This report presents developments in our corporate sustainability strategy, activities and results in 2016. Corporate Social Responsibility (CSR) commitment is an integral part of our operations. Every year we work on further improvements to enhance the data and reporting cycle for our non-financial performance. We have not had our CSR performance verified externally.

This Sustainability Report is published in digital form only. To increase its readability and functionality, the report has been posted on our website in HTML format and can also be downloaded as a PDF document. In the event of textual inconsistencies between this English translation and the original Dutch version, the latter shall prevail.
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**REPORT**

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PROFILE

Royal Cosun is an agro-industrial group that processes arable crops and other vegetable raw materials. Cosun is a cooperative of some 8,800 Dutch sugar beet growers. The cooperative has been processing its members’ sugar beet since 1899. Over the years we have added new activities to our portfolio, nearly all of them relating to agriculture or horticulture.

PLANTS AND PRODUCTS

We produce a wide range of ingredients and intermediate products from vegetable raw materials such as sugar beet, potatoes, chicory, fruit and vegetables for the international food industry. We also make products that are sold to consumers through the foodservice (out-of-home and wholesale outlets) and retail channels. We are increasingly developing ingredients for non-food applications. We supply products to the animal feed sector, develop building blocks for biobased chemicals and produce bio-energy (green gas).

Of all the businesses that make up Cosun, Suiker Unie and Aviko are the most widely known. They have traditionally produced sugar and potato specialities respectively. Sensus produces inulin from chicory. Inulin is a dietary fibre that reduces the sugar and fat content of foodstuffs. SVZ processes fruit and vegetables into concentrates and purees for the food industry. The Duynie group is a trader and distributor of animal feed and develops advanced applications based on residual flows and co-products from the food industry.

INNOVATION

Cosun Biobased Products specialises in the development and production of functional green chemicals and materials based on renewable vegetable raw materials. Its innovations are used in a wide range of applications. To this end, like the other Cosun business groups, it works closely with Cosun Research & Development (R&D). This joint R&D centre has a modern and well-equipped facility where it improves the use of agricultural raw materials, innovates process technology, optimises energy management and, in cooperation with customers, develops new products. Cosun R&D also works with a variety of institutions and universities in the Netherlands and abroad.
**BUSINESS MODEL**
Cosun is a link between plant-based raw materials and products (both bulk and specific) in many markets. Our core activity is the large-scale biorefinery of plant-based raw materials (biomass) to extract as much of the high value ingredients as we can. We make use of everything we extract and attempt to close cycles wherever we can.

Our commitment and contribution extend to the very start of the supply chain, where we advise and support our growers. Sophisticated delivery logistics brings the biomass to our factories for processing. Our focus on innovation embraces both product development and the sustainability of the processes.

Recurring EBITDA is operating profit before depreciation and amortisation, after adjustment for activities divested and non-recurring items.

The members’ bonus is paid to the members as part of the quota beet price and recognised as a cost of raw materials in ordinary operating profit. More information on page 15 - 16.

The beet yield per hectare, calculated on the average yield with average quality and after premium payments.
The upper part of the figure represents direct emissions caused by our use of fossil fuels. The lower part is the indirect emission relating to the purchase of electricity, converted into tonnes of CO₂. More details on page 16.

Total number of complaints about Cosun's production locations in the Netherlands and abroad. Most complaints related to odour nuisance. See also page 20.

Total water consumption of all Cosun production locations in m³ per tonne of product. More details on page 17.

Total volume of residual material per tonne of product, broken down into separated and mixed flows. Read more on page 18.
**Number of staff** average in FTEs

Average number of staff during the year with a contract of employment with Cosun or one of its business groups.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>3,396</td>
</tr>
<tr>
<td>2013</td>
<td>3,477</td>
</tr>
<tr>
<td>2014</td>
<td>3,799</td>
</tr>
<tr>
<td>2015</td>
<td>3,912</td>
</tr>
<tr>
<td>2016</td>
<td>3,896</td>
</tr>
</tbody>
</table>

**Reports of suspected wrongdoing**

Number of reports on suspected wrongdoing received by the Speak Up system. More details on page 23.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>0</td>
</tr>
<tr>
<td>2013</td>
<td>4</td>
</tr>
<tr>
<td>2014</td>
<td>9</td>
</tr>
<tr>
<td>2015</td>
<td>2</td>
</tr>
<tr>
<td>2016</td>
<td>1</td>
</tr>
</tbody>
</table>

**Number of lost-time accidents** per 1,000 employees

Total number of lost time accidents at Cosun business groups per 1,000 employees. For more details, see page 22.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Lost-Time Accidents</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>32</td>
</tr>
<tr>
<td>2013</td>
<td>30</td>
</tr>
<tr>
<td>2014</td>
<td>26</td>
</tr>
<tr>
<td>2015</td>
<td>24</td>
</tr>
<tr>
<td>2016</td>
<td>21</td>
</tr>
</tbody>
</table>

**Sickness absenteeism in %**

Rate of sickness absence at the Cosun business groups, excluding maternity leave. More on page 22.

<table>
<thead>
<tr>
<th>Year</th>
<th>Sickness Absenteeism</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>3.5</td>
</tr>
<tr>
<td>2013</td>
<td>3.8</td>
</tr>
<tr>
<td>2014</td>
<td>3.8</td>
</tr>
<tr>
<td>2015</td>
<td>3.9</td>
</tr>
<tr>
<td>2016</td>
<td>4.0</td>
</tr>
</tbody>
</table>
CLOSING THE CYCLES TOGETHER

If farming in the Netherlands is to remain a vibrant sector, we have to manage the soil sustainably. Cosun is more than willing to play its part. As an arable cooperative and agro-industrial group, it is in our interests to ensure that agricultural land is fertile and remains in good condition. We can do this by effectively recycling the organic residual flows and micronutrients produced by our production processes. We look upon recycling as an investment in our future. Not only for our business but for all arable farmers in the Netherlands.

Closing the cycles requires all the players in the agricultural chains to work together to return nutrients to the fields. In other words, we must return valuable organic matter and minerals to their original location wherever possible. The lime fertiliser Betacal, for example, can be used to return phosphates to the fields, where it will serve as nutrient again for the crops. Digestate from the biomass digesters and struvite from the process water treatment plants can also be returned to the fields. These are the first cycles between the primary sector, arable farming in this case, and the secondary sector, our production sites. Beet pulp and chicory pulp can be used as animal feed in livestock farming.

There are more ways to close the cycles. Some can be found in our own processes; some rely on cooperation with other links in the chain. We purify process water, for example, so that we can use it to wash the beet in the sugar factories. The factory in Dinteloord supplies some of its surplus treated water to local greenhouse growers. The methane we produce during water treatment is used to power steam turbines and cut our natural gas consumption. Our large production facilities have been operating biological digesters for several years in order to ferment their organic residual flows into green gas. The digestate remaining after the gas has been extracted is used as an organic manure in arable and glasshouse farming to keep the soil in good condition.

By combatting the wasteful use of raw materials and setting up wider alliances, we will be able to close even more cycles in the future. Working in chains and geographical clusters, moreover, reduces the need to import minerals. In its own interests and in the interests of society, Cosun wants to play a meaningful role in the circular economy. We are investing in research and development to extract even more value from our raw materials. To do so, we are looking beyond the confines of our own industry. We invite others to join us in our quest for new and higher value applications and to close the cycles with us. Without their cooperation, deeper sustainability is inconceivable. By working together, the livestock and arable sectors will create ways to realise this circularity, regionally and nationally. We expect the government to facilitate and promote such innovations by removing legal barriers. Inefficiencies must be regulated out of the market.

This report accounts for our activities and results in 2016 and provides an insight into how we are striving to work sustainably and responsibly. It has been written not only for our staff, members, suppliers, customers and social stakeholders but for everyone who feels involved with Cosun and cares for the environment.

We welcome comments about this publication. Who knows, your response might be the start of a new alliance to close even more cycles.

Dirk de Lugt
Chairman of the Board

Robert Smith
Chief Executive Officer
Cosun takes a practical approach to corporate social responsibility (CSR). It says something about how we weigh up the conflicting interests before reaching a decision. Cosun wants to be a sustainable player in areas where we are active and can bring our influence to bear.

**OUR VISION:**

Growth is at the heart of everything we do.
When crops grow, people prosper.
By working together, we create a future that enables growth for everyone.
We learn by doing and aim to be better at every step we take.
Our purpose is to create the most out of crops.
To deliver lasting added value in the agro supply chain.
With true respect for the environment.
Strong and resilient.
For generations to come.
We take our responsibility.

**COSUN CSR POLICY**

**STAKEHOLDERS**

**External**
- Members of the cooperative
- Customers
- Suppliers/service providers/partners
- Consumers
- Local residents
- Potential employees
- Politicians and public authorities
- Financial institutions
- Education
- Media (press)
- NGOs

**Internal**
- Employees
- Works Councils

**MISSION**

Cosun operates close to the arable sector and works with farmers on the sustainable cultivation of vegetable raw materials.

We are convinced that the refinery of vegetable raw materials is essential to make optimal and sustainable use of our agricultural raw materials and natural resources.

We deliver ingredients for food and feed, materials for many non-food applications and ultimately for energy production.

We carefully balance respect for people, planet and profit with the continuity of the business and the cooperative.

**PILLARS**

Cosun's sustainability policy is built on four pillars:

1. **Sustainable cultivation**
   - Investment in the knowledge and expertise of the growers and suppliers of our raw materials
   - Higher yield per hectare
   - Mineral cycles closed wherever possible

2. **Financial and economic value creation**
   - For members (income through the beet price)
   - For staff (salaries and pensions)
   - For society (products and taxes)

3. **Optimisation of production processes**
   - Optimal use of raw materials and consumables including water
   - Energy savings and lower CO₂ emissions
   - Waste prevention
   - Caring for the social environment; minimising nuisance

4. **Good employment practices**
   - Safe working environment
   - Fitness and employability
   - Education and training

**GUIDELINES**

- Cosun Principles
  (fully revised code of conduct in 2015)
- Specific regulations
- NCR Code for cooperatives
TARGETS

We have set a number of social and environmental targets to measure the results of our efforts. We also account to our members for the return earned on the capital invested and our contribution to the financial result per hectare of sugar beet. Responsibility for the financial result is shared between our members/beet growers and ourselves as a sugar manufacturer. More information on our financial results can be found in our Annual Report for 2016.

PEOPLE

• To reduce absenteeism as a result of incidents at work to zero. The target for 2017 is to have an injury frequency (IF) of less than 6.4 (this indicator is explained further on page 21).
• To keep sickness absenteeism in any event below the industry average (2015: 4.8%, source: Statistics Netherlands).
• To reduce the number of complaints made by local residents. Our target is to have 80% of our production sites receive no complaints whatsoever and to reduce the number of complaints at other sites by tackling the causes.

ENVIRONMENT

• To reduce energy consumption per unit of production by 2% per annum on average. This will in turn reduce the carbon footprint of our operations.
• To excel in creating value by converting all our vegetable raw materials (biomass) into food, feed, non-food applications and energy products, and so prevent biomass being treated as waste wherever possible.

OTHER TARGETS

We have also set targets in other areas. We have taken initiatives to make the cultivation of our agricultural raw materials more sustainable, to use water more responsibly both to grow the crops and to process them, to cooperate within the supply chain to encourage sustainable innovation, to reduce CO₂ emissions before and after our production processes and to professionalise staff development through training and education. These targets, too, are considered in this report.

INTEGRATED

Corporate social responsibility is an integral part of our strategy. Final responsibility for the policy lies with the Board, with the Supervisory Board overseeing the policy’s implementation by the Executive Board. The Chief Executive Officer reports to the Board.

COOPERATION AND COORDINATION

The business group directors are responsible for setting and implementing their own policies. At Cosun level, the policies are coordinated by the CSR platform. The platform’s members are:

• Anouk ter Laak Chair - director, SVZ
• Coen de Haas Secretary - environmental coordinator, Cosun
• Dick van der Aart Marketing manager, Aviko
• Iwan Blankers Director, Sensus
• Etiënne Geerts Member of the Central Works Council
• Jobien Laurijssen Sustainability manager, SVZ
• Sandra Munsterman Marketing manager, Duynie Group
• Frank van Noord R&D director, Suiker Unie
• Willy van Oorschot Corporate communication manager, Cosun

Each business group has its own steering group; some have also appointed working groups in specific areas such as the environment and employee relations. The business groups’ management teams coordinate, direct, monitor and report on their activities to the Executive Board. The reporting lines come together in the Board. A working group at Cosun level compiles management reports and the Annual Report.
SUSTAINABLE CULTIVATION

The companies that buy products from Cosun’s business groups have set themselves ambitious sustainability goals that they cannot achieve without the help of their suppliers. To this end, both Cosun and external organisations have developed registration systems and benchmarks.

The Sustainable Agriculture Initiative Platform (SAI) is such a system. This platform has developed the farmer sustainability assessment (SAI FSA) to analyse the principles and practice of farming. It provides an insight into the sustainability of crops and growing regions. This is important information because the consideration paid to sustainability within the supply chain depends not only on the crop but also on the growing region and local circumstances.

Cosun joined the SAI as a group in 2016. Aviko and SVZ had already been members. In addition to membership of such international platforms, Cosun also develops its own sustainability systems. Sensus, for example, has developed the Crop-R programme to optimise chicory cultivation and Suiker Unie uses the Unitip programme to raise the standard of sugar beet cultivation to an even higher level.

On behalf of over 40 multinationals, EcoVadis rates more than 150 industries on four important sustainability themes: environment, fair labour practices, ethics/fair business practices and supply chain. Suiker Unie and SVZ have both been awarded Gold status by EcoVadis.

POTATOES

Aviko paid extra attention to food safety and traceability in 2016 and incorporated them into its own ERP systems. Potato growers who supply Aviko on contract must have their food safety certificates and crop records in order and provide them to Aviko on request. With nearly all the potatoes Aviko processes being grown on contract, the records cover almost all the raw materials it receives. Aviko’s field staff ensure that the records are complete and are available when required. Potato growers who do not provide food safety data do not supply Aviko! Contract growers sometimes need to adjust to this strict rule. But it is vital that they do. It is the basis of sustainability and the basis must be solid and reliable. It is a guarantee that we can trace the raw materials all the way from the fields.

Aviko develops potato varieties in order to increase the yield per hectare and the quality of its raw material. It improves not only the yield and soil quality but also satisfies its customers’ growing demand for sustainable farming and food production.

For Aviko, this is an incentive to step up a gear. Its first priority is to analyse opportunities to further reduce the use of chemical pesticides and herbicides. Where crop protection is necessary, it wants to use organic agents wherever possible by 2030. To this end, the company is a partner in the Skylark Foundation to future-proof healthy food production. The critical success factor, however, is cooperation with the potato growers. All steps towards sustainability are therefore being taken in consultation with the Potato Growers Committee (ATC), Aviko’s advisory platform.

CHICORY

Sensus has set itself the goal of producing 10 tonnes of inulin per hectare. Its agricultural team is helping all chicory growers reach this target. Sensus analyses the information it collects using the Cimone chicory monitoring system. Every grower is personally informed of the results. If a grower is willing to share information about how he grew his crop in the Crop-R system, Sensus can tailor its advice in order to improve his yield. The advice is concerned mainly with the selection of the field and the seed variety, the sowing time, and the use of fertilisers and pesticides. It also advises on when the crop should be harvested and how the roots should be stored and supplied to the factory.

At the end of 2016 about 80% of all chicory growers were taking part in this voluntary registration system. The advice they receive from Sensus increases their yield per hectare – and therefore their incomes – at no extra cost or effort. Sensus in turn can make more inulin of higher quality. Furthermore, this approach complements the goal of responsible and sustainable soil management. After all, soil is the most important production factor in arable farming.

Sensus did not proceed with its intention of having the crops cleaned in order to remove soil tare from the roots. Thanks to the relatively dry spell during the harvest season the tare rate was at a record low level of about 11.5%, instead of the usual 12-14%. This had a significant impact on transport costs and carbon emissions. Sensus still intends to have the roots cleaned before they are carried to the factory and will roll out the scheme for the 2017 campaign.
FRUIT & VEGETABLES

SVZ processes the strawberries grown in the sunny southwest of Spain into puree and puree concentrate. To safeguard the harvest and make responsible use of the soil and fresh water, it has been partnering with major food manufacturers, international retail chains, NGOs and local stakeholders for several years. This consortium, united in the Doñana Berry and Sustainable Water Management Group of the SAI Platform, set up a training project last year specifically to promote the efficient use of water (www.ferdonana.es). The first course started at the end of 2016. The ambition is to teach as many growers as possible. It is also in their interests to use water sparingly in order to protect their long-term future as fruit growers.

Even though lack of water is not a problem in the Polish growing regions, SVZ is investing to stay one step ahead of climate change. Last year it studied the impact of climate change on the irrigation of red fruit in Poland. SVZ will use the findings to advise and train the growers and identify the very earliest signs of risks. Its experiences in Spain will also be applied in Poland.

SVZ is taking measures to increase the traceability of its raw materials. Fruit supply chains are inherently complex. SVZ is also studying the sustainability of several crops. Customers are making increasing demands on sustainability, traceability and transparency. To improve the quality of its raw materials, SVZ again trained more than 2,000, mainly small-scale red fruit growers in Poland in order to enhance their crops and farm more sustainably in 2016. It also advised carrot and other vegetable growers on crop protection, crop yields and other aspects that will help them meet market demand and improve their harvests. SVZ again processed sorted fruit that did not sell at auction in 2016. The business group is investing in knowledge sharing in order to make the best use of its supply chains. SVZ was awarded a high score by EcoVadis during the year in recognition of its standing as a leader in sustainability.
The cooperative’s Members’ Council decided in 2016 that the Unitip registration system would be compulsory for all beet growers in the Netherlands as from the 2018 growing season. To encourage growers to use it, Suiker Unie is paying a premium of €250 to every farm that enters its data in Unitip in the 2016 and 2017 growing seasons. In total, about 60% of the growers did so in 2016. Suiker Unie has commissioned an independent agency, Control Union Certification, to verify the registrations with a view to its being awarded Gold Level status by SAI.

Suiker Unie has been working with the growers for several years to achieve the ambitious target of growing 90 tonnes of beet per hectare, with a sugar content of 18%. This ambition for a higher crop yield must be realised responsibly and sustainably. Suiker Unie advises the growers, for example, on which variety is best suited to a particular plot and how to minimise the use of pesticides and herbicides. Financial and ecological interests go hand in hand as crop protection agents are a cost to the grower.
FINANCIAL AND ECONOMIC VALUE CREATION

Cosun’s Annual Report for 2016 considers the cooperative’s performance and results during the year and the main developments at and around the group. In this CSR Report, we look at how our activities create value. We create value by selling goods and services, making payments to our members and staff, and investing in the sustainability of our production processes.

Cosun is a major economic player that creates added value by:

- upgrading vegetable raw materials into products for our many customers;
- making substantial payments to our suppliers, staff, the government and financiers.

The table below shows the added value that Cosun generates by selling its products, after the deduction of payments to suppliers and members for their goods and services. In 2016 we created €657 million. Of this amount, €501 million was paid to our employees, members, the government and other financiers. Cosun retained the remainder of the added value and invested in its assets and in the expansion of its activities.

### ADDED VALUE STATEMENT in millions of euros

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net turnover</td>
<td>1,988</td>
<td>1,948</td>
</tr>
<tr>
<td>Other revenue and stock movements</td>
<td>-13</td>
<td>39</td>
</tr>
<tr>
<td>Payments to suppliers of raw materials</td>
<td>-965</td>
<td>-981</td>
</tr>
<tr>
<td>Payments to other suppliers</td>
<td>-353</td>
<td>-364</td>
</tr>
<tr>
<td><strong>Added value created</strong></td>
<td><strong>657</strong></td>
<td><strong>642</strong></td>
</tr>
<tr>
<td>Employees (salaries)</td>
<td>243</td>
<td>255</td>
</tr>
<tr>
<td>Members (beet payments and members’ bonus)</td>
<td>237</td>
<td>230</td>
</tr>
<tr>
<td>Financiers (interest)</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Government (taxes)</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td><strong>Value created for stakeholders</strong></td>
<td><strong>501</strong></td>
<td><strong>499</strong></td>
</tr>
<tr>
<td>Retained profit</td>
<td>56</td>
<td>46</td>
</tr>
<tr>
<td>Depreciation and amortisation</td>
<td>100</td>
<td>98</td>
</tr>
<tr>
<td><strong>Value created for reinvestment</strong></td>
<td><strong>156</strong></td>
<td><strong>143</strong></td>
</tr>
</tbody>
</table>

### TURNOVER

We create value by making optimal use of our vegetable raw materials. Total turnover increased to €1,988 million in 2016, 2% higher than in 2015. Despite lower sugar prices, Suiker Unie’s turnover for the year was also slightly higher than in 2015. Aviko’s turnover was lifted by firmer selling prices. Sensus and Duynie reported lower turnover, while SVZ’s was unchanged from 2015. The greater part of turnover (about 86%) was earned in Europe.

### PROFIT

Cosun’s profit for the year was better than expected and higher than in 2015. Earnings before depreciation and amortisation and after adjustment for divested activities and non-recurring items (recurring EBITDA) rose from €167 million in 2015 to €172 million in 2016.
MEMBERS
As a cooperative, we pay out a substantial proportion of our earnings to our members. The members’ bonus for the year came to €71 million (2015: €69 million). The quota beet price paid to our members was accordingly higher than in 2015: €44.15 per tonne of beet with average sugar content and average extractability versus €43.01 per tonne in the previous year. At 13.3 tonnes, the average sugar yield per hectare was lower (2015: 13.9 tonnes). The average financial yield per beet grower in the Netherlands accordingly came to €3,317 per hectare, slightly higher than in the previous year. The financial yield per hectare is an important measure of the profitability of beet cultivation.

INVESTMENTS
The cash position was adequate to finance the investments we made in our factories. The healthy financial position gives us a strong platform to continue implementing our growth strategy. Capital expenditure totalled €121 million (2015: €109 million). We again made substantial investments in our sugar and potato activities. They were targeted primarily at increasing the scale and flexibility of our production capacity. We also made regular replacement investments. Cosun did not invest in any acquisitions to strengthen its activities in 2016. In the current year, too, Cosun will invest in a variety of segments in order to strengthen its position in the market.

OPTIMISING THE PRODUCTION PROCESSES
When we process our vegetable raw materials, our care for the environment often comes down to preventing waste. We aim to make maximum use of all our raw materials and consumables, energy, water and residual flows, and to reduce our CO2, odour and noise emissions. We take a critical approach to road safety around our locations.

At group level, Cosun monitors the CO2 emissions of its factories, the water consumption of its processes, the amount of residual matter and the number of complaints made by local residents. We monitor all our production sites, including those outside the Netherlands apart from the two joint ventures in China. The figures are expressed in units per tonne of primary end product so as not to conflate variations in the size of the harvests we process. Our energy consumption per tonne of product was lower in 2016 than in 2015. The number of complaints received about the inconvenience caused by our production processes, however, was higher than in the previous year. Dutch NOx emission standards have been tightened up. All our sites in the Netherlands have taken measures so that they can work within the stricter standards.
**CO₂ EMISSIONS**

The composition and quality of the harvests we process vary from year to year. We have very little influence on their impact on our energy consumption. Energy consumption accounts for a substantial proportion of our costs. We have set ourselves the goal of reducing our overall energy consumption by at least 2% on average every year as from 2010. This saving will also reduce our CO₂ emission per tonne of product. In recent years, we have nearly always met this goal and we did so again last year. On average, we have achieved our goal over the past five years and are on track to reach our target for 2020. Every additional saving, however, requires an even greater effort to cut energy consumption by 2% per annum.

**Cogeneration**

Cosun is constantly seeking ways to make better use of its production capacity and reduce its gas and electricity consumption. Nearly all production sites produce steam as a source of energy. They use natural gas to make the steam and thus satisfy a large proportion of their own electricity needs. The CO₂ that is released is classified as a direct emission. The indirect CO₂ emission is based on the electricity purchased from external suppliers and the average CO₂ emission per kWh they declare. Where specific figures are not available, we use national averages.

One of Duynie Ingredients’ sites generates electricity using biogas and applies the residual heat to dry its products. Using the residual heat in this way has cut natural gas consumption by no less than 2.2 million m³. To meet the growing demand expected for its products, Duynie Ingredients will study ways to ensure it as sufficient sustainable and profitable drying capacity, either internally or externally.

With the help and support of Cosun Food Technology Centre (CFTC), the energy specialists in the business groups are optimising the processes at various locations or completely replacing steam boilers and peripheral equipment. The ultimate goal is to increase energy efficiency even further and thus reduce the environmental impact. The addition of a seventh step in the evaporation process at the sugar factory in Dinteloord has led to a considerable energy saving, so high in fact that the Ministry of Economic Affairs awarded Suiker Unie the very first Energy Award at the end of 2016.

**WATER CONSUMPTION**

The food industry uses a lot of water, not only to wash the raw materials but also to process them and to clean the processing equipment. The vegetable raw materials themselves also contain a lot of water that we can use after it has been treated. The total volume of water we use is directly related to the size of the harvests we process. In and of itself, therefore, absolute water consumption in m³ is of relatively little importance. Water consumption per tonne of product in 2016 was unchanged on 2015.

We treat and re-use as much water as we can but for food safety reasons we cannot do so indefinitely. Because we produce food, the water must be of drinking water quality. Water that is surplus to our needs is treated in our own facilities and discharged into surface water or into the public sewer. Many of the treatment processes produce methane, which, like natural gas, can be used to power steam turbines. Our water treatment plants work to high standards, so high in fact that we can sometimes discharge water into vulnerable surface waters subject to strict environmental standards. This makes very high demands on our treatment plants and their management. We are studying potential applications for high quality water from our production processes that we do not need ourselves, for example to water plants in nearby greenhouses.
WASTE

Cosun produces two kinds of waste: separated and mixed. Separated waste is sorted into paper and board, wood, stones, plastic and chemicals. We send this sorted waste to external processors. What remains is mixed waste.

The amount of waste per tonne of product was higher in 2016 than in 2015. The increase in mixed waste was due to the demolition of an old wash house at the sugar factory in Dinteloord and building work at Vierverlaten and other locations. After allowing for this work, we produced less mixed waste than in 2015. To put the amount of waste into perspective, for every thousand kilos of product that leaves our factories, we produce just six kilos of waste. Cosun nevertheless intends to reduce the volume of waste even further and make good use of any valuable residual matter.

Organic residual matter

Suiker Unie’s three sugar factories operate biomass digesters to convert organic residual matter from our production processes into biogas. The residual matter is converted only if it cannot be used in applications that have a higher value, such as animal feed. If our biomass digesters cannot handle all the residual matter on site, we prefer to supply the surplus to an external biomass digester. In both cases, we produce a commercial and sustainable application rather than waste.

The amount of organic residual matter processed by third parties declined in 2016. The Suiker Unie factory in Vierverlaten converted more organic matter into green gas in its own biomass digester. Figure 7 shows the amount of organic residual matter that our factories supplied to external biomass digesters or composters.
Bio-energy
Suiker Unie produces green gas from vegetable residuals such as beet tops and tails, foliage and some of the pulp remaining after the beet have been processed into sugar. Pulp is turned into gas only if the fresh pressed pulp cannot be sold as animal feed. The production of green gas is an alternative to drying the pulp, which costs far more energy.

Suiker Unie’s three digesters together produce more than 30 million m³ of green gas per annum. Most of it is fed into the national gas transmission network. Financially this is the most attractive option, although nearly a third of Suiker Unie’s trucks drive on the green gas. This puts into practice our green deal with the government to make our transport operations more sustainable.

Other production units within Cosun have methane reactors that produce biogas from process water. The Aviko factory in Steenderen supplies process water to a nearby water treatment plant that recovers energy (biogas) and minerals (chiefly struvite). This helps close the mineral cycle as the phosphate and other minerals can be returned to the fields as plant nutrients.

SMART USE OF RESIDUAL HEAT
Duynie Ingredients makes ingredients on a co-production basis for pet food manufacturers. The co-products are made from potato starch, beet and chicory pulp and inulin and undergo several processing steps. To dry a solid, semi-solid or liquid material and increase its dry matter from, say, 25% to 90%, Duynie usually uses sustainably generated heat produced by burning locally grown wood chips or residual heat that can no longer be used in its production processes. By using it to dry products, it has an economic value and reduces our total energy consumption even further. The maximum possible use is made of residual heat in order to reduce our carbon footprint.

LIMITING NUISANCE AND INCONVENIENCE
Cosun has a total of 35 production sites in the Netherlands and abroad. Their large-scale industrial processes are sometimes a source of nuisance to local residents.

Where factories are located close to residential areas, local residents may sometimes be inconvenienced by odours or noise. The transport of raw materials can also be a source of nuisance to people who live along the delivery routes to and from the factories. More than 80% of our production sites did not receive a single complaint in 2016. However, this also means that complaints were made about the other factories.

The number of complaints rose to 168 in 2016. Most of them related to the production sites that had also received the most complaints in previous years. The increase is an unwelcome development and suggests that residents were inconvenienced more than in the past. Complaints were received by Aviko’s fries factory in Lomm, Suiker Unie’s site in Vierverlaten and, for the first time, the sugar factory in Anklem (Germany). Another issue arose at Aviko’s site in Steenderen. Several residents objected to the proposed construction of a new cold storage at the fries factory there, and about its height in particular. These objections do not qualify as complaints and are therefore not included in the figure on p. 20.
AVIKO
The Aviko production site in Lomm received more complaints about odour nuisance in 2016 than in 2015. Odour has been a problem there for several years. In 2014, the company studied the feasibility and effectiveness of a range of measures to reduce the odour nuisance. Several options were piloted in 2015. The results indicated that building a new chimney would be the most effective solution and could reduce the odour nuisance by about 80%. Aviko intended to start building the chimney in 2016 but its plans have had to be put back until 2017 at the earliest as a building permit has not yet been issued.

SUIKER UNIE
Suiker Unie also received more complaints last year than in the previous year. Most of them related to the factory in Vierverlaten, with more than half of those complaints being about odours from the biomass digester. Complaints were also made about odours from its water treatment and Betacal storage. Transport to and from the factory was also an inconvenience to local residents. Talks between representatives of the residents and specialists from Suiker Unie have made a demonstrable contribution to the good relations between the factory and the residents. Talks with the focus group enabled Suiker Unie to take targeted measures to minimise the odour nuisance caused by the biomass digester. Representatives of the local community in Hoogkerk were also contacted to discuss complaints. The residents were regularly invited to take a look in and around the factory. This is always a popular activity, especially when the visitors learn that the factory is investing in measures to reduce the nuisance.

The sugar factory in Anklam received its first complaints during the year. Complaints had apparently already been made to the regional authorities but they had not been passed on to the factory. In view of the new permit applications it has been agreed to give the complaints priority and tackle the nuisance where possible.

Aviko’s substantial investment programme includes the construction of a new cold storage facility at its factory in Steenderen. This large-scale storage capacity will cut the energy required to freeze products and will avoid the need to transport products to more distant storage sites. The initial plans and permit applications were submitted to the local municipality – Bronckhorst – before 2016. The residents of Steenderen were also informed about the building plans. The municipality has approved the plans and revised the zoning plan. Some residents are concerned about the size of the cold storage building. In particular they object to its planned height of 35 metres. Aviko has consulted their representatives but has been unable to prevent the matter going to court. Separately from the court’s decision, which is expected later this year, Aviko wants to remain in talks with the residents to discuss their concerns. It goes without saying that it will carry out the planting and management work included in the zoning plan. Aviko has concluded a voluntary agreement with the municipality to study what extra planting measures it can take to design the planned new building into the landscape.
GOOD EMPLOYMENT PRACTICES

Our people are at the heart of our success. We are proud of our well trained and highly motivated staff who work tirelessly every day to deliver a good product or contribute to the group in any other capacity. As a good employer we shoulder our responsibilities by ensuring that they can work safely, keep their know-how and expertise up to date and continue to develop.

As Cosun has more older employees than younger ones, we must invest in keeping them fit. Older employees are also remaining in the labour process for longer than in the past. When they retire, there must be enough qualified young people to fill the vacancies. Cosun is facing the challenge of having to recruit enough qualified young people and train them further within the organisation.

Figure 9 shows that the number of permanent FTEs has fallen very slightly in recent years. The number of temporary workers, by contrast, has risen.

SAFE WORKING CONDITIONS

Safety at work is a permanent matter of concern. Cosun’s overall safety record was slightly better in 2016 than in the previous year (2016 index: 21) but the number of lost time incidents and accidents is still too high. Safety at work is expressed as an index based on the number of lost time incidents reported per 1,000 FTEs. Cosun’s target for 2017 is to have fewer than 6.4 registered incidents based on the health, safety and environmental checklist for contractors (VCA). This means we must all make an extra effort to be even more aware of unsafe situations, to hold each other responsible for unsafe conduct and to ensure strict observance of the safety rules.

Cosun has been using the VCA index to measure the injury frequency (IF) since 2017. The index is calculated as IF = A x 1,000,000/t, where A = the number of incidents that led to lost time or absenteeism in one year, and t = the total number of hours worked – based on all permanent and temporary staff at the location – in the same year. The index does not take account of incidents involving external parties working on...
HEALTH AND FITNESS

Sickness absenteeism has been steadily increasing for several years. In 2015 the rate had been 3.9%, in 2016 it was 4.0%. In comparison with the average sickness absenteeism rate in the industry (2015: 4.8%, source: Statistics Netherlands) this is relatively low. We cannot say with certainty whether the steady upward trend is related to the increase in the average age of the staff.

With a view to the ageing workforce and the higher retirement age, the two business groups with the most members of staff, Aviko and Suiker Unie, launched fitness programmes for their employees some years ago. Such programmes cost money, but if the investments are weighed up against the cost of long-term sickness absenteeism, it is money well spent. To say nothing of the health benefits for the participants.

DIVERSITY

Several business groups employ people with a disability or a weak position on the labour market. These employees need more attention and sometimes more assistance than others. Our aim is to coach them so that they can eventually carry out their duties independently. It is sometimes a matter of trial and error before young disabled people adjust to working at Cosun, but when they do both sides are very pleased with the results. Diversity in terms of gender balance and socio-cultural background is not a decisive factor in the recruitment procedure or in internal career development. The acid test is the right person in the right place. There was a shift in the gender balance in favour of women in 2016. They now account for 23% of the total workforce.
Cosun introduced a fully revised code of conduct in 2015 entitled the Cosun Principles. The principles set out the standards and conduct that are expected of Cosun’s staff so that they take the right decisions in their day-to-day work. Specific regulations and channels are also in place within Cosun for staff to report suspected wrongdoing, anonymously if they wish.

Anyone who suspects wrongdoing or a breach of integrity by one or more of their colleagues must be able to report it to a superior or, if that is neither possible nor desirable, to a confidential counsellor. To increase accessibility, a dedicated reporting line known as Speak Up has been introduced. Staff can contact a counsellor by telephone or through the website, in their own language and anonymously if they wish. We regularly draw attention to this channel.

We received just one report via Speak Up in 2016. It related to an initiative at one of the sites outside the Netherlands. The person making the report subsequently said they would discuss the matter internally and no further action was taken.

We respond to reports of potential wrongdoing as quickly as possible. It is good that this channel is in place and is used in practice.

Some issues, such as the atmosphere at work, a colleague’s inconsiderate behaviour and the relationship with a manager, are perhaps better discussed with a superior, the P&O department or the local Works Council. In such cases the counsellor encourages the staff to try to solve the problem internally first. The only report received in 2016 fell into this category and was dealt with locally at the site itself.

The Cosun regulations on reporting suspected wrong-doing are now eight years old and will be reviewed against the Whistleblowers (Safe Haven) Act introduced in July 2016. Given the decline in the number of reports received, all the business groups will benefit if the regulations are brought to their attention again.

Safety, both physical and social, is a key theme in the Cosun Principles. The Cosun Principles apply not only to all members of staff but also to the cooperative’s Board members, executive directors and supervisory directors. The new code was brought to everyone’s attention during 2015 through various channels, including both the line organisation and our own media such as websites, staff magazines and leaflets enclosed with the payslips. In parallel, we have developed instruments to help managers introduce the Cosun Principles and raise awareness of the desired conduct.