building Orion's future as a team, in the spirit of the Group values and 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 most elementary principles in human resources are recorded in the Human Resources Policy, which leans on the Group values. The ethical principles concerning our working community are recorded in the Code of Conduct of the Orion Group. The Code is applicable to our employees and businesses, requiring every individual employee's commitment to comply with it. All employees are also obliged 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 key ones: Leader as a Coach, Skills of Working Together and Personal Leadership, Customer-Focused Leadership, and Leadership in Collaborative Partnership.

In collaboration with the personnel we build a value-based corporate culture of succeeding together, which is characterised by open and constructive interaction and continual renewal. Interaction between the

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

Management responsibilities in human resources affairs and services

Human resources affairs and services are manged 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

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 all, 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 mainframe for establishing equal opportunities plans in all countries where we have own 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 recruitments, payroll systems, in adapting people's working and private lives, and in educational opportunities. By equality we also mean equality of 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 when salaries are determined 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 on.

Our Code of Conduct also emphasises respectful and courteous behaviour at the workplace. The Code provides that every Orion employee is entitled to good, courteous and respectful treatment by his or her supervisors, subordinates and fellow employees.

Possible issues of misconduct should be brought to the attention of the supervisor. If this is not possible, alternative instances are the supervisor's supervisor, the Human Resources department or Corporate Internal Audit. If necessary, the case can be reported directly by e-mail to the Internal Audit.

All our Finnish employees are in the scope of 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 blue collar and white collar employees in the Group's Finnish locations, a total of about 60% of the workforce in 2015.

To our exempts, a so-called common pay record concerning exempts in the chemical industry is applied. 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.

The employment contract of each Orion employee specifies the notice period, which is at least the period specified in national employment legislation and applicable collective agreements.

In Finland, when the employer terminates the employment contract, the notice periods are the following for all personnel groups:

Term of employment	Notice period
Max. 1 year	14 days
Over 1 year and max. 4 years	1 month
Over 4 years and max. 8 years	2 months
Over 8 years and max. 12 years	4 months
Over 12 years	6 months

Ensuring human resources. Recruitment: We aim to recruit people with the best skills

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 on a broad scale, 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 preparedness for a variety of jobs in our supply chain of pharmaceuticals. Independently of the 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 workplace 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, to further develop and train their skills, and to care for their well-being at work.

By the means of resource planning we ensure that the organisation has the required people and skills for the tasks 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 recruitments we aim to find the best and motivated people, observing the current and future competence needs. Successful recruitments support us in the achievement of our strategic business goals. Recruitment occasions also offer us opportunities to renew the competence of our organisation. To make successful recruitments we continuously develop the professional skills of our recruitment organisation and the quality of the recruitment process, applying up-to-date methods such as video interviews and web-based application procedures.

When seeking employees into new or open positions, existing employees with suitable skills are considered first. As a rule, the job is first announced applicable for our own employees during at least one week in the Group's intranet. If no appropriate candidates are found from inside the Group, the job is announced applicable 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 get acquainted with our industry and our company. In return, they offer us 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.

Our *Phase I* summer job programme offers practical orientation possibilities to tens of students approaching the completion of their studies in the fields of natural, pharmaceutical, technical or economical sciences.

Introduction into work

Supervisors are responsible for organising sufficient induction for new employees, those starting in new roles and those returning from extended absences. Some organisations have particular persons 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 information source 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.

Ensurance of competence. Talent management: We develop occupational and management skills

Our aim is that the Group's employees 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 personnel, which is why we continually invest in the quality and skills of our supervisors. Certainly we also anticipate every individual employee to take responsibility of their own professional development.

Corporate level competence requirements derived from the strategy are determined annually in the People Day meetings of the 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. In these occasions, also the level of know-how is 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 and business and financial skills.

Means of developing supervisory skills include a Group-level training programme 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 independent of their geographic location. This is how the Orion management culture, policies and principles are equally implemented in all locations throughout the Group.

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

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

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

Database helps us manage our employees' competence and training history

The employees' professional skills are most elementary in securing the quality and safety of the products as well as the regulatory compliance of the manufacturing process. The regulatory requirements provide 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 a precise documentation.

Most of our training effort is on 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.

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We also encourage our employees to develop themselves utilising the versatile 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 plentiful offering of internal training, our employees are spurred to voluntary studying alongside work. Sponsorship from Orion can be received for such studies when, e.g., the education supports the employee in his/her current work or changing requirements of the duties. The support grantable by Orion ranges from 30 to 80 percent of the total cost of the training, the maximum being EUR 1,000. The remuneration can be used for learning materials or course fees, for example. With certain conditions, an employee can receive sponsorship from Orion for longer educational training, such as MBA or academic post-graduate studies.

Persons employed in Finland are entitled to take study leave from work. Study leave can involve attending to lessons, practical training included in course plans, preparing for or tutored full-time self-studying for the completion of a degree or a thesis, and participation in an examination. Vocational education into certain occupations can also be arranged through apprenticeship.

As tools of competence development we apply *360 and 180-degree evaluations* globally in Orion. In the 360-degree evaluation, supervisors receive personal feedback from their subordinates, colleagues and their own supervisor. Also representatives of our external partners can be asked to give feedback with the purpose to support 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 query.

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 persons with 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 of the operational units and functions shall annually discuss the wishes in the respective organisations and, furthermore, identify persons capable to support the company's success and renewal. In the annually held People Day event, the senior management shall assess Orion's renewability and, at a general level discuss the job rotation and career opportunities offered by the company.

Performance is reviewed and targets are set in Succeeding Together! Discussions

Performance reviews are conducted as a standard in the Orion Group, and the entire personnel belongs to their scope. The supervisors shall have personal performance reviews with their subordinates at least once a year under the name "Succeeding Together! Discussion". In certain cases the Discussion can take place in the form of a group discussion. As a main rule, the blue collars and exempts have the discussion in private with their supervisor.

In the Succeeding Together! Discussions we emphasise equality and good interaction. In the discussions, the goals are agreed and checked, the achievements in the past period as well as the aspects needing improvement are dealt with, and the skills necessary for successful performance are considered. Concrete actions to promote skills and/or well-being at work are also agreed. In the evaluation of the past period we also discuss how the Group's values and management principles have been fulfilled at work and in the working community. In addition, we build the culture of continual feedback, which we regard as an important tool of operational development and a learning organisation.

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

We reward for good performance

We encourage our employees to good results and long-term commitment using various means of rewarding. 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 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 duties and individual 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

It is extremely important for Orion that each employee can maintain their capability to work until retirement age, without exposure to health risks or hazards. We want to provide our employees with a healthy and safe working environment and a smoothly functioning working community characterised by a constructive working atmosphere, good management and motivating colleagues.

Two indicators of occupational well-being are included in the metrics monitoring the fulfilment of our Group-level strategic objectives. One of them is LTI 1 (lost time incident rate 1), which measures workplace injury rate as the proportion of work hours lost due to injuries having led to an absence of 1 or more days of the total regular theoretical working hours. Our target for 2015 was set at "less than 7". Of course, a year with no incidents at all is worth aiming at. The other metric indicates our ability to promote our employees' working ability, measuring it as the proportion of the total hours of absenteeism due to illness of the total regular theoretical working hours.

Accordingly, our occupational safety and well-being activities focus on the prevention of hazardous situations and occupational diseases and injuries. In accordance with our EHS Policy, our occupational health and safety activities are managed with the guiding principle of continual improvement.

The practices applied in the management and development of occupational health and safety are determined in the Group's EHS Management System which is based on ISO standards and which, in addition to occupational health and safety also comprises the environmental affairs. Practices and organisational responsibilities applicable Group-wide are described in the EHS Handbook confirmed by the Group management. In the EHS 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.

We aim to continually improve our performance with management-confirmed programmes, monitoring their progress as part of internal inspections, among others. Important are also the working unit-specific action plans describing the unit's operational environment and the occupational health and safety aspects and responsibilities, and identifying the most important items to be developed. Systematic assessments of the workplace, processes, working conditions and methods and associated risks are carried out by the occupational health and work safety organisations to continuously develop working conditions and safety. In the annual management reviews, the Group management assesses the fulfilment of the EHS System as a whole and our progress towards the targets.

In accordance with the target of our strategic KPI, 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. In major locations, we maintain occupational health centres of our own. In smaller locations, the health services are purchased from external service providers.

Health check-ups of the employees are performed by age group to evaluate occupational fitness and the need of measures to promote it.

The operational models for *Early support, Treatment practices for the occupational healthcare for musculo-skeletal and mental disorders* as well as for management of ageing employees are examples of the ways via which we promote well-being at work and to enable better management of the risks of disability. *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 for maintaining ability to work and function and to manage 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 of personnel 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 in Finland where the 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 addition to the strategic KPIs, we monitor our progress towards our health and well-being objectives by 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

Orion is a member in the *Good morning – Good tomorrow* project, the purpose of which is to enhance competence, prolong working careers, decrease absences due to illness and increase productivity at all Finnish chemical industry workplaces. Our participation in this project has generated the following determination of what we mean by employee well-being in Orion:

- Well-being at Orion means that the employees can work in duties corresponding to their skills, 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 created by doing things together
- A well-being employee feels complacency, is active, has endurance / is energetic both at work and at home, and is able to face changes and misfortune.

Our ways of building well-being					
Leadership and management	Possibilities to influence 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 take new opportunities in our daily work. We all take responsibility of our duties and the functionality of our working community.	We can trust each other and appreciate everyone's work. Confidence is built upon promises 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 speak about problems, and we solve them constructively.	Building well-being!
Personal health and well-being					

Management responsibilities in EHS

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. EHS activities in Fermion are coordinated by a safety manager who reports to the President of Fermion. Core tasks of the EHS organisation in the promotion of occupational health and safety include, among other things, participation in the preparation of continual improvement programmes, external and internal EHS inspections, guidelines and trainings, follow-up of safety observations and consequent corrective actions, risk assessments, investigations of injury events, and EHS reporting.

Occupational Health Services belong 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 System.

Each supervisor shall take care of the safety of their subordinates as well as occupational safety guidelines and necessary safety training. Supervisors shall also see to it that shortcomings in safety at the workplace are fixed.

As provided by the Finnish legislation, our Finnish units have so-called occupational health and safety committees in which all blue collars and white collars, i.e. approximately 60% of the total Finnish workforce, are represented.

EHS 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, accessible to all employees in the Group.

We emphasise the importance of each employee's awareness of those health and safety risks that are involved in their duties, as well as of how to avoid them. All employees are required to follow the safety instructions and act without constituting risk to their own and/or other employees' safety, and without causing damage to the company's property. We also anticipate employees to report on their observations of potential hazards to help us prevent them. To ensure the correct kind of action, we arrange regular training into good safety and security practices to avoid and prevent hazardous events not only in personal tasks but also anywhere else at the workplace.

Employee-employer relations and personnel empowerment

Orion considers employee opinions in the decision-making concerning human resources affairs and implementing human resources related decisions. Employee representatives principally take part in the work for preparing new practices or changes to existing ones. In addition to mandatory employer-employee forums, our supervisors have regular informal meetings with employees and employee representatives. A good example of successful collaboration is to make Orion as a totally non-smoking work place by 2018, by initiative of the employee representatives.

Employee representation in the Group management is principally agreed with employees. There is one employee representative, nominated by the personnel groups, on Orion's Executive Management Board. The representative is, however, not a member of the Executive Management Board. There are employee representatives in the management teams of operational units and functions, too.

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

Employee surveys help us identify needs of further development

By the help of regular employee surveys we identify our strengths and development needs in view of the implementation of our strategy. The employee survey is conducted Group-wide in all those countries where we have personnel. The survey is an important tool for the development of working communities and in the collaboration between the employees and the management. Orion's executive management is strongly committed not only to conducting the survey but also to implementing improvement actions agreed on the basis of the results. The high response rates show that the survey is regarded important by the employees, too. The next employee survey will be conducted in spring 2017.

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

Complementary references in the Sustainability section of our corporate website:

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

Performance indicators concerning Labour

Absenteeism

Causes of absenteeism and work time lost due to absenteeism

Hours	2014	2015	2016
Paid sick leave	150 714	132 434	139 418
Unpaid absence from work due to illness	47 411	35 163	28 317
Paid absence from work due to child's illness	14 747	13 871	17 228
Unpaid absence from work due to child's illness	219	145	91
Total absence due to illness	213 091	181 613	185 054
Absence of 3 or more days due to injury at workplace	2 480	1 688	1 674
Absence of less than 3 days due to injury at workplace	144	224	56
Absence due to commuting injuries	1 680	1 696	1 408
Total absence due to injuries	4 304	3 608	3 138
Total work time lost due to absences	217 395	185 221	188 192
Absentee rate, all absences	4.1%	3.5%	3.5%
Absentee rate due to illness	3.7%	3.2%	3.1%
Absentee rate due to work place injuries	0.05%	0.03%	0.03%
Actual working hours	4 543 624	4 474 220	4 517 674
Theoretical working hours	5 365 999	5 262 192	5 368 248

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

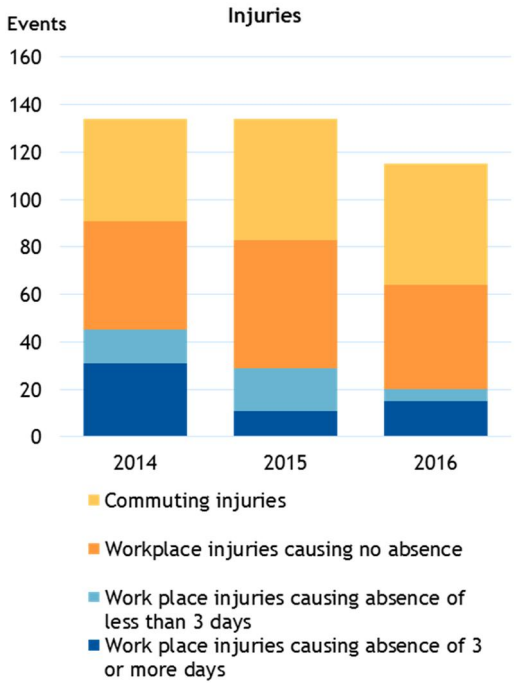
Absentee rate due to illness is presented as the proportion of absence hours due to illness of the total regular theoretical working hours.

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

Absentee rate due to injuries is presented as the proportion of work 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	2014	2015	2016
Work place injuries causing absence of 3 or more days	31	11	15
Work place injuries causing absence of less than 3 days	14	18	5
Work place injuries causing absence, total	45	29	20
Work place injuries causing no absence	46	54	44
Work place injuries total	91	83	64
Commuting injuries	43	51	51
Fatalities	0	0	0
All injury events total	134	134	115
Injury rate LTI 3	6.8%	2.5%	3.3%
Injury rate LTI 1	9.9%	6.5%	4.4%



Work place injuries include injuries caused by accidents that occur at the work place or its area, or at an external working area outside the primary work place.

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

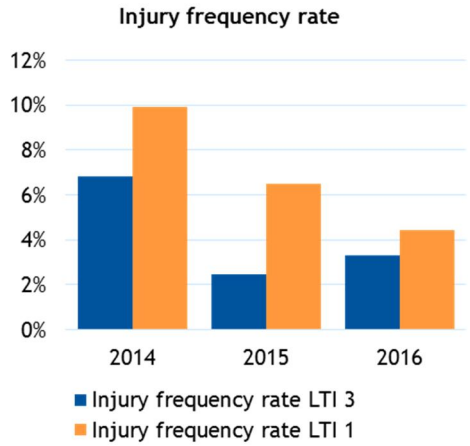
About 2% more working hours were lost due to absences in 2016 than in 2015, the slight increase being due to absences because of illness. Absentee rate 3.5% was the same as in 2016. About 98% of the total absence hours were lost due to illness of either an employee or his/her child. Sickness rate declined further slightly from the previous year to 3.1. Working time lost because of paid absence due to illness increased by about 5%.

The work done to prevent accidents and injuries at our work places is leading to positive results. Only 3,138 (3,608 in 2015) working hours were lost because of injuries, which was 13% less than in 2015. Incidents at the work place accounted for 1,730 (1,912) hours, with which we came down to the lowest record in our 10-year long reporting history. Almost as much time was lost due to commuting injuries as due to events at work.

The number of work place incidents decreased by 23% from the previous year. Ones that led to absence now occurred only 20 (29), but the number of occurrences that required taking three or more days off work increased to 15 from the previous year's 11. Incidents which led to an absence of less than three days now totalled only 5, and also the number of minor injuries decreased. Lost time incident rate LTI 3 rose to 3.3

from the previous year's 2.5. LTI 1, into which all absences of at least one day due to a work place injury incident are counted and which is included in the metrics indicating the fulfilment of our strategic objectives, came to 4.4. Thus, we achieved our "less than 5" objective set for 2016. Although our LTI target is set above zero, we do not mean that we accept injuries to occur. To us, a work place 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, climbing, handling chemicals and opening packages with knives. In 2016, the longest absence due to a work place injury was about 2 months. Most events were mild. Many events could have been avoided by acting carefully and following instructions, and by planning how to perform the task before doing it. We take rapid action to amend spots requiring improvements and rearrangements. We also revisit the applicable guidelines and re-train people to perform the task correctly.



Our employees reported altogether 51 commuting injuries, i.e. ones that occurred on their way between home and the work place. The figure was the same as in 2015, but we now lost less working hours than in the previous year, altogether 1,408 hours. Typical events to walkers were slipping and sprains, and fallings with a bike, a dozen events of each against the previous year's twenty. Altogether 12 accidents with cars, motorbikes and mopeds were reported, but fortunately, serious consequences were avoided. The number of commuting injury events that led to absence came to 14, two of which required 48 days off work.

Orion Corporation, which comprises our pharmaceutical operations in Espoo, Turku, Kuopio and Salo, recorded altogether 83 (105) injury events, of which 43 (61) occurred at the work place. Altogether 9 (9) injury events at the work place led to an absence of three or more days, and 5 (16) ones led to a shorter absence. Our efforts towards lower figures and avoidance of serious events have already generated favourable results, but there still remains road to go to reach a supply chain with no injuries.

Commuting injury events totalled 40 (44). The events that required the longest absences occurred in pharmaceutical operations. Fortunately, most of the events were mild. Only 13 of all commuting events led to absence, and altogether 1,400 (1,688) working hours were lost.

Fermion continued to actively promote occupational safety and safe working methods, and the outcomes are clearly and consistently reflected in its performance. Altogether only 3 (2) injury events leading to absence occurred at its sites in Hanko, Oulu and Espoo. Minor events were recorded 14 (16).

Only two (1) commuting events occurred to Fermion's employees, and fortunately, both with minor injury only.

> Fermion at "World Top" in occupational safety
>
> In 2016, Fermion was rated into "Class I – World Top", the highest level of occupational health in the ranking of the Zero Accident Forum, which is a network coordinated by the Finnish Institution of Occupational Health. The participating companies were evaluated based on their health and safety performance in 2015.

Orion Diagnostica had 12 (10) injury events, of which 4 (4) occurred at the work place. Three events led to absences of three or more days, against two events in 2015. The severest one was the afore-mentioned occurrence due to which a person had to stay two months off work.

The number of commuting injuries was 8 (6), and none of them caused absence.

Our system for recording safety observations collected as many as 2,100 (1,900) observations of different kinds of dangerous spots at our sites, reported for information to the employer and the employees and for 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 are easily recordable into the database via the Group's intranet and accessible to persons responsible for taking corrective action. By the help of the system, employees can also follow the progress of the actions.

Training of skills

The offering of trainings comprises hundreds of educational events and courses on most various topics related to job-specific tasks as well as practices at the work place. Our annual financial input into the training and development of the skills of our employees varies somewhat. In 2016, we used about EUR 1.8 million into training activity. The corresponding expenditure in 2015 was about EUR 2 million and in 2014 about EUR 1.7 million.

Most of the training offering for blue collars, i.e., those working in production, comprises development of task-oriented professional skills and adoption of GMP. Among the trainings for supervisors, a new 4-day training programme was arranged for 65 supervisors from various production departments.

Training for persons working in specialist tasks included the *As a Specialist in Orion* course, and a course in effective communication and negotiation.

A two-day congress was arranged for the entire R&D organisation, with several optional seminars on actual themes.

Management training included the *Corporate Management Day* meant for the Group's senior management, the main topics dealing with lean management and building future business.

Adoption of lean operational methods in practice was one of the most central themes in the enhancement of our corporate culture. About 240 supervisors and experts participated in a training event organised by the cross-organisational Lean Network team. Continuous improvement was one of the themes in numerous team and department meetings as well as in trainings for top management.

We also continued to build the culture of giving feedback all over the Orion Group, using a versatile menu of tools and means for the purpose. Training was given on how to give constructive and positive feedback, and the theme was also a topic in the trainings for supervisors and experts as well as in introductions for new employees. People were invited to take part in discussions and motivated to give feedback. Supporting tools were offered, such as *empowered personnel*, *a quarter for corporate values*, and various visual methods applicable in the Succeeding Together Discussions.

In 2016, we revamped our international leadership training programme in collaboration with our new partner, the St. Gallen University of Switzerland. The purpose of the year 2017 programme is to enhance the participants' leadership capabilities, strategic thinking and collaboration skills and to provide tools for the development of Orion's businesses in the constantly changing world. The crystallised idea of the programme is "leading with both hands": with one hand exploiting our today's business and delivering results today, the other engaging in ensuring the future success.

Preventive health and safety training

In 2016, the Group organised a total of about 300 (380 in 2015) training courses focusing on environment, health and safety, with altogether 4,600 (5,170) attendants.

Training to manage exceptional events at our operational sites belongs to the important means of ensuring our safety and security. Towards the end of 2016, one such training was arranged at Orion Diagnostica in Espoo. In this exercise we tested, among other things, whether the personnel can act correctly when a fire alarm is given, i.e., how well they follow the instruction to instantly exit from the building and get together at the meeting place. We also tested how successfully all the premises can be checked, the first extinguishing actions can be performed and the production and other operations can be stopped, and how fluently communication in the situation is managed. Every exercise gives us a lesson or two to learn. In this one we identified needs of improvement especially in the procedure for making sure that not a single person has remained inside in any corner of the building.

Personnel structure of the Orion Group

Statistics of the employee structure 2014–2016 are presented in the Tables section of this Report. In the review of the structural features of our personnel, 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. Details of the personnel structures and statistics for 2014–2016 are provided in the Tables section in the end of this Report. The headcounts '*by reporting organisational unit'* are grouped according to the same operational structure as is used in this Sustainability Report. This grouping differs from that used in Orion's financial reporting, in which the numbers of employees are presented per business segment and division. 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 2016, our Group employed about 3,469 persons, about 675 of them working outside Finland in the Group's offices, most of which are located in Europe. The total number of employees increased by 68 persons from 2015. The combined number of employees in our foreign locations was five persons lower than at the end of 2015.

Approximately 24% of Orion's total workforce in 2016 was blue collars. White collars accounted for about 37% of the total workforce. About 39% were exempts, i.e. senior clerical employees.

About 10% of personnel were in temporary employment. The total number of part-time employees was 288, of which 156 persons were under a temporary employment contract. Our Finnish locations offered summer jobs to 131 students.

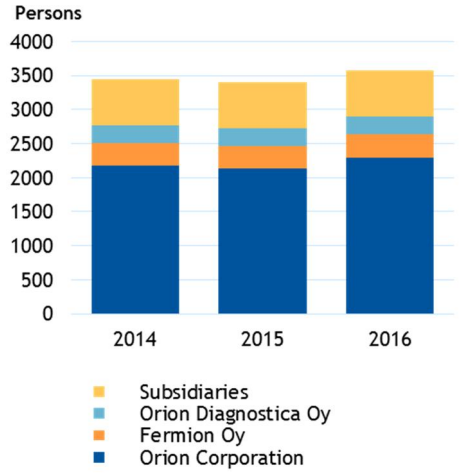
Employment durations are typically relatively long at Orion. The average duration of employment has been somewhat over 10 years for several years, and in 2016 it was 11 years.

A slight change took place in the age structure of the Orion Group personnel, as the share of persons under 30 years of age decreased by about 2 percentage points to 12% whereas the share of those having turned 50 years increased to 30% from 25%. In 2016, approximately 71% of all employees were under 50 years of age. About 6% of the employees had turned 60.

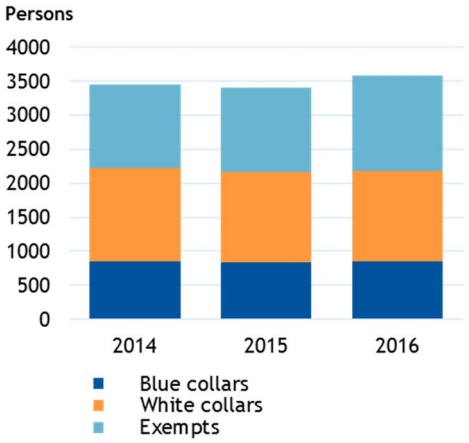
Employee turnover is considerably higher among the blue collars than among white collars and exempts. As of 2016, the turnover is reported as an average turnover calculated in the way recommended by the Finnish Accounting Board. The rates of 2014 and 2015 are adjusted comparatively.

In 2012–2016, Orion employees have retired in an age about 2.5 years higher than the average in Finland. In 2016, the average retirement age in our company was 64 years, while the Finnish average was 61.1 years. In the Orion Group, the average retirement age to old-age pension was 64.4. Exempts retired to old-age pension at the average age of 65.3 years, the corresponding retirement age of while blue collars being 63.8 and that of white collars 63.9 years.

Personnel by reporting unit



Personnel by employee category



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%. A clear move has taken place among the exempts and the white collars: 70% (63%) of the exempts were women and 30% (37%) men. In the group of white collars the share of women decreased by 7 percentage points to 63% (70%), while that of men grew correspondingly to 37% from the previous year's 30%.

Orion Diagnostica has the highest proportion of women, with 69% of employees being women. Fermion's gender structure is almost contrary to that of Orion Diagnostica: 72% of the total workforce is men. The production processes in particular are dominantly cared for by 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 persons in supervisory positions shows differences between the reporting units. In Orion Diagnostica, women make the majority of supervisory positions, while supervisors are mostly men in Fermion. The proportional difference is clearly narrower in Orion Corporation and in the foreign subsidiaries.

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 personnel, customers and suppliers of goods and services. To this end, we develop our operations systematically and utilise our resources efficiently. We are proactive towards 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 necessary to enable us to attend to also 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

Management of our economic responsibility follows the general guidelines established in our Corporate Governance Manual. They consist of clear definitions of responsibility, setting and monitoring of objectives and appropriately organised internal control. 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 of the financial development of the Company and supervision of 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, accessible on the Corporate Governance pages in section "Orion Group" 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 growth of the pharmaceuticals market. Achievement of this objective requires continuous investment in 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 that in the next few years will be at least EUR 1.30 per share, and increasing the dividend in the long term.

According to our dividend policy, we take into account the distributable funds and 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.

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

In our procurements we prefer goods and service suppliers who share our responsibility values. 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 continuous ability from us to 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 clearly largest shareholder group consists of private Finnish households. At the end of 2016, about 43% of the total shares and 91% of the total votes were held by Finnish shareholders. 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 is accessible under the “Investors” section of our corporate website containing both past and up-coming 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 main 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 the collaboration is shared on our corporate website.

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 those countries where we have an own marketing organisation for pharmaceuticals.

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 2014–2016 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. In addition in 2016, defined benefit pension plans had been taken out for two persons belonging to the Group's executive management.

Our pension obligations are listed under Note 12 "Pension assets and pension liabilities" of the Financial Statements 2016. At the end of 2016, our pension obligations totalled EUR 323.2 (309.2) million. We had a pension asset of EUR 22.8 (asset of 24.4) million from the Pension Fund and a liability of EUR 3.2 (liability of 3.1) million to other units.

Significant financial assistance received from government

EUR million	2014	2015	2016
Tekes grants	1.9	1.8	1.2

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 Annual reviews of Tekes, 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 2016 totalled EUR 1,247,327, of which pharmaceutical R&D projects of Orion Corporation accounted for EUR 1,010,193. Orion Diagnostica Oy received EUR 232,085 and Fermion Oy EUR 5,049.

Orion Corporation received Tekes funding for research of treatment approaches to certain cancers and central nervous system disorders. In 2016, we received Tekes funding for projects in which we studied *resistance mechanisms of cancer treatments* and *the role of a certain neurotransmitter system in the treatment of neurodegenerative disorders*. Both projects ended in 2016. The remaining parts of the support granted for these projects will be paid in 2017.

In 2016, a new research project was started to further study *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. Tekes has granted a total funding of EUR 1.8 million for this project.

The EUR 232,085 Tekes funding received by Orion Diagnostica covered expenses of a programme named *Personalized diagnostics and care, Get It Done,* which started in 2015 and is planned to end in 2018.

The EUR 5,049 funding received by Fermion Oy comprised the remaining balance of the funding for a non-public development project which started in 2013 and ended in 2015.

Donations for purposes of public interest

EUR	2014	2015	2016
Donations	234 500	247 300	339 173

Patient organisations also belong to the scope of instances of public interest. In 2016, the total monetary value of our collaboration with patient organisations came to about EUR 130,190 (EUR 124,000 in 2015). This sum is not included in the figures presented in the table above.

Human Rights

Management approach of Human Rights

Goals and performance

Orion insists on application of human rights in all its operations and works towards eliminating any human rights violating practices from the Group's as well as its subcontractors' and suppliers' operating procedures. We are committed to the principles of the UN's universal declaration of human rights and the declaration on the rights of indigenous peoples as well as the ILO agreements, and we also expect the same of our partners.

We regard every Orion employee and everyone involved in the manufacturing of our products to have 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 subcontractors 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.

As a rule, we require that suppliers participating in our supply chains fulfil our requirements for responsible operating practices and principles, including those concerning human rights and EHSG practices. Especially the GxP-critical key and preferred-class suppliers are requested to commit themselves to our anticipations and principles concerning our sources of supply. We also systematically monitor the compliance of our material and service suppliers and their operations.

When selecting suppliers, we are especially critical towards countries where there is a risk of human and employee rights being violated and/or child labour being used and where the national labour legislation is weak or weakly 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 our employees to inform the management about their experiences, observations and doubts of behaviour violating human rights as well as of any other incompliance with our ethical codes by contacting primarily their own supervisor, the supervisor's supervisor, the Human Resources department or the Group Internal Audit. We aim to examine and handle the cases rapidly, confidentially and impartially using purposeful methods to stop such behaviour and action as is against our principles.

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 actions 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 also 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 obligates all employees to behave and act in ways which respect the human rights. Our employees' awareness of the content and spirit of the Code 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 program.

Monitoring and follow-up

We monitor compliance with the human rights principles and react to any violation thereof with the same corporate governance practices as are applied to other corporate internal guidelines.

The compliance of our suppliers of materials, products and service suppliers with our requirements is controlled by evaluating their operations with regular enquiries and by auditing their facilities. The purpose is to ensure the continuity and compliance of Orion's and the suppliers' operations, and to manage supply chain risks. If an external party involved in our supply chain is observed to blatantly violate the human rights principles, international agreements or legislation, we will undertake corrective action and, in an extreme case, terminate the partnerships and replace the party with a compliant supplier. The main principles of our approval process in the approval of suppliers to our sources of supply 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. Also, the risk of using forced or compulsory labour is insignificant in both our own operations and those of our suppliers. 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 section of our corporate website:

- Human Resources Policy
- Code of Conduct
- Pharmaceutical R&D Ethics Policy
- Anti-corruption Policy
- Anticipations towards Suppliers
- Our practices in approving suppliers

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 valid laws and regulations issued there under as well as with ethically acceptable operating principles. This is the guiding principle also in the ethical standards determined in our *Code of Conduct* which is to be followed by all units and employees all over the Orion Group. 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. Our *Anti-Corruption Policy* obligates all organisations of the Orion Group, unambiguously prohibiting ours employees from giving or accepting a bribe or any comparable benefit.

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 for political action, which is considered a private matter.

Orion adheres to 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 operations. We expect that every employee is 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 familiarised with them.

Procedures

The divisions and organisations that form the Group are responsible for managing authority relations in those areas that fall in 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.

When necessary, our managers can approach decision-makers directly. To be able to voice our opinion, we consider good and appropriate relations important, in particular with local decision-makers in the regions where we have operational presence, with 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.

As regards hospitality, we adhere to the principle of reasonable level. In the relationships of our pharmaceuticals business with healthcare professionals and organisations we follow the commonly agreed good practices provided in the EFPIA HCP/HCO Code.

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.

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 PO code. A summary report of our collaboration with patient organisations is published annually in the Sustainability section of our corporate website.

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 and supervisor and expert training, induction of new employees and other training and information sessions where it is natural to discuss these issues. Guidelines and instructions are also defined 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 refrain from giving or accepting bribes or any comparable benefit. Training is arranged for the employees throughout the Group to adopt the meaning and purpose of the Policy.

Identification and evaluation of corruption-related risks belong to the broad scope of the Group's risk management. Potential risks of corruption shall be evaluated as an elementary standard phase of preparing new partnership agreements, for example.

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 to our personnel 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 to breaches of other internal guidelines.

Complementary references in the Sustainability section of our corporate website:

- Code of Conduct
- Anti-Corruption Policy
- Anticipations towards suppliers
- Our practices in approving suppliers

Compliance

In 2016, two monetary sanctions were issued to us by ethical committees operating under national member associations of the EFPIA with the task to supervise the compliance with the ethical marketing codes commonly agreed by pharmaceutical companies. We accepted both sanctions.

One of the decisions was issued by Läkemedelsindustrins informationsgranskningsman (IGM Profession), the instance monitoring pharmaceutical marketing ethics in Sweden. The IGM regarded it unacceptable to refer to new study results in the marketing documentation of the heart failure drug Simdax, because they had not yet been updated into the locally applicable summary of product characteristics. Our subsidiary Orion Pharma AB was passed a fine of SEK 90,000.

The other decision was issued by the Danish ethical marketing committee ENLI, Etisk Naevn for Laegemiddelindustrien. In this case, the ENLI panel considered patient information material for Easyhaler asthma medicines to be non-compliant with the requirements of the Danish code. A sanction of DKK 15,000 was issued to our Danish subsidiary Orion Pharma A/S.

In the comparative year 2015, we paid sanctions for two events and in 2014 for one event of non-compliance with pharmaceutical marketing codes. These events are reported in our Sustainability Reports for 2015 and 2014.

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

- Non-compliance with regulations and voluntary codes concerning health and safety impacts of our products and services
- Non-compliance with regulations and voluntary codes concerning 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 2014–2016

Indicators of product responsibility	2014	2015	2016
Product recalls due to product defects, total events:	25	13	12
Class 1 (Critical)	1	0	1
Class 2 (Harmful)	5	2	4
Class 3 (Minor)	17	6	7
Class 4 (Other defect)	2	5	0
Number of inspections of Orion's own operations by third parties	83	70	55
Inspections by authorities	16	8	12
Inspections by partners	67	62	43
Number of critical observations	0	2	0
Number of inspections of suppliers by Orion	227	245	269
Number of critical observations	56	22	29
Rejected suppliers	1	5	5

Environmental indicators	2014	2015	2016
Materials use total, ton:	13 398	13 331	13 320
Direct manufacturing materials	9 529	9 538	9 295
Packaging materials	3 869	3 793	4 025
Proportion of recycled materials (regenerated solvents) of	17%	18%	14%
Waste total, ton:	10 921	10 217	11 400
Re-use as energy	9 164	8 638	9 789
Re-use elsewhere	1 683	1 565	1 606
Landfill waste	71	14	4
Energy consumption total, MWh:	157 716	152 316	161 440
Direct energy consumption total, MWh	11 964	485	451
Heavy fuel oil	11 500	0	0
Light fuel oil	464	485	451
Indirect energy consumption total, MWh	145 752	151 831	160 990
District heat	50 445	47 744	55 160
Steam	24 755	35 057	36 310
Electricity	70 552	60 030	69 520
Energy consumption by reporting unit, MWh:			
Orion Corporation	102 974	99 843	107 507
Fermion Oy	45 531	43 495	45 081
Orion Diagnostica Oy	9 212	8 978	8 852
Energy saved due to efficiency improvements, MWh:	827	2 395	2 021
Electricity	627	0	0
Heat	200	703	2 021
Fuels	0	1 692	0
CO_2 emissions from energy consumption total, ton:	44 393	41 470	44 456
From direct energy	3 402	128	120
From indirect energy	40 991	41 341	44 336

Environmental indicators, continued	2014	2015	2016
Emissions into air from other than energy, ton:			
CO_2 from production	89	66	110
Methylene chloride (DMC)	1	1	0
Volatile organic compounds (VOC)	41	23	14
Nitrogen oxides, NOx	9	6	20
Sulphur dioxide, SO_2	20	0.1	4
Particles	1	0.2	0.1
Water withdrawal and consumption total, 1 000 m^3:	272	280	275
Orion Corporation	166	178	183
Fermion Oy	88	84	71
Orion Diagnostica Oy	19	18	21
Environmental expenditures and investments total, EUR 1 000:	5 278	5 364	6 667
Environmental investments	358	980	1 710
Environmental protection expenses	4 920	4 384	4 957

Personnel indicators	2014	2015	2016
Absenteeism due to illness, hours	213 091	181 613	185 054
Absentee rate due to illness	3.7%	3.2%	3.1%
Absenteeism due to injuries, hours	4 304	3 608	3 138
Work time lost due to absenteeism, hours	217 395	185 221	188 192
Absentee rate	4.1%	3.5%	3.5%
Injury events total	134	134	115
Work place injuries causing absence of 3 or more days	31	11	15
Work place injuries causing absence of less than 3 days	14	18	5
Work place injuries causing absence, total	45	29	20
Work place injuries causing no absence	46	54	44
Work place injuries total	91	83	64
Commuting injuries	43	51	51
Fatalities	0	0	0
Injury rate LTI 1	9.9%	6.5%	4.4%
Injury rate LTI 3	6.8%	2.5%	3.3%
Actual working hours	4 543 624	4 474 220	4 517 647
Theoretical working hours	5 365 999	5 262 192	5 368 248

Personnel structure	2014	2015	2016
Personnel at the end of the period	3 450	3 401	3 469
Average personnel during the period	3 493	3 431	3 446
Number of employees by region at Dec. 31:	3 450	3 401	3 469
Finland	2 769	2 723	2 796
Other Nordic countries	120	124	113
Germany	88	68	74
UK and Ireland	51	50	52
Russia	92	84	85
India	107	128	127
Other countries	223	224	222
Employees outside Finland total	681	678	673
Number of employees by reporting unit at Dec. 31:	3 450	3 401	3 469
Orion Corporation	2 171	2 127	2 206
Fermion Oy	329	333	346
Orion Diagnostica Oy	269	263	284
Foreign subsidiaries	681	677	655
Number of employees by employee category at 31 Dec.:	3 450	3401	3 469
Blue collars	853	831	831
White collars	1 365	1 336	1 357
Exempts	1 232	1 234	1 281
Gender structure, all employees:			
Women	61 %	61 %	61 %
Men	39 %	39 %	39 %
Gender structure, Blue collars:			
Women	44 %	42 %	42 %
Men	56 %	58 %	58 %
Gender structure, White collars:			
Women	71 %	70 %	63 %
Men	29 %	30 %	37 %
Gender structure, Exempts:			
Women	61 %	63 %	70 %
Men	39 %	37 %	30 %
Age structure, all employees:			
Under 20 years	<1 %	<1 %	1 %
20–29 years	16 %	14 %	11 %
30–39 years	28 %	28 %	27 %
40–49 years	31 %	32 %	32 %
50–59 years	20 %	21 %	24 %
60 years or more	5 %	4 %	6 %
Employee turnover, average:	16.5 %	13.7 %	14.3 %
White collars and exempts	12.5 %	10.3 %	12.7 %
Blue collars	25.2 %	21.5 %	17.9 %
Employees with permanent employment contract at 31 Dec.	2 981	2 926	3 205
Average duration of employment, years	10.8	11.1	11.0

Gender structures

Gender structure of the personnel by reporting unit in 2016

Employees (%)	Orion Group	Orion Corporation	Fermion Oy	Orion Diagnostica Oy	Foreign subsi-diaries
Female	2 177	1 474	98	177	428
	61%	64%	28%	69%	63%
Male	1 398	820	252	79	247
	39%	36%	72%	31%	37%
Total	3 575	2 294	350	256	675

Gender structure of managers and supervisors in 2016

	Orion Group		Orion Corporation	Fermion Oy	Orion Diagnostica Oy	Foreign subsi-diaries
Female	192	50 %	159	11	22	51
Male	196	50 %	136	48	12	63
Total persons	386	100 %	295	58	33	114

Gender structure,
Board of Directors of Orion Corporation

Gender	2014	2015	2016
Female	1	1	2
Male	6	6	5
Total members	7	7	7

Gender structure,
Orion Executive Management Board

Gender	2014	2015	2016
Female	3	3	3
Male	5	5	5
Total members	8	8	8

Age structure,
Board of Directors of Orion Corporation

Year of birth	2014	2015	2016
1940–1949	1	1	0
1950–1959	5	5	5
1960–1969	1	1	2
Total members	7	7	7

Age structure,
Orion Executive Management Board

Year of birth	2014	2015	2016
1950–1959	2	2	2
1960–1969	5	5	5
1970–1979	1	1	1
Total members	8	8	8

Financial performance	2014	2015	2016
Net sales, EUR million	1 015.3	1 015.6	1 073.5
International operations, EUR million	719.8	697.1	735.0
% of net sales	70.9 %	68.6 %	68.5 %
Operating profit, EUR million	272.4	266.6	314.6
% of net sales	26.8 %	26.2 %	29.3 %
Profit before taxes, EUR million	267.8	262.3	310.9
% of net sales	26.4 %	25.8 %	29.0 %
Income tax expense, EUR million	56.6	54.2	61.9
R&D expenses, EUR million	106.2	108.1	118.2
% of net sales	10.5 %	10.6 %	11.0 %
Capital expenditure, EUR million	57.1	44.5	51.1
% of net sales	5.6 %	4.4 %	4.8 %
Assets total, EUR million	1 001.5	1 047.4	1 062.9
Equity ratio, %	52.3 %	57.4 %	60.8 %
ROCE (before taxes), %	36.6 %	35.7 %	40.9 %
ROE (after taxes), %	41.1 %	37.5 %	40.3 %
Personnel expenses, EUR million	219.2	220.6	224.4
Financial assistance received from government, EUR million	1.9	1.8	1.2

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