The Novozymes Report 2016

Rethink Tomorrow

novozymes®

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The big picture

In 2016, our customers avoided an estimated 69 million tons of CO_2 emissions by applying Novozymes' products. The savings achieved are equivalent to taking approximately 30 million cars off the road.

Key financial performance

Market leader in industrial enzymes

With an estimated 48% of the global enzyme market in 2016, Novozymes reinforced its position as the world's leading producer of industrial enzymes.

Key figures

	2016 realized	2017 outlook
Sales growth, organic	2%	2-5%
Sales growth, DKK	1%	3-6%
EBIT growth	2%	3-6%
EBIT margin	27.9%	~28%
Net profit growth	8%	2-5%
Net investments excl. acquisitions, DKKm	1,188	1,700-1,900
Free cash flow before acquisitions, DKKm	2,652	2,000-2,200
ROIC (including goodwill)	25.1%	24-25%
Avg. USD/DKK	673	696

Organic sales growth

2%

Sales grew by 2% organically and by 1% in DKK. Sales to Agriculture & Feed and Technical & Pharma were the most significant contributors to organic sales growth in 2016.

EBIT margin

27.9%

EBIT margin was 27.9% in 2016, an improvement of 0.2 percentage points compared with 2015.

Net profit growth

8%

Net profit was DKK 3,050 million, an increase of 8% from DKK 2,825 million in 2015, driven by higher EBIT and lower net financial costs.

ROIC

25.1%

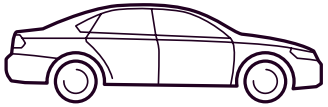
Return on invested capital (ROIC) including goodwill was 25.1%, 0.8 percentage points lower than for 2015. The decrease in ROIC was mainly a result of a higher capital base due to higher average net working capital, net investments and the acquisition of Organobalance GmbH.

Read more in Accounts & performance

Key sustainability performance

CO_2 emission reduction

30,000,000



Read more in Note 7.1 Climate change

In 2016, our customers avoided an estimated 69 million tons of CO_2 emissions by applying Novozymes' products. The savings achieved are equivalent to taking approximately 30 million cars off the road.

Employee satisfaction

"Satisfaction and motivation" score in annual employee survey

2016 realized

76

2016 target

≥ 75

Water efficiency

6%

Water efficiency improved by 6% compared with the base year 2014. This improvement was less than our target of 12%. This was due to higher than expected water consumption as well as challenges in the system for water reuse in Denmark. The increased water consumption together with the slower-than-expected development in gross profit affected water efficiency performance.
See Note 7.3.

Energy efficiency

10%

Energy efficiency improved by 10% compared with 2014. This improvement was less than our target of 18%. This was caused by operational challenges in Novozymes' fermentation facilities and higher than expected energy consumption. The increased energy consumption together with the slower-than-expected development in gross profit affected energy efficiency performance.
See Note 7.2.

Frequency of occupational accidents

2.2

The frequency of **occupational accidents** decreased to 2.2 per million working hours in 2016 from 2.5 in 2015. However, this achievement was below our target of ≤ 1.7. Many accidents involved trips and falls, and some were due to mobile device distractions. Several new initiatives with focus on safety improvements were undertaken in 2016.
See Note 8.2.

Key figures

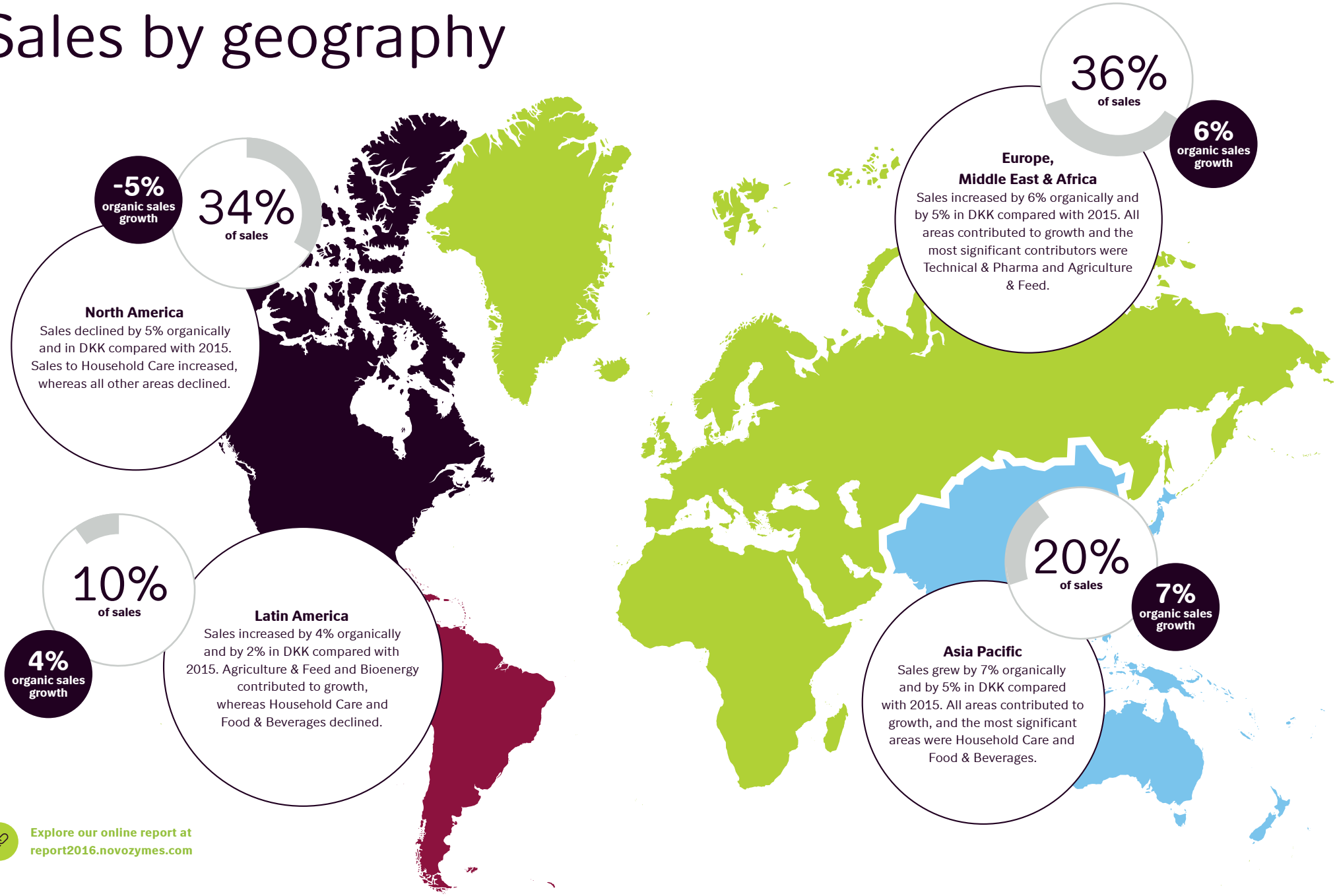
	2016 realized	2016 target	2017 target
Estimated reduction in CO_2 emissions through our customers' application of our products, in million tons	69	63	≥ 72
Water efficiency*	6%	12%	4%
Energy efficiency*	10%	18%	7%
CO_2 intensity*	16%	20%	9%
Renewable energy	24%	24%	24%
Satisfaction and motivation**	76	≥ 75	
Opportunities for professional and personal development**	79	≥ 75	
Occupational accidents***	2.2	≤ 1.7	≤ 2.0
Employees promoted who are women	36%	≥ 40%	
Employee absence	2.0%	≤ 2.0%	≤ 2.0%
RobecoSAM class rating****	Silver	Medal	Medal

* Efficiency/intensity is measured by dividing net consumption by gross profit. The improvement is calculated as the relative improvement in efficiency/intensity compared with the base year 2014.
** Score in annual employee survey.
*** Per million working hours.
**** The distribution of medals will be announced in RobecoSAM's Sustainability Yearbook on Jan. 19, 2017. We expect silver.

RobecoSAM class rating Silver

Read more in Accounts & performance

Sales by geography



-5%
organic sales growth

34%
of sales

North America
Sales declined by 5% organically and in DKK compared with 2015. Sales to Household Care increased, whereas all other areas declined.

10%
of sales

4%
organic sales growth

Latin America
Sales increased by 4% organically and by 2% in DKK compared with 2015. Agriculture & Feed and Bioenergy contributed to growth, whereas Household Care and Food & Beverages declined.

36%
of sales

6%
organic sales growth

Europe, Middle East & Africa
Sales increased by 6% organically and by 5% in DKK compared with 2015. All areas contributed to growth and the most significant contributors were Technical & Pharma and Agriculture & Feed.

20%
of sales

7%
organic sales growth

Asia Pacific
Sales grew by 7% organically and by 5% in DKK compared with 2015. All areas contributed to growth, and the most significant areas were Household Care and Food & Beverages.

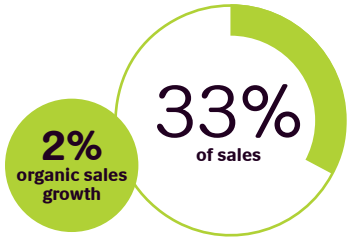
Explore our online report at report2016.novozymes.com

Sales by industry

Household Care

Sales to the Household Care industry increased by 2% organically and in DKK compared with 2015. The division has made good progress on the key strategic initiatives throughout 2016, with continued progress expected in 2017. Market interest in new enzyme technology is very strong.

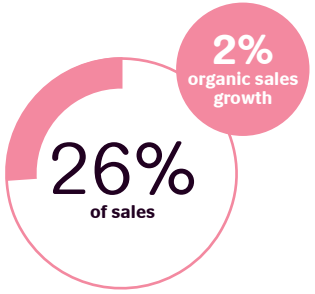
In 2016, sales in Asia grew solidly, driven by penetration of performance-boosting enzymes in liquid formulas, particularly in the Chinese market. Sales in North America grew moderately due to higher demand for premium detergent products. Sales growth in Europe was slightly positive, following the underlying market growth. Sales growth in Latin America was slightly negative.



Food & Beverages

Sales to the Food & Beverages industries increased by 2% organically and increased by 1% in DKK compared with 2015.

In 2016, sales to the starch and beverage industries were the main contributors to sales growth. Enzyme sales to the starch industry benefited from strong starch syrup markets and recently launched innovation. Sales to the baking industry were flat. Sales for production of healthy foods declined due to lower enzyme sales for infant formula, but growth in other areas of the health category partly offset the negative development.



Bioenergy

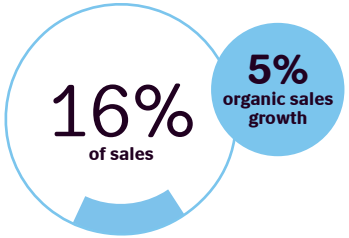
Sales to the Bioenergy industry decreased by 3% organically and by 4% in DKK compared with 2015.

Throughout 2016, ethanol producers have focused on low-cost solutions, resulting in a dynamic market place with negative product mix and price changes. US ethanol production in 2016 is estimated to be up by 3% compared with 2015, and global ethanol production is estimated to be up by 2%.

Agriculture & Feed

Sales to the Agriculture & Feed Industries increased by 5% organically and by 4% in DKK compared with 2015. Sales growth was driven by solid sales growth in Feed and moderate sales growth in BioAg.

Sales development in BioAg was moderately positive, primarily driven by the ramp-up in Q4 in preparation for the 2017 North American growing season. Agricultural markets in the US and Latin America have felt strong headwinds in 2016, which also affected farmers' willingness to invest in biological solutions. In 2016, Novozymes recognized DKK 194 million of deferred income as revenue, compared with DKK 224 million in 2015. Sales to the animal feed market grew solidly across main geographies. The growth was driven by both carbohydrate- and protein-enhancing solutions. The launch of the probiotic Alterion® in 2016 has been successful, and trials have progressed well throughout the year.



Technical & Pharma

Sales to the Technical & Pharma industries increased by 13% organically and by 8% in DKK compared with 2015. The strong growth was mainly driven by sales of enzymes for pharmaceutical production, sales of hyaluronic acid and contributions from the royalty agreement with GSK.

Key events in 2016

JANUARY

Adisseo and Novozymes launch a probiotic based on beneficial bacteria to improve poultry health

Henkel recognizes Novozymes with its Best Supply Performance and Sustainability Award Laundry & Home Care for 2015

APRIL

Forbes magazine names CEO Peder Holk Nielsen as one of its 30 global game changers

JUNE

Alaska Airlines becomes the first carrier to operate flights using a blend of 20% renewable fuel and traditional jet fuel

20 organizations, including Audi, Pannonia, Yale University and Novozymes, team up to advance sustainable fuels through the below50 initiative

below50

AUGUST

DONG Energy and Novozymes announce their intention to turn household trash into green power at DONG Energy's future REnescience plant in Manchester, UK

H1

Novozymes announces its H1 results with adjusted sales expectations for the full year due to the Q2 performance and the uncertainty facing many markets

SUSTAINABLE DEVELOPMENT GOALS

The UN Global Compact recognizes Novozymes China as a Pioneer Company for achieving the UN Sustainable Development Goals (SDGs)

Novozymes is ranked #9 on Fortune Magazine's list of companies changing the world

MEMBER OF
Dow Jones Sustainability Indices
In Collaboration with RobecoSAM

SEPTEMBER

The Dow Jones Sustainability Index ranks Novozymes among the most sustainable companies in the world, with an overall score of 90 out of 100

Novozymes acquires Organobalance GmbH, a company specializing in microbial screening and assay development

P&G names Novozymes its Business Partner of the Year and recognizes our consistent high-level performance with the Excellence Award

OCTOBER

The CDP A List recognizes Novozymes as a world leader on corporate climate action

CDP A LIST 2016 CLIMATE

NOVEMBER

Novozymes breaks ground on the new innovation campus in Lyngby, Denmark. The new center will be a global hub for biotech research and business development

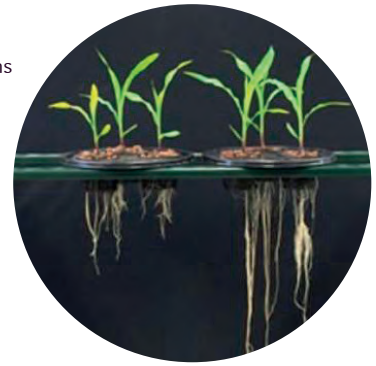
Novozymes announces plans to build a new production and supply chain facility near Mumbai, India

Science 2016 TOP EMPLOYER

Science Magazine ranks Novozymes among the top 10 science employers in the world, for the second year running

DECEMBER

The BioAg Alliance launches Acceleron® B-300 SAT, a new microbial solution that boosts corn yields



Economic contribution

In 2016, Novozymes' generated value amounted to DKK 14,291 million. 86% of this amount was returned to society. The remaining 14% was reinvested in Novozymes to develop the company, and ensure competitiveness and future value generation for distribution among key stakeholders.

In addition to the 8% returned to capital providers, Novozymes bought back shares worth DKK 2 billion in 2016.

Generated value

Sales 99%

Financial and other income* 1%

14,291 DKKm

Distributed value

42%
used to purchase goods and services from our **suppliers**

10%
returned to the **community** by paying corporation tax, other taxes and duties

26%
used for **employee** wages, pensions, etc.

8%
in financial costs and dividends for our **capital providers**

14%
reinvested in **Novozymes** for future value generation

* Grants, license fees, milestones, gain/loss on sale of licenses, patents, etc.

Five-year summary

DKK million	2016	2015	2014	2013	2012
Income statement					
Revenue	14,142	14,002	12,459	11,746	11,234
Gross profit	8,126	8,129	7,149	6,716	6,423
EBITDA	4,960	5,011	4,400	3,639	3,448
Operating profit / EBIT	3,946	3,884	3,384	2,901	2,745
Financial items, net	(34)	(257)	(84)	(134)	(158)
Net profit	3,050	2,825	2,525	2,201	2,016
Balance sheet					
Total assets	18,659	17,791	18,426	16,506	15,113
Shareholders' equity	11,745	11,593	11,280	11,066	9,568
Invested capital	12,584	11,891	10,535	11,871	10,998
Net interest-bearing debt	990	437	(716)	805	1,430
Investments and cash flows					
Cash flow from operating activities	3,840	3,339	4,525	2,599	2,758
Purchases of property, plant and equipment	1,076	968	703	762	1,128
Net investments excluding acquisitions and the BioAg Alliance impact	1,188	1,015	715	783	1,177
Free cash flow before net acquisitions and securities	2,652	2,324	4,229	1,816	1,581
Business acquisitions and purchase of financial assets	161	242	14	640	732
Free cash flow	2,491	2,082	4,215	1,176	849

		2016	2015	2014	2013	2012
Key ratios						
Revenue growth, DKK	%	1	12	6	5	7
Revenue growth, organic	%	2	4	7	7	4
R&D costs (% of revenue)	%	13.2	13.5	14.8	13.0	13.6
Gross margin	%	57.5	58.1	57.4	57.2	57.2
EBITDA margin	%	35.1	35.8	35.3	31.0	30.7
EBIT margin	%	27.9	27.7	27.2	24.7	24.4
Effective tax rate	%	21.4	22.0	23.0	20.2	22.0
Equity ratio	%	62.9	65.2	61.2	67.0	63.3
NIBD/EBITDA		0.2	0.1	(0.2)	0.2	0.4
Return on equity	%	26.1	24.7	22.6	21.3	21.9
ROIC including goodwill	%	25.1	25.9	23.1	20.0	19.9
WACC after tax	%	6.5	5.3	3.7	4.7	4.7
Earnings per share (EPS), diluted	DKK	10.06	9.12	8.02	6.93	6.33
Dividend per share (2016 proposed)	DKK	4.00	3.50	3.00	2.50	2.20

Key ratios have been prepared in accordance with The Danish Finance Society's "Recommendations & Financial Ratios 2015 Nordic Edition" as well as certain key figures for the Novozymes Group as described in the Glossary.

Environmental and social data						
Total number of employees	No.	6,441	6,485	6,454	6,236	6,041
Rate of employee turnover	%	10.4	9.1	8.1	7.5	8.1
Frequency of accidents with absence per million working hours		2.2	2.5	1.7	2.4	3.0
Employee satisfaction	Score	76	77	77	77	78
Development opportunities	Score	79	80	75	74	75
Employees promoted who are women	%	36	41	34	26	37
Estimated CO_2 reductions from customers' application of Novozymes' products *		69	60	60	52	48

* Data for 2012-2013 have been calculated based on life cycle assessment data from 2008.

Letter from the Board of Directors

Pushing through a challenging year

2016 was a challenging year for Novozymes. As the year progressed, sales growth proved harder to achieve than originally anticipated. This had a significant impact on all of Novozymes, its employees, leadership team and also the share price, which fell by 26% over the year. Although challenging, 2016 also saw good progress in a lot of areas, which positioned Novozymes well for the future: Our biotechnology platform was strengthened across the field of enzymes and microbes, we saw good progress in the pipeline of new products, exciting products were brought to market, and 2016 was yet another strong year in terms of earnings.

Novozymes' strategy is to invest significantly in being at the forefront of industrial biotechnology. Together with our customers and partners, we bring innovation to market that improves our customers' business whilst growing the market for sustainable biological solutions.

Accelerating short- and long-term growth through execution

The low sales growth in 2016 led the Board and Executive Leadership Team to focus on accelerating growth in the short term as well as in the long term. A lot of the areas in which Novozymes is currently conducting research will generate revenue in 3-5 years or beyond. Although this may herald great value, it will not help us in 2017. Therefore, we are currently focusing on execution, delivering our innovations faster and getting as close to our customers as possible in order to maximize the value of the extensive product portfolio each of our divisions boasts.

In 2016, we launched some exciting solutions across divisions within both enzymes and microorganisms. For example, we launched our first probiotic for animals together with Adisseo, and as part of The BioAg Alliance, we launched our first microbial product for corn. Both launches open up new markets for Novozymes, and the Board has great expectations in terms of their success.

During the year, Novozymes also acquired Organobalance GmbH, a small German research-oriented company with an exciting platform within microbial solutions that will strengthen and complement Novozymes' own talents in the microbial space.

Overall, 2016 was a year with challenges across many of our markets. However, nothing has happened in the markets that would prompt us to change our strategy. We have to constantly advance and strengthen our agility, flexibility and diversity. We firmly believe that there will be an increased need for technologies that enable the world to utilize raw materials better, consume less energy, and produce more and better foods for a growing population.
The products and projects Novozymes has in the market today and in the pipeline reassure the Board that growth rates will increase again.

Planning for the future of Novozymes

After 17 years as Chairman of Novozymes' Board of Directors, Henrik Gürtler has decided not to seek re-election to the Board. Following the Annual Shareholders' Meeting on February 22, 2017, Mr. Gürtler will pass on the torch. The Board would like to take this opportunity to thank Mr. Gürtler for his many years of dedication to Novozymes and his passion for growing the company since the IPO in 2000. The Board wishes him all the best in his future endeavors.

The Board proposes the election of Jørgen Buhl Rasmussen as the new Chairman of the Board. Mr. Rasmussen has been a member of the Board since 2011, and Vice Chairman for the past year. He has the necessary skills and experience from leading large, global companies as well as the in-depth knowledge of Novozymes required to take on the task.

As Vice Chairman, the Board is proposing the election of Agnete Raaschou-Nielsen. Ms. Raaschou-Nielsen has also been a member of the Board since 2011, and from 2014 to 2016 she was also Vice Chairman of the Board. She has extensive experience in strategic leadership, acquisition and divestment of companies as well as macroeconomics and intellectual property rights.

In addition to the changes to the Chairmanship, the Board is proposing the election of two new members, Ms. Kim Stratton and Mr. Kasim Kutay. Ms. Stratton is responsible for International Commercial at Shire, a global biotech company. She has extensive international experience in a technology-based company that has created high growth with impressive earnings. Mr. Kutay is CEO of Novo A/S. He has more than 25 years' experience within the pharmaceutical industry and banking.

These changes are a result of the Board's continuous work to ensure the right competencies on the Board and a successful demonstration of its long-term succession planning. The Board looks forward to welcoming the new members to the Board and to continuing its close collaboration with the Executive Leadership Team in the drive to fulfill Novozymes' purpose of finding biological answers for better lives in a growing world.

Let's rethink tomorrow.

January 2017
The Board of Directors
Novozymes A/S

Letter from the CEO

Amplifying the impact of biological solutions in tough markets

In 2016, Novozymes delivered 2% organic sales growth and strong earnings with significant progress in a number of areas. 2017 will be a year with sustained investments in new innovation.

Our financial results for 2016 showed strong earnings, and we were able to expand our EBIT margin despite weak organic sales growth of 2%. Sales growth was moderate across industries and, from a regional perspective, we saw growth in Europe and Asia Pacific, whereas sales in North America in particular proved challenging. We were able to deliver strong earnings due to very low cost expansion and our continued efforts to optimize productivity in our facilities.

Novozymes' key growth driver is delivering solutions that improve the sustainability performance of our customers and partners. We are performing against a set of ambitious sustainability targets to drive our company toward delivering on the UN Sustainable Development Goals. In 2016, our customers avoided an estimated 69 million tons of CO_2 emissions by applying our solutions. The savings achieved are equivalent to taking approximately 30 million cars off the road. I am proud of this achievement, but at the same time, we were unable to meet some of our other sustainability targets, for example water efficiency, frequency of occupational accidents and diversity. This is not satisfactory, and in 2017 it will be key for us to deliver a better performance.

Delivering value

Novozymes operates in more than 40 different markets. During the years I have been with the company, most markets have seen positive as well as negative developments. However, whenever there have been negative developments, we have been able to deliver solid growth over time, as the combination of diversified markets and strong innovation provides a balance in favor of positive development.

2016 was a year with more headwind than usual. A company such as Novozymes that sells biological solutions that reduce the use of raw materials and energy in various processes, creates less value for its customers when energy and raw materials are cheaper. In 2016, our customers started planning and designing their offerings based on cheaper raw materials. If we compare 2015 and 2016, the world has not changed significantly, but customer perception of what adds value has changed.

We were not able to fully predict these developments when planning for 2016. We expected 3-5% growth and ended the year on 2%. As the market leader in industrial enzymes, we were able to retain our global market share of an estimated 48%.

2016 was also a year when we adjusted our product portfolio to create growth in a world with low-priced raw materials. We maintained our dedicated focus on innovation and continued research as part of long-term programs aimed at developing more sustainable solutions. At the same time, we re-evaluated how programs are tailored and altered to address changing customer perceptions. Improvements in operational efficiency and general cost awareness have been important levers to deliver on our earnings target.

"Novozymes' key growth driver is delivering solutions that improve the sustainability performance of our customers and partners."

Innovations and recognitions

In 2016, we launched a number of exciting new innovations that set us apart in the marketplace. For example, at the beginning of the year, we started marketing our first probiotic for poultry together with our partner Adisseo. In September, we complemented our microbial capabilities with the acquisition of Organobalance GmbH, a German company that researches and develops microbial solutions.

In December, we launched the first product from The BioAg Alliance with Monsanto – a new yield-boosting microbial seed coating for corn. On top of this, we announced plans to build a new production and supply chain facility near Mumbai, India, and broke ground at our new innovation campus in Lyngby, near Copenhagen, Denmark, to secure the long-term future of the business.

Our customers continued to show their appreciation for our innovation efforts in 2016. Novozymes received the prestigious Best Business Partner of the Year Award from P&G for the seventh time and we were recognized for our consistent high-level performance with their Excellence Award. The Best Business Partner of the Year Award has been given out eight times, and no company has received it as many times as Novozymes. These are very important recognitions of Novozymes and its employees from one of its largest customers.

Our continuous sustainability efforts also won recognition this year. Once again, we scored 90 out of 100 in the chemicals sector of the Dow Jones Sustainability World Index, placing us among the top companies in terms of sustainability in the competitive chemicals sector.

From commitment to action

The political and economic developments we saw in 2016 did not drive the world to become more sustainable. The current low raw material prices are not sustainable, and while increased consumption at low cost may be attractive in the short term, it is unsustainable in the long term. Over the past couple of years, we have seen strong commitments from companies, experts, politicians and NGOs, and there is no doubt that sustainability is high on the agenda. Now is the time for action. Helping to make the world become more sustainable is Novozymes' most important driving force. We invest in delivering biological answers to some of the world's most pressing problems.

Adjusting for growth

In February 2016, we changed our organizational structure to bring decisions about customers, positioning and investment in our innovation pipeline even closer to customers.

We see early signs of progress from the reorganization, but also see that we need to add further force in order to deliver more impactful innovations to our customers and protect our earnings. We will prioritize harder and reallocate resources to the areas with the biggest growth potential. Unfortunately, we need to lay off 198 employees across the organization. It is always hard to lay off colleagues, but it is necessary for us in order to develop our company and ensure enough power to our customer-facing activities. We will do our utmost to support the colleagues affected and help them find new employment.

Looking ahead

We have a strong innovation pipeline. In 2-3 years, the key programs in our pipeline will be successfully commercialized, and we are confident that it will then be possible to achieve organic sales growth in line with our historical performance.

Novozymes' two other long-term financial targets – that of an EBIT margin at 26% or above, and a ROIC including goodwill of 25% or above – are unchanged. Achieving these targets requires that we constantly build our operational efficiency and optimize our processes in order to achieve higher enzyme yield and produce enzymes with higher activity. We will also keep our six impact targets and long-term non-financial targets, to continue to drive Novozymes' actions toward supporting the UN Sustainable Development Goals.

Although 2017 looks slightly better than 2016, we also know that it will be challenging. We will continue to invest for a future with a higher demand for sustainable solutions, building our leadership position within industrial biotechnology.

Peder Holk Nielsen
President & CEO

Novozymes in a nutshell

Novozymes is the global market leader in biological solutions, producing a wide range of industrial enzymes and microorganisms. We provide solutions that help customers produce more from less, adapt to market changes, make their products stand out and reduce costs.

Sustainability is in our DNA

The planet's population is growing, and consuming more – putting a strain on natural resources and calling for more sustainable solutions. Novozymes helps the world address some of these challenges. Used in the manufacture of a wide variety of products, our innovative biological solutions improve the efficiency of processes both in industry and in everyday life, by saving energy, water and other raw materials while reducing waste.

The nature of our products makes sustainability an intrinsic part of our business. In 2016 alone, our solutions helped our customers save an estimated 69 million tons of CO_2. That is equivalent to taking 30 million cars off the road!

Delivering world-class innovations

The possibilities for further developing enzymes and microorganisms into new business solutions are vast. Every year, around 13% of Novozymes' revenue is reinvested in R&D, and more than 1,400 of our employees work in R&D to create innovation that influences how our customers work and succeed. In 2016, we launched eight new products aimed at the Household Care, Agriculture & Bioenergy and Food & Beverages industries.

Our purpose

Together, we find **biological answers** for better lives in a growing world – Let's rethink tomorrow.

Our business model

Our promise to customers is to make our biological solutions work successfully for them. Want to know more about how we innovate, produce and supply our biological solutions to customers across a range of industries worldwide?

Read more about our business model

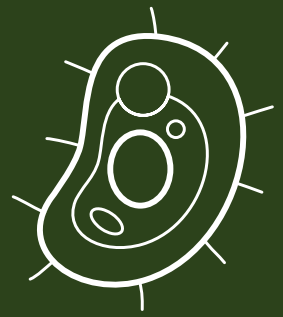
Small components that make a big difference

What are enzymes?

Enzymes are proteins that act as catalysts and thereby help complex reactions occur everywhere in life. This is nature's own way of kick-starting biological processes. When one substance needs to be transformed into another, nature uses the catalyzing enzymes to speed up and control the process. With Novozymes' expertise, enzymes can excel on an industrial scale by optimizing output and accelerating processes, while saving water, energy and raw materials.

What are microorganisms?

Microorganisms are living, single-celled organisms such as fungi or bacteria. Like enzymes, Novozymes' microorganisms have natural properties that influence processes and reactions. The industrial applications for microorganisms are countless. For example, microbes expand the farmer's toolkit to increase yield and protect crops. Microbes produce enzymes and are found everywhere, some come from volcanoes and Arctic lakes and are particularly robust in hot and cold environments.



What do our enzymes do?

Animal feed
Maximize nutrition by enhancing digestive systems

Baking
Improve softness, freshness and dough strength

Biofuels
Produce sustainable energy from crops or waste

Brewing
Improve filtration and flavor of beer and ensure raw material optimization

Detergents
Remove tough stains and enable low-temperature wash

Health & nutrition
Make foods safer by removing carcinogenic and allergenic ingredients

Juice
Increase yields and improve clarity of juice

Leather
Prepare, degrease and tan leather more efficiently

Oils & fats
Harden fats without unhealthy trans-fatty acids

Pulp & paper
Reduce water, energy and chemical consumption

Pharmaceuticals
Improve yields and reduce costs of drug production

Starch
Produce sugar syrups more simply and efficiently

Textile
Save time, water, energy and chemicals in textile production

What do our microorganisms do?

Biological solutions for agriculture (BioAg)
Improve crop yield and health

Poultry health & nutrition
Improve animal health, growth and feed utilization

Aquaculture
Support improved growth, survival and disease resistance

Biogas
Work as processing aids

Wastewater treatment
Make wastewater treatment facilities more efficient

Product launches in 2016

Saphera® – the only lactase to offer manufacturers of lactose-free products better control of lactose elimination, better sweetness stability in sugared dairy products and improved suitability in fermented dairy products such as yoghurt.

Q1 2016

Alterion® – a probiotic solution that helps poultry farmers lower costs by improving feed conversion and gut health. It also provides a natural alternative to antibiotic growth promoters.

Progress® Uno – a protease for tough conditions that delivers consistent wash performance – even in water-rich concentrations – and reduces or eliminates the need for stabilizers, as well as increasing formulation flexibility for detergent manufacturers.

Q2 2016

Amplify® Prime – best-in-class liquid amylase that allows manufacturers to offer laundry detergents optimized for short wash cycles and in-depth cleaning at low temperatures, enabling consumers to save time and money.

Acceleron® SAT B-300 – a biological upstream seed treatment product containing the fungus *Penicillium bilaii* to boost corn yields.

Q4 2016

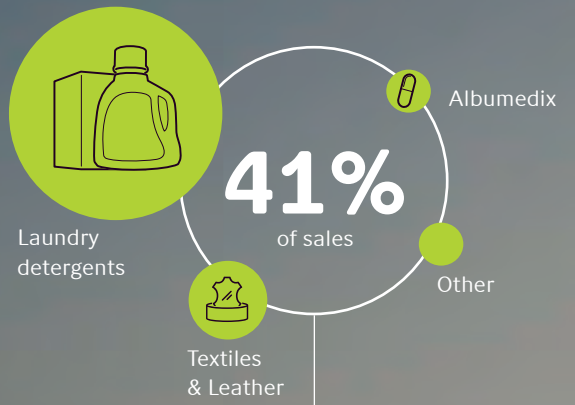
Fermax™ – the world's first biological solution to control foam when fermenting sugarcane to produce ethanol.

Extenda® Go 2 Extra & Extenda® Peak 1.5 Extra – saccharification enzymes for industrial sweetener production that enable starch-processing customers to further optimize their processes through better performance and greater consistency.

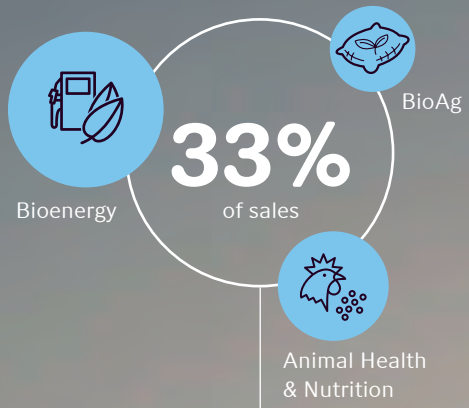
Quara® LowP – an enzymatic solution to help remove naturally occurring gums when refining oil. It also helps producers consistently meet specifications for phosphorus levels, improve oil yield and reduce the use of chemicals in the production process.

Novozymes' divisions

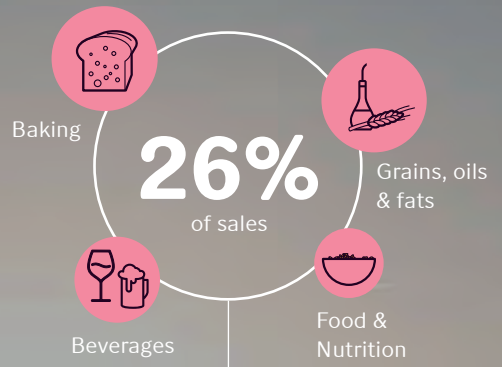
Household Care & Technical



Agriculture & Bioenergy



Food & Beverages



For more information about our solutions, please visit Novozymes.com

Our business

Macro and industry trends

Macro and industry trends impact Novozymes and emphasize the need for innovation and strong positioning of our solutions.

In 2016, the world market for industrial enzymes expanded by 1.7% to an estimated DKK 25.4 billion. Novozymes remained the market leader with an estimated 48% market share, followed by DuPont with an estimated 19%.

In the growing market for microorganisms, which is particularly influenced by trends in the agricultural industry, improving yields and complementing traditional chemistry and fertilizers remain priorities. This industry continues to attract increased attention from established agricultural chemical companies. In 2016, a consolidation wave swept the industry, with mergers announced by Bayer–Monsanto, Syngenta–ChemChina and Dow–DuPont, among others.

The world around us

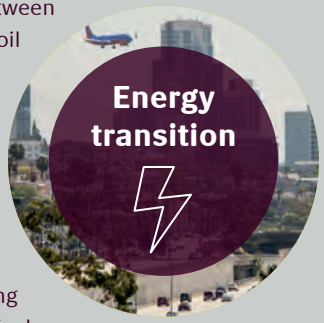
To ensure long-term success, Novozymes needs to understand how developments in the external world translate into specific macro and industry trends with the potential to drive or hinder growth in each of our end markets. While some trends are specific to one industry, Novozymes has also identified five macro trends that are globally relevant, impact multiple sectors or represent a fundamental shift in business as usual. These trends emphasize the need for new and transformative innovation as well as strong positioning of Novozymes' solutions.

Global macro trends

By 2030, global demand for water will outstrip supply by 40%, largely driven by the agricultural and manufacturing sectors. Unlike climate change, water is a local issue that is already affecting the well-being of some communities. Several regions around the world are experiencing severe water crises in the form of floods, polluted waterways or droughts. The availability of water is subject to growing government regulation, which is driving demand for solutions that reduce water consumption and improve wastewater quality.

To ensure global food security, the world needs to increase agricultural productivity significantly. The need to produce more from less is driven by a number of factors, such as increasing population, consumer pressure and climate change-related supply chain disruptions. In response, there has been an increase in the use of big data, sensors and digital farm management, microbial solutions and plant genetics.

Global macro trends



Crude oil prices have plunged since mid-2014, hovering between USD 30 and USD 50 per barrel. The market expects low oil prices to persist in the short to medium term. Low oil prices create ripple effects throughout the economy, as they push down the price of gasoline and other conventional fuels as well as the petrochemical derivatives that serve as inputs in many manufacturing industries.

The main impact of low oil prices on the uptake of renewables has been seen in the transport and heating sectors, which are still heavily reliant on fossil fuels.

Changes in global consumption patterns are largely driven by shifting demographics and rapid urbanization. Each year, close to 70 million people move from rural areas to cities. By 2030, 81% of global consumption will come from consumers in large cities. Although urbanization in itself can be a positive force, poorly planned cities, urban sprawl and associated infrastructure result in high levels of air, water and soil pollution, and significant public health challenges. The most significant demographic trend is the growing middle class in emerging economies. Estimates show that the global middle class will increase to 4.9 billion by 2030, of which 64% will live in Asia while only 22% will live in Europe and North America. Another key shift is the aging of the global population due to falling birth rates and longer life expectancy.

The increase in digital interconnections between people, things and organizations is reshaping the nature of business.

Digitalization enables companies to outsource or automate a number of back-office functions. It has also led to the rise of new manufacturing technologies (e.g. 3D printing) and impacts the way we communicate with customers, investors and other stakeholders. In addition, digitalization facilitates greater corporate transparency, and the use of big data and analytics is driving greater production efficiencies by enabling companies to analyze large data sets in real time, and R&D teams can create solutions tailored to specific customer needs. As an example, Novozymes' biofuel customers send data about their plant processes, outputs and operations to Novozymes' Biofuel Technical Service. The team analyzes the information to solve production problems and help the plant realize the full benefits of Novozymes' solutions.

The digital transformation is also changing the nature of work. Estimates forecast that new technologies such as robotics and machine learning could affect nearly half of all current occupations by 2020 and potentially exacerbate global unemployment.

Household Care

	Current trends	Growth drivers	Growth barriers	Our management approach
Macro trends	**Shifting demographics and urbanization**	• Demand for better-performing products in emerging markets • Growing demand for antibacterial and hygiene solutions for laundry	• Middle-class consumers' ability to differentiate brand performance • Competition putting pressure on detergent prices	Lead innovation Focus on opportunities
Macro trends	**Energy transition**	• Growing demand for energy-efficient solutions (washing at low temperatures and with low environmental footprint)	• Sustained low surfactant prices reducing adoption of high-performance enzymes	Focus on opportunities Rally for change
Macro trends	**Water scarcity**	• Demand to clean more with less water	• Low price of water	Focus on opportunities
Industry trends	**Stronger consumer preference for convenience and cleanliness**	• Opportunity to work on new solutions and formats (liquids, unit dose compaction, hygiene, etc.)	• Technology development in liquids and new formats needed to address rapid shifts in consumer preferences • Initial customer perception that compaction and washing at low temperatures are less effective	Lead innovation
Industry trends	**Customer consolidation**	• Stronger partners with greater reach providing potential for increased sales of Novozymes' solutions	• Stronger partners potentially having more bargaining power	Focus on opportunities
Industry trends	**Commodity price volatility driving cost-based optimization of detergent formulations**	• Growing customer focus on ensuring supply chains and sourcing raw materials from renewable sources	• Focus on cost optimization potentially making certain customers opt for lower enzyme levels, resulting in reduced wash performance	Focus on opportunities

Read more about our strategic focus areas in the Strategy section

Food & Beverages

	Current trends	Growth drivers	Growth barriers	Our management approach
Macro trends	**Shifting demographics and urbanization**	• Growing demand for better and more convenient foods • Improved processing and optimization of raw materials • Growing demand for substitutes for animal protein	• Consumer preference for traditional foods • Fragmented local markets and dietary habits • Fragmented regulation in local markets slowing market entry • Demand for rapid innovation in regional markets	Lead innovation Focus on opportunities
Macro trends	**Digitalization of the global economy**	• Customers using data analytics to validate efficiency gains achieved		Rally for change Grow people
Industry trends	**Consumer focus on health, wellness and natural products**	• Increased awareness about food safety • Demand for “naturally healthy” products • Growth in market for “food intolerance” products, such as lactose-free dairy	• Consumer skepticism about technology in food & beverage production • Conservative industries	Lead innovation Focus on opportunities Rally for change
Industry trends	**Increased cost of raw materials**	• Demand for optimization in raw materials and production processes • Price and yield stability of enzymes	• Customer inertia in changing formulations and adopting new technologies • Low raw material prices disincentivizing customers from adopting enzymatic solutions	Lead innovation
Industry trends	**Customers consolidating operations but diversifying brands to cater to hyperlocal consumer preferences**	• Customer focus on cost optimization, processing aids and brand building • Stronger partners with greater reach	• Fragmented local markets and dietary habits • Demand for rapid innovation in regional markets	Lead innovation Focus on opportunities

Bioenergy

	Current trends	Growth drivers	Growth barriers	Our management approach
Macro trends	**Energy transition**	• Industry consolidation and focus on process economics driving demand for enzymatic solutions that enhance yield and reduce chemical costs • Growth of low-carbon fuel standards driving demand for Novozymes' solutions for cellulosic ethanol	• Reduced demand for premium enzymes as ethanol producers optimize costs • Majority of renewable investments going to the power sector (solar, wind, etc.), while the transport sector continues to rely heavily on fossil fuels • Lack of political support outside of the US for starch-based ethanol • General lack of willingness to invest in cellulosic ethanol	Lead innovation Focus on opportunities Rally for change
Macro trends	**Digitalization of the global economy**	• Modern and automated ethanol facilities using data analytics to monitor performance and potential for optimization gains, driving demand for high-tier enzymes		Focus on opportunities
Industry trends	**US corn ethanol industry affected by low corn prices**	• Continued stable and coherent political mandate driving adoption of biofuels	• Lack of political commitment to expanding blending mandates • Resistance to exceeding 10% blend	Rally for change Focus on opportunities
Industry trends	**Waning public support for biofuels**	• Growing calls for CO_2 reductions in transportation sector driving demand for ethanol, if positioned as the best low-impact alternative on the market	• Competition with other transportation technologies such as electric vehicles to be the "best way" of reducing CO_2 emissions	Rally for change
Industry trends	**Volatile commodity prices squeezing customer margins**	• Price and yield stability of low-tier enzymes • Demand for enzymes with optimization potential	• Low ethanol prices increasing fight for share • Fluctuating value of co-products reducing demand for Novozymes' yield enhancement solutions	Lead innovation Focus on opportunities

Agriculture & Feed

	Current trends	Growth drivers	Growth barriers	Our management approach
Macro trends	**Transition to sustainable agriculture**	• Favorable regulatory requirements benefiting sustainable farming practices • Pressure on available farmable land increasing focus on getting more output from existing land • Demand for more efficient animal feed solutions to increase production with less grain input	• Customer skepticism and lack of understanding of biologicals • Fragmented and complicated regulation in local markets • Limited scientific proof for biologicals	Lead innovation Focus on opportunities Rally for change Grow people
Macro trends	**Shifting demographics and urbanization**	• Global growth in protein consumption due to changes in dietary habits • Demand for more sustainable protein • Governments in emerging economies (China, India, etc.) seeking solutions to increase agricultural productivity	• Lack of understanding of the potential of biotechnology in agriculture and feed	Rally for change
Macro trends	**Digitalization of the global economy**	• Rise of precision agriculture validating yield improvements and enabling tailoring of microbial solutions to farmers' specific soil conditions		Lead innovation
Industry trends	**Consumer focus on health, wellness and natural products**	• Growing calls for reduced use of antibiotics in farm animals, and focus on animal welfare • Growing demand for natural weed solutions that are not resistance forming or harmful to biodiversity • Growing demand for biocontrol solutions to replace chemicals	• Low pricing of traditional fertilizers and pesticides competing with more sustainable solutions • Fragmented and complicated regulation in local markets	Lead innovation Rally for change
Industry trends	**Farmers sensitive to fluctuations in commodity prices**	• High input costs for farmers driving demand for yield-enhancing and sustainable solutions • Attractive return on investment from feed enzymes and biologicals	• Low commodity prices forcing farmers to cut back on seed treatments • Limited scientific proof for biologicals	Lead innovation Focus on opportunities

Technical

Industry trends Macro trends

Current trends	Growth drivers	Growth barriers	Our management approach
Water scarcity	• Increasing demand for wastewater solutions due to increasing water quality/pollution cleanup regulations	• Water prices potentially so low that there is no incentive to invest in water-saving solutions	Lead innovation
Shifting demographics and urbanization	• Consumer demand in emerging markets for improved textile quality and longevity	• Demand for low-quality textiles and raw materials	Focus on opportunities Grow people
Continuous optimization in textile industry	• Enzymatic solutions potentially optimizing processes and lowering costs	• Preference for lower-cost, chemical solutions to enable market growth	Rally for change

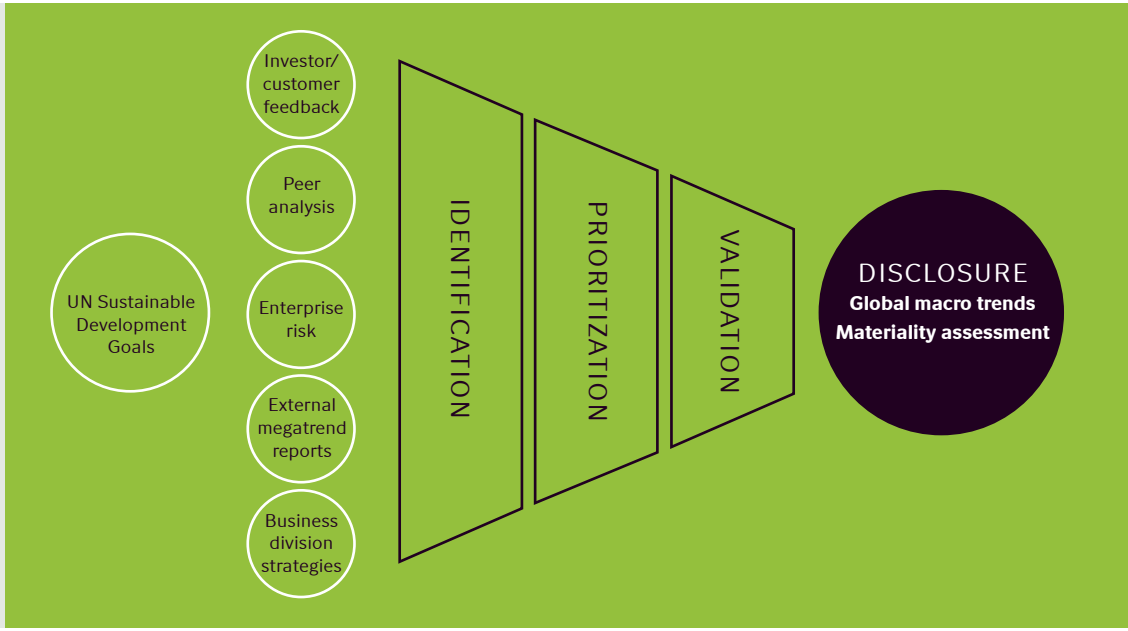
Identifying global macro trends

Novozymes has conducted an analysis of global macro trends to inform its long-term strategy development and sharpen its integrated reporting.

One of the starting points for the analysis was to better understand how the global challenges articulated in the UN Sustainable Development Goals translate into specific drivers of and barriers to business growth for Novozymes.

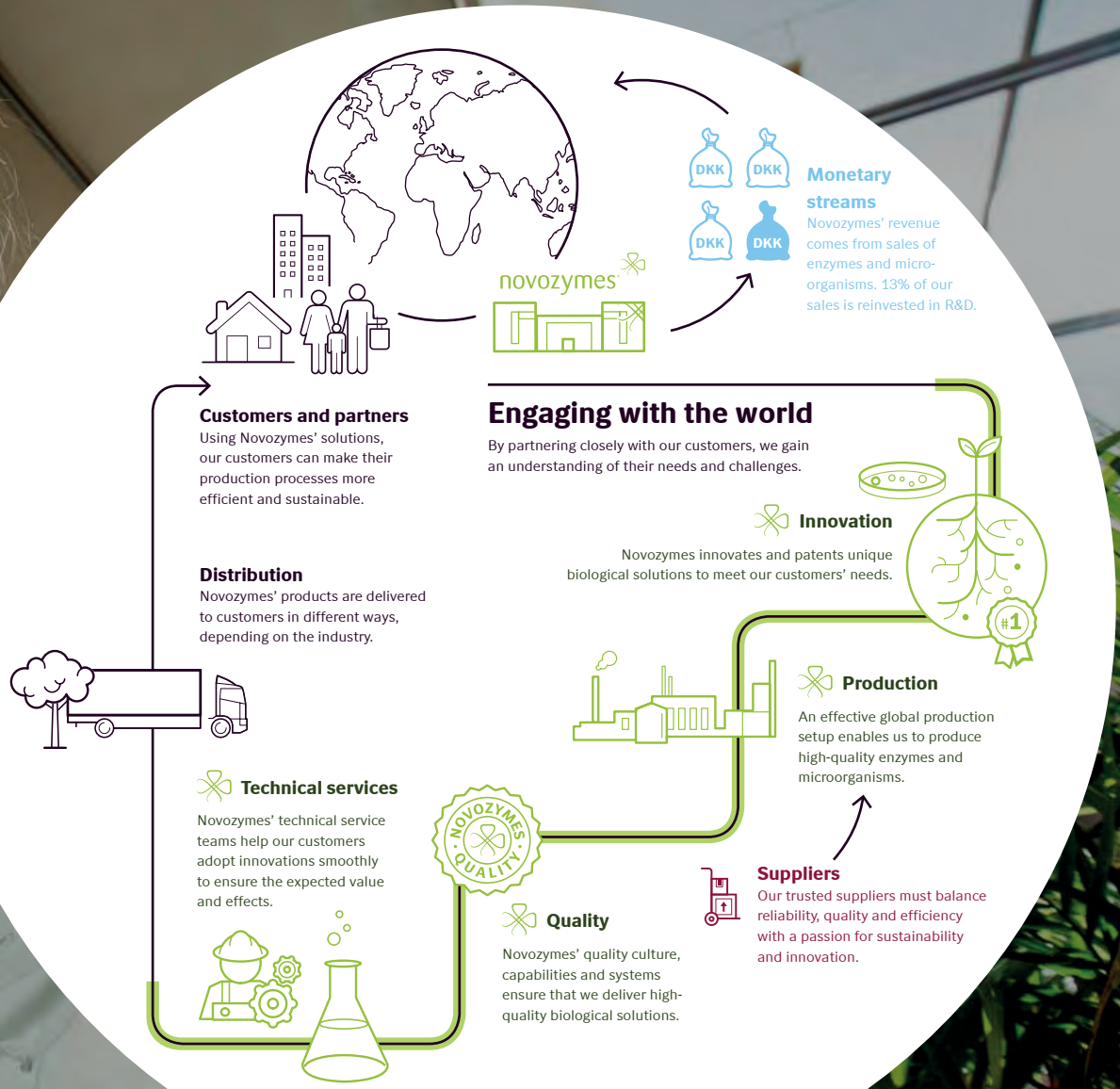
The analysis also included information from diverse sources, such as reports on global risks and opportunities, peer benchmarks and Novozymes' enterprise risks. Internal stakeholders prioritized trends according to relevance to Novozymes' business and importance to stakeholders. The top macro trends were validated through a series of dialogues with Novozymes' senior management and consultations with selected investors and customers.

See full description of Novozymes' integrated materiality assessment



Business model

Novozymes produces a wide range of industrial enzymes and microorganisms. Together with our partners, we turn to biology to unlock business opportunities across industries. We create microorganisms that help farmers achieve a better harvest and support sustainable agriculture. And we deliver biological innovation to producers of ethanol, bread, detergents, textiles and many other products. In brief, our business model is to develop biotech solutions to the world's pressing problems, profit from doing so, and then reinvest in finding more biological answers.



Explore Novozymes' interactive business model
report2016.novozymes.com

By looking for new enzymes and microbial technologies or improving existing ones, we deliver and apply innovation that has an impact and creates value for customers, improving performance and reducing costs. Our business model fits well with current and future global macro and industry trends. Together with our strategy, it forms the framework for our operations and will ultimately enable us to achieve our long-term targets and deliver on our purpose. Of course, there are also risks associated with Novozymes' operations and with opportunities not materializing, and these are presented in the Risk management section.

Sustainability and business go hand in hand

Sustainability is an innate part of all Novozymes' products and a key part of Novozymes' value proposition and business model. Sustainability is also evident in our agreements with suppliers and partners, as well as in our production. We have ambitious targets for reducing our resource consumption and CO_2 emissions, as well as a strong focus on providing a safe and motivating working environment for our employees. With climate change high on the political and public agenda, our focus on sustainability is an advantage as customers look for sustainability as a differentiator. Our long-term target for global CO_2 savings resulting from customers' application of our products enables us to track and document our impact.

Our dedication to sustainability goes beyond the products we offer to our customers. When the UN Sustainable Development Goals (SDGs) were published in September 2015, we started working on ways to integrate these into Novozymes' business. The SDGs highlight environmental, economic and social issues of global importance, such as eradicating poverty, investing in sustainable water, energy and transport infrastructure, and enabling food security. Our purpose and our long-term targets are guided by these goals.

Read more about our targets in the Targets section

Customers and partners

Using Novozymes' enzymatic or microbial solutions, customers save on costs and minimize the environmental footprint of their production by reducing or substituting raw materials, saving resources and energy, or improving product quality. By partnering closely with our customers, we gain a better understanding of their needs and challenges. In turn, we help them to improve their business by providing new insights and innovations that help them achieve their goals. Our integration with customers does not stop at innovation. In Household Care, for example, we have also begun working with key customers' commercial teams on branding, where our solutions provide a unique selling proposition that sets them apart from their competitors. We help our customers to understand the value our solutions bring to their products and the benefits that consumers will experience.

In line with its strategy "Partnering for Impact," Novozymes partners closely with other companies, such as Monsanto in The BioAg Alliance and DSM in animal feed. These partnerships benefit from Novozymes' strong innovation skills and manufacturing/fermentation expertise as well as our partners' key skills in areas such as screening, testing, data processing and commercialization, and make it possible to meet customer and consumer needs more effectively. Partnering with other companies gives Novozymes the opportunity to explore and enter into new business areas faster and more efficiently. For example, partners such as Monsanto can move large volumes through their network of distributors, providing Novozymes with a greater reach, enabling us to bundle more solutions and integrate these later in the customer value chain.

Engaging with the world

The SDGs have guided Novozymes' long-term targets for fulfilling its purpose to find biological answers for better lives in a growing world. To do this, we need to work together with partners such as customers, consumers, suppliers, governments and academia, and we need to open up our business model to take in ideas from outside the company. We partner with the UN and other governmental institutions to further sustainability objectives, and with academia to improve and expand fundamental research. We take part in dialogues on the world's pressing challenges, develop solutions to some of those challenges, profit from doing so, and then reinvest in finding more biological answers.

Innovation

Novozymes' solutions are derived from nature. We set out to solve a problem – be it cleaning clothes, breaking down biological material for ethanol or helping animals to stay strong and healthy – based on our extensive knowledge of enzymes and microorganisms. In fact, when we innovate with enzymes, we screen thousands of microorganisms to find the one that produces the enzyme with the exact characteristics we need for a specific product.

Most of Novozymes' products take between two and five years to go through the innovation pipeline from idea to market, but can sometimes take less than a year (e.g. in Bioenergy) or more than five years. For some industries, especially within food and feed products, there is a lengthy and comprehensive regulatory process before a product can be sold commercially. Novozymes also continuously updates and reinnovates its product portfolio to maintain product value and generate new patentable innovations.

In 2016, we established a new Portfolio Board to manage the R&D pipeline across Novozymes' divisions. This board evaluates all of the projects in the pipeline based on a number of criteria, including strategic impact, financial impact and contribution to delivering on the SDGs. That way, we ensure that the innovations we bring to market are in line with our long-term targets and purpose. This way of working is not entirely new to us: Environmental and social issues have long been a consideration in how we set priorities, and we have many years' experience of using life cycle assessments (LCAs) successfully to scale our research and measure the effect our biological solutions have on the environment.

Production

Once our innovation teams have tested and prepared an enzyme for an industrial process,

we apply that enzyme to a set of fast-growing microorganisms – our "workhorses" as we call them. Microorganisms produce enzymes, and an important part of our production process is to identify the microorganisms that produce the exact enzymes we need for each production process. One microorganism only produces a grain of sand's worth of enzymes, and industrial processes often require an entire beach. To produce these vast amounts of enzymes, we make the microorganisms multiply using fermentation. Having recovered the enzymes after the fermentation process, we prepare them for use by our customers.
Our global production setup enables us to do this wherever the necessary technology and skills are available. Currently, we produce our enzymes at eight plants across four continents.

Suppliers

Through an efficient supplier management system, Novozymes ensures that its suppliers balance reliability, quality and efficiency with a passion for sustainability and innovation. We partner closely with them in an effort to innovate and implement responsible solutions that have an impact on the world.

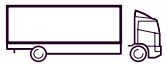
Quality

The ability to anticipate and understand customers' present and future needs allows Novozymes to deliver high-quality biological solutions. At Novozymes, quality is more than product quality; it also covers processes and services related to how we do business with our customers. Continuous surveillance and improvement are integrated components of Novozymes' quality system and the cornerstone of how we advance the services we offer to customers.

Technical services

When solutions are ready for application in customers' value chains, Novozymes' technical service teams help them adopt each innovation smoothly to ensure that the expected value and effect are delivered. These teams work on the ground at customer sites to make Novozymes' biosolutions a success in the specific environment where they are used. These implementation taskforces innovate for our customers as their technical experts, problem-solvers and advisers. For instance, our technical service teams help customers replace other inputs with an enzyme solution or perform troubleshooting at the customer's production facilities. They also adjust enzyme combinations to suit local recipes, for instance in the brewing and baking industries. Technical service teams are used more extensively in some industries than others, depending on the complexity of the production process at the customer's plant.

Our technical service teams set us apart from our competitors because they are able to optimize the use of our products and make the necessary adjustments to maximum effect for the customer. Working closely with customers, they combine Novozymes' global R&D capacity with deep industry experience to bring customers new value. The knowledge gained from interactions with customers also feeds back to our product pipeline and helps future innovations, so together we can evaluate our progress and rethink tomorrow.



Distribution

The distribution of Novozymes' products to customers depends on industry dynamics. Within Agriculture & Feed, distribution is conducted by our partners in the industry, Monsanto, DSM and Adisseo, as they are responsible for the commercial aspects of our partnerships in addition to testing and regulatory aspects. In Bioenergy and Household Care, most distribution is direct from Novozymes to customers. In Food & Beverages and Technical, markets are more fragmented, and we therefore have a more mixed distribution setup.

Monetary streams

Novozymes' revenue comes from sales of products – enzymes and microorganisms. Technical services are included in the price of the product. Around 13% of revenue is reinvested in R&D, benefiting both product innovation and production economy. Novozymes' most significant cost drivers are direct production costs, R&D and technical services. In terms of shareholder remuneration, Novozymes has a target dividend payout ratio of around 40% and conducts regular share buyback programs to provide a return for investors.

See our economic contribution in 2016 in brief

New organization to increase innovation and agility

In February 2016, Novozymes was reorganized in order to unlock its full growth potential and to deliver more innovation to customers with more speed and commercial impact.

Until February 2016, Novozymes was organized in five functional units: R&D, Supply Operations, Business Operations, Business Development and Corporate Functions. After nearly three years, the Executive Leadership Team and the Board of Directors agreed it was time for a change.

Three divisions and two units
The 2016 reorganization affected all areas of Novozymes and saw the formation of three new divisions: Household Care & Technical, Agriculture & Bioenergy, and Food & Beverages. Each of the divisions is responsible for application research, technical service, sales and marketing. In addition, two new functions were created: Research, Innovation & Supply, aimed at enhancing the strength and scale advantage within science and manufacturing, and Corporate Functions, uniting cross-company areas such as Finance, Investor Relations, Legal, IT, HR, Sourcing, Global Business Services, Facility Management and Communications.

See the press release at Novozymes.com

Business model characteristics across industries

Industry	Household Care	Food & Beverages	Bioenergy	Agriculture & Feed	Technical & Pharma
Solutions	Enzymes	Enzymes	Enzymes and micro-organisms	Enzymes and micro-organisms	Enzymes and micro-organisms
Selected product areas	Laundry detergents, hand and automatic dishwashing soaps, professional cleaning products	Baking (freshness, product appearance, dough improvement, etc.), brewing (fermentation control, separation and filtration, etc.), food & nutrition (lactose-free dairy, removal of trans fats, etc.)	Cellulosic ethanol, starch-based ethanol, enzymatic biodiesel, sugarcane ethanol	Animal feed (feed enzymes), animal health (probiotics), aquaculture (microbials), plant health and crop yields	Textile processing, pulp & paper production, leather preparation, pharmaceuticals (pharma enzymes), wastewater treatment solutions
Innovation model	Novozymes' R&D teams work very closely with customers' R&D teams	Novozymes' R&D teams work very closely with customers' R&D teams	Novozymes' R&D teams get input from customers and develop solutions independently of customers' R&D teams	Novozymes' R&D teams work very closely with partners' R&D teams	Novozymes' R&D teams get input from customers and develop solutions independently of customers' R&D teams

Innovation pipeline update

Novozymes' innovation pipeline contains more than 100 research projects across the business. In 2016, Novozymes launched eight new products. The chart on the right shows some of the major innovation areas in which Novozymes is investing. All these eight innovation programs represent significant market-expanding growth opportunities in terms of sales, and most also have the potential to impact sustainability positively. In 2016, progress was made in all programs, including two product launches. Four of the seven existing programs progressed to the next phase, and one new program – grain milling – was added in Food & Beverages.

In Household Care, hygiene solutions build on the functionality of stain removal and target consumers' clothes having a more complete feel of cleanliness and freshness. Tailored enzyme solutions for emerging markets is another area of research, as these geographies require special solutions and innovative approaches at low cost. Both programs remain in the "Development" phase, and the first products are on track to be launched in 2017.

We have made significant progress in Food & Beverages with our technology for improving yields in vegetable oil processing, and the status for the platform has been moved from "Discovery" to "Development." A new track for grain milling has also been added, as this is a new area where we are looking into the feasibility of using enzymes to increase efficiency in the milling step of grain-processing facilities.

In Agriculture & Feed, all three tracks progressed, with the new corn inoculant Acceleron® B-300 SAT being launched with Monsanto, and the new animal probiotic Alterion® being launched together with Adisseo. The development of new transformative microbes for corn, soybeans and wheat, together with Monsanto, also progressed. These new BioAg products will further add to the division's growth potential.

In Bioenergy, our partners have seen increasingly stable production of biomass-based ethanol and higher utilization rates throughout 2016, and further improvements are expected in 2017.

* Arrows denote advancement to the next phase over the past 12 months.

Strategy

A growing global population with a rising need for food, water, energy and other necessities is pushing industries to get smarter and produce more from less. It is around these trends that Novozymes has defined its purpose and strategy.

At Novozymes, we believe that there are a vast number of opportunities for building a better tomorrow. To seize these opportunities, we have defined a purpose and strategy for our company that will steer our priorities and direction.

Let's rethink tomorrow

Our purpose is "Together we find biological answers for better lives in a growing world – Let's rethink tomorrow." This purpose is deeply rooted in our heritage and all we have accomplished so far. It also looks ahead to what we can achieve together with customers, consumers, governments, academia and others around us in terms of finding the sustainable answers that our world needs. And while our solutions are microscopic, we believe they can have a big impact and help address some of the major challenges the world is facing.

Partnering for Impact

Our strategy sets out four focus areas that will enable us to fulfill our purpose. The core of this strategy is our belief that we make the biggest impact through partnerships. We call our strategy "Partnering for Impact."

For Novozymes, partnerships mean deep-rooted collaborations with mutual benefits and obligations. A great example is the partnership we have with our customers. By working closely with customers and others around us, we can gain the necessary insights into how to help them succeed. The nature of our products allows us to get so close to customers that they are like partners. Our products are often integrated at an early stage in the customer's value chain and are sometimes the key ingredients that set a company's products apart from its competitors' offerings. This might be in terms of effective stain removal in detergents, freshkeeping in baking or yield enhancement in agriculture and bioenergy.

Only by being alert and truly understanding the social, environmental and economic realities of our partners can we create real and sustained impact. We can do this by optimizing our partners' processes, reducing their environmental footprint, improving their profitability and creating breakthrough products. We are already doing this today, but we can do much more in terms of increasing impact, benefiting our partners and growing our company at the same time. Our strategic focus areas guide us in this.

Strategy unfolded

2016 achievements in our four strategic focus areas

Rally for change

In 2016, Novozymes worked with like-minded organizations to promote sustainable growth. In June, Novozymes teamed up with 20 organizations, including Audi, Pannonia and Yale University, to advance sustainable fuels through the below50 initiative, and entered into an agreement with DONG Energy to supply enzymes to the world's first energy plant turning household waste into biogas, electricity and fuel.

We continued our work to integrate the Sustainable Development Goals (SDGs) into our business processes. In addition, Novozymes was invited to participate in the G20 and B20 Summits in Hangzhou, China, in September. As part of our G20 and B20 commitments, we focused on highlighting the role of sustainable development within global economic growth.

Lead innovation

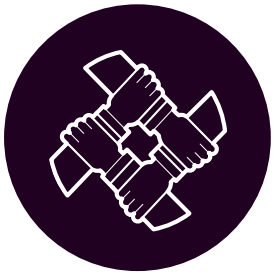
In 2016, we launched a number of new products that improve our customers' production and help them meet consumer needs in a sustainable way. Progress® Uno and Amplify® Prime are bringing enzymatic cleaning power to more consumers across regions and helping customers differentiate their products from a crowd of similar detergents. Fermax™ is the first biological foam control solution for the sugarcane industry. Saphera® is a new lactase that helps dairy customers meet high demand for lactose-free products, while Frontia® Fiberwash and Quara® LowP help customers get even better yields and lower costs in starch and oil processing.

2016 also saw important launches as a result of our strategic partnerships. In January, we commercialized Alterion®, our first probiotic for poultry, together with our partner Adisseo, and we rounded off the year with the launch of Acceleron® B-300 SAT, the first upstream treated inoculant for corn, with more than two years' on-seed stability. This is the first product jointly developed as part of The BioAg Alliance with Monsanto and will be applied to all of Monsanto's new 2017 corn hybrids sold in the US.

Focus on opportunities

In February, Novozymes announced a global restructuring of the company, resulting in the formation of three divisions, each responsible for application research, technical service, sales and marketing: Household Care & Technical, Agriculture & Bioenergy and Food & Beverages. The reorganization also created two new functions: Research, Innovation & Supply, which will have core research at its center and focus on new biological solutions and production optimization, and Corporate Functions, uniting cross-company areas to strengthen Novozymes' competitive edge. The aim of the organizational change is to enhance Novozymes' ability to focus on new opportunities, deliver more innovation to customers faster and create commercial impact.

To strengthen existing capabilities and deliver on more opportunities within microbial technologies, Novozymes acquired Organobalance GmbH, a microbial research company that specializes in developing natural microbial solutions for customers and partners across a number of industries, including food, feed and animal health.



Grow people

Novozymes kicked off 2016 with Development Week, a global initiative focusing on employee development. During the summer, all employees were offered a one-on-one sparring session with an HR representative to enhance the capabilities and motivation needed to grow with the company. In December, Novozymes scored 79 out of 100 for personal and professional development in the annual employee survey, meeting its target of 75 or above.

Throughout the year, a key priority was to ensure a safe and healthy work environment, and several initiatives were rolled out at our facilities worldwide.

To build external knowledge, we launched a new and updated version of the Bioenergy University, our educational platform for the ethanol industry, and we continued our work with regional partners on educational activities that provide children and young adults in the US, Brazil, India, China and Denmark with a better understanding of the potential of biology.

Risk management

Novozymes is exposed to a range of risks. Identifying and mitigating those risks as early as possible is integral to the success of our business and our partners, as it reduces uncertainty and keeps us on track to achieve our ambitions and deliver promised value and impact to our stakeholders.

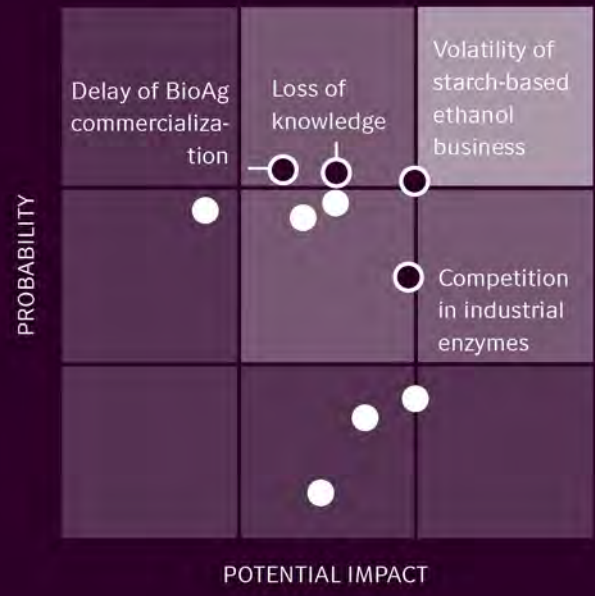
Risk management framework
Novozymes periodically runs an Enterprise Risk Management (ERM) process, during which the key risks facing the company are identified, assessed, mitigated and reported at different levels of the organization. Risks are assessed based on a two-dimensional heat map rating system that estimates the impact of the risk on financials and/or reputation and the likelihood of the risk materializing. The most significant risks are reviewed and assessed by the Executive Leadership Team and the Board of Directors.

Responsibility for the process rests with Finance and ensures that top management has a high level of risk awareness, with involvement and ownership across the organization. Responsibility for all relevant risks rests with vice presidents of functions and geographical regions, who then act to mitigate risks in their respective areas of responsibility.

Enterprise Risk Management process

Key risks for Novozymes
The key risks identified for 2017 are Competition in industrial enzymes*, Volatility of starch-based ethanol business*, Loss of knowledge* and Delay of BioAg commercialization.

Risk assessment heat map



* Also a key risk presented in The Novozymes Report 2015.

See Note 5.1 for information on financial risk factors and risk management

Key risks for 2017

Novozymes has identified four key risks for 2017.

Competition in industrial enzymes

Description

Novozymes' leading position in the market for industrial enzymes continues to be exposed to competition from existing and potential new competitors. Competitive threats could come from two areas in particular, namely the detergent industry and Chinese competitors supplying enzymes to various industries. Novozymes' exposure to competition within these two areas is unchanged on last year in terms of impact and likelihood.

Potential impact

In detergents, increased competition could come from established enzyme manufacturers, such as DuPont, offering new competitive solutions, or from the entry of new players with a broader technology platform, for example offering solutions that combine enzymes with other technologies such as polymers.
Fierce competition, especially among detergent producers in the mid- and low-tier segments, is enticing detergent producers to look for options to lower their production costs.
This could include removing enzymes from detergents or opting for cheaper enzymes at the expense of wash performance.
Continued customer focus on cost cutting could impact Novozymes negatively if we are not able to respond quickly enough with suitable solutions catering to this demand. This also makes it more important to position Novozymes' sustainable solutions as a competitive first choice for customers.

"By accelerating local innovation, Novozymes constantly seeks to optimize products tailored to local market needs in various market tiers."

Consolidation among competitors in the industry could also impact the competitive landscape, depending on the nature of the consolidating parties and their combined potential. The planned merger of Dow Chemicals and DuPont continued in 2016 and is expected to close in early 2017. However, it is still too early to assess the impact on the enzyme market and consequently on Novozymes.

In 2016, the threat from Chinese competitors remained high on the agenda. Feed application within the Agriculture & Bioenergy industry is still the largest and most attractive market in China for local enzyme players to pursue.
In recent years, Chinese manufacturers have started working with academia to develop new products for feed application. Furthermore, the technology barrier for Chinese competitors has lowered due to new faster and cheaper technologies, including independent laboratories and universities offering technology services. Global competition is further intensified by Chinese enzyme manufacturers exploring overseas markets.

Mitigation

Novozymes has an inherent competitive advantage due to its unique global approach to innovation and production. By accelerating local innovation, Novozymes constantly seeks to optimize products tailored to local market needs in various market tiers. To defend its position against competitors, Novozymes is focusing on delivering a strong innovation pipeline and novel solutions targeted particularly at important strategic partners and customers.

"In 2016, initiatives were implemented to speed up our global and local innovation pipelines to establish a faster route from lab to customer production sites."

More than 20% of Novozymes' workforce works in R&D, and we spend around 13% of sales on R&D, where our employees ensure that we have a contemporary product portfolio with new concepts and applications. In 2016, initiatives were implemented to speed up our global and local innovation pipelines to establish a faster route from lab to customer production sites. However, market volatility means it is difficult to ascertain how effective our mitigation efforts will be, making it difficult to predict the impact on our future growth. Monitoring the competitive situation and focusing on strengthening agility within the organization are key focus areas going forward.

Volatility of starch-based ethanol business

Description

Novozymes has long offered enzymatic solutions that optimize the conversion of grains such as corn, barley, wheat and rye into starch-based ethanol, used as an alternative to traditional fossil fuels. The Bioenergy industry currently makes up 17% of our total sales.
US ethanol production in 2016 was up by an estimated 3% on 2015. However, ethanol producers have continued to focus on low-cost solutions, resulting in negative product mix and price changes. The industry is also beginning to see the emergence of new technologies, for example new types of yeast, that could impact demand for some of our enzymes.

Potential impact
Ethanol prices remained low throughout 2016 compared with historical levels, mainly due to sustained low oil prices as well as the low input cost of corn. This spurred producers to maintain their focus on lowering costs throughout 2016, challenging the value proposition of maximizing ethanol yield with Novozymes' yield-enhancing solutions. More attractive pricing of dried distiller's grains with solubles (DDGS) for animal feed, a by-product of the ethanol production process, is also tempting producers to shift their focus away from yield-enhancing solutions. If oil prices remain at their current levels in 2017, pressure on ethanol prices is likely to continue, unless we see a stronger political push for alternatives to traditional fossil fuels. If the current low-margin environment persists, it could increase pressure to lower input costs. Competition within the development of alternative technologies, for example yeast technology, could pose a threat to Novozymes' market share in some enzyme segments.

"Ethanol prices remained low throughout 2016 compared with historical levels, mainly due to sustained low oil prices as well as the low input cost of corn."

Mitigation
Novozymes continuously invests in R&D to develop even better enzyme solutions for improving yield and profitability to ensure that biofuels are a commercial alternative to traditional fossil fuels. We also continue to monitor competitor pricing in the industry to ensure that we offer the best price/performance ratio.

To address lower margins in starch-based ethanol, Novozymes is continuing to expand its extensive product portfolio while ensuring that it still delivers premium yields and reduces costs. At the same time, Novozymes is becoming more competitive in mid- and lower-tier segments, where customers are calling for enzymes that provide basic performance benefits.

In late 2015, Novozymes launched Liquozyme® LpH, aimed at enabling ethanol producers to reduce the use of chemicals and save on costs, and Avantec® Amp, an advanced enzyme product that improves yield and throughput in corn ethanol production while increasing corn oil extraction, significantly reducing the need for several harsh chemicals used in ethanol production. 2016 saw these two products start to penetrate the market tangibly. To mitigate the risk of new technologies winning market share, Novozymes is also exploring opportunities within yeast.

These mitigation efforts are mainly based on current visibility and historical experience. However, given the volatility of the starch-based ethanol industry, and particularly its reliance on political endorsements, we recognize that the efficiency and effectiveness of our mitigation efforts involve uncertainty and unpredictability.

Loss of knowledge

Description
Novozymes' business is driven by innovation in the form of pioneering biotechnology. Safeguarding sensitive business information and critical assets such as strains and intellectual property is essential in order to successfully protect and maintain Novozymes' competitive edge. The risk is considered to have decreased slightly on 2015 due to the impact of our extensive focus on IT security and perimeter control throughout the company. Novozymes is a knowledge- and innovation-driven company, and the potential impact of the risk remains, making this a key risk area.

Potential impact
Any infringement of Novozymes' unique technologies or theft of production strains or plans for unique innovation projects under development could lead to loss of business opportunities with new or existing customers. Cybercrime, including hacker attacks, is a growing problem and could impact Novozymes in several ways. The most significant impact relates to intellectual property, which could be compromised.

Mitigation
Novozymes pursues an active patent strategy by protecting new discoveries, production strains, formulations, and relevant know-how and processes as early as possible through a global information security strategy as well as IT governance, perimeter protection and access control. With more than 6,500 patents granted or pending, we actively defend our extensive product portfolio to prevent and stop infringement by competitors.

At the same time, competitors' activities are constantly monitored to ensure that our innovations do not infringe existing patents, enabling product development costs and resources to be saved through early intervention. As part of a separate risk assessment, we also constantly analyze and evaluate how we handle and safeguard our production strains.

The assessment carried out at the end of 2016 evaluated the threat from external intruders such as hackers to be low. Activity by external intruders was down slightly on 2015, reflecting the improvements to the IT infrastructure and the faster response from Novozymes' IT department.

To mitigate the risk of cyberattacks, our IT Security team continuously monitors and implements key security procedures and behaviors to prevent data theft. We also train employees at all sites in how to handle sensitive information.

Initiatives to protect and improve physical security were also implemented in 2016, and a global mandatory security training session was rolled out during the second quarter.

Delay of BioAg commercialization

Description
Novozymes entered into The BioAg Alliance with Monsanto in February 2014 to research, develop and commercialize sustainable biological solutions that use microbial technology to significantly increase plant health and productivity of crops worldwide. The BioAg Alliance combines Novozymes' BioAg operations and capabilities within microbial discovery, development and production with Monsanto's microbial discovery, advanced biology, field testing and commercial capabilities.

There are two risks related to the success of The BioAg Alliance:

The BioAg Alliance is dependent on both partners' abilities to deliver on their respective obligations to the Alliance. Novozymes has committed to delivering on microbial discovery, development and production, while Monsanto will deliver on microbial discovery, advanced biology, field testing and commercialization. Should one of the partners be unable to deliver on one or more milestones as expected, the commercial success of the Alliance could be compromised

In 2016, Bayer AG announced its intention to acquire Monsanto. Like any transaction of this type, Bayer's potential acquisition of Monsanto entails some disruption and uncertainties. While there is a good basis for mutual value creation, there is a risk of short-term delays related to the integration of the Alliance within a consolidated Bayer–Monsanto

Potential impact
Novozymes is dedicated to driving The BioAg Alliance further. We have invested significantly in developing and delivering on the Alliance and in nurturing a good relationship with Monsanto.

Should The BioAg Alliance not succeed commercially as expected, either due to Novozymes or Monsanto not delivering on their commitments to the Alliance or due to Bayer's takeover of Monsanto, there could be a negative impact on Novozymes' sales and earnings in the important agricultural industry, which currently makes up just under half of our current segment within Agriculture & Feed, but has the potential to be transformative for Novozymes in the long term.

Although a potential delay may cause short-term disruption, a merged Bayer–Monsanto could also be an attractive alliance partner for Novozymes in the long term, sharing its vision and commercial commitment, and increasing the commercial reach of the Alliance.

Mitigation
Both parties consider The BioAg Alliance to be a successful partnership. The technological progress already made by the Alliance, from discovery to field trials, confirms that the solutions produced by the Alliance are effective. After nearly three years of operations, the maturity of the Alliance reduces the risk of either Novozymes or Monsanto being unable to deliver on their promises.

In summer 2016, Novozymes' Board of Directors had a successful meeting and visit to Monsanto's headquarters, during which both partners' dedication to the Alliance was once again confirmed.

The Board continues to place The BioAg Alliance high on its agenda, and prioritizes and follows developments closely.

In the short term, Novozymes' priority is to ensure the success of the Alliance, and its focus is on getting full value from the recent launch of Acceleron® B-300 SAT, the first upstream treated inoculant for corn with more than two years' on-seed stability. Derived from a fungus found in soil, Acceleron® B-300 SAT has a proven yield advantage of more than 3 bushels per acre (~1.5%). This is the first product jointly developed by the Alliance and shows the kind of innovation we can achieve within the partnership.

We look forward to continuing our close collaboration with Bayer as a new partner.

Targets

We measure the success of our purpose and strategic focus areas using a number of financial and nonfinancial long-term targets. These ambitious targets reflect the belief that the use of our biological solutions will have a real and positive impact on the world.

Our long-term targets tell us if we are succeeding in helping the world become more sustainable, at the same time as ensuring Novozymes' continued growth.

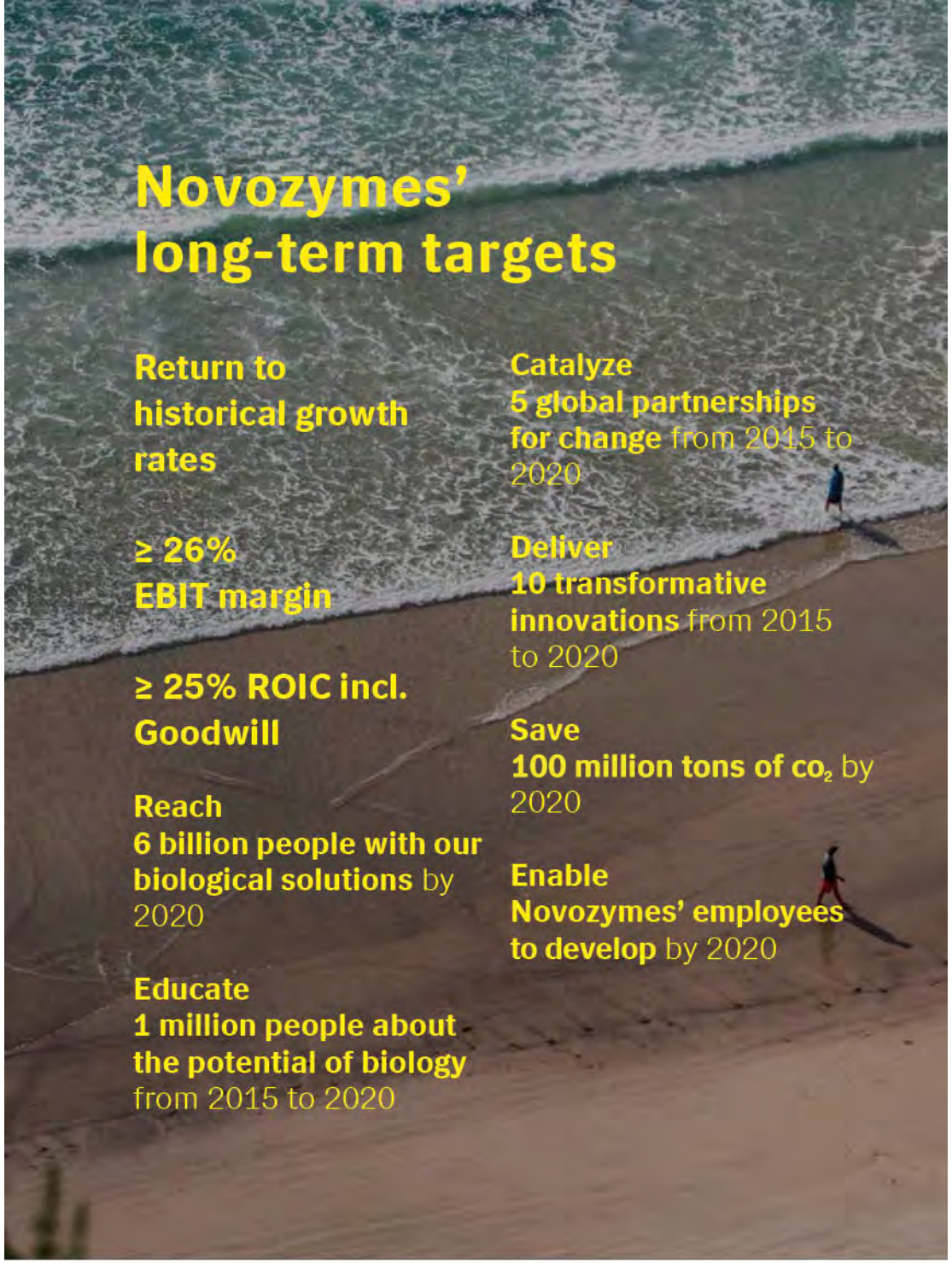
Long-term financial targets
Novozymes is investing to strengthen its leadership position within industrial biotechnology and unleash the potential of our innovation pipeline (see Business model). Once we successfully commercialize the programs in the pipeline, we are confident that we will grow the business in line with the historical performance. Since most of the programs will not have a commercial impact with significant revenue contribution for the next one to two years, Novozymes does not currently expect organic sales growth rates in line with the historical performance to be achievable in 2017. Once the programs have been commercialized, these will be achievable again.

Novozymes' other two long-term financial targets – EBIT marginat 26% or above and ROIC including goodwill of 25% or above – are unchanged. The ROIC includes goodwill, but does not include impacts from acquisitions.

The company continues to find both targets challenging in light of the desire to invest in innovation, business development and further capacity expansions over the coming years within enzyme and microbe production, as well as the new innovation campus in Denmark. As a result, the ROIC is expected to be below the long-term target for the next 2-3 years.

Long-term sustainability targets
We will keep our six long-term sustainability targets, to drive our actions toward supporting the UN Sustainable Development Goals (SDGs). The 17 SDGs were adopted by more than 190 UN member states in September 2015. The SDGs represent the global community's ambitions to end hunger, eradicate poverty, stop climate change and more. We believe the goals are not only necessary and important, but also point companies in the right direction to deliver solutions that contribute to sustainable growth.

On the following pages, we elaborate on our long-term sustainability targets.



Reach 6 billion people with our biological solutions

Every time a consumer uses a product that has been made or treated with Novozymes' technology, or contains one or more products made by Novozymes, the world becomes a bit more sustainable. By 2020, we want 6 billion people worldwide to be using products made with our solutions at least once a week.

This target is closely connected to our sales performance. Increasing our reach therefore depends on the successful execution of our strategy within each of our industries, and on expanding our sales in emerging and developing markets, which have the greatest untapped potential.

Achievements in 2016

- We reached approximately 5 billion consumers with more than one of our solutions on a weekly basis – approximately 100 million more than last year
- This growth was driven by the global increase in textile products and by laundry products in China
- Furthermore, we have refined how we calculate delivery of this target

What's next

The growth potential of the REACH target is greatest in India, China and Africa, with the laundry and animal feed industries being the key growth drivers.

Consumers are buying more clothes today than ever before, and brands and consumers are increasingly conscious of the environmental footprint of the clothes they make and wear. Novozymes' textile solutions help textile producers make their processes more sustainable.

One of the biggest positive impacts can be seen in the desizing process. To protect yarn so that it does not break during the weaving process, textile manufacturers need to coat the yarn with "size," typically a starch-based substance. The size needs to be removed before dyeing the fabric. Novozymes' amylase enzymes allow for efficient desizing of textiles, which enables textile mills to save on water and chemicals compared with nonenzymatic size removal. Since enzymatic desizing is milder than chemical desizing, the fabrics retain their strength for longer.

Novozymes' textile desizing solutions are used to treat 4-5 million tons of woven fabric every year, saving 3-4 million tons of CO_2 and 3 million tons of chemicals. This also results in the manufacture of higher-quality woven textiles used by an estimated 5 billion people.

Read more about our textile desizing solutions at Novozymes.com

Educate 1 million people about the potential of biology

Education is crucial for global sustainable development as articulated in Sustainable Development Goal number 4. Novozymes' employees have a wealth of knowledge about science and sustainability to share, and regularly engage with schools, universities and communities through various outreach programs. The more people we educate about biology, sustainability and the environment, the more people will get involved in creating sustainable biological solutions in the future. Novozymes' educational activities included under this target exclude those related directly to sales and marketing of our technologies.

Achievements in 2016

- Novozymes is dedicated to encouraging local education with global impact by driving EDUCATE activities out of our largest regions: China, India, Brazil, North America and Europe, Middle East & Africa (EMEA)
- In 2016, Novozymes educated more than 100,000 learners through regional partnerships. This brings our total to more than 130,000 learners since 2015

What's next

In the coming year, we will continue to scale up our most successful programs in all regions. We will also develop new partnerships with relevant educational organizations.

Novozymes is aiming to educate 1 million people about the potential of biology by 2020. To achieve this, the company runs educational programs with local partners to reach children and teenagers in Brazil, China, India and the US.

In the US, EDUCATE partners include Morehead Planetarium and Science Center and Bertie Early College High School in North Carolina.

In Brazil, Novozymes is working with SESI, a chain of high schools, to create and launch a series of interactive mobile applications. Given that smartphones are ubiquitous in Brazil, these apps help educate students and teachers about the SDGs and how biology can solve some of the world's biggest problems, such as poverty, hunger, water and sanitation. By encouraging mobile-based reading and learning, Novozymes is able to reach more students faster, in remote regions and across social classes, and engage with them in creative ways.

In India, Novozymes has teamed up with the NGO Agastya International Foundation, which promotes creativity-based education for rural and economically disadvantaged children, to create a lab and learning center for children from rural government schools near Bangalore. Known as the Let's Investigate Corner, the center mixes fun with learning so that children can understand and remember concepts better and develop their capacity for analysis, evaluation and creativity. Also in India, Novozymes is working with the Centre for Environment Education on a project that creates awareness about environmental issues among rural school students.

Read more about our contributions to the UN Sustainable Development Goals in Sustainability indices & data

Catalyze 5 global partnerships for change

To make the necessary impact on the world, we need strong partners dedicated to solving key global issues with us. By 2020, we aim to form five high-impact partnerships with public or private organizations that share our agenda and support Novozymes' commercial activities.

Achievements in 2016

- Forming new strategic partnerships is not easy, and developing strong, impactful partnerships that have lasting and transformational impact on business takes time and effort
- In 2016, we made headway on forming promising partnerships for change. One of these partnerships was with DONG Energy. Novozymes will supply enzymes to the world's first energy plant turning household waste into biogas, electricity and fuel. Novozymes and DONG Energy have also agreed to further develop the enzymes for the technology

What's next

In 2017, we will dedicate additional organizational resources to help accelerate new promising partnerships as well as focus on further enhancing the partnering culture across Novozymes.

From trash to cash

Rotten apples, milk cartons, eggshells and other household waste will soon be powering homes in the UK thanks to DONG Energy's REnescience plant, which will use Novozymes enzymes.

Located in Northwich, near to Manchester, UK, the plant will be the world's first full-scale bioplant capable of processing household waste through the use of enzymes. It will ensure that the waste collected from 110,000 UK households is recycled and converted into green power, thereby reducing the impact on landfill sites.

The unsorted waste is mixed with water and enzymes in a large reactor. Enzymes dissolve all the food waste, labels and similar types of organic waste, converting these into a liquid that can be used for biogas. The biogas will generate around 5 MW of electricity, which is sufficient to supply approximately 9,500 typical households with power. The remaining plastic and metal waste is recycled or converted into fuel. The plant can sort 15 tons of waste per hour, or 120,000 tons per year.

DONG Energy will finance, build and operate the plant, which is expected to become operational in early 2017, and will also look into the possibility of building similar plants in other locations around the world.

Biorefineries like this, where trash is transformed into value, are an excellent example of circular economy in practice. Novozymes and DONG Energy have agreed to further develop the enzymes for the technology together.

Read the press release at Novozymes.com

Deliver 10 transformative innovations

Every innovation Novozymes delivers has an impact. Some of our innovations transform markets and ultimately impact people's lives. By 2020, we aim to deliver 10 such transformative innovations, creating significant impact for our customers and making the world more sustainable.

When evaluating our innovation efforts and pipeline, we consider their financial and transformative potential and measure their impact against the SDGs.

Achievements in 2016

- Acceleron® B-300 SAT, our new-generation corn seed treatment developed with Monsanto, represents a step-change improvement in crop yield and resilience

What's next

We have a number of other promising transformational innovations in our pipeline that are expected to launch in 2017 and contribute to this target. An overview of some of the programs in the innovation pipeline is provided in the Business model section.

Explore our business model

First product from The BioAg Alliance

In December 2016, The BioAg Alliance launched the first-ever microbial seed treatment solution for corn, capable of boosting corn yields by more than 3 bushels per acre (~1.5%). Known as Acceleron® B-300 SAT, the solution is based on a fungus found in soil and is coated on corn seeds without harming the performance or longevity of the microbes. The Acceleron® B-300 SAT inoculant will be applied to all of Monsanto's new 2017 corn hybrids sold in the US.

Using the power of nature's microbes, farmers will be able to produce more crops with fewer resources. This will benefit agriculture, consumers and the environment. This is the first product jointly developed by Monsanto and Novozymes, and it shows the kind of innovation we can achieve in The BioAg Alliance.

Seed treatments protect crops from natural threats that reduce yield, so improving plant health and increasing uptake of nutrients. Acceleron® B-300 SAT increases plants' ability to take up nutrients and is an improved version of JumpStart®, a product from Novozymes' pipeline prior to the formation of the Alliance.

While JumpStart® lasts for 120 days on the seed after application, Acceleron® B-300 SAT lasts for at least two years on the seed and is compatible with other seed treatments. This allows The BioAg Alliance to coat the seeds with the microbial product before they are shipped to retailers and farmers.

As announced in January 2017, the BioAg Alliance has an improved version of the recently launched Acceleron® B-300 SAT in the pipeline, namely Acceleron® B-360 SAT, which can increase corn yields by up to 5 bushels per acre (~2.5%) and is expected to enter the market in 2019.

Read the press release at Novozymes.com

Save 100 million tons of CO_2

Our products help customers improve their environmental performance by reducing their consumption of energy, raw materials and chemicals, and lowering their CO_2 emissions. To help address climate change, we have set a target of saving 100 million tons of CO_2 in 2020 through the application of our solutions.

Achievements in 2016

- Based on life cycle assessments (LCAs) – from raw material extraction, through production and use, to final disposal – we estimate that our solutions saved customers a total of 69 million tons of CO_2 in 2016
- The main drivers of the additional savings compared with 2015 (a total of 60 million tons) were our household care, animal health & nutrition and textile products
- Fuel ethanol is one of the industries with immense potential to contribute to achievement of the SAVE target. However, 2016 saw a slight decline in this contribution due to more or less flat sales in terms of product volume

What's next

Delivery on the CO_2 savings target is closely connected to the volume of various enzymes brought to market. On top of the volume growth of the existing product portfolio, we continue to explore other opportunities to increase our CO_2 savings, for example by increasing sales of products with particularly positive CO_2-saving profiles, either from our existing portfolio or by further accelerating specific innovations in our pipeline.

See Note 7.1 Climate change

More climate-friendly meat production

Meat production has a considerable impact on the climate because energy is required to produce animal feed, and because farm animals emit greenhouse gases such as methane.

Novozymes has a range of products for animal health and nutrition that enable animals to extract more nutrients and energy from the feed. Use of Novozymes' products for animal feed reduces the cost to the farmer while reducing greenhouse gas emissions related to feed supply and manure disposal.

One of our products in this area is RONOZYME® HiStarch, which reduces the need for fat in chicken feed. The fat saved can be used for biodiesel production, saving emissions from fossil diesel combustion, and the vegetable oil saved can reduce demand for palm oil, for example.

Another product is RONOZYME® ProAct, an enzyme that improves the digestion and uptake of protein in broiler chickens, thereby saving poultry producers money and reducing their environmental impact.

RONOZYME® HiStarch, RONOZYME® ProAct and other products in our animal feed range have been jointly developed by Novozymes and DSM. Established in 2001, the alliance has launched several innovative feed enzyme products.

Read more about product launches in 2016 in Novozymes in a nutshell

Enable Novozymes' employees to develop

Great employees make for a great Novozymes. Our ability to grow and contribute to a better world is dependent on our ability to enable our employees to develop both personally and professionally.

This target will ensure that Novozymes builds the skills needed to deliver on its strategy and that all employees worldwide realize their full potential.

Achievements in 2016

- 90% of all Novozymes employees have Individual Development Plans with development targets and actions, exceeding our target of 80%
- Our dedication to employee development is measured through our annual employee survey. With a score of 79 in 2016, meeting our target of 75, our employees agree that development is a priority at Novozymes
- More than 2,600 employees worldwide participated in Development Week to enhance their personal and professional development skills
- Regional leadership pipelines were strengthened through targeted talent development initiatives. In China, for example, 62% of identified and developed talents were promoted, had their role expanded or were assigned new roles. In North America, 50% of identified and developed talents were promoted

What's next

Over the coming years, we will work on the following focus areas to "Enable Novozymes' employees to develop:"

- Unfolding the potential of talents across our global organization with a special focus on building capabilities and talent in our high-growth markets and high-investment business areas
- Developing leaders to be capable of leading a multigenerational, multicultural workforce in a changing business environment
- Promoting more agile working structures and building the skills and mindset required to embrace digitalization

As one of the world's leading biotechnology companies, Novozymes needs the best talents in its labs, production, sales force and administration to create the best solutions for its customers. Once we have recruited the best talents, we are committed to enabling them to develop both personally and professionally.

Talents in China

In China, for example, Novozymes has initiated a talent program to strengthen the ability to identify leadership talent, helping us to succeed in a dynamic and highly competitive business environment.

In 2016, selected talents were involved in a three-month program that challenged them to identify and solve high-priority business challenges, accelerate professional and personal development, and improve cross-functional understanding.

The talents worked with three high-priority business challenges, and followed a rigorous process based on the 70-20-10 model for learning and development.

The talents came up with innovative and actionable business solutions, and the program gave the China Leadership Team, who acted as business case sponsors, valuable insight into the potential of the talents.

Every year, Novozymes' Executive Leadership Team visits all regions to review business progress and to evaluate regional talent pipelines and organizational competencies.

Development Week to strengthen individual development worldwide

Novozymes kicked off 2016 with a global Development Week, a program offering online and offline learning sessions, tips & tricks and activities for enhancing personal and professional development skills. The sessions included insights into the company's business areas and how to better develop on the job. More than 2,600 employees participated in Development Week activities, both online and across 18 sites globally.

Outlook for 2017

Sales outlook

Novozymes expects to deliver organic sales growth of 2-5%. All five business areas are expected to contribute to organic sales growth in 2017.

As the majority of the sales for BioAg is expected toward the end of the year, as in 2016, and since Q1 2016 is a relatively high comparison, organic sales growth for Novozymes in the first quarter of 2017 is expected to be roughly flat.

Household Care sales growth is expected to be higher in emerging markets. Growth in 2017 will also be supported by new product launches. Toward the end of 2017, the first product launch from the Hygiene platform is expected, but no material sales contribution from this is expected in 2017.

"Novozymes expects to deliver organic sales growth of 2-5%. All five business areas are expected to contribute to organic sales growth in 2017."

Food & Beverages sales growth is expected to be driven primarily by new product launches in the starch industry made in 2016 and 2017. Growth is expected to be higher in emerging markets. Baking is expected to be negatively impacted by price reductions as a result of more competition in the US baking market.

Bioenergy sales growth is expected to be driven by new product launches. The North American market is expected to be dynamic in 2017. US ethanol production in 2017 is expected to be on par with 2016. Global sales to the emerging biomass conversion industry are expected to contribute to sales growth.

Agriculture & Feed sales growth is expected to be driven mainly by animal feed. Headwinds in agriculture, particularly low farmer income, are expected to create a somewhat challenging environment in BioAg. In 2017, Novozymes expects to recognize around DKK 200 million of the deferred BioAg income as sales. Deferred income does not impact the calculation of organic sales growth rates; it impacts realized sales growth in DKK and has no cash flow impact.

Technical & Pharma sales are expected to be roughly on par with 2016.

"Headwinds in agriculture, particularly low farmer income, are expected to create a somewhat challenging environment in BioAg."

Outlook for 2017

	2016 realized	2017 outlook
Sales growth, organic	2%	2-5%
Sales growth, DKK	1%	3-6%
EBIT growth	2%	3-6%
EBIT margin	27.9%	~28%
Net profit growth	8%	2-5%
Net investments excl. acquisitions, DKKbn	1.2	1.7-1.9
Free cash flow before acquisitions, DKKbn	2.7	2.0-2.2
ROIC (including goodwill)	25.1%	24-25%
Avg. USD/DKK	673	696

Financial calendar

Feb. 22, 2017	Annual Shareholders' Meeting 2017
Apr. 26, 2017	Interim report for the first 3 months of 2017
Aug. 11, 2017	Interim report for the first half of 2017
Oct. 25, 2017	Interim report for the first 9 months of 2017
Jan. 18, 2018	Group financial statement for 2017

Profit outlook

EBIT growth is expected to be 3-6%, on par with the expected sales growth in DKK. Novozymes expects to maintain the current high level of profitability with an EBIT margin of around 28% in 2017.

The effective tax rate is expected to be around 21%.

"Novozymes expects to maintain the current high level of profitability with an EBIT margin of around 28% in 2017."

Net profit is expected to grow by 2-5%, on par with the expected organic sales growth. Net financial costs are expected to be higher than in 2016, given the expected USD/DKK exchange rate.

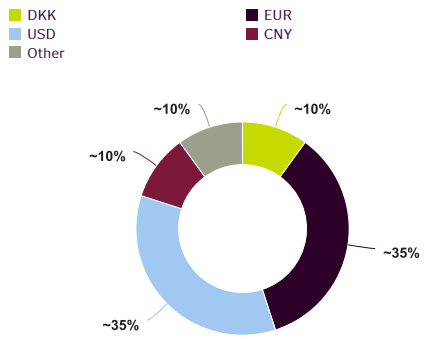
Net investments are expected to be DKK 1,700-1,900 million. Maintenance investments and manufacturing capacity expansions will drive investments, along with expansions in R&D, notably the new innovation campus in Denmark.

Free cash flow before acquisitions is expected to be DKK 2,000-2,200 million.

Return on invested capital including goodwill is expected at 24-25%.

Currency exposure
In 2017, EBIT will be most exposed to currency fluctuations in the USD and EUR.

Sales by currency 2016



Other things being equal, a +5% movement in USD/DKK is expected to have an annual positive impact on EBIT of DKK 100-120 million, and vice versa.

Other things being equal, a +5% movement in EUR/DKK is expected to have an annual positive impact on EBIT of DKK 150-200 million, and vice versa.

Sustainability outlook
The sustainability expectations for 2017 reflect our ambition to continuously improve our business operations across our value chain – making our operations more cost-effective, environmentally friendly and socially responsible.

We have categorized our sustainability outlook into Environment, Other and People.

Sustainability outlook

Environment	2016 realized	2017 target	2020 target
Estimated reduction in CO2 emissions through our customers' application of our products, in million tons	69	≥ 72	100
Water efficiency*	6%	4%	25%
Energy efficiency*	10%	7%	30%
CO2 intensity*	16%	9%	25%
Renewable energy	24%	24%	30%
Other			
Customer satisfaction	45	≥ 35	n/a
Medal class rating from RobecoSAM**	Silver	Medal	Gold
People			
Occupational accidents***	2.2	≤ 2.0	≤ 1.0
Employee absence	2.0%	≤ 2.0%	≤ 2.0%
Directors or higher who are women		≥ 25%	≥ 30%

* Efficiency/intensity is measured by dividing net consumption by gross profit. The improvement is calculated as the relative improvement in efficiency/intensity compared with the base year 2014.

** The distribution of medals will be announced in RobecoSAM's Sustainability Yearbook on Jan. 19, 2017. We expect silver.

*** Per million working hours.

If every household in Europe washed at 30°C instead of 40°C, we would save electricity equivalent to the annual usage of 2 million homes and more than 6 million tons of CO_2.

Governance

Chairman's introduction

Proactive and transparent corporate governance promotes sustainable business behavior and long-term value creation. In 2016, Novozymes' Board of Directors focused on getting the company in better shape to meet current challenges and leverage future opportunities.

The microbial space
Novozymes makes its biggest impact through partnerships. One of our key partnerships is The BioAg Alliance, which we formed three years ago together with Monsanto. The results of The BioAg Alliance have been impressive so far, and its potential continues to grow. The Board therefore continues to prioritize The BioAg Alliance and the microbial space.

In September 2016, Bayer AG announced its intention to acquire Monsanto Co. to create an agribusiness covering seeds, traits, crop protection and biologicals. The transaction is subject to customary closing conditions, including the receipt of required regulatory approvals. Closing is expected by the end of 2017. The Board acknowledges that The BioAg Alliance is exposed to risks, as described in the Risk management section. Although it is still too early to determine how the acquisition may potentially impact The BioAg Alliance, the Board believes that this could be very positive.

Novozymes also entered into new ventures in microbials and acquired Organobalance GmbH, a German company that researches and develops microbial solutions. A number of board members were involved in the acquisition process at different levels.

Reshaping the company for future growth
At the beginning of the year, big decisions had to be made to reprioritize the company's efforts. The Board fully supported the decision to restructure the Executive Leadership Team and reorganize the company. The result was three new commercial divisions: Household Care & Technical, Agriculture & Bioenergy and Food & Beverages – each responsible for sales, marketing and technical services as well as application development and a strong focus on customers.

With the restructuring, we welcomed two new members to the Executive Leadership Team: Tina Sejersgård Fanø and Anders Lund. The Board was especially pleased to see this demonstration of well-functioning succession planning, as the two have grown their careers within Novozymes and have a strong track record and extensive knowledge about the company.

Ongoing strategic review process
As in previous years, the Board conducted reviews of Novozymes' business and the mid- and long-term strategies for its main business areas. We held a number of deep-dive sessions on specific industry strategies, to identify exactly how we can help Novozymes achieve its targets. We also looked at Novozymes' competitive advantages and how we can help fortify and utilize what sets the company apart from its competitors. The Board discussed current challenges in the Bioenergy industry that continued to impact Group sales over the year. Another area of focus was the processed oils industry. The Board was presented with the opportunities this industry offers Novozymes and was a sounding board to determine the strategy going forward.

New Nomination and Remuneration Committee
We closely monitor corporate governance trends, guidelines and regulations, and regularly update our management systems to ensure openness and transparency. In 2016, the Board reviewed its committee structure and decided to set up a new Nomination and Remuneration Committee in 2017 consisting of three board members.

Investing in Novozymes' long-term future
During the year, the Board approved further stages of the project to establish a new innovation campus in Lyngby, Denmark, to secure the long-term future of the business. The ground-breaking ceremony took place on November 8. Ready for use in 2019, this will be a great place for Novozymes and Zymers to work on more biological solutions and invite stakeholders into the inspiring world of biotechnology!

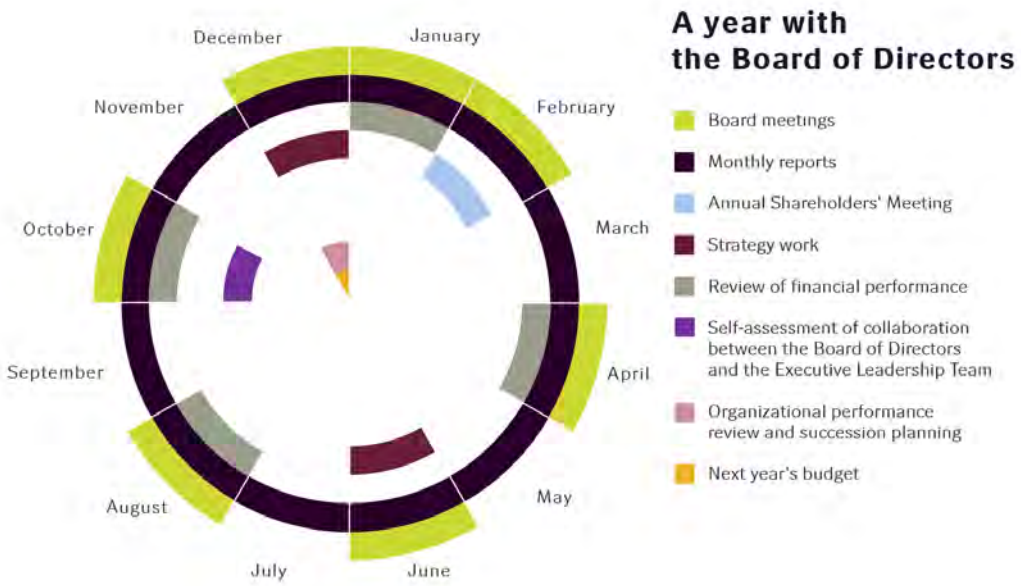
Henrik Gürtler
Chairman of the Board of Directors
Novozymes A/S

Board of Directors: Composition and responsibilities

In accordance with Danish legislation, Novozymes has a two-tier management system comprising the Board of Directors and the Executive Leadership Team, with no individual being a member of both. The division of responsibilities between the Board of Directors and the Executive Leadership Team is clearly outlined and described in the Rules of Procedure for the Board of Directors and the Rules of Procedure for the Executive Leadership Team, available at novozymes.com. Novozymes' Articles of Association require the Board of Directors to have four to eight members elected at the Annual Shareholders' Meeting. Currently, the Board has six members. They are elected for one year at a time and cannot be elected or re-elected after reaching the age of 70.

Nominations are based on an evaluation of factors such as competencies, diversity, independence and prior performance.

The Board of Directors also includes three employee-elected members, who serve four-year terms. The Board of Directors is accountable to the company's shareholders for the management of the company. The composition of the Board of Directors must therefore be such that the combined competencies of the Board enable it to inspire, guide and oversee the company's development, and diligently address and resolve the issues and challenges faced by the company at any time.



In order to ensure the right competencies and promote diversity, the following targets have been set for the composition of the Board of Directors:

1. At least half of the shareholder-elected board members shall be independent as defined in the Danish Recommendations on Corporate Governance.
2. At least 40% of the shareholder-elected board members shall have substantial international experience from the management of large corporations or institutions headquartered outside of Denmark.
3. One-third or more of the shareholder-elected board members shall be female, and one-third or more of the shareholder-elected board members shall be male.

The first two targets were met in 2016. Unfortunately, it was not possible to meet the gender diversity target in 2016. However, the Board of Directors is dedicated to working toward achieving the full diversity target again in the near future. The required competencies are defined in a competency profile that specifies various personal characteristics, skills and experience. The individual competencies of the members of the Board of Directors are shown in the presentation of the Board of Directors and Executive Leadership Team. The Board's main responsibilities are to:

- Ensure the right management and organizational structure
- Supervise financial, social and environmental performance and the Executive Leadership Team's day-to-day management of the company
- Decide the overall management and strategic development of the company

For an overview of the tasks performed to fulfill these responsibilities, see the diagram "A year with the Board of Directors."

"The Board of Directors has decided to establish a Nomination and Remuneration Committee in 2017."

In accordance with the Articles of Association and the Rules of Procedure for the Board of Directors, the Board has a Chairmanship consisting of two members – the Chairman and the Vice Chairman – that is responsible for assisting the Board of Directors in matters concerning the Executive Leadership Team's day-to-day management of the company and reporting back to the Board of Directors.

The Chairmanship is also responsible for planning and preparing meetings of the Board of Directors, preparing material for the nomination of candidates for election to the Board of Directors, and recommending the remuneration of the Board of Directors and the Executive Leadership Team.

The Board of Directors has decided to establish a Nomination and Remuneration Committee in 2017 to take over the matters relating to remuneration and nominations, which up to now have been carried out by the Chairmanship.

In addition, the Board of Directors has an Audit Committee that assists the Board of Directors in monitoring aspects relating to accounting, auditing, internal controls and financial reporting. Further information about the Audit Committee can be found at novozymes.com.

As part of the internal control system, all cases of identified fraud and all concerns raised are investigated and reported to the Audit Committee and the Board of Directors. 44 investigation cases were reported in 2016 of which 25 were substantiated fraud. Sanctions included dismissal of employees, reporting to the police and other disciplinary measures. Further information on fraud can be found in Note 8.3 to the Consolidated financial statements.

Charters and recommendations
In laying down the management principles for Novozymes, the Board of Directors has followed the Recommendations on Corporate Governance that form part of the disclosure requirements applicable to companies listed on Nasdaq Copenhagen. These recommendations are available at corporategovernance.dk. A detailed review of Novozymes' position on all of the recommendations and a description of the internal control and risk management system relating to financial reporting can be found in the statutory report on corporate governance pursuant to section 107b of the Danish Financial Statements Act, at report2016.novozymes.com/governance/governancereport.

The recommendations require companies to explain any noncompliance. Novozymes follows 43 of the 47 recommendations, the exceptions being:

- Nomination and remuneration committees have not been set up. Instead, these responsibilities are laid down in the Charter for the Chairmanship (Recommendations 3.4.6 and 3.4.7). Note: As mentioned above, the Board of Directors has decided to establish a Nomination and Remuneration Committee in 2017, following which the company will be compliant
- The remuneration policy for the Executive Leadership Team contains no specific clause pertaining to the repayment of variable remuneration components paid on the basis of misstated information, as Novozymes considers the rules in Danish law to be sufficient in such cases (Recommendation 4.1.2)
- Due to the limitations imposed by the Novo Nordisk Foundation's Articles of Association and Novozymes' ownership structure, the Board of Directors reserves the right in certain circumstances to reject takeover bids without consulting shareholders (Recommendation 1.3.1)

Furthermore, under the Danish Financial Statements Act (sections 99a and 99b) it is mandatory for large companies to report on corporate responsibility and equal opportunities. As a member of the UN Global Compact, Novozymes prepares a Communication on Progress, which is available under Sustainability indices & data at report2016.novozymes.com/sustainability/ungc-cop. Together with the integrated financial, environmental and social reporting, the Communication on Progress meets both the requirements for reporting on corporate responsibility and equal opportunities, and the UN Global Compact's advanced reporting criteria.

Novozymes also works within the parameters of *Touch the World*, a document outlining the company's values and commitments, and has committed to principles derived from the UN Global Compact and the UN Convention on Biological Diversity.

Changes to the Board of Directors
After 17 years as Chairman of Novozymes' Board of Directors, Mr. Henrik Gürtler has decided to not seek re-election to the Board at the Annual Shareholders' Meeting on February 22, 2017. The Board proposes the election of Mr. Jørgen Buhl Rasmussen as Chairman of the Board. Mr. Rasmussen has been a member of the Board since 2011 and Vice Chairman for the past year. The Board proposes Mr. Rasmussen as the new Chairman because of his in-depth knowledge of Novozymes, significant experience of leading global companies, and particular insight into businesses in emerging markets and consumer industries, most recently as the CEO of Carlsberg A/S.

The Board is proposing the election of Ms. Agnete Raaschou-Nielsen as Vice Chairman. Ms. Raaschou-Nielsen has also been a member of the Board since 2011. From 2014 to 2016 Ms. Raaschou-Nielsen was also Vice Chairman of the Board, and since 2011 she has been a member of the Audit Committee. Ms. Raaschou-Nielsen has extensive experience in strategic leadership, acquisition and divestment of companies as well as macroeconomics and protection of intellectual property rights.

In addition to the changes to the Chairmanship, the Board is proposing the election of two new members, Ms. Kim Stratton and Mr. Kasim Kutay.

Ms. Stratton is a member of the executive management of Shire, a global biotech company, where she is responsible for all commercial activities outside the US. The Board is proposing to elect Ms. Stratton because of her extensive international experience in technology companies that have created high growth with impressive earnings based on long-term investments in innovation. She has notable leadership experience from various commercial entities and has led organizations in both Switzerland, the US and the UK. The Board expects Ms. Stratton's experience and global commercial perspective will strengthen Novozymes' strategic agenda. Ms. Stratton is 54 years old and an Australian citizen.

Mr. Kutay is the CEO of Novo A/S, the main shareholder in Novozymes. Mr. Kutay has more than 25 years' experience within the life science industry and banking, and brings notable international experience. The Board expects Mr. Kutay to strengthen the Board's strategic and financial understanding when entering into partnerships and acquiring and divesting businesses. Mr. Kutay is 51 years old and a British citizen.

Other Board-related information

The Board of Directors held seven meetings in 2016, with an overall attendance rate of 100%. Any changes to the Articles of Association require that shareholders representing at least two-thirds of the total number of votes in the company are represented at the Shareholders' Meeting, and that at least two-thirds of the votes cast, as well as two-thirds of the voting capital represented at the meeting, are in favor of the proposal to change the Articles of Association.

"The Board of Directors held seven meetings in 2016, with an overall attendance rate of 100%."

The Annual Shareholders' Meeting has authorized the Board of Directors to allow the company to acquire treasury stock on an ongoing basis, provided the nominal value of the company's total holding of treasury stock does not exceed 10% of its share capital at any time, cf. section 198 of the Danish Companies Act.

The purchase price must not deviate by more than 10% from the price quoted on Nasdaq Copenhagen on the date of acquisition. This authorization applies until March 1, 2017. In addition, the Board of Directors has been authorized to increase the share capital. This authorization applies until March 2, 2018.

Each year, one of the responsibilities of the Board of Directors is to assess whether the capital and share structure of Novozymes is optimal. The Board of Directors remains of the opinion that the share structure with A and B common stock is the best way to safeguard Novozymes' long-term strategy and development to the benefit of the company's shareholders and other stakeholders. Regarding capital structure, Novozymes will continue to favor a conservative balance sheet, reflected by a target for net interest-bearing debt of 0-1x EBITDA. This target was met in 2016.

Novozymes is party to a number of partnership contracts that can be terminated by the other party in the event of significant changes to the ownership or control of Novozymes. A few contracts contain provisions that restrict Novozymes' licenses to use specific forms of technology in such situations.

UNGC Communication on Progress: report2016.novozymes.com/sustainability/ungc-cop

Tax strategy

Novozymes' overall tax strategy and transfer-pricing policy support a positive tax contribution to society and governments in the countries in which Novozymes operates. Novozymes continuously works to fulfill its tax obligations in the countries where it operates. We seek to obtain a competitive tax level in a fair and responsible way, and with full regard to national and international laws and regulations. Besides taxes, our economic contributions include duties, VAT, employee taxes, employee pension and benefit programs, procurement from local vendors and job creation.

In 2016, Novozymes incurred corporate income taxes, and other taxes and duties that came to approximately DKK 1,425 million. In addition, Novozymes collected and withheld tax contributions on dividends and wages totaling approximately DKK 1,300 million. Novozymes' total tax contribution therefore amounted to approximately DKK 2,725 million, compared with approximately DKK 2,700 million in 2015.

Board member	Nationality	Board meetings attended	Board tenure	Election period
Henrik Gürtler[1, 2]	Danish	●●●●●●●	2000	1 year
Jørgen Buhl Rasmussen[1, 3, 4, 5]	Danish	●●●●●●●	2011	1 year
Heinz-Jürgen Bertram[1, 5]	German	●●●●●●●	2015	1 year
Lars Green[1, 4]	Danish	●●●●●●●	2014	1 year
Agnete Raaschou-Nielsen[1, 4, 5]	Danish	●●●●●●●	2011	1 year
Lena Olving*[1, 4, 5]	Swedish	●●	2011	1 year
Mathias Uhlén[1, 5]	Swedish	●●●●●●●	2007	1 year
Lena Bech Holskov[6]	Danish	●●●●●●●	2013	4 years
Anders Hentze Knudsen[6]	Danish	●●●●●●●	2013	4 years
Lars Bo Køppler[6]	Danish	●●●●●●●	2010	4 years

[1] Elected at the Shareholders' Meeting
[2] Chairman of the Board of Directors
[3] Vice Chairman
[4] Member of the Audit Committee
[5] Independent
[6] Employee representative
* Resigned on February 24, 2016.

Board of Directors

Our nine-member Board of Directors and six-member Executive Leadership Team comprise broad and global management experience, comprehensive biotech expertise and in-depth knowledge of Novozymes' business. The members' competencies combine to ensure the best possible management of the company.

Henrik Gürtler*

Born 1953. Chairman of the Board since 2000. Elected for one year at a time.

Board positions
Chairman:
Ejendomsmægler Kim Svane A/S

** This board member is not regarded as independent in the sense of the definition in the Danish Recommendations on Corporate Governance that apply to Danish listed companies.*

Special competencies
In-depth knowledge of Novozymes' business, and expertise in managing and working in an international biotechnology company.

Jørgen Buhl Rasmussen

Born 1955. Vice Chairman of the Board since 2016. Adjunct Professor at Copenhagen Business School. Member of the Board since 2011. Member of the Audit Committee. Elected for one year at a time.

Board positions
Chairman:
F. Uhrenholt A/S

Member:
IFC Europe A/S
Human Practice Foundation
Advisory Board of Axcel

Special competencies
International business and management experience, specifically within sales, marketing, branding and acquisitions. Experience in finance and accounting matters.

Heinz-Jürgen Bertram

Born 1958. President & CEO, Symrise AG (Germany). Member of the Board since 2015. Elected for one year at a time.

Board positions
Member:
Rockwool A/S, Denmark, until February 2016
Nord/LB Holzminden
Deutsche Bank Hannover
Nomination Committee of Probi AB, Sweden

Special competencies
International business and management experience, and experience in converting research and biotechnology into commercial products and solutions.

Lars Green*

Born 1967. Senior Vice President, Finance & Operations, Novo Nordisk Inc. (US). Member of the Board since 2014. Chairman of the Audit Committee. Elected for one year at a time.

Special competencies
In-depth knowledge of the Novo Group's business, international experience from managing global biotech and biopharma companies, and financial and accounting expertise.

Agnete Raaschou-Nielsen

Born 1957. Member of the Audit Committee. Member of the Board since 2011. Elected for one year at a time.

Board positions
Chairman:
Arkil Holding A/S
Brdr. Hartmann A/S
Danske Invest, three other UCITS funds and two AIF funds

Vice Chairman:
Dalhoff Larsen & Horneman A/S
Solar A/S

Member:
Aktieselskabet Schouw & Co.
Danske Invest Management A/S

Member of the Audit Committee:
Aktieselskabet Schouw & Co.
Solar A/S

Special competencies
Expertise within business development and acquisitions, macroeconomics and intellectual property rights. Experience in finance and accounting matters.

Mathias Uhlén

Born 1954. Professor at the Royal Institute of Technology (KTH) in Sweden and the Technical University of Denmark (DTU). Member of the Board since 2007. Elected for one year at a time.

Board positions
Chairman:
Atlas Antibodies AB
Antibodypedia AB

Vice Chairman:
Affibody Medical AB

Member:
Alligator AB
Bure Equity AB
Woodheads AB

Special competencies
Broad experience in research and biotechnology.

Anders Hentze Knudsen

Born 1959. Senior Operator. Employee representative. Member of the Board since 2013. Elected for four years at a time.

Lars Bo Køppler

Born 1962. Technician. Employee representative. Member of the Board since 2010. Elected for four years at a time.

Board positions
Member:
Novo Nordisk Foundation

Lena Bech Holskov

Born 1967. Safety Adviser. Employee representative. Member of the Board since 2013. Elected for four years at a time.

Executive Leadership Team

Peder Holk Nielsen

Born 1956. President & CEO.

Board positions
Member:
Hempel A/S
LEO Pharma A/S

Education
Holds a Ph.D. and an M.Sc. in Chemical Engineering from the Technical University of Denmark (DTU) and a B.Com. in International Business Management from Copenhagen Business School.

Special competencies
Novozymes' CEO since 2013. Peder focuses on developing our organization and processes to effectively turn market insights into product ideas and solutions that excite Novozymes' customers. With his background in engineering and business management, Peder drives an agenda that couples market insights and research capabilities to deliver innovation and growth.

Tina Sejersgård Fanø

Born 1969. Executive Vice President, Agriculture & Bioenergy.

Board positions
Member:
DLF Seeds & Science
Professional Packaging Systems

Education
Holds an M.Sc. in Chemical Engineering from the Technical University of Denmark (DTU).

Special competencies
Tina is responsible for application research, technical service, sales and marketing in the Agriculture & Bioenergy division. Tina has significant experience in developing and managing global partnerships and has been instrumental in negotiating several major business deals for Novozymes over the years.

Andrew Fordyce

Born 1963. Executive Vice President, Food & Beverages.

Education
Holds a Ph.D. in Chemical Engineering from the University of Texas at Austin, US.

Special competencies
Andy is responsible for application research, technical service, sales and marketing in the Food & Beverages division. Andy's career has moved from pure engineering to a strong focus on value generation for customers. Previous responsibilities include global sales and marketing, strategic account management and technical service strategy.

Benny D. Loft

Born 1965. CFO & Executive Vice President, Corporate Functions.

Board positions
Member:
DONG Energy A/S
New Xellia Group A/S

Chairman of the Audit Committee:
DONG Energy A/S
New Xellia Group A/S

Education
Holds an M.Sc. in accounting, tax and auditing from Copenhagen Business School. State-authorized Public Accountant.

Special competencies
Benny leads Corporate Functions, which covers finance, investor relations, legal, IT, human resources, sourcing, global business services, facility management and communications. Benny combines deep financial experience and acumen with extensive operational knowledge of the company's core areas.

Anders Lund

Born 1973. Executive Vice President, Household Care & Technical.

Education
Holds an M.Sc. in Economics from Aarhus University, Denmark.

Special competencies
Anders is responsible for application research, technical service, sales and marketing in the Household Care & Technical division. Anders has a strong commercial and strategic background as well as extensive experience of building and maintaining global customer relationships.

Thomas Videbæk

Born 1960. COO & Executive Vice President, Research, Innovation & Supply.

Board positions
Vice Chairman:
Albumedix A/S

Member:
Evolva SA

Education
Holds a Ph.D. and an M.Sc. in Chemical Engineering from the Technical University of Denmark (DTU) and a B.Com. in International Business from Copenhagen Business School.

Special competencies
Thomas is responsible for Novozymes' Research, Innovation & Supply unit. The unit has core research at its center and focuses on developing new biological solutions and production optimization – from discovery to large-scale manufacturing. The unit also ensures the supply and quality of our products and incubation of new platforms. Thomas has been a central driver of business ventures outside Novozymes' established areas for several years. He also has broad knowledge of sales and customer solutions and supply chain operations.

Remuneration report

At Novozymes, our executives work to promote the long-term interests of our shareholders, and the remuneration of the Board of Directors and Executive Leadership Team supports this objective. A new incentive program has been established.

Novozymes' remuneration policy for managers and other employees is designed to encourage strong performance and support value creation. Remuneration consists of a base salary, pension contributions, bonus and stock-based incentive programs. These components are linked to the employee's individual performance and to the level of achievement of Novozymes' financial, social and environmental targets.

The remuneration policy aims to provide both managers and other employees with a competitive financial package, which we review against external benchmarks.

Management remuneration

	2016			2015		
DKK million	**Executive Leadership Team**	**Board of Directors**	**Total**	**Executive Leadership Team**	**Board of Directors**	**Total**
Salaries and other short-term benefits	38	7	45	40	7	47
Defined contribution plans	9	-	9	9	-	9
Expensed stock-based incentive programs	36	-	36	34	-	34
Remuneration*	**83**	**7**	**90**	**83**	**7**	**90**

* Severance pay of DKK 62 million has not been included in the remuneration figures.

Changes in the Executive Leadership Team

In February 2016, Novozymes announced a change in the organizational structure. As part of the reorganization, Novozymes appointed former Vice President of Sales Tina Sejersgård Fanø as Executive Vice President (EVP), Agriculture & Bioenergy, former Vice President of Sales Anders Lund as EVP, Household Care & Technical, and former EVP, Business Operations, Andrew Fordyce transferred into the role of EVP, Food & Beverages.

Furthermore, Per Falholt, former EVP, R&D, stepped down from the Executive Leadership Team. He continues to support Novozymes in a consulting role on technology scouting. Thomas Nagy, former EVP, Supply Operations, has left Novozymes. Per Falholt and Thomas Nagy will continue to receive salary and bonuses during the notice period (12 months) as well as termination compensation (24 months), totaling DKK 40.7 million. Furthermore, they will participate in the stock-based incentive program during the notice period, the fair value of which is DKK 21.3 million. The severance packages were fully expensed in 2016.

Remuneration paid to individual members of the Board of Directors

	2016			2015		
DKK '000	Board of Directors	Audit Committee	Total	Board of Directors	Audit Committee	Total
Henrik Gürtler	1,500	-	1,500	1,500	-	1,500
Jørgen Buhl Rasmussen	917	208	1,125	500	-	500
Agnete Raaschou-Nielsen	583	250	833	1,000	250	1,250
Mathias Uhlén	500	-	500	500	-	500
Anders Hentze Knudsen	500	-	500	500	-	500
Lars Bo Køppler	500	-	500	500	-	500
Lena Bech Holskov	500	-	500	500	-	500
Lars Green	500	500	1,000	500	500	1,000
Heinz-Jürgen Bertram*	500	-	500	417	-	417
Lena Olving**	83	42	125	500	250	750
Remuneration	**6,083**	**1,000**	**7,083**	**6,417**	**1,000**	**7,417**

* Joined on February 25, 2015.

** Resigned on February 24, 2016.

The disclosed remuneration for board members does not include minor mandatory social security contributions paid by Novozymes.

The following members of the current Board of Directors hold shares of stock in Novozymes A/S

Shares of stock	Shares of stock at Jan. 1, 2016	Purchased during the year	Sold during the year	Shares of stock at Dec. 31, 2016	Market value DKK million
Agnete Raaschou-Nielsen	430	-	-	430	0.1
Mathias Uhlén	650	-	-	650	0.1
Anders Hentze Knudsen	356	-	-	356	0.1
Lena Bech Holskov	270	-	-	270	0.1
Jørgen Buhl Rasmussen	2,000	-	-	2,000	0.5
Board of Directors	**3,706**	**-**	**-**	**3,706**	**0.9**

Members of the Board of Directors are not granted stock options or stock awards. However, employee-elected members hold a limited number of stock options in Novozymes A/S due to Group-wide employee stock option programs.

Board of Directors

The remuneration of the Board of Directors comprises a fixed fee and is not incentive based. This ensures that the Board pursues the company's long-term interests without taking into consideration what this may mean in terms of the value of incentive-based remuneration.

The Board of Directors assesses the fees paid to the Board annually, based on recommendations from the Chairmanship. In making its recommendations, the Chairmanship is guided by relevant benchmarks, including Novozymes' peers in Denmark and the rest of Europe.

The Board of Directors' remuneration for the year is approved at the Annual Shareholders' Meeting.

Board members receive a fixed base fee, while the Chairman and the Vice Chairman receive a fee that is three times and two times the base fee respectively. The Chairman and other members of the Audit Committee also receive one base fee and half a base fee respectively.

The fixed base fee was DKK 500,000 in 2016, unchanged from 2015.

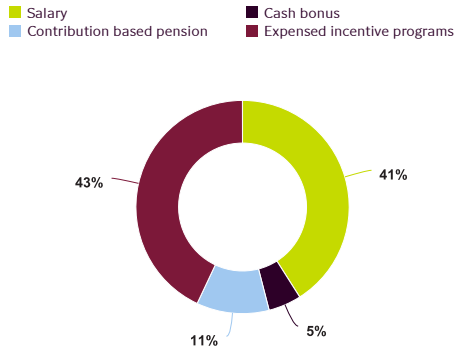
Executive Leadership Team

The Board of Directors seeks to incentivize the Executive Leadership Team to ensure the continued positive development of Novozymes and, as a result, good value creation for Novozymes' shareholders. The Board finds that the best results are achieved when a relatively high proportion of an executive's total remuneration is dependent on that executive achieving their individual targets and Novozymes' financial, social and environmental targets being met.

The Executive Leadership Team's remuneration comprises a base salary, pension contributions, a cash bonus scheme, stock-based incentive programs and other benefits (car, phone, etc.). Compared with Novozymes' peers, the variable part of the total remuneration (cash bonus and stock-based programs) is relatively large. This is because the Board of Directors sets the base salary for members of the Executive Leadership Team at a level slightly below the average for a sample of comparable Danish companies. In 2016, the ratio of the CEO's remuneration to the median employee's remuneration was 46, which is below the average ratio of 55 for the 800+ companies assessed by RobecoSAM in 2015.

In 2016, a 2.5% salary increase was awarded to the members of the Executive Leadership Team with the exception of Thomas Videbæk, who received a 15% salary increase to reflect his increased organizational responsibilities due to his appointment as COO following the reorganization in February 2016.

Composition of Management remuneration 2016



The Executive Leadership Team has a defined pension contribution scheme, with the pension contribution representing between 25% and 30% of the base salary and the cash bonus.

The maximum annual cash bonus is equivalent to five months' fixed base salary plus pension contributions.

The amount of the cash bonus is dependent on the degree of fulfillment of 1) individual targets agreed with the CEO (the Chairman for the CEO), not exceeding three months' salary and 2) the company's operational targets for financial, social and environmental performance, not exceeding two months' salary.

For 2016, the cash bonus based on individual targets was 25% of the maximum bonus for individual targets, for all members of the Executive Leadership Team. The cash bonus related to Novozymes' operational targets was 50% of the maximum bonus for operational targets.

Remuneration paid to individual members of the Executive Leadership Team

DKK million	Salary	Cash bonus	Contribution-based pension	Expensed incentive programs	Total remuneration
Peder Holk Nielsen	8.2	1.1	2.4	9.1	20.8
Anders Lund*	4.4	0.6	1.0	3.2	9.2
Andrew Fordyce***	5.0	0.6	1.2	6.1	12.9
Benny D. Loft	4.8	0.6	1.2	6.1	12.7
Tina Sejersgård Fanø*	3.8	0.6	1.0	3.1	8.5
Thomas Videbæk	5.7	0.8	1.5	6.1	14.1
Per Falholt**	0.8		0.2	1.0	2.0
Thomas Nagy**	0.8		0.2	1.0	2.0
Total remuneration 2016	**33.5**	**4.3**	**8.7**	**35.7**	**82.2**
Peder Holk Nielsen	7.9	2.1	2.6	7.8	20.4
Andrew Fordyce	4.4	0.8	1.3	5.3	11.8
Benny D. Loft	4.6	1.4	1.4	5.2	12.6
Thomas Videbæk	5.1	1.5	1.5	5.2	13.3
Per Falholt	4.7	1.1	1.3	5.2	12.3
Thomas Nagy	4.6	1.2	1.3	5.2	12.3
Total remuneration 2015	**31.3**	**8.1**	**9.4**	**33.9**	**82.7**

* Non-registered member of Executive Leadership Team. Joined on February 8, 2016.

** Resigned on February 8, 2016.

*** Non-registered member of Executive Leadership Team as of February 8, 2016.

The following members of the current Executive Leadership Team hold shares of stock in Novozymes A/S

Shares of stock	Shares of stock at Jan. 1, 2016	Change in Management	Purchased during the year	Sold during the year	Shares of stock at Dec. 31, 2016	Market value DKK million
Peder Holk Nielsen	82,188		-	-	82,188	20.0
Anders Lund	-	146	2,038	-	2,184	0.5
Andrew Fordyce	-		4,602	(4,602)	-	-
Benny D. Loft	2,260		-	-	2,260	0.6
Tina Sejersgård Fanø	-	748	1,365	-	2,113	0.5
Thomas Videbæk	-		-	-	-	-
Executive Leadership Team	**84,448**	**894**	**8,005**	**(4,602)**	**88,745**	**21.6**

The following members of the current Executive Leadership Team hold stock options in Novozymes A/S

Stock options	Options at Jan. 1, 2016	Change in Management	Additions during the year	Exercised during the year	Options at Dec. 31, 2016	Market value DKK million
Peder Holk Nielsen	376,281		119,355	-	495,636	31.1
Anders Lund	-	40,532	55,027	-	95,559	3.8
Andrew Fordyce	175,535		79,570	-	255,105	8.9
Benny D. Loft	170,044		79,570	-	249,614	8.5
Tina Sejersgård Fanø	-	55,266	54,835	(12,385)	97,716	4.1
Thomas Videbæk	170,044		79,570	-	249,614	8.5
Executive Leadership Team	**891,904**	**95,798**	**467,927**	**(12,385)**	**1,443,244**	**64.9**

The following members of the Executive Leadership Team hold stock awards in Novozymes A/S

Stock awards	Awards at Jan. 1, 2016	Change in Management	Additions during the year	Released during the year	Awards at Dec. 31, 2016	Market value DKK million
Anders Lund	-	7,128	-	(2,038)	5,090	1.2
Andrew Fordyce	2,411		-	(2,411)	-	-
Tina Sejersgård Fanø	-	5,998	-	(1,365)	4,633	1.1
Executive Leadership Team	**2,411**	**13,126**	**-**	**(5,814)**	**9,723**	**2.3**

An incentive program covering the period 2014-2016 was established for the Executive Leadership Team in 2014. The general purpose of the program was to ensure that the members of the Executive Leadership Team were incentivized in such a way that there was a focus on long-term growth and earnings at Novozymes, in order to ensure that shareholders' interests were best met. The new members of the Executive Leadership Team have been included in the program as of their appointment.

The incentive program offered a combination of stock and stock options, with half of the incentive program allocated in stock and half in stock options. The stock options have been granted annually, while the stock will be allocated in January 2017.

The amount of the incentive program was based on achievement of cumulative targets for economic profit over the three-year period. The accumulated economic profit generated in the three-year period was DKK 6.1 billion, exceeding the DKK 5.5 billion target and resulting in the full program being awarded. The intrinsic value, DKK 57 million, does not trigger the maximum value clause.

As a result of this program, 451,883 stock options were granted to the Executive Leadership Team in 2016, 463,749 in 2015 and 641,735 in 2014. Furthermore, 215,974 shares will be released in January 2017. The number of shares does not include shares that will be released to Per Falholt and Thomas Nagy.

The fair value of the program on the grant date was DKK 134 million, which is expensed over a six-year period, starting in 2014. DKK 36 million was expensed in 2016.

In 2016, Tina Sejersgård Fanø and Anders Lund had also participated in the Senior Leadership Program prior to their promotion and as a consequence have been granted 7,632 and 8,412 stock options respectively. Furthermore, they will have 7,199 and 7,102 shares respectively released in January 2017.

The members of the Executive Leadership Team have contracts of employment containing standard conditions for executive officers of Danish listed companies, including the periods of notice that both parties are required to give and noncompetition clauses. If an executive officer's contract of employment is terminated by the company without any misconduct on the part of the executive officer, the executive officer has the right to compensation, which, depending on the circumstances, may amount to a maximum of two years' base salary and pension contributions.

New incentive program for the Executive Leadership Team

A new three-year incentive program for the Executive Leadership Team covering the period 2017-2019 has been established. The program complies with the General guidelines for remuneration of the Board of Directors and Executive Management of Novozymes A/S approved at Novozymes' Annual Shareholders' Meeting.

Like the previous program, the new program is an equal stock and stock option program. Awards will depend on accumulated economic profit generated as well as average organic sales growth during the period:

- A total of up to 75% of the program will be allocated if accumulated economic profit for the three years reaches DKK 7.5 billion. If economic profit of DKK 5.5 billion is generated over the period, 50% of the stock and stock options allocated to the economic profit pool will be awarded. Between the two points, a proportional number of stock and stock options will be awarded. If the accumulated economic profit is below DKK 5.5 billion, no stock or stock options will be awarded under the economic profit pool
- A total of up to 25% of the program will be allocated if Novozymes delivers 6% average organic sales growth (CAGR) over the three years. If average organic sales growth of 3% is delivered, 50% of the stock and stock options allocated to the sales growth pool will be awarded. Between the two points, a proportional number of stock and stock options will be awarded. If average sales growth is below 3%, no stock or stock options will be awarded under the sales growth pool

The stock is allocated in January 2017 and released in January 2020 in accordance with the level of target achievement, while the stock option program is a three-year incentive program with annual allocations. The allocations for 2017-2019 will be adjusted in January 2020 in relation to the level of target achievement. The awarded stock options have a vesting period of four years, after which there is an exercise period of five years.

For the Executive Leadership Team, the value of the three-year program is approximately DKK 162 million as of January 1, 2017. The value of the program corresponds to the aggregated annual remuneration of the Executive Leadership Team in 2017-2019 (base salary, pension contributions and maximum cash bonus).

The incentive program includes a maximum clause that gives the Board of Directors the option to reduce the number of stock and stock options that are allocated. The reduction can be implemented if the intrinsic value of the stock and stock options for the Executive Leadership Team totals more than DKK 324 million on the date on which the Annual Report for 2019 is approved in January 2020.

Senior leadership

The remuneration of Novozymes' senior leadership is in line with the general remuneration policy.

A three-year incentive program covering 2014-2016 was established for senior leadership below executive level that largely followed the same mechanisms as the program for the Executive Leadership Team described above. Further information on the incentive program for this employee group can be found in Note 6.2 to the consolidated financial statements, which also includes an overview of outstanding stock options.

New incentive programs for the Senior Leadership Team and directors covering the period 2017-2019 has been established. The program for the Senior Leadership Team largely follows the same mechanisms as the program for the Executive Leadership Team.

The new program for directors is a stock option program that includes the same targets for sales and economic profit as the other programs. Furthermore, there are awards linked to annual EBIT and sustainability targets.

The Novozymes stock

The Novozymes stock performed poorly in 2016 with the share price contracting by 26% versus 2015, 24% below the OMXC20CAP. DKK 3.1 billion was returned to shareholders via a DKK 2.0 billion stock buyback program and DKK 1.1 billion in annual dividend. A new stock buyback program worth up to DKK 2 billion is planned for 2017.

The Novozymes stock is listed on Nasdaq Copenhagen and included in the OMX Copenhagen CAP 20 index.

Shareholders
Novozymes' common stock consists of two types: A shares and B shares, both with a nominal value of DKK 2 per share. All A stock is held by Novo A/S, and an A share carries 10 times as many votes as a B share. At the end of 2016, Novo A/S held 25.75% of the total common stock and, through its holding of the A stock and a proportion of the B stock (26,071,400 shares), controlled 71% of the votes. Novo A/S, domiciled in Hellerup, Denmark, is wholly owned by the Novo Nordisk Foundation, and Novozymes is therefore included in the consolidated financial statements of the Novo Nordisk Foundation.
At year-end, Novozymes had more than 60,000 shareholders, of whom more than 95% were private shareholders in Denmark. Forty institutional investors, including Novo A/S, owned approximately 50% of the B shares. Around 65% of the B shares were held outside Denmark. Novozymes held 4.9% of the B stock, equivalent to 4% of the total common stock.

Novo A/S was the only major stockholder holding more than 5% of Novozymes' common stock on December 31, 2016.

Stock performance
Novozymes' share price contracted by 26% during the year. In comparison, the OMXC20CAP fell by 2% in 2016.

The average daily trading volume of Novozymes' stock in 2016 was 826,589 shares, or DKK 141 million, making it the 10th most actively traded company on Nasdaq Copenhagen, compared with ninth in 2015. At year-end, the total market cap of Novozymes was DKK 75.5 billion, split between DKK 62.4 billion for the B shares and DKK 13.1 billion for the nontraded A shares, assuming the same value per share as for the B shares.
Over the past five years, Novozymes' stock has generated an average annual return (compounded) to shareholders of 8%. Total shareholder return in 2016 was a negative 25%, adjusted for dividends.

	A stock	B stock	Total
Share capital	107,487,200	512,512,800	620,000,000
Number of shares	53,743,600	256,256,400	310,000,000
Held by Novo A/S (%)	100.0%	10.2%	25.7%
Number of votes	1,074,872,000	512,512,800	1,587,384,800
Voting rights (%)	67.7%	32.3%	100.0%
Held by Novo A/S (%)	67.7%	3.3%	71.0%

Dividends

The Board of Directors proposes that the Annual Shareholders' Meeting approve a dividend of DKK 4.00 per share for the 2016 financial year. This will result in an expected total dividend payment of approximately DKK 1,190 million, corresponding to a payout ratio of 39%.

The dividend for 2016 will be disbursed on February 27, 2017, and the last trading day with right to dividend for 2016 is February 22, 2017.

Stock buyback program in 2016

A DKK 2 billion buyback program ran from February 1 to November 15, 2016. Under the program, 6,767,182 shares were purchased and added to treasury stock.

New stock buyback program in 2017

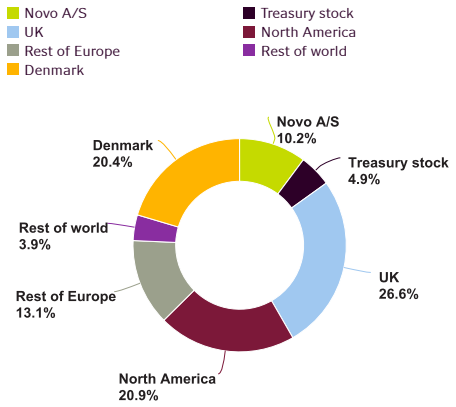
Novozymes has decided to initiate a new stock buyback program worth up to DKK 2 billion in total or a maximum of 20 million shares. The program is expected to begin early in 2017 and run for the remainder of the year. The shares acquired within the program will be used to reduce the common stock and to meet obligations arising from employee share incentive programs.

Investor Relations

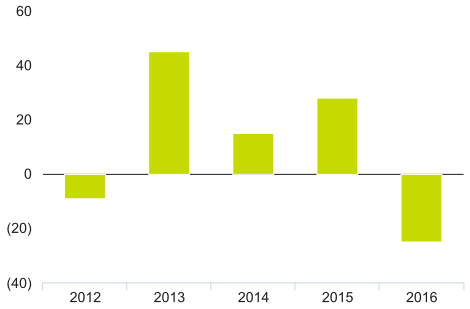
Novozymes' Investor Relations maintains an ongoing dialogue with sell-side equity analysts, as well as major institutional and retail shareholders. A list of the current analysts covering Novozymes can be found at novozymes.com/investor.

Visit our website for financial reports, current presentations, factsheets, tools and other downloads, and information for private and institutional shareholders.

Ownership by geography (B shares)



Total shareholder return, %



Ownership structure

Purpose of the Novo Nordisk Foundation

1. Provide a stable basis for the commercial and research activities of the companies in Novo A/S.
2. Support psychological, endocrinological, metabolic and other medical research.
3. Contribute to the preservation and operation of Novo Nordisk A/S' research hospital activities.
4. Support other scientific as well as humanitarian and social purposes.

novo nordisk fonden

novo

Financial investments:
Venture capital
Seed capital

Novo Group companies:
novo nordisk
novozymes
nnit

Large investments:
Sonion
Chr. Hansen
Xellia

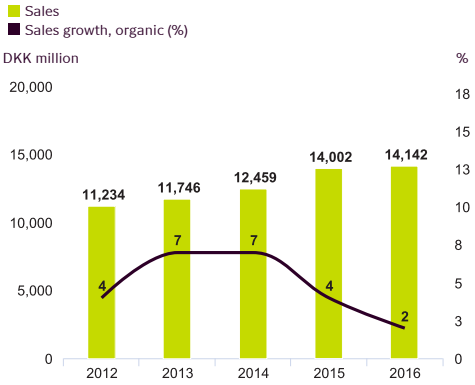
Accounts & performance

Novozymes' textile-desizing solutions are used to treat 4-5 million tons of woven fabric every year, saving 3-4 million tons of CO_2 and 3 million tons of chemicals.

Sales and earnings

Sales
Total sales in 2016 were DKK 14,142 million, an increase of 2% organically and 1% in DKK. Sales to Agriculture & Feed and Technical & Pharma were the most significant contributors to organic sales growth.

Sales and sales growth



Gross profit and margin
Gross profit was flat at DKK 8,126 million compared with 2015, and the gross margin was 57.5%, a decrease of 0.6 percentage points from 58.1% in 2015. Productivity improvements increased the gross margin, offset by product mix changes. Adjusting for the one-time reorganization costs and a DKK 40 million write-down, the gross margin would have been around 58%, on par with 2015.

Operating costs
Operating costs decreased by 1% to DKK 4,297 million. Operating costs as a percentage of sales was 30%.

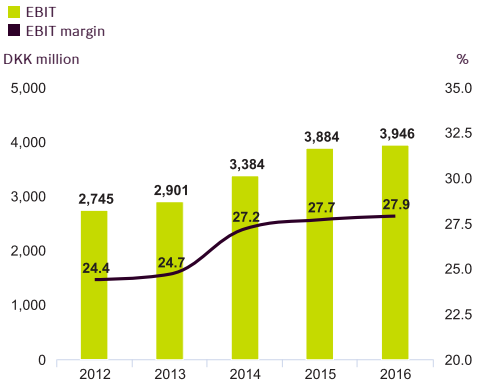
- Sales and distribution costs increased by 3%, representing 11% of sales
- Research and development costs decreased by 2%, representing 13% of sales
- Administrative costs decreased by 8%, representing 6% of sales

Other operating income
Other operating income was DKK 117 million, compared with DKK 98 million in 2015. Other operating income was related to income received across businesses and secondary sources of income.

EBITDA
EBITDA decreased by 1% to DKK 4,960 million, down from DKK 5,011 million in 2015. Depreciation and amortization were DKK 1,014 million in 2016, down 10% from DKK 1,127 million in 2015. The lower level was due to the absence of the write-down in 2015 related to intangible assets associated with the Beta Renewables partnership.

EBIT
EBIT increased by 2% to DKK 3,946 million, up from DKK 3,884 million in 2015. Adjusting for the one-time reorganization costs, EBIT grew by more than 3%.

EBIT and EBIT margin



EBIT margin
The EBIT margin was 27.9%, an increase of 0.2 percentage points from 27.7% in 2015. Adjusting for the one-time reorganization costs, the EBIT margin was above 28%.

Net profit
Net profit grew by 8% to DKK 3,050 million in 2016, up from DKK 2,825 million in 2015, driven by higher EBIT and lower net financial costs.

Earnings per share
Earnings per share increased by 10% to DKK 10.15, compared with DKK 9.23 in 2015, due to higher net profit and cancellation of shares.

Consolidated statements of income

Income statement

DKK million	Note	2016	2015
Revenue	2.1, 2.2	14,142	14,002
Cost of goods sold	2.3, 3.1, 3.2, 4.1	(6,016)	(5,873)
Gross profit		8,126	8,129
Sales and distribution costs	2.3, 3.1,3.2	(1,622)	(1,571)
Research and development costs	2.3, 2.4,3.1, 3.2	(1,865)	(1,896)
Administrative costs	2.3, 3.1,3.2	(810)	(876)
Other operating income, net	2.5	117	98
Operating profit / EBIT		3,946	3,884
Share of losses in associates	3.4	(31)	(6)
Financial income	5.2	32	4
Financial costs	5.2	(66)	(261)
Profit before tax		3,881	3,621
Tax	2.6	(831)	(796)
Net profit		3,050	2,825
Attributable to			
Shareholders in Novozymes A/S		3,050	2,823
Non-controlling interests		-	2
		3,050	2,825
Proposed dividend per share		DKK 4.00	DKK 3.50
Earnings per share	2.7	DKK 10.15	DKK 9.23
Earnings per share, diluted	2.7	DKK 10.06	DKK 9.12

Statement of comprehensive income

DKK million	Note	2016	2015
Net profit		**3,050**	**2,825**
Items that may be reclassified subsequently to the income statement:			
Currency translation adjustments			
Subsidiaries and non-controlling interests		140	399
Hedges of net investments in foreign subsidiaries		-	(315)
Tax on currency translation adjustments		(8)	23
Currency translation adjustments		**132**	**107**
Cash flow hedges			
Fair value adjustments		(70)	(113)
Tax on fair value adjustments		15	24
Fair value adjustments reclassified to financial costs		(8)	152
Tax on reclassified fair value adjustments		2	(33)
Cash flow hedges		**(61)**	**30**
Other comprehensive income		**71**	**137**
Comprehensive income for the year		**3,121**	**2,962**
Attributable to			
Shareholders in Novozymes A/S		3,121	2,960
Non-controlling interests		-	2
		3,121	2,962

Balance sheet and financial position

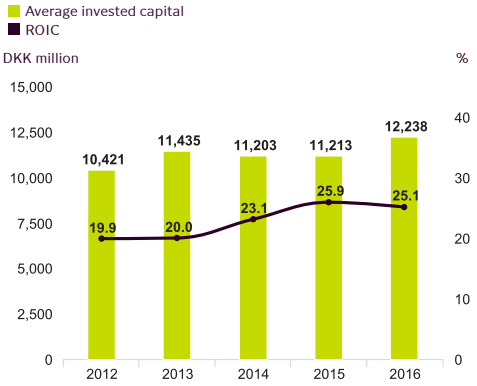
Total assets

Total assets increased from DKK 17,791 million at year-end 2015 to DKK 18,659 million at December 31, 2016.

ROIC

Return on invested capital (ROIC), including goodwill, was 25.1%, down 0.8 percentage points from 25.9% in 2015. The decrease was mainly a result of a higher capital base, due to higher NWC, investment in land for the new innovation campus and the acquisition of Organobalance GmbH.

ROIC and invested capital



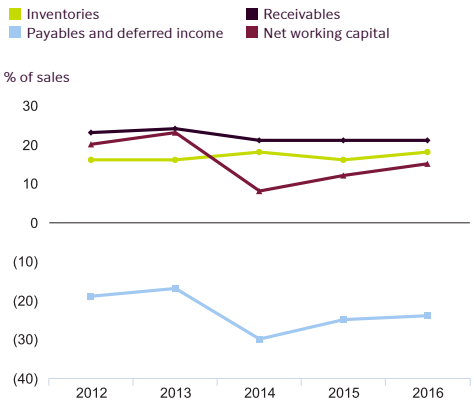
Invested capital

Invested capital increased from DKK 11,891 million in 2015 to DKK 12,584 million in 2016 driven by higher net working capital, investment in land and the acquisition of Organobalance GmbH.

Net working capital

Novozymes' net working capital increased to DKK 2,088 million, up from DKK 1,708 million in 2015, mainly due to increase in Inventories and release of deferred income.

Net working capital



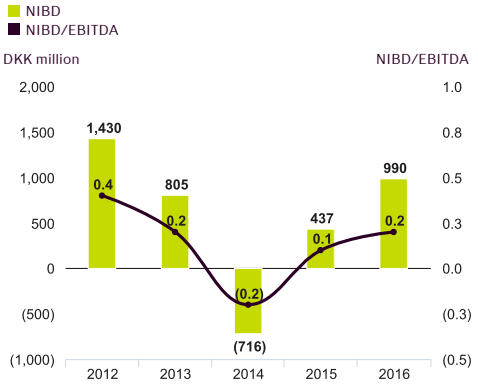
Net interest-bearing debt

Novozymes had net interest-bearing debt of DKK 990 million at year-end 2016, compared with DKK 437 million at December 31, 2015. This was a result of cash flows from dividend payments of DKK 1,061 million, stock buybacks of DKK 2,000 million and net investments of DKK 1,188 million, which more than offset cash flows from operating activities.

Net interest-bearing debt-to-EBITDA

Net interest-bearing debt-to-EBITDA was 0.2 at year-end 2016, compared with 0.1 at December 31, 2015.

Net interest-bearing debt (NIBD) and net interest-bearing debt-to-EBITDA



Consolidated balance sheet

Assets

DKK million	Note	Dec. 31, 2016	Dec. 31, 2015
Intangible assets	2.1, 3.1	2,737	2,676
Land and buildings	2.1, 3.2	2,931	2,665
Plant and machinery	2.1, 3.2	4,239	4,237
Other equipment	2.1, 3.2	615	611
Assets under construction and prepayments	2.1, 3.2	856	649
Deferred tax assets	2.6	607	459
Other financial assets		151	139
Investments in associates	3.4	73	91
Other receivables	4.3	57	116
Non-current assets		**12,266**	**11,643**
Inventories	4.1	2,488	2,281
Trade receivables	4.2	2,680	2,558
Tax receivables	2.6	142	156
Other receivables	4.3	267	294
Other financial assets		4	20
Cash and cash equivalents	6.6	812	839
Current assets		**6,393**	**6,148**
Assets		**18,659**	**17,791**

Liabilities and shareholders' equity

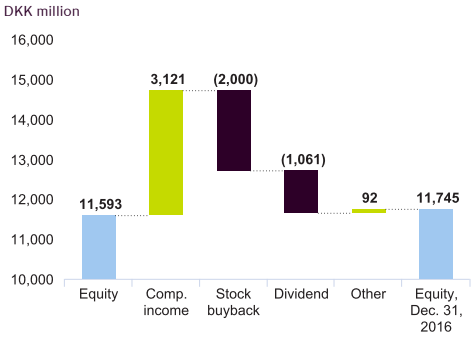
DKK million	Note	Dec. 31, 2016	Dec. 31, 2015
Common stock	5.5	620	626
Currency translation adjustments		670	538
Cash flow hedges		(41)	20
Retained earnings		10,483	10,396
Equity attributable to shareholders in Novozymes A/S		**11,732**	**11,580**
Non-controlling interests		13	13
Shareholders' equity		**11,745**	**11,593**
Deferred tax liabilities	2.6	854	715
Provisions	3.3	231	186
Deferred income	4.4	540	769
Other liabilities		-	12
Other financial liabilities	5.3	1,727	1,216
Non-current liabilities		**3,352**	**2,898**
Provisions	3.3	61	55
Other financial liabilities	5.3	200	116
Trade payables		1,194	1,189
Deferred income	4.4	248	223
Tax payables	2.6	437	369
Other liabilities	4.5	1,422	1,348
Current liabilities		**3,562**	**3,300**
Liabilities		**6,914**	**6,198**
Liabilities and shareholders' equity		**18,659**	**17,791**

Equity and shareholder return

Shareholders' equity

At December 31, 2016, shareholders' equity was DKK 11,745 million, up 1% from DKK 11,593 million at year-end 2015, as comprehensive income more than offset dividend payments and stock buyback in 2016.

Movements in equity 2016



Equity ratio

Shareholders' equity represented 63% of the balance sheet total, down from 65% at year-end 2015.

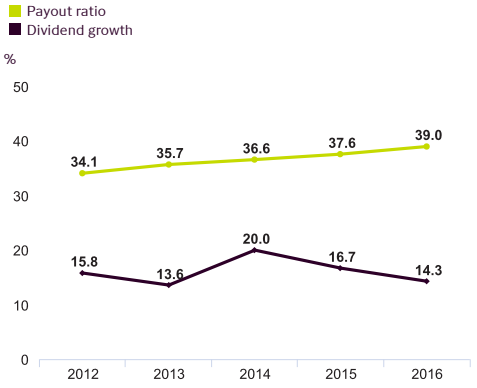
Return on equity

Return on equity was 26.1%, up 1.4 percentage points from 24.7% in 2015. The increase was a result of higher net profit partly offset by an increase in equity.

Dividend

The Board of Directors proposes that the Annual Shareholders' Meeting approve a dividend of DKK 4.00 per share for the 2016 financial year, an increase of 14% compared with 2015. This will result in an expected total dividend payment of approximately DKK 1,190 million, corresponding to a payout ratio of 39.0%.

Payout ratio and dividend growth



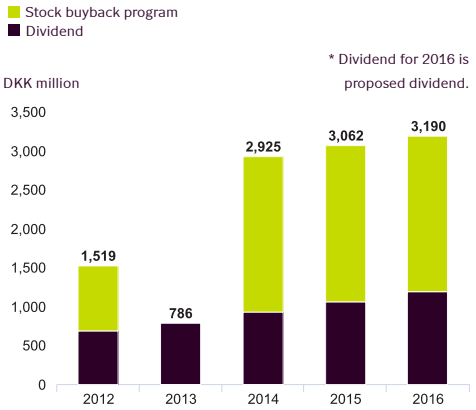
Treasury stock

At December 31, 2016, the holding of treasury stock was 12.4 million B shares, equivalent to 4.0% of the common stock.

Stock buyback program

In 2016, Novozymes bought back 6.8 million B shares with a transaction value of DKK 2,000 million under the stock buyback program initiated on February 15, 2016, and completed on November 15, 2016. The shares acquired within the program will be used to reduce the common stock and to meet obligations arising from employee share-based incentive programs.

Shareholder return



Consolidated statement of shareholders' equity

DKK million		Attributable to shareholders in the company						
		Common stock	Currency translation adjustments	Cash flow hedges	Retained earnings	Total	Non-controlling interests	Total equity
Shareholders' equity at January 1, 2016		**626**	**538**	**20**	**10,396**	**11,580**	**13**	**11,593**
Net profit for the year					3,050	3,050	-	3,050
Other comprehensive income for the year			132	(61)		71		71
Total comprehensive income for the year		**-**	**132**	**(61)**	**3,050**	**3,121**	**-**	**3,121**
Purchase of treasury stock					(2,000)	(2,000)		(2,000)
Sale of treasury stock					69	69		69
Write-down of common stock		(6)			6	-		-
Dividend					(1,061)	(1,061)		(1,061)
Stock-based payment					136	136		136
Tax related to equity items					(113)	(113)		(113)
Changes in shareholders' equity		**(6)**	**132**	**(61)**	**87**	**152**	**-**	**152**
Shareholders' equity at December 31, 2016	B/S	**620**	**670**	**(41)**	**10,483**	**11,732**	**13**	**11,745**
Shareholders' equity at January 1, 2015		**639**	**431**	**(10)**	**10,209**	**11,269**	**11**	**11,280**
Net profit for the year					2,823	2,823	2	2,825
Other comprehensive income for the year			107	30	-	137	-	137
Total comprehensive income for the year		**-**	**107**	**30**	**2,823**	**2,960**	**2**	**2,962**
Purchase of treasury stock					(2,000)	(2,000)		(2,000)
Sale of treasury stock					126	126		126
Write-down of common stock		(13)			13	-		-
Dividend					(925)	(925)		(925)
Stock-based payment					101	101		101
Tax related to equity items					49	49		49
Changes in shareholders' equity		**(13)**	**107**	**30**	**187**	**311**	**2**	**313**
Shareholders' equity at December 31, 2015	B/S	**626**	**538**	**20**	**10,396**	**11,580**	**13**	**11,593**

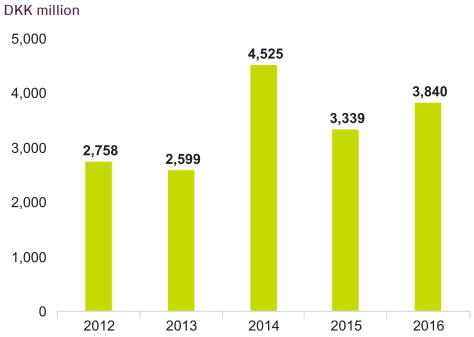
The proposed dividend of DKK 1,190 million for 2016 is included in Retained earnings.

Cash flow

Cash flow from operating activities

Cash flow from operating activities was DKK 3,840 million, up from DKK 3,339 million in 2015, primarily due to higher net profit.

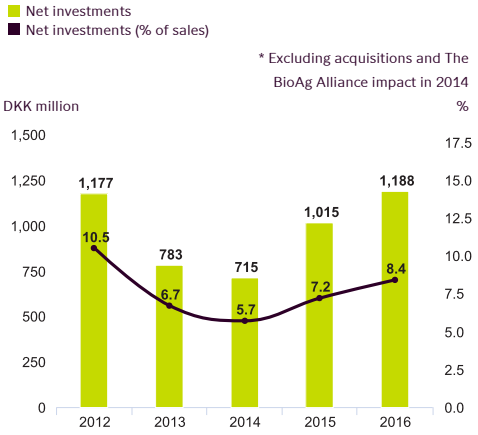
Cash flow from operating activities



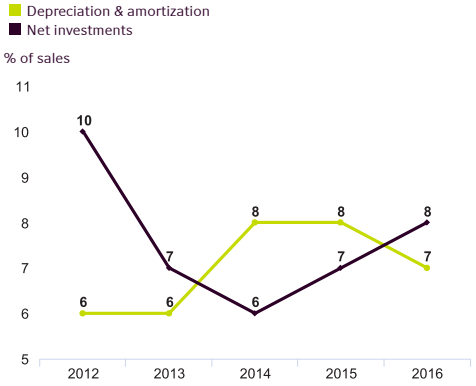
Net investments

Net investments excluding acquisitions were DKK 1,188 million, up from DKK 1,015 million in 2015. Net investments in property, plant and equipment amounted to DKK 1,048 million, compared with DKK 952 million in 2015. The increase is related to the purchase of land for the new innovation campus in Denmark.

Net investments



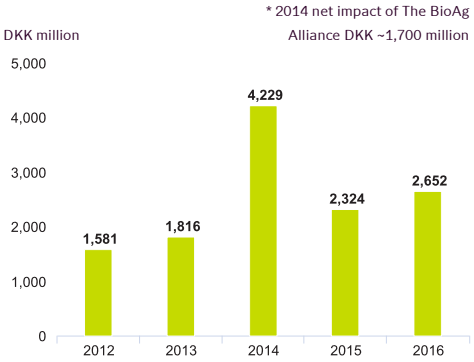
Net investments and depreciation & amortization



Free cash flow before acquisitions

Free cash flow before acquisitions was DKK 2,652 million, compared with DKK 2,324 million in 2015. The increase is primarily due to higher net profit. Free cash flow was DKK 2,491 million in 2016, compared with DKK 2,082 million in 2015. The acquisition of Organobalance GmbH impacted free cash flow by DKK 146 million in 2016.

Free cash flow before acquisitions



Financing activities

Cash flow from financing activities was negative at DKK 2,484 million, compared with a negative cash flow of DKK 3,681 million in 2015. The negative cash flow from financing activities was mainly due to completion of the stock buyback program and dividend payments.

Cash position

Cash and cash equivalents at December 31, 2016, amounted to DKK 805 million, up from DKK 796 million at year-end 2015. Undrawn committed credit facilities were DKK 3,500 million at December 31, 2016.

Consolidated statement of cash flows

DKK million	Note	2016	2015
Net profit		**3,050**	**2,825**
Reversal of non-cash items	6.6	2,035	1,992
Income tax paid	2.6	(905)	(893)
Interest received		4	3
Interest paid		(30)	(42)
Cash flow before change in working capital		**4,154**	**3,885**
Change in working capital			
(Increase)/decrease in receivables		13	(311)
(Increase)/decrease in inventories		(199)	(60)
Increase/(decrease) in payables and deferred income		(125)	(161)
Currency translation adjustments		(3)	(14)
Cash flow from operating activities		**3,840**	**3,339**
Investments			
Purchase of intangible assets	3.1	(140)	(63)
Purchase of property, plant and equipment	3.2	(1,076)	(968)
Sale of property, plant and equipment		28	16
Business acquisitions and purchase of financial assets	6.6	(161)	(242)
Cash flow from investing activities		**(1,349)**	**(1,257)**
Free cash flow		**2,491**	**2,082**

DKK million	Note	2016	2015
Financing			
Borrowings		1,281	122
Repayments of borrowings		(773)	(606)
Hedging of net investments		-	(398)
Purchase of treasury stock		(2,000)	(2,000)
Sale of treasury stock		69	126
Dividend paid		(1,061)	(925)
Cash flow from financing activities		**(2,484)**	**(3,681)**
Net cash flow		**7**	**(1,599)**
Unrealized gain/(loss) on currencies and financial assets included in cash and cash equivalents		2	(58)
Net change in cash and cash equivalents		**9**	**(1,657)**
Cash and cash equivalents, net, at January 1		796	2,453
Cash and cash equivalents, net, at December 31	**6.6**	**805**	**796**

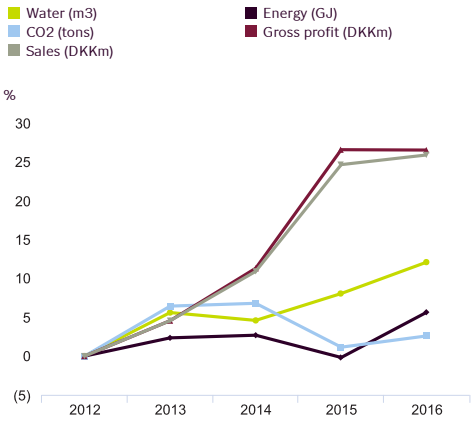
Environmental performance

Climate change

Novozymes has adopted three efficiency/intensity targets that measure performance improvements against the base year 2014. The efficiency/intensity is measured as consumption/emissions divided by gross profit. In 2016, consumption/emissions increased more than gross profit, resulting in reduced performance compared with 2015. Novozymes' CO_2 intensity reduction compared with the base year 2014 fell from 17% in 2015 to 16% in 2016.

Novozymes' impact on climate change should also take into account the net positive carbon footprint that its products generate. In 2016, Novozymes' customers avoided an estimated 69 million tons of CO_2 emissions by applying Novozymes' products, compared with 60 million tons in 2015. The savings achieved are equivalent to taking approximately 30 million cars off the road.

Developments in sales, gross profit and environmental impact

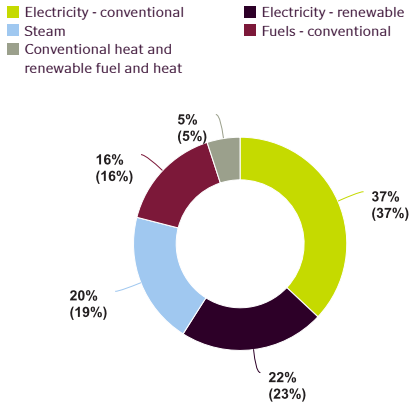


Energy

In 2016, the energy efficiency improvement compared with the base year 2014 was 10% – a reduction from 15% in 2015. This decrease stems from operational challenges in Novozymes' fermentation facilities and increased capacity utilization, both of which required more energy.

As in 2015, Novozymes obtained 24% of its energy from renewable sources in 2016, mostly from offshore wind farms in Denmark.

Energy by source 2016 (2015)



Water

In 2016, the water efficiency improvement was 6% compared with the base year 2014. In 2015, the improvement was 9%. The decrease was due to high capacity utilization, changed product mix and ongoing challenges in the system for reusing water in Denmark.

Waste

In 2016, Novozymes' production sites across the world generated 13,000 tons of solid waste, of which 44% was recycled, compared with 50% in 2015.

Novozymes recovered more than 97% of the biomass generated as a by-product of its production processes, compared with 98% in 2015. All recovered biomass is either sent for composting or is converted and sold as NovoGro®, an organic agricultural fertilizer.

Environmental compliance

In 2016, 37 breaches of regulatory limits were recorded worldwide, compared with 27 in 2015. Most of these breaches are minor and relate to wastewater treatment and soil contamination. Novozymes has agreed on or is in the process of negotiating action plans with the relevant authorities to address these incidents.

In addition, the company received nine complaints from neighbors in 2016, compared with 11 in 2015, mostly related to odors and noise.

Consolidated environmental data

	Note		2016	2015
Climate change				
Estimated CO_2 reductions from customers' application of Novozymes' products in their products or processes	7.1	Million tons	69	60
Greenhouse gas emissions	7.1	1000 tons CO_2-eqv.	413	408
CO_2 intensity	7.1	%	16	17
Energy				
Energy consumption	7.2	1000 GJ	4,380	4,148
Renewable energy	7.2	%	24	24
Energy efficiency	7.2	%	10	15
Water				
Water consumption	7.3	1000 m^3	7,225	6,965
Volume of wastewater	7.3	1000 m^3	5,392	4,917
Water efficiency	7.3	%	6	9
Waste				
Solid waste	7.4	1000 tons	13	13
Recycling rate	7.4	%	44	50
Biomass volume	7.4	1000 tons	550	517
Environmental compliance, etc.				
Breaches of regulatory limits	7.5	No.	37	27
Neighbor complaints	7.5	No.	9	11
References to notes without data				
Bioethics & gene technology	7.6		n.a.	n.a.
Product safety & stewardship	7.7		n.a.	n.a.

Social and governance performance

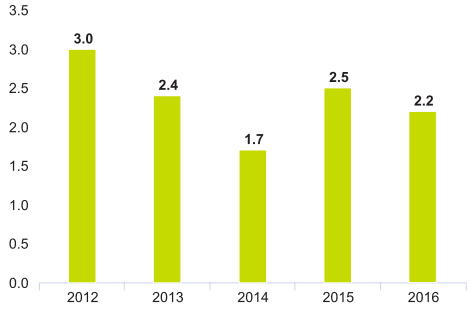
Labor practices & human rights
The total number of employees at year-end 2016 was 6,441, compared with 6,485 at year-end 2015. The slight decrease was mainly due to the reorganization in 2016.

Novozymes continued to strengthen diversity within the organization while upholding the principles of merit-based selection and promotion. In 2016, 36% of the employees promoted were female, compared with 41% in 2015.

Novozymes' employee absence rate remained at 2.0% in 2016. Region-specific initiatives have been drawn up to reduce absences.

Occupational health & safety
In 2016, the frequency of occupational accidents decreased to 2.2 per million working hours from 2.5 per million working hours in 2015. As the majority of the accidents involved falls or trips, a new program has been launched across all sites to raise awareness and reduce these types of accidents.

Frequency of accidents (per million working hours)

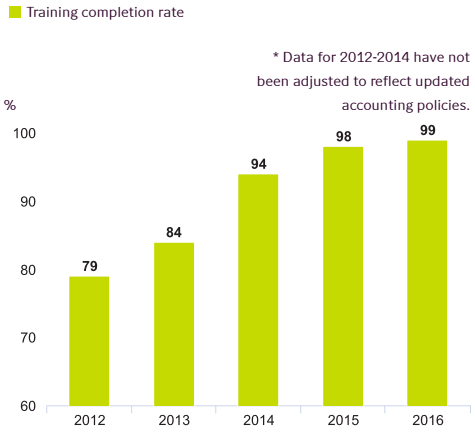


Innovation
In 2016, Novozymes launched eight new products compared with six product launches in 2015. See the full list of new products in Novozymes in a nutshell.

Business ethics
99% of Novozymes' employees completed business integrity training in 2016, compared with 98% in 2015.

The number of investigated fraud cases increased from 25 in 2015 to 44 in 2016. None of the investigated fraud cases, in both 2015 and 2016, had a material financial impact on Novozymes.

Business integrity training for employees*



Corporate Citizenship
In 2016, Novozymes engaged with more than 106,000 learners, compared with approximately 25,000 in 2015.

Customer satisfaction measurement
A customer satisfaction survey was conducted among Novozymes' customers in 2016. The results show a high level of satisfaction, with a Net Promoter Score (NPS) of +45 on a scale from -100 to +100.

Consolidated social and governance data

	Note		2016	2015
Labor practices & human rights				
Employees, total	2.3	No.	6,441	6,485
Women	2.3	%	37.7	37.5
Men	2.3	%	62.3	62.5
Rate of absence	8.1	%	2.0	2.0
Employees promoted who are women	8.1	%	36	41
“Satisfaction and motivation” score in employee survey	8.1	No.	76	77
“Opportunities for professional and personal development” score in employee survey	8.1	No.	79	80
Occupational health & safety				
Fatalities		No.	-	-
Frequency of occupational accidents	8.2	Per million working hours	2.2	2.5
Frequency of occupational diseases	8.2	Per million working hours	0.7	1.2
Innovation				
New products	2.4	No.	8	6
Active patent families	2.4	No.	1,123	1,164
Business ethics				
Completion of business integrity training for employees*	8.3	%	99	98
Breaches of competition law	8.3	No.	-	-
Investigated fraud cases*	8.3	No.	44	25
Corporate Citizenship				
Estimated number of learners reached*	8.4	No.	106,000	25,000
Customer satisfaction measurement				
Net Promoter Score (NPS)	8.5	No. (-100 to +100)	45	n.a
Reference to notes without data				
Responsible sourcing	8.6		n.a.	n.a.

* Comparison year data have been restated to reflect updated accounting policies.

Notes

Basis of reporting

1 Basis of reporting

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8.2 Occupational health & safety

8.3 Business ethics

8.4 Corporate citizenship

8.5 Customer satisfaction measurement

8.6 Responsible sourcing

1 Basis of reporting

Reading guide
The Accounts and performance section is presented in a manner that attempts to make the information provided more understandable and relevant to readers. This includes providing relevant rather than generic information.

The notes have been divided into eight sections: Basis of reporting, Net operating profit after tax, Invested capital, Net working capital, Capital structure and financing, Other financial notes, Environmental data and Social and governance data. The purpose is to provide a clearer understanding of what drives performance.

The notes have been structured to provide an enhanced understanding of each accounting area, by describing relevant accounting policies and sources of estimation uncertainty in the notes to which they relate.

Novozymes explains the accounting choices that have been made within the framework of the prevailing IFRS standards and has elected not to repeat the actual text of the standard, unless this is considered particularly important for an understanding of the note content.
The descriptions of accounting policies in the notes form part of the overall description of accounting policies.

Environmental and social and governance data are an integrated part of The Novozymes Report and are covered by the statutory audit performed by the auditor elected at the Annual Shareholders' Meeting. The notes for these data also disclose Novozymes' management approach to the reported issue.

The symbols I/S, B/S and ESG show which amounts in the notes can be found in the income statement, balance sheet, and environmental data and social and governance data respectively.

Basis of reporting
The consolidated financial statements of the Novozymes Group have been prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU and further requirements in the Danish Financial Statements Act. Novozymes has prepared its consolidated financial statements in accordance with all the IFRS standards in force at December 31, 2016. The fiscal year for the Group is January 1 – December 31.
The consolidated financial statements have been prepared on a going concern basis and under the historical cost convention, with the exception of derivatives and securities, which are measured at fair value. The accounting policies are unchanged from last year.
The consolidated environmental and social and governance statements have been prepared in accordance with principles that adhere to the following internationally recognized voluntary reporting standards and principles:

- AA1000 framework for accountability. The framework states that reporting must provide a complete, accurate, relevant and balanced picture of the organization's approach to and impact on society
- UN Global Compact. Novozymes is a signatory to the UN Global Compact, a strategic policy initiative for businesses that are committed to aligning their operations and strategies with ten universally accepted principles in the areas of human rights, labor, environment and anti-corruption. Read more in Novozymes' UNGC Communication on Progress 2016
- GRI Sustainability Reporting Standards (GRI Standards). Novozymes refers to GRI 101: Foundation 2016 to inspire its materiality assessment process. Information is presented on Novozymes' management approach to material issues, taking inspiration from GRI 103: Management Approach 2016. Topic-specific information is provided by referencing GRI Standards 200, 300 and 400 on Economic, Environmental and Social disclosures. Specific content for which information is reported is outlined in Novozymes' GRI content index in Novozymes reporting on the GRI

The accounting policies are unchanged from last year.

Impact of new accounting standards
Novozymes has adopted the following new or amended standards and interpretations from January 1, 2016.

- Amendments to IFRS 11 Accounting for Acquisition of Interests in Joint Operations was published in May 2014 and clarifies that IFRS 3 is to be used when interests in joint ventures are acquired if the joint venture constitutes a business
- Amendment to IAS 16 and IAS 38 Clarification of Acceptable Methods of Depreciation and Amortisation was published in May 2014 and clarifies that revenue-based depreciation is not allowed for property, plant and equipment and only allowed in certain situations for intangible assets
- Annual Improvements to IFRSs (2012-2014) was published in September 2014 and contains minor changes to four standards
- Amendments to IAS 1 Disclosure Initiative was published in February 2015 and clarifies that entities are able to use judgment when presenting their financial statements

1 Basis of reporting (continued)

The adoption of the amended standards and interpretations has not had a significant impact on recognition or measurement in the consolidated financial statements for 2016, and is not anticipated to have a significant impact on future periods.

New standards and interpretations not yet adopted

The IASB has issued a number of new or amended standards and interpretations that are not mandatory for the consolidated financial statements for 2016, some of which have not yet been endorsed by the EU. Novozymes expects to adopt the standards and interpretations when they become mandatory. None of these are expected to have a significant impact on recognition and measurement, but may lead to further disclosures in the notes.

- IFRS 15 – Revenue from Contracts with Customers was published in May 2014 and establishes a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers. The standard requires extensive disclosures and is effective for annual periods beginning on or after January 1, 2018. Based on a preliminary assessment, the new standard on revenue recognition is not expected to have a significant effect on recognition and measurement, but is expected to impact the disclosures due to extensive new disclosure requirements
- IFRS 16 – Leasing was published in January 2016 and introduces a single accounting approach to all leases, so that all leases, with a few exceptions, must be recognized in the balance sheet as assets with a related liability, while the costs are recognized as depreciation and interest expenses. Based on a preliminary assessment, the new leasing standard is expected to result in an increase in total assets of approx. 2-4%
- IFRS 9 – Financial Instruments: Classification and Measurement of Financial Assets and Financial Liabilities was published in July 2014 and contains requirements for the classification and measurement of financial assets and financial liabilities, impairment methodology and general hedge accounting. An analysis of the effect of implementing IFRS 9 is ongoing. However, the implementation of IFRS 9 is not expected to have a significant effect on the consolidated financial statements

Defining materiality

Novozymes' annual report is based on the concept of materiality, to ensure that the content is material and relevant to the reader.

The consolidated financial statements consist of a large number of transactions. These transactions are aggregated into classes according to their nature or function, and presented in classes of similar items in the financial statements and in the notes as required by IFRS. If items are individually immaterial, they are aggregated with other items of similar nature in the statements or in the notes. The disclosure requirements throughout IFRS are substantial, and Novozymes provides the specific disclosures required by IFRS unless the information is considered immaterial to the economic decision-making of the readers of these financial statements.

The consolidated environmental and social and governance (ESG) data include the parameters that, based on an assessment of materiality for Novozymes and its stakeholders, are deemed the most relevant.

Novozymes' materiality assessment is a systematic and rigorous process that integrates inputs from external stakeholders, trend analyses and internal engagement with relevant departments, for example risk management and corporate sustainability.

The process results in two outputs: 1) disclosures on key trends and 2) disclosures on material ESG issues.

In 2016, Novozymes' materiality assessment compiled diverse inside-out and outside-in perspectives using evidence-based research and active stakeholder engagement. This process comprised the following activities:

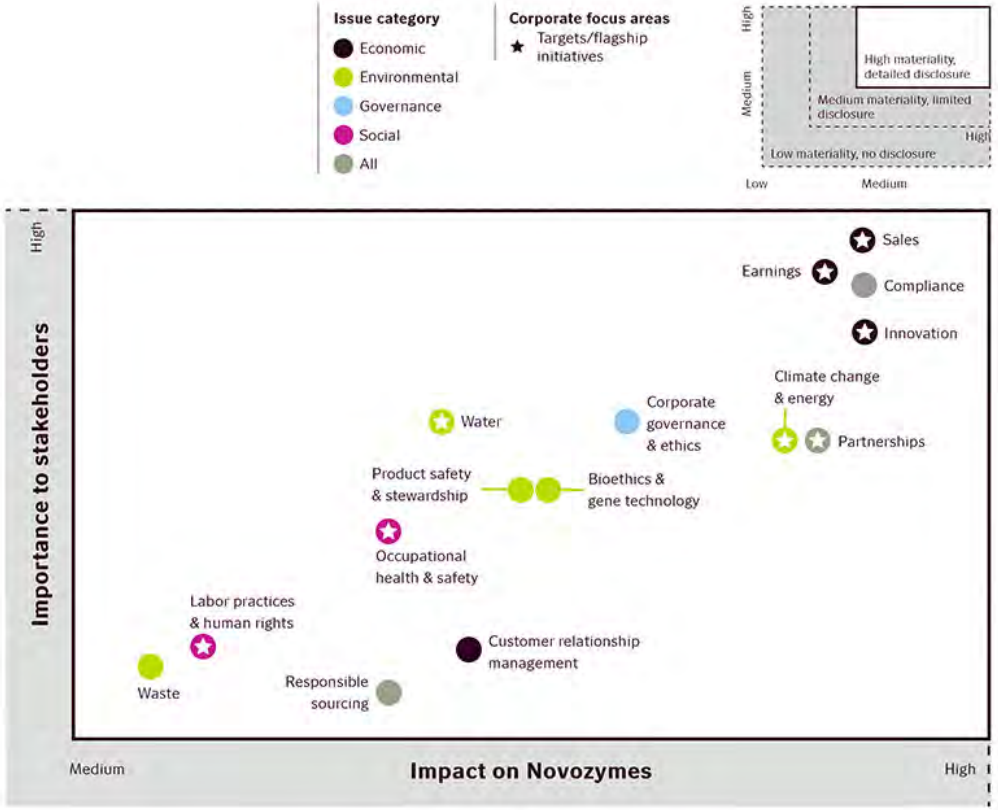
- **Identification** of global trends and ESG issues from internal and external sources. The UN SDGs, expert reports on global trends for 2015 and 2016 (e.g. Global Risk Reports by the World Economic Forum, etc.), investor and customer questionnaires, and peer analysis served as external sources. Novozymes' business strategies and enterprise risk management (ERM) provided significant internal insights
- **Prioritization** of trends and ESG issues by means of a survey of relevant internal stakeholders from Corporate Sustainability, Corporate Strategy and Public Affairs globally. The shortlist of prioritized issues was validated and further prioritized with senior leadership from Novozymes' business divisions and Risk Management
- **Validation** of top trends and ESG issues by means of comparing them with priority themes identified by key ESG rating agencies and the SASB Standards for the chemical industry. Furthermore, consultations were held with selected investors, customers and Novozymes' Executive Leadership Team
- **Disclosure** of the macro trends that most shape and influence Novozymes' business (see "Trends"), and material issues (see "Materiality matrix") in The Novozymes Report. The primary audience for these assessments and disclosures is Novozymes' investors, employees and customers

1 Basis of reporting (continued)

Novozymes will continue to review global macro trends and material issues on an ongoing basis to proactively understand emerging trends and developments.

The illustration is a snapshot of the upper-right quadrant of Novozymes' materiality matrix and depicts 15 issues that are most material to Novozymes' business.

The materiality matrix includes some new issues and other changes compared to previous year. The new issues included are Sales, Earnings, Compliance and Responsible sourcing. An explanation of all the changes in the materiality matrix in 2016 can be found in the Novozymes' UNGC Communication on Progress 2016.



Further information on the identified issues, excluding Sales and Earnings can be found in the note sections Environmental data and Social and governance data.

Limited reporting scope

The environmental data cover those activities that could have a significant impact on the environment. Sites with activities considered not to have a significant environmental impact are not included. Such sites comprise sales offices, R&D labs, and sites with limited blending and storage of products. However, measures are taken to ensure that at least 97% of the total Novozymes quantity of the measured environmental parameter is included in the reported numbers.

CRITICAL ACCOUNTING ESTIMATES AND JUDGMENTS

The preparation of the consolidated financial statements in conformity with IFRS requires Management to make estimates and assumptions that affect the application of policies and reported amounts of assets, liabilities, income, expenses and related disclosures. The estimates and underlying assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, and are used to assess the carrying amounts of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Changes in accounting estimates may be necessary if there are changes in the circumstances on which the estimate was based, or as a result of new information or more experience. Such changes are recognized in the period in which the estimate is revised.

The application of the Group's accounting policies may require Management to make judgments that can have a significant effect on the amounts recognized in the consolidated financial statements. Management judgment is required in particular when assessing the substance of transactions that have a complicated structure or legal form.

1 Basis of reporting (continued)

§ **ACCOUNTING POLICIES**

The descriptions of accounting policies in the notes form part of the overall description of accounting policies.

Consolidation
The consolidated financial statements comprise the financial statements of Novozymes A/S (the parent company) and subsidiaries controlled by Novozymes A/S, prepared in accordance with Group accounting policies. The consolidated financial statements are prepared by combining items of a uniform nature and subsequently eliminating intercompany transactions, internal stockholdings and balances, and unrealized intercompany profits and losses.

Environmental and social data are similarly based on data for the parent company and all subsidiaries by combining items of a uniform nature compiled using the same accounting principles. Recognition of newly acquired or divested sites and subsidiaries follows the same principles as for the financial reporting.

Translation of foreign currencies
The consolidated financial statements are presented in Danish kroner (DKK).

Foreign currency transactions are translated into the functional currency defined for each company using the exchange rates prevailing at the transaction date. Monetary items denominated in foreign currencies are translated into the functional currency at the exchange rates prevailing at the reporting date.

Financial statements of foreign subsidiaries are translated into Danish kroner at the exchange rates prevailing at the reporting date for assets and liabilities, and at average exchange rates for income statement items.

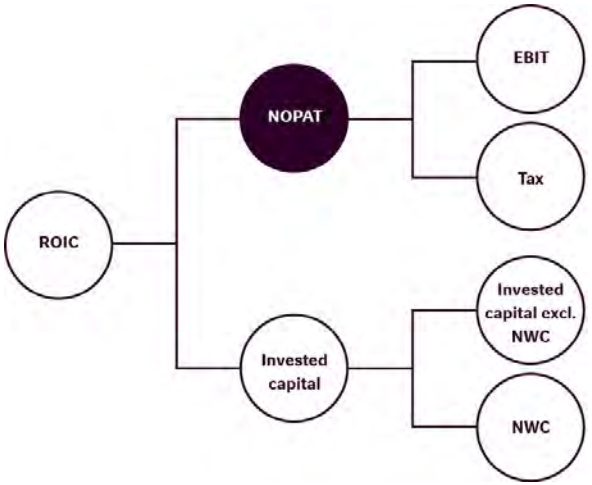
All exchange rate differences are recognized as Financial income or Financial costs, with the exception of the following, which are recognized in Other comprehensive income, translated at the exchange rates prevailing at the reporting date:

- Translation of foreign subsidiaries' net assets at the beginning of the year
- Translation of foreign subsidiaries' income statements from average exchange rates to the exchange rates prevailing at the reporting date
- Translation of long-term intercompany balances, which are considered to be an addition to net assets in subsidiaries

Goodwill arising on the acquisition of new companies is treated as an asset belonging to the new foreign subsidiaries and translated into Danish kroner at the exchange rates prevailing at the reporting date.

Unrealized gains/losses relating to hedging of future cash flows and hedging of net investments in foreign subsidiaries are recognized in Other comprehensive income.

Net operating profit after tax



DKK million	Note	2016	2015
Revenue	2.2	14,142	14,002
Cost of goods sold		(6,016)	(5,873)
Gross profit		**8,126**	**8,129**
Sales and distribution costs		(1,622)	(1,571)
Research and development costs	2.4	(1,865)	(1,896)
Administrative costs		(810)	(876)
Other operating income, net	2.5	117	98
Operating profit (EBIT)		**3,946**	**3,884**
Exchange gains/(losses)		(2)	(158)
Tax on adjusted operating profit		(844)	(820)
Share of loss in associates	3.4	(31)	(6)
Adjusted operating profit (NOPAT)		**3,069**	**2,900**
Average invested capital		**12,238**	**11,213**
ROIC		**25.1%**	**25.9%**

Organic sales growth

2%

EBIT grew by DKK 62 million to DKK million

3,946

The EBIT margin grew by 0.2 percentage points to

27.9%

2.1 Segments

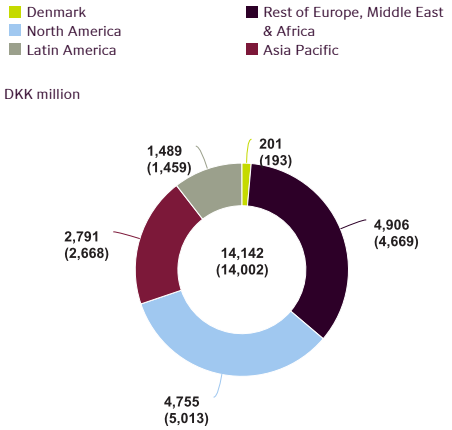
No segment reporting

The internal reporting framework used for reporting on revenue and expenses to the Executive Leadership Team and the Board of Directors has been set up to reflect and report on the global functional responsibility setup at Novozymes. This setup consolidates functions by type, and Management reviews the results of the Group as a whole to assess performance thus, there is only one operating segment.

Worldwide operations

The Group operates in four geographical regions: Europe, Middle East & Africa (including Denmark), North America, Asia Pacific and Latin America. From a revenue perspective, the US is the single largest market, contributing around 31% of the Group's revenue (2015: around 33%).

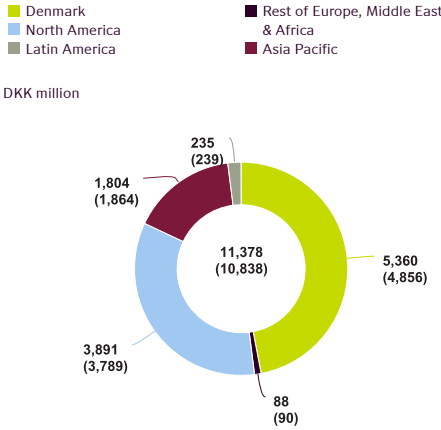
Revenue 2016 (2015)



The geographical distribution of revenue is based on the country in which the goods are delivered. With a number of customers, central deliveries are made to specified locations and the final recipient is unknown.

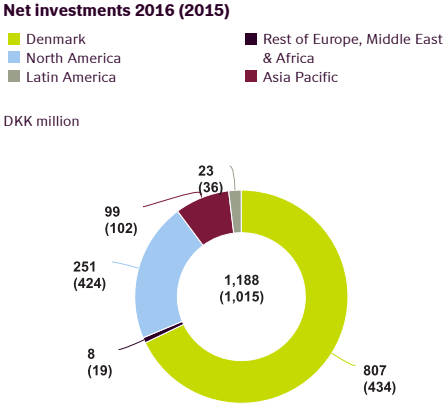
The stated geographical distribution of revenue may therefore vary from year to year if the delivery destination for these strategic customers changes.

Intangible assets and property, plant and equipment 2016 (2015)



The major part of the Group's intangible assets and property, plant and equipment are located in Denmark, the US and China at ~47%, ~33% and ~14% respectively (2015: ~45%, ~34% and ~15%).

Net investments 2016 (2015)

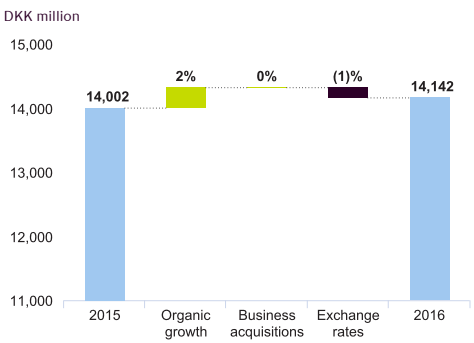


2.2 Revenue

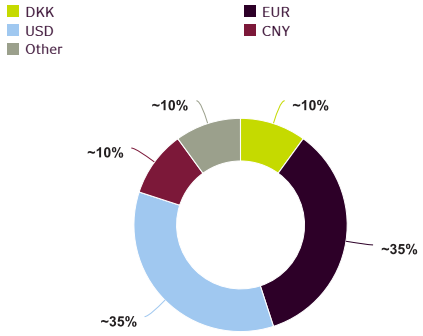
DKK million		2016	2015
Household Care		4,702	4,632
Food & Beverages		3,740	3,715
Bioenergy		2,438	2,543
Agriculture & Feed		2,206	2,130
Technical & Pharma		1,056	982
Revenue	I/S	**14,142**	**14,002**
Sales to the five largest customers as a percentage of revenue		33%	32%

A very limited part of the Group's total revenue arises from royalties.

Sales growth 2016



Sales by currency 2016



CRITICAL ACCOUNTING ESTIMATES AND JUDGMENTS

The Group has entered into partnerships and collaboration agreements that include complex mechanisms for sharing profit and expenses. The complexity of the agreements means there are several uncertainties in relation to interpretation. Revenue recognition for these partnerships and collaboration agreements is complex and requires significant judgment and estimates by Management.

ACCOUNTING POLICIES

Revenue includes sales of goods and related services, commission income and royalties, less goods returned and volume and cash discounts. Sales are recognized at the time of risk transfer relating to the goods sold, provided that the revenue can be measured on a reliable basis and payment is expected to be received. A liability is recognized when it is permitted for goods to be returned and this is likely.

The Group has entered into agreements where the other contracting party undertakes sales to third parties and the profit is distributed between the Group and the other contracting party on the basis of a predetermined formula.

Sales from these arrangements are recognized using information on the other contracting party's realized sales. Distribution of the profit is calculated and settled periodically, and a receivable/liability is recognized for any unsettled profit at the reporting date.

The Group has entered into commission agreements where agents undertake sales to third parties in return for commission on realized sales.

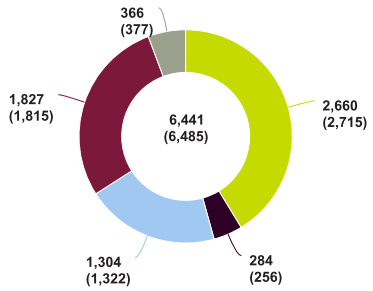
2.3 Employees

DKK million	2016	2015
Wages and salaries	3,007	2,998
Pensions – defined contribution plans	302	292
Other social security costs	262	267
Other employee costs	131	147
Stock-based payment	144	108
Employee costs	**3,846**	**3,812**
Recognized in the income statement under the following items:		
Cost of goods sold	1,378	1,352
Sales and distribution costs	830	831
Research and development costs	1,106	1,058
Administrative costs	517	538
	3,831	**3,779**
Change in employee costs recognized in Inventories	15	33
Employee costs	**3,846**	**3,812**

Number of employees 2016 (2015)

Denmark
North America
Latin America
Rest of Europe, Middle East & Africa
Asia Pacific

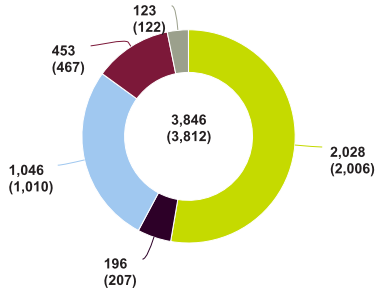
DKK million



Employee costs 2016 (2015)

Denmark
North America
Latin America
Rest of Europe, Middle East & Africa
Asia Pacific

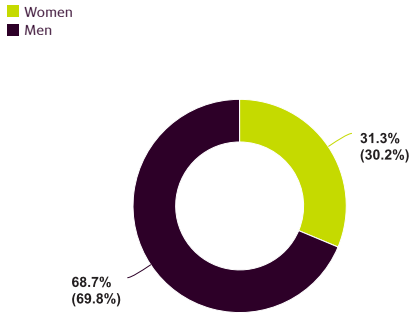
DKK million



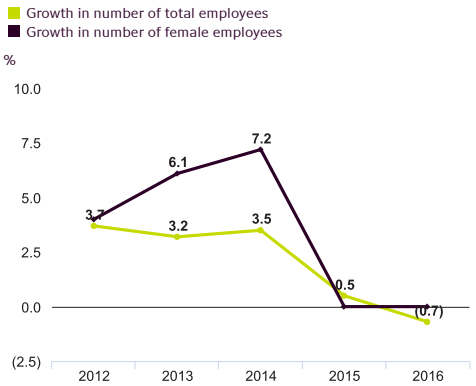
2.3 Employees (continued)

		2016	2015
Average number of employees in the Group		6,408	6,515
Average number of employees who work with R&D		1,502	1,566
Number of employees outside Denmark as a percentage of total number of employees		59%	58%
Part-time employees		292	301
Full-time employees		6,149	6,184
Employees	ESG	**6,441**	**6,485**
Senior management		207	213
Management		1,169	1,150
Professional		1,868	1,884
Administrative		571	575
Skilled workers, laboratory technicians and other technicians		1,422	1,440
Process operators		1,204	1,223
Employees by category	ESG	**6,441**	**6,485**

Women in management and senior management 2016 (2015)



Employee growth



ACCOUNTING POLICIES

The number of employees is derived from contractual obligations but does not include employees on unpaid leave, temporary replacements, student interns, agency employees, consultants or PhD students. In calculating the number of full-time employees, employees with a working-time ratio of 95% or over are stated as full-time employees.

The average number of employees is calculated as the average of the number of permanent employees at the end of each quarter.

Job categories are defined as follows: Senior management comprises the CEO, executive vice presidents, vice presidents and directors. Management comprises middle managers and specialists. Professional comprises employees with academic backgrounds as well as team leaders. Process operators comprises operators and unskilled workers.

2.4 Research and development costs

DKK million	Note	2016	2015
Internal and external research and development costs		573	671
Employee costs	2.3	1,106	1,058
Amortization and impairment losses, intangible assets	3.1	92	79
Depreciation and impairment losses, property, plant and equipment	3.2	94	88
Total research and development costs		**1,865**	**1,896**
As a percentage of revenue		13.2%	13.5%

In 2016, Novozymes launched eight new products (2015: six new products). New products comprises products with new or improved characteristics launched during the year.

In 2016, Novozymes had 1,123 active patent families (2015: 1,164). Active patent families comprises the number of inventions for which there are one or more active patent applications or active patents at year-end.

Reference is made to the Innovation pipeline update in the business model for an overview of significant market-expanding opportunities that are currently being pursued in Research & Development.

§ ACCOUNTING POLICIES

Research and development costs primarily comprise employee costs, internal and external costs related to ongoing optimization of production processes for existing products or to development of new products, and amortization, depreciation and impairment losses related to intangible assets and property, plant and equipment used in the research and development activities.

Costs related to the development phase are expensed as incurred where lack of approval by the authorities, acceptance by customers and other uncertainties mean the development costs do not fulfill the criteria for recognition in the balance sheet.

Income received from research and collaboration agreements is recognized as part of Other operating income, net.

2.5 Other operating income, net

DKK million		2016	2015
Income and grants concerning research projects/ collaborations		29	17
Other secondary income, net		88	81
Other operating income, net	I/S	**117**	**98**

CRITICAL ACCOUNTING ESTIMATES AND JUDGMENTS

The Group is party to various outlicensing and research and collaboration agreements, which can involve upfront and milestone payments that may occur over several years and may also involve certain future obligations.

Income is recognized only when, in Management's judgment, the significant risks and rewards of ownership have been transferred and the Group does not retain managerial involvement in or effective control over the assets sold, or when the obligation has been fulfilled. These assessments are essential for timing of income recognition and for classification of income as Revenue or Other operating income according to the revenue definitions.

ACCOUNTING POLICIES

Other operating income comprises income that is not product related. This includes income from research and collaboration agreements, government grants, sale of licenses, patents, etc., and other income of a secondary nature in relation to the main activities in the Group. This item also includes non-recurring income items in respect of damages, outlicensing, etc.

2.6 Tax

Tax risk

Novozymes operates in many markets via sales companies and distributors, while production takes place in a small number of countries. This leads to transactions between Group companies. Novozymes follows the OECD principles in setting internal transfer prices for these transactions, but this is a complicated area and entails a tax risk, partly because the area is subject to political judgment in each individual country. Novozymes regularly enters into dialogue with the tax authorities to reduce this risk, and has entered into advance pricing agreements with the tax authorities in the countries where internal transactions are most significant.

For Novozymes, such agreements create predictability in relation to taxation and reduce the risk of Novozymes becoming part of the ongoing transfer-pricing debate around the world. A major part of internal transactions in the Group is covered by advance pricing agreements. See also Novozymes' position on tax at novozymes.com.

Joint taxation

Novozymes A/S and its Danish subsidiaries are jointly taxed with the Danish companies in the Novo A/S Group. The joint taxation also covers withholding taxes in the form of dividend tax, royalty tax and interest tax. The Danish companies are jointly and individually liable for the joint taxation liability. Any subsequent adjustments to income taxes and withholding taxes may lead to a larger liability. The tax for the individual companies is allocated in full on the basis of the expected taxable income.

Tax in the income statement

DKK million		2016	2015
Tax payable on net profit		(940)	(806)
Change in deferred tax		124	(11)
Adjustment for previous years		(15)	21
Tax in the income statement	I/S	**(831)**	**(796)**
Calculation of effective tax rate:			
Corporate tax rate in Denmark		(22.0)%	(23.5)%
Non-taxable income less non-deductible expenses		(0.2)%	(0.2)%
Difference in foreign tax rates		0.4%	0.9%
Other adjustments		0.4%	0.8%
Effective tax rate		**(21.4)%**	**(22.0)%**

CRITICAL ACCOUNTING ESTIMATES AND JUDGMENTS

The Group's tax charge is the sum of the total current and deferred tax charges. The calculation of the Group's total tax charge necessarily involves a degree of estimation and judgment in respect of certain items for which the tax treatment cannot be finally determined until a resolution has been reached with the relevant tax authority or, as appropriate, through a formal legal process. The final resolution of some of these items may give rise to material gains, losses and/or cash flows. The complexity of the Group's structure following its geographic expansion makes the degree of estimation and judgment more challenging. The resolution of issues is not always within the control of the Group and is often dependent on the efficiency of the legal processes in the relevant tax jurisdictions in which the Group operates. Issues can, and often do, take many years to resolve. Payments in respect of tax liabilities for an accounting period result from payments on account and on the final resolution of open items. As a result, there can be substantial differences between the tax charge in the consolidated income statement and actual tax payments.

2.6 Tax (continued)

Deferred tax

DKK million		Deferred tax assets 2016	Deferred tax assets 2015	Deferred tax liabilities 2016	Deferred tax liabilities 2015
Intangible assets and property, plant and equipment		484	410	(1,271)	(1,347)
Inventories		533	494	(163)	(161)
Tax loss carry-forwards		41	17	-	-
Stock options		70	176	-	-
Other		287	266	(228)	(111)
		1,415	**1,363**	**(1,662)**	**(1,619)**
Offsetting items		(808)	(904)	808	904
Deferred tax at December 31	B/S	**607**	**459**	**(854)**	**(715)**

The tax value of the unrecognized share of tax loss carry- forwards, tax credits, etc. that do not expire amounted to DKK 13 million (2015: DKK 12 million).

DKK million		2016	2015
Deferred tax at January 1		(256)	(299)
Currency translation adjustments		13	(8)
Effect of business acquisitions		(64)	(23)
Tax related to the income statement		172	53
Tax on shareholders' equity items		(112)	21
Deferred tax at December 31		**(247)**	**(256)**
Deferred tax assets	B/S	607	459
Deferred tax liabilities	B/S	(854)	(715)
Deferred tax at December 31		**(247)**	**(256)**

§ ACCOUNTING POLICIES

Corporation tax, comprising the current tax liability, change in deferred tax for the year and possible adjustments relating to previous years, is recognized in the income statement, except to the extent that it relates to items recognized either in Other comprehensive income or directly in Shareholders' equity. Uncertain tax positions are assessed individually and recognized if it is probable that an amount is to be paid or received. Deferred tax is measured using the balance sheet liability method and comprises all temporary differences between the carrying amount and tax base of assets and liabilities. No deferred tax is recognized for goodwill, unless amortization of goodwill for tax purposes is allowed. The tax value of tax loss carry-forwards is included in the calculation of deferred tax to the extent that the tax losses can be expected to be utilized in the future.

Deferred tax is measured according to current tax rules and at the tax rate expected to be in force on elimination of the temporary differences. Changes in deferred tax due to tax rate changes are recognized in the income statement, except to the extent that they relate to items recognized either in Other comprehensive income or directly in Shareholders' equity.

2.6 Tax (continued)

Tax receivables and payables

DKK million		2016	2015
Tax payable at January 1		(213)	(286)
Currency translation adjustments		9	(13)
Tax related to the income statement		(1,002)	(849)
Tax on shareholders' equity items		6	42
Tax paid for the current year, net		905	893
Tax payables, net, at December 31		**(295)**	**(213)**
Tax receivables	B/S	142	156
Tax payables	B/S	(437)	(369)
Tax payables, net, at December 31		**(295)**	**(213)**
Of which due within 12 months		(59)	(43)
Of which due after more than 12 months		(236)	(170)
Tax payables, net, at December 31		**(295)**	**(213)**
Corporate income taxes paid are specified as follows:			
Income taxes paid in Denmark		633	586
Income taxes paid outside Denmark		272	307
Total income taxes paid		**905**	**893**

2.7 Earnings per share

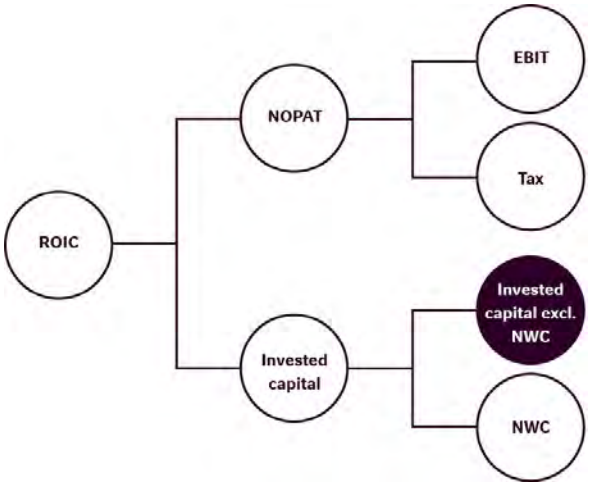
DKK million		2016	2015
Profit used to calculate earnings per share	I/S	**3,050**	**2,823**
Average number of shares			
Weighted average number of shares in circulation		300,466,604	306,004,982
Average dilutive effect of outstanding stock options and stock awards		2,653,533	3,369,639
Average number of diluted shares		**303,120,137**	**309,374,621**
Earnings per share		DKK 10.15	DKK 9.23
Earnings per share, diluted		DKK 10.06	DKK 9.12

§ ACCOUNTING POLICIES

Basic earnings per share is calculated as net profit attributable to shareholders in Novozymes A/S divided by the average number of shares in circulation.

Diluted earnings per share is calculated as net profit attributable to shareholders in Novozymes A/S divided by the average number of shares in circulation, including the dilutive effect of stock options “in the money.”

Invested capital



DKK million	Note	2016	2015
Intangible assets	3.1	2,737	2,676
Property, plant and equipment	3.2	8,641	8,162
Investments in associates	3.4	73	91
Net working capital (see Net working capital section)		2,088	1,708
Financial assets, non-interest-bearing		4	20
Provisions	3.3	(292)	(241)
Other non-current financial liabilities, non-interest-bearing		(14)	(14)
Other financial liabilities, non-interest-bearing		(111)	(42)
Tax, net		(542)	(469)
Invested capital		**12,584**	**11,891**
Average invested capital		**12,238**	**11,213**

ROIC down from 25.9% in 2015 to

25.1%

Increase in average invested capital of DKK million

1,025

Net investments up from DKK 1,015 million in 2015 to DKK million

1,188

3.1 Intangible assets and impairment test of goodwill

DKK million	Goodwill	Acquired patents, trademarks, licenses and know-how, etc.	Completed IT development projects	IT development projects in progress	Total
Cost at January 1, 2016	1,140	2,912	349	24	4,425
Currency translation adjustments	(3)	2	2	-	1
Additions from business acquisitions	22	216	-	-	238
Additions during the year	-	26	42	72	140
Disposals during the year	-	-	(20)	-	(20)
Transfers to/(from) other items	-	-	47	(47)	-
Cost at December 31, 2016	**1,159**	**3,156**	**420**	**49**	**4,784**
Amortization and impairment losses at January 1, 2016		(1,487)	(262)		(1,749)
Currency translation adjustments		(1)	(2)		(3)
Amortization during the year		(224)	(51)		(275)
Impairment losses		(40)	-		(40)
Disposals during the year		-	20		20
Amortization and impairment losses at December 31, 2016		**(1,752)**	**(295)**		**(2,047)**
Carrying amount at December 31, 2016 B/S	**1,159**	**1,404**	**125**	**49**	**2,737**

CRITICAL ACCOUNTING ESTIMATES AND JUDGMENTS

If there is any indication that an asset may be impaired, the asset's value in use is estimated and compared with the carrying amount. The calculation of value in use is based on the discounted cash flow method using estimates of future cash flows from the continuing use of the asset. The key parameter is the expected revenue streams. This parameter is based on estimates of the future, and the value in use calculated thus aggregates the natural uncertainty of these estimates. More information related to the estimates made may become available in future periods, which may give rise to changes in the estimated value in use.

Impairment

In 2016, an impairment loss of DKK 40 million on licenses has been recognized and included in Cost of goods sold. The impairment loss was the result of an impairment test performed on a specific asset where indication of impairment had been identified due to reduced cash flow projections for the assets in question. The cash flow used for impairment was based on business plans for the period 2017-2021. A WACC of 11% was used to calculate the discounted cash flows.

Impairment test of goodwill

With effect from 2016, Management has identified two cash-generating units (CGUs): Novozymes' main activities and the Albumedix Group. In 2015, Management monitored goodwill for the Novozymes Group as a whole, which meant that the impairment test of goodwill was performed for the Novozymes Group as a whole.

The market value of Novozymes is significantly greater than equity, and no further key assumptions are used in determining whether impairment of goodwill exists for Novozymes' main activities (2015: no impairment).

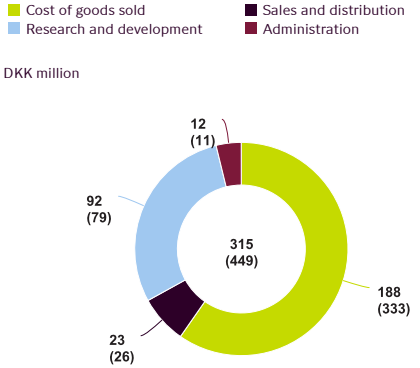
The recoverable amount of the Albumedix Group has been determined based on a value-in-use calculation. The key assumptions used in testing for impairment are based on Management's expectations for operational development and growth, which are partly based on past experience. This calculation uses risk-adjusted cash flow projections based on financial budgets and business plans approved by Management covering a budget period of 5 years. Cash flows beyond the 5-year budget period are extrapolated using an estimated growth rate of 3%. This growth rate does not exceed the long-term average growth rate for the markets in which the CGU operates. A WACC of 11% has been used to calculate the discounted cash flows for the Albumedix Group.

As the value in use for the Albumedix Group is greater than its carrying amount, no impairment has been identified.

3.1 Intangible assets and impairment test of goodwill (continued)

DKK million	Goodwill	Acquired patents, trademarks, licenses and know-how, etc.	Completed IT development projects	IT development projects in progress	Total
Cost at January 1, 2015	1,113	2,836	314	-	4,263
Currency translation adjustments	(3)	13	1	-	11
Additions from business acquisitions	30	68	-	-	98
Additions during the year	-	4	21	38	63
Disposals during the year	-	(9)	(1)	-	(10)
Transfers to/(from) other items	-	-	14	(14)	-
Cost at December 31, 2015	**1,140**	**2,912**	**349**	**24**	**4,425**
Amortization and impairment losses at January 1, 2015		(1,077)	(232)		(1,309)
Currency translation adjustments		-	(1)		(1)
Amortization during the year		(245)	(30)		(275)
Impairment losses		(174)	-		(174)
Disposals during the year		9	1		10
Amortization and impairment losses at December 31, 2015		**(1,487)**	**(262)**		**(1,749)**
Carrying amount at December 31, 2015 B/S	**1,140**	**1,425**	**87**	**24**	**2,676**

Recognition of amortization and impairment losses by function 2016 (2015)



Impairment

The intangible asset related to the partnership with Beta Renewables S.p.A has been fully written down by recognizing an impairment loss of DKK 174 million in 2015. This was partly offset by a compensation of DKK 120 million in accordance with the Beta Renewables agreement. The net impairment loss of DKK 54 million has been recognized in Cost of goods sold.

The impairment loss was the result of an impairment test performed on the specific asset as the expectations for the cash flows related to the asset had been reduced. The impairment test compared the discounted cash flow related to the future use of the asset with the carrying amount of the asset. The cash flow used was based on business plans for the period 2016-2022. A WACC of 13% was used to calculate the discounted cash flows.

3.1 Intangible assets and impairment test of goodwill (continued)

§ ACCOUNTING POLICIES

Intangible assets other than goodwill are measured at cost less accumulated amortization and impairment losses. Goodwill and IT development projects in progress are not subject to amortization.

Costs associated with large IT projects for the development of software for internal use are capitalized if they are incurred with a view to developing new and improved systems.

Amortization is based on the straight-line method over the expected useful lives of the finite-lived assets, as follows:

- Completed IT development projects are amortized over the useful life. IT development assets are amortized over a period of 3-5 years
- Acquired patents, trademarks, licenses and know-how are amortized over their useful lives. The useful lives of patents and trademarks are normally identical to the patent period. Licenses are amortized over the agreement period. Recognized patents, trademarks, licenses and know-how are amortized over a period of 7-15 years

Expected useful lives are reassessed regularly.

Research costs and development costs pertaining to ongoing optimization of production processes for existing products, or to development of new products where lack of approval by the authorities, acceptance by customers and other uncertainties mean that the development costs do not fulfill the criteria for recognition in the balance sheet, are expensed as incurred.

The Group regularly reviews the carrying amounts of its finite-lived intangible assets to determine whether there is an indication of an impairment loss. An impairment loss is recognized to the extent that the asset's carrying amount exceeds its estimated recoverable amount. Impairment losses are reversed only to the extent of changes in the assumptions and estimates underlying the impairment calculation. Goodwill is tested for impairment annually or whenever there is an indication that the asset may be impaired.

3.2 Property, plant and equipment

DKK million	Land and buildings	Plant and machinery	Other equipment	Assets under construction and prepayments	Total
Cost at January 1, 2016	5,183	9,564	1,598	649	16,994
Currency translation adjustments	31	42	11	11	95
Additions from business acquisitions	-	-	2	-	2
Additions during the year*	326	197	82	530	1,135
Disposals during the year	(20)	(61)	(35)	-	(116)
Transfers to/(from) other items	84	215	35	(334)	-
Cost at December 31, 2016	**5,604**	**9,957**	**1,693**	**856**	**18,110**
Depreciation and impairment losses at January 1, 2016	(2,518)	(5,327)	(987)		(8,832)
Currency translation adjustments	(11)	(9)	(5)		(25)
Depreciation for the year	(148)	(426)	(125)		(699)
Disposals during the year	4	44	39		87
Depreciation and impairment losses at December 31, 2016	**(2,673)**	**(5,718)**	**(1,078)**		**(9,469)**
Carrying amount at December 31, 2016 B/S	**2,931**	**4,239**	**615**	**856**	**8,641**

* Additions during the year include finance lease arrangements of DKK 59 million.

Capitalized interest and pledges
Interest of DKK 4 million (2015: DKK 0 million) has been capitalized under Additions during the year above and included as Investing activities in the statement of cash flows. Capitalization rate: 1.78%.

Land and buildings with a carrying amount of DKK 397 million (2015: DKK 412 million) have been pledged as security to credit institutions. The mortgage loan expires in 2029.

Impairment
No impairment losses on property, plant and equipment have been recognized in 2016 (2015: no impairment losses).

§ ACCOUNTING POLICIES

Property, plant and equipment is measured at cost less accumulated depreciation and impairment losses. Borrowing costs in respect of construction of major assets are capitalized.

Depreciation is based on the straight-line method over the expected useful lives of the assets, as follows:

- Buildings: 12-50 years
- Plant and machinery: 5-25 years
- Other equipment: 3-18 years

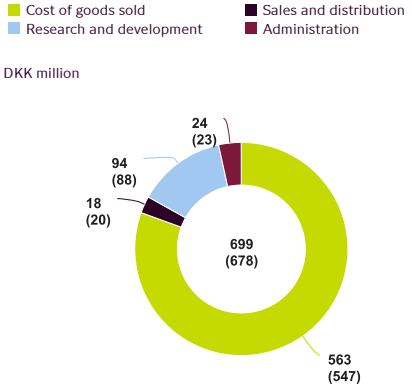
The assets' residual value and useful life are reviewed on an annual basis, and adjusted if necessary at each reporting date.

The Group regularly reviews the carrying amounts of its property, plant and equipment to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss, if any. If the recoverable amount of an asset is estimated to be less than its carrying amount, the carrying amount is reduced to the recoverable amount. Impairment losses are reversed only to the extent of changes in the assumptions and estimates underlying the impairment calculation.

3.2 Property, plant and equipment (continued)

DKK million		Land and buildings	Plant and machinery	Other equipment	Assets under construction and prepayments	Total
Cost at January 1, 2015		4,838	8,779	1,431	524	15,572
Currency translation adjustments		186	376	53	18	633
Additions from business acquisitions		2	-	-	-	2
Additions during the year		92	328	108	440	968
Disposals during the year		(14)	(114)	(53)	-	(181)
Transfers to/(from) other items		79	195	59	(333)	-
Cost at December 31, 2015		**5,183**	**9,564**	**1,598**	**649**	**16,994**
Depreciation and impairment losses at January 1, 2015		(2,301)	(4,895)	(878)		(8,074)
Currency translation adjustments		(58)	(146)	(30)		(234)
Depreciation for the year		(169)	(389)	(120)		(678)
Disposals during the year		10	103	41		154
Depreciation and impairment losses at December 31, 2015		**(2,518)**	**(5,327)**	**(987)**		**(8,832)**
Carrying amount at December 31, 2015	B/S	**2,665**	**4,237**	**611**	**649**	**8,162**

Recognition of depreciation and impairment losses by function 2016 (2015)



3.3 Provisions

DKK million		2016 Dismantling and restoration	2016 Legal, contingent consideration and other	2016 Total	2015 Dismantling and restoration	2015 Legal, contingent consideration and other	2015 Total
Provisions at January 1		101	140	241	129	150	279
Currency translation adjustments		(1)	1	-	6	-	6
Additions during the year		1	72	73	1	22	23
Reversals during the year		-	(16)	(16)	(35)	(29)	(64)
Utilization during the year		-	(6)	(6)	-	(3)	(3)
Provisions at December 31		**101**	**191**	**292**	**101**	**140**	**241**
Recognized in the balance sheet as follows:							
Non-current	B/S	96	135	231	96	90	186
Current	B/S	5	56	61	5	50	55
Provisions at December 31		**101**	**191**	**292**	**101**	**140**	**241**

Dismantling and restoration
Dismantling and restoration relates to estimated future costs of environmental restoration – Novozymes aims for production sites not to have a negative environmental impact – and restoration of leased premises when terminating the lease and vacating the premises. These liabilities relate to established circumstances, and these costs are expected to be incurred either when concrete measures are implemented or when the sites are vacated. The expected costs and timing are by nature uncertain.

Amounts with regard to restoration of leased premises are considered uncertain, as the final settlements will depend on thorough inspection of the premises and negotiations with the lessor at the time of vacating. The costs are expected to be incurred in a minimum of two years/maximum of 15 years.

Legal, contingent consideration and other
Novozymes is involved in a number of ongoing legal disputes, and provision is made for the estimated costs of these based on the current evaluation of the outcomes. The cases are expected to be finalized in 2017-2018. In Management's opinion, the outcome of these cases will not give rise to any significant loss beyond the amounts provided for at December 31, 2016.

Contingent consideration and other provisions cover a number of obligations, including liability for returned goods, contingent consideration, etc. Other long-term employee benefits are also included but at only a minor amount, as the main part of Novozymes' pension plans are defined contribution plans, covering approximately 99% of employees. These obligations are mainly expected to be incurred over a long period.

CRITICAL ACCOUNTING ESTIMATES AND JUDGMENTS

Management assesses the need for provisions on an ongoing basis. This assessment takes account of the likelihood of Novozymes being obliged to expend financial resources and the amount at which the liabilities are expected to be settled. As these assessments are based on estimates of the future, they are subject to a high level of uncertainty and may give rise to changes in amounts in future accounting periods.

ACCOUNTING POLICIES

Provisions are recognized where a legal or constructive obligation has been incurred as a result of past events and it is probable it will lead to an outflow of financial resources. Provisions are measured at the present value of the expected expenditure required to settle the obligation.

No provisions are discounted, as discounting does not have any significant impact on the carrying amounts.

3.4 Joint operations and associates

Joint operations
In 2012, Novozymes formed a strategic partnership with Beta Renewables S.p.A. The objective of the partnership is to market, demonstrate and guarantee cellulosic biofuel solutions based on technologies held by Beta Renewables S.p.A. and Novozymes on a global basis. The parties have joint control of the partnership. The partnership had no material impact on revenue and earnings in 2016 (2015: no material impact).

Novozymes has interests in joint operations with Novo Nordisk. These are houseowners' associations and related utility facilities in connection with the shared Danish production sites in Kalundborg and Bagsvaerd. The operations had no impact on revenue and earnings in 2016 (2015: no impact). Novozymes and Novo Nordisk share control of the arrangements equally.

Associates
Novozymes holds 9.95% of the shares in Beta Renewables S.p.A., with which Novozymes has formed a jointly controlled operation within cellulosic biofuel solutions.

Novozymes holds 23.1% of the shares in Microbiogen Pty Ltd., with which Novozymes collaborates exclusively on the exploration and development of yeast for the ethanol industry.

In 2016, a minor investment was made in MagnaBioAnalytics LLC.

None of the associates is individually material to the Group.

DKK million		2016	2015
Associates			
Share of losses	I/S	(31)	(6)
Comprehensive income for the year		**(31)**	**(6)**
Investments in associates	B/S	**73**	**91**

CRITICAL ACCOUNTING ESTIMATES AND JUDGMENTS

Although Novozymes holds less than 20% of the equity shares in Beta Renewables S.p.A., the Group exercises significant influence by virtue of its contractual right to appoint members of key management boards, and has the power to participate in Beta Renewables' financial and operating policy decisions. Consequently, this investment has been classified as an associate.

ACCOUNTING POLICIES

Joint operations
The Group's holdings in joint operations are consolidated by including its interest in the joint operations' assets, liabilities, revenue and costs.

Associates
Investments in associates are accounted for using the equity method of accounting. Under the equity method, the investment in an associate is initially recognized at cost, and the carrying amount is increased or decreased to recognize Novozymes' share of the profit or loss of the associate after the date of acquisition. The Group's investment in associates includes the fair value of the net assets and goodwill identified on acquisition.

The accounting policies of associates have been changed where necessary to ensure consistency with the accounting policies adopted by the Group. Gains and losses resulting from transactions between the Group and its associates are recognized in the Group's financial statements only to the extent of unrelated investors' investments in the associates.

In a step acquisition, the previously held equity interest in the acquiree is remeasured at its fair value on the acquisition date, and the resulting gain or loss is recognized in profit and loss. The estimated total fair value of the equity interest held immediately after the step acquisition is recognized as the cost of the equity interest.

3.5 Business acquisitions

The final purchase price allocation for Organobalance GmbH acquired in 2016 is as follows:

DKK million	Organobalance GmbH
The assumed fair value of acquired assets and liabilities is as follows:	
Intangible assets	216
Property, plant and equipment	2
Trade and other receivables	7
Cash	2
Deferred tax liabilities	(64)
Provisions	(2)
Financial and other liabilities	(5)
Acquired net assets	**156**
The purchase price is as follows:	
Cash	148
Contingent consideration	30
Total purchase price	**178**
Goodwill	**22**
Cash flow for acquisition:	
Cash payment	148
Less cash and cash equivalents in acquired business	(2)
Cash outflow for acquisition	**146**

On September 15, 2016, Novozymes acquired 100% of the voting shares in Organobalance GmbH. Organobalance GmbH owns a large collection of microbial strains and has strong capabilities in microbial screening and assay technology. The company specializes in developing natural microbial solutions for customers and partners across a number of industries, including Food, Feed and Animal Health.

Goodwill of DKK 22 million is attributable to expected synergies within Novozymes' existing microbial technologies and business areas. The goodwill is not tax-deductible.

The purchase agreement includes a contingent consideration of up to DKK 30 million. The consideration is contingent on achievement of a number of specific project development targets and sales targets, and is recognized at the anticipated acquisition-date fair value.

The net revenue and profit Organobalance GmbH has contributed to the consolidated income statement are immaterial for the period. This would also have been the case if the acquisition had been completed on January 1, 2016.

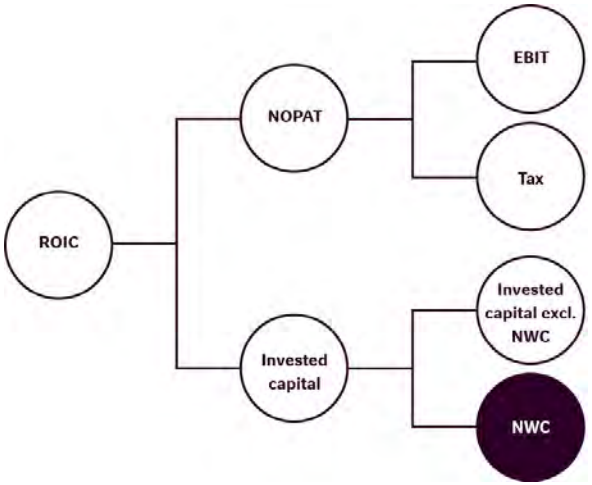
The transaction cost amounts to DKK 4 million and is included in administrative costs.

§ ACCOUNTING POLICIES

On acquisition of companies, the identifiable assets acquired and the liabilities and contingent liabilities assumed are recognized at the fair values at the acquisition date. The consideration transferred includes the fair value at the acquisition date of any contingent consideration arrangement.

Goodwill may subsequently be adjusted for changes in the fair value of the consideration transferred and/or changes in the fair value of the identifiable net assets acquired until 12 months after the acquisition date, to the extent such changes relate to facts and circumstances present at the acquisition date. Acquired companies are consolidated from the date of acquisition. Acquisition-related costs are expensed as incurred.

Net working capital



DKK million	Note	2016	2015
Other receivables, non-current	4.3	57	116
Inventories	4.1	2,488	2,281
Trade receivables	4.2	2,680	2,558
Other receivables	4.3	267	294
Other liabilities, non-current		-	(12)
Deferred income	4.4	(788)	(992)
Trade payables		(1,194)	(1,189)
Other liabilities	4.5	(1,422)	(1,348)
Net working capital		**2,088**	**1,708**
Average net working capital		1,898	1,384

Average net working capital in DKK million

1,898

Net working capital as % of sales

14.8%

Deferred income related to The BioAg Alliance released as revenue in 2016 in DKK million

194

4.1 Inventories

DKK million		2016	2015
Raw materials and consumables		327	339
Work in progress		671	578
Finished goods		1,490	1,364
Inventories at December 31	B/S	**2,488**	**2,281**
Cost of materials, included under Cost of goods sold		3,254	3,225
Write-downs expensed during the year		82	85
Reversal of write-downs during the year*		42	61

* Some of the reversal of write-downs can be attributed to written-down inventory being reused in production.

CRITICAL ACCOUNTING ESTIMATES AND JUDGMENTS

Work in progress and Finished goods are measured at cost including indirect production costs. The indirect production costs capitalized under inventories amounted to DKK 815 million at the end of 2016 (2015: DKK 774 million). The indirect production costs are assessed on an ongoing basis to ensure reliable measurement of employee costs, capacity utilization, cost drivers and other relevant factors. Changes in these parameters may have an impact on the gross margin and the overall valuation of Work in progress and Finished goods.

ACCOUNTING POLICIES

Inventories are measured at cost determined on a first-in first-out basis or net realizable value where this is lower.

The cost of Work in progress and Finished goods comprises direct production costs such as raw materials and consumables, energy and labor directly attributable to production as well as indirect production costs such as employee costs, maintenance and depreciation of plant, etc.

If the expected sales price less any completion costs and costs to execute sales (net realizable value) of inventories is lower than the carrying amount, the inventories are written down to net realizable value.

Novozymes has entered into a few agreements where Novozymes supplies goods to a customer's premises but retains title to the inventory until the goods are consumed in the customer's production. Such goods are derecognized from inventories in the period that they are consumed in the customer's production.

4.2 Trade receivables

DKK million		2016	2015
Trade receivables		2,792	2,694
Allowances for doubtful trade receivables		(179)	(179)
		2,613	**2,515**
Amounts owed by related companies		67	43
Trade receivables at December 31	B/S	**2,680**	**2,558**
Changes in allowances for doubtful trade receivables:			
At January 1		179	168
Allowances during the year		66	108
Write-offs during the year		(18)	(7)
Reversed allowances		(48)	(90)
Allowances at December 31		**179**	**179**
Age of trade receivables that are past due but not impaired:			
Up to 30 days		131	154
Between 30 and 90 days		36	52
More than 90 days		13	3
Trade receivables past due but not impaired at December 31		**180**	**209**

Novozymes has collateral held as security for trade receivables in selected countries of DKK 50 million (2015: DKK 51 million).

CRITICAL ACCOUNTING ESTIMATES AND JUDGMENTS

The credit risk on trade receivables is mitigated by thorough, regular analyses based on customer type, country and specific terms and conditions.

Allowances for doubtful trade receivables are based on a country-specific credit rating by external rating agencies. However, the allowances also reflect Management's assessment and review of the individual receivables based on individual customer creditworthiness, receivables past due and current economic trends.

ACCOUNTING POLICIES

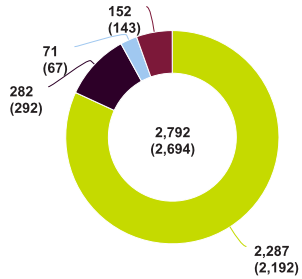
Trade receivables are measured at amortized cost or net realizable value equivalent to nominal value less allowances for doubtful receivables, whichever is lower. The cost of allowances for doubtful trade receivables is included in Sales and distribution costs.

Trade receivables - country risk* 2016 (2015)

Lowest to slight risk
High risk
Moderate risk
Very high to highest risk

* Country risk categories are based on definitions used by external rating agency

DKK million



4.3 Other receivables

DKK million		2016	2015
Deposits		21	29
Prepaid expenses		114	165
Loans		5	-
Other		184	216
Other receivables at December 31		**324**	**410**
Recognized in the balance sheet as follows:			
Non-current	B/S	57	116
Current	B/S	267	294
Other receivables at December 31		**324**	**410**

4.4 Deferred income

DKK million		Amortization ends (year)	2016	2015
The BioAg Alliance		2023	741	950
Other		Up to 2022	47	42
Other income at December 31			**788**	**992**
Recognized in the balance sheet as follows:	B/S			
Non-current	B/S		540	769
Current	B/S		248	223
Other income at December 31			**788**	**992**
Expected to be recognized in the income statement:				
Within 1 year			248	223
Between 1 and 5 years			430	602
After 5 years			110	167
Defered income at December 31			**788**	**992**

At December 31, 2016, deferred income amounted to DKK 788 million. This amount relates mainly to payments from Monsanto in connection with formation of The BioAg Alliance in 2014. The planned release of deferred income is based on an assessment of the earnings process and the underlying deliverables, which are reassessed annually. The reassessment in 2016 has not changed the planned release of deferred income.

CRITICAL ACCOUNTING ESTIMATES AND JUDGMENTS

Assessing the earnings process and the underlying deliverables for The BioAg Alliance requires judgment and is based on estimates of the future. These estimates are by nature subject to a high degree of uncertainty, and changes in such estimates may impact the timing of revenue recognition in future periods.

ACCOUNTING POLICIES

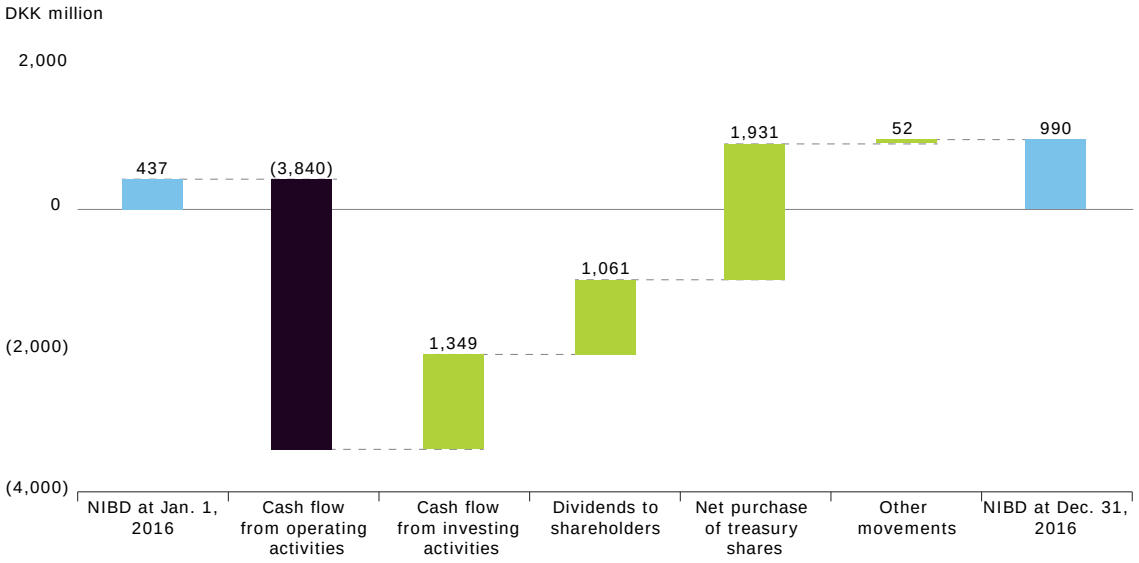
Deferred income reflects the portion of payments received that relates to future periods and deliverables, and for which the criteria for revenue recognition are not yet met. Deferred income is measured at nominal value.

4.5 Other liabilities

DKK million		2016	2015
Employee costs payable		712	753
Stock-based payment settled in cash		24	45
Other payables		686	550
Other liabilities at December 31	B/S	**1,422**	**1,348**

Capital structure and financing

Net interest bearing debt, 2016



NIBD/EBITDA at December 31, 2016

0.2

Return on equity up from 24.7% to

26.1%

Novozymes bought back 6.8 million B shares under the stock buyback program with a transaction value of DKK million

2,000

5.1 Financial risk factors and risk management

Novozymes' international operations mean that its earnings and financial position are exposed to a number of financial risk factors. Financial risks are managed centrally for the entire Group. The treasury policy is approved by Novozymes' Board of Directors, and sets the limits for the various financial risks and the derivatives used to hedge the risks. The treasury policy is adjusted on an ongoing basis to adapt to the market situation, and contains rules on which derivatives can be used for hedging, which counterparties can be used and the risk profile that is to be applied.

Currency risk

Currency risk arises due to imbalances between income and costs in each individual currency and because Novozymes has more assets than liabilities in foreign currencies in connection with its global operations.

Hedging of currency risk is carried out in the currencies where Novozymes has the largest exposure. The hedging is managed by entering into derivatives such as forward contracts, currency options and swaps. Loans and deposits in foreign currencies are also utilized as hedging. Hedge effectiveness is assessed on a regular basis.

Currency risk related to net investments in foreign subsidiaries is hedged where this is deemed appropriate by taking out loans and entering into swaps. Currently, there are no open transactions used to hedge equity investments.

Foreign exchange sensitivity - 2016

The sensitivity analysis below shows the impact on net profit and other comprehensive income of a 5% change in the DKK versus the key currencies to which Novozymes was exposed on December 31, 2016. For other comprehensive income, the analysis shows the impact on currency translation of net investments and does not include the impact of cash flow hedges, as these relate to future commercial transactions.

The sensitivity analysis reflects the transaction and translation risk, and assumes that the exchange rates are changed on December 31, 2016, and that all other variables remain constant. A similar negative change in exchange rates would have a similar opposite effect on net profit and other comprehensive income.

Foreign exchange sensitivity - 2017 estimate

Operating profit/EBIT is exposed to currency changes, as the effect of hedges is included in Financial income/costs.

Operating profit/EBIT is mainly exposed to the USD and EUR. A movement of 5% in the USD would result in a change in the expected operating profit/EBIT for 2017 of around DKK 100-120 million (2016: DKK 90-110 million). A 5% movement in the EUR would result in a change in expected operating profit/EBIT for 2017 of around DKK 150-200 million (2016: DKK 150-200 million). Of the expected USD cash flows for 2017, 100% has been hedged by forward contracts and currency options at an average rate of DKK 6.65. As a result, the impact on net profit from changes in the USD has been reduced significantly compared with the impact on operating profit/EBIT.

Foreign exchange analysis 2016

		2016		2015	
DKK million	Increase in exchange rates	Change in net profit	Change in other comprehensive income	Change in net profit	Change in other comprehensive income
CHF	5.0%	-	37	1	66
CNY	5.0%	-	108	3	133
USD	5.0%	1	229	1	212
Other	5.0%	(2)	93	-	85
Total		**(1)**	**467**	**5**	**496**

5.1 Financial risk factors and risk management (continued)

Interest rate risk
Interest rate risk arises in relation to interest-bearing assets and liabilities. In accordance with Novozymes' treasury policy, a minimum of 30% of loans must be at fixed interest rates. Hedging of the interest risk is managed by entering into fixed-rate loans and interest rate swaps.

An increase of 1 percentage point in the average interest rate on Novozymes' net interest-bearing debt would have a positive effect on profit of DKK 4 million (2015: DKK 4 million). At year-end 2016, 80% (2015: 75%) of the loan portfolio was at fixed interest rates.

Credit risk
Credit risk arises especially on cash and cash equivalents, derivatives and trade receivables. Details of credit risk on trade receivables are included in Note 4.2. The credit risk on cash and cash equivalents as well as derivatives is mitigated by the treasury policy, which limits exposure solely to counterparties that have an investment-grade credit rating. The credit risk is calculated on the basis of net market values and is governed by the treasury policy. Novozymes has entered into netting agreements (ISDA or similar agreements) with all the banks used for trading in financial instruments, which means that Novozymes' credit risk is limited to net assets.

At December 31, 2016, the Group considered its maximum credit risk to be DKK 3,857 million (2015: DKK 3,801 million), which is the total of the Group's financial assets. At December 31, 2016, the maximum credit risk related to one counterparty was DKK 294 million (2015: DKK 232 million).

Liquidity risk
In connection with the Group's ongoing financing of operations, including refinancing, efforts are made to ensure adequate and flexible liquidity. This is guaranteed by using committed credit facilities and placing free funds in deposits, government bonds or ultra-liquid mortgage bonds in accordance with the treasury policy.

At December 31, 2016, Novozymes' financial resources amounted to DKK 4,305 million (2015: DKK 2,796 million), consisting of net cash and cash equivalents and undrawn committed credit facilities of DKK 3,500 million, which expire in 2018-2021.

With the exception of credit institutions, the maturity dates are primarily within one year.

5.2 Financial income and Financial costs

DKK million		2016	2015
Interest income		5	4
Gain on cash flow hedges		8	-
Gains on fair value hedges, net		1	-
Fair value adjustments of cash-settled stock options		18	-
Financial income	I/S	**32**	**4**
Interest costs		(31)	(31)
Losses on cash flow hedges		-	(152)
Other financial costs		(24)	(57)
Other foreign exchange losses, net		(11)	(6)
Fair value adjustments of cash-settled stock options		-	(15)
Financial costs	I/S	**(66)**	**(261)**
Financial income/costs, net		**(34)**	**(257)**

§ ACCOUNTING POLICIES

Financial income and Financial costs comprise interest income and interest costs, realized and unrealized foreign exchange gains and losses, as well as fair value adjustments of cash-settled stock-based incentive programs, which are offset against Other liabilities.

Financial income and Financial costs also include fair value adjustments of derivatives used to hedge assets and liabilities, and income and costs relating to cash flow hedges that are transferred from Other comprehensive income on realization of the hedged item.

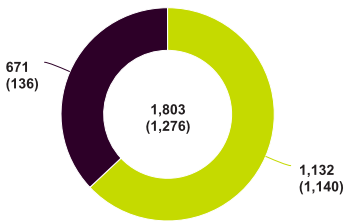
5.3 Other financial liabilities

DKK million		2016	2015
Credit institutions		1,803	1,276
Derivatives		124	56
Other financial liabilities at December 31		**1,927**	**1,332**
Recognized in the balance sheet as follows:			
Non-current	B/S	1,727	1,216
Current	B/S	200	116
Other financial liabilities at December 31		**1,927**	**1,332**

Credit institutions - currency 2016 (2015)

EUR
Other

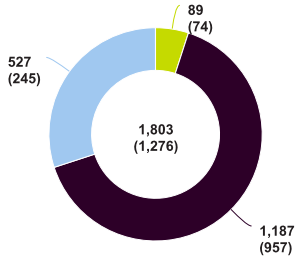
DKK million



Credit institutions - time to maturity 2016 (2015)

Less than 1 year
Between 1 and 5 years
More than 5 years

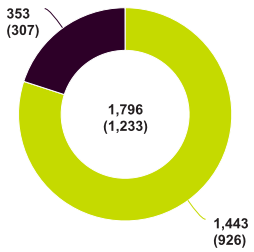
DKK million



Loan portfolio - fixed or floating interest rate 2016 (2015)

Fixed interest rate
Floating interest rate

DKK million



5.4 Derivatives – hedge accounting

Fair value hedges

The table below shows the derivatives the Group has contracted to hedge currency exposure on financial assets and liabilities that give rise to currency adjustments in the income statement.

	2016		2015	
DKK million	Contract amount based on agreed rates*	Fair value Dec. 31	Contract amount based on agreed rates*	Fair value Dec. 31
Forward exchange contracts				
CAD	(340)	(5)	(290)	3
CHF	(693)	-	(429)	1
USD	103	(2)	326	(9)
Other	(170)	(5)	(234)	(1)
Fair value hedges at December 31	**(1,100)**	**(12)**	**(627)**	**(6)**

* Positive contract amounts represent a sale of the respective currency, and negative amounts represent a purchase.

The forward exchange contracts fall due in the period January 2017 to April 2017 (2015: January 2016 to June 2016).

The fair value hedges were 100% effective, as the gain on forward exchange contracts was DKK 0.4 million (2015: loss of DKK 48 million), compared with a loss on the hedged items of DKK 0.4 million (2015: gain of DKK 48 million).

§ ACCOUNTING POLICIES

Hedge accounting consists of positive and negative fair values of derivatives, which are recognized in the balance sheet under Other financial assets and Other financial liabilities respectively.

Derivatives used for fair value hedges are measured at fair value on the reporting date, and value adjustments are recognized as Financial income or Financial costs.

Derivatives used for cash flow hedges and hedges of net investments in subsidiaries are measured at fair value on the reporting date, and value adjustments are recognized in Other comprehensive income.

Income and costs relating to cash flow hedges and hedges of net investments in subsidiaries are transferred from Other comprehensive income on realization of the hedged item and are recognized as Financial income or Financial costs.

Derivatives are recognized on the transaction date.

5.4 Derivatives – hedge accounting (continued)

Cash flow hedges

The table below shows the derivatives that the Group has contracted to hedge currency and interest rate exposure in future cash flows.

	2016		2015	
DKK million	Contract amount based on agreed rates*	Fair value Dec. 31	Contract amount based on agreed rates*	Fair value Dec. 31
Forward exchange contracts				
EUR	-	-	369	(4)
USD	1,797	(95)	1,823	(13)
	1,797	**(95)**	**2,192**	**(17)**
Currency options				
USD	198	3	197	3
	198	**3**	**197**	**3**
Interest rate swaps				
EUR/EUR - pays fixed rate of 3.58% / earns variable rate of (0.191%) (2015: 0.049%)	111	(13)	112	(16)
DKK/DKK - pays fixed rate of 0.595% / earns variable rate of (0.025%)	521	(3)	-	-
	632	**(16)**	**112**	**(16)**
Cash flow hedges at December 31	**2,627**	**(108)**	**2,501**	**(30)**

* Positive contract amounts represent a sale of the respective currency, and negative amounts represent a purchase.

The forward exchange contracts fall due in the period January 2017 to December 2017 (2015: January 2016 to December 2016), while the option contracts fall due in the period October 2017 to December 2017 (2015: July 2016 to September 2016), and the swaps fall due in July 2019 and May 2026 (2015: July 2019).

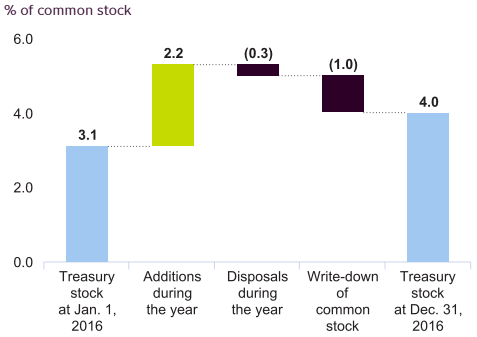
At the end of 2016, the Group had hedged 100% of expected future cash flows in USD for 2017 at an average rate of DKK 6.65 (2015: 100% of expected future cash flows in USD for 2016 at an average rate of DKK 6.73).

5.5 Common stock and treasury stock

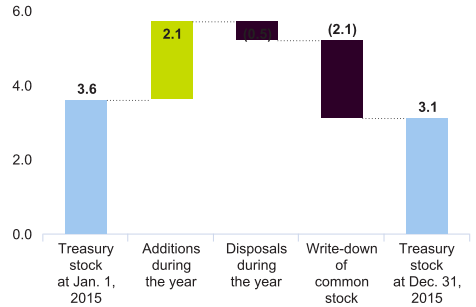
		2016		2015	
		No.	Nominal value DKK million	No.	Nominal value DKK million
Common stock					
A common stock (shares of DKK 2)		53,743,600	107	53,743,600	107
B common stock (shares of DKK 2)		256,256,400	513	259,256,400	519
Common stock at December 31	B/S	**310,000,000**	**620**	**313,000,000**	**626**
Treasury stock - B stock					
Treasury stock at January 1		9,618,693	19	11,489,888	23
Additions during the year		6,767,182	14	6,389,173	12
Disposals during the year		(1,004,137)	(2)	(1,560,368)	(3)
Cancellation of common stock		(3,000,000)	(6)	(6,700,000)	(13)
Treasury stock at December 31		**12,381,738**	**25**	**9,618,693**	**19**

No.	2016	2015
Shares of common stock in circulation		
Shares of stock at January 1	303,381,307	308,210,112
Purchase of treasury stock	(6,767,182)	(6,389,173)
Sale of treasury stock	1,004,137	1,560,368
Shares of common stock in circulation at December 31	**297,618,262**	**303,381,307**

Treasury stock 2016



Treasury stock 2015



Each A share gives an entitlement to 20 votes, while each B share gives an entitlement to two votes.

Each year the Board of Directors assesses whether the ownership structure with A and B common stock is optimal. The Board of Directors maintains that this is the best way to safeguard Novozymes' long-term development to the benefit of the company's shareholders and other stakeholders.

The treasury stock is used to reduce the common stock, and to hedge employees' exercise of granted stock awards and stock options.

In 2016, Novozymes canceled 3 million treasury shares, reducing the common stock to 310 million shares.

From 2012 to 2015 the common stock was reduced with a DKK 11 million cancellation in 2013 and a DKK 13 million cancellation in 2015.

5.6 Financial assets and liabilities by category

The table below shows the Group's financial assets and financial liabilities at December 31 by category.

DKK million	Note	2016	2015
Trade receivables and other receivables, excl. prepaid expenses	4.2, 4.3	2,890	2,803
Cash and cash equivalents	6.6	812	839
Loans and receivables		**3,702**	**3,642**
Securities and other financial assets		151	139
Available-for-sale financial assets		**151**	**139**
Derivatives		4	20
Hedge accounting (asset)		**4**	**20**
Financial assets		**3,857**	**3,801**
Credit institutions	5.3	(1,803)	(1,276)
Trade payables		(1,194)	(1,189)
Other payables	4.5	(686)	(550)
Financial liabilities at amortized cost		**(3,683)**	**(3,015)**
Derivatives	5.3	(124)	(56)
Hedge accounting (liability)		**(124)**	**(56)**
Financial liabilities		**(3,807)**	**(3,071)**

Measurement and fair value hierarchy
All financial assets and liabilities, except for derivatives and other financial assets, are measured at cost and amortized cost. The carrying amounts for these approximate fair value. Derivatives and other financial assets are measured at fair value on observable data (level 2 input) according to the fair value hierarchy. The derivatives and other financial assets are not traded on an active market based on quoted prices, but are individual contracts. The fair value of these assets is determined using valuation techniques that utilize market-based data such as exchange rates, interest rates, credit risk and volatilities. There are no financial instruments measured at fair value on the basis of quoted prices (level 1 input) or non-observable data (level 3 input).

Other financial notes

This section contains other statutory disclosures not related to the previous sections.

Grant date fair value of options granted in 2016 in DKK million

103

In compliance with Novozymes' audit fee policy

Ratio < 1

No. of Danish and foreign subsidiaries in the Group

47

6.1 Management remuneration

	2016			2015		
DKK million	Executive Leadership Team	Board of Directors	Total	Executive Leadership Team	Board of Directors	Total
Salaries and other short-term benefits	38	7	45	40	7	47
Defined contribution plans	9	-	9	9	-	9
Expensed stock-based incentive programs	36	-	36	34	-	34
Severance package	62	-	62	-	-	-
Remuneration	**145**	**7**	**152**	**83**	**7**	**90**

Executive Leadership Team
Remuneration of the Executive Leadership Team comprises a base salary, pension contributions, a cash bonus scheme, stock-based incentive programs and other benefits (car, telephone, etc.). The variable part of the total remuneration (cash bonus and stock-based incentive programs) is relatively large compared with the base salary, and is dependent on achievement of individual targets and Novozymes' targets for financial, social and environmental performance. The maximum annual cash bonus is equivalent to five months' fixed base salary plus pension contributions. General guidelines for remuneration of the Executive Leadership Team are approved at the Annual Shareholders' Meeting, and more detailed information is available in the Remuneration report.

Members of the Executive Leadership Team have contracts of employment containing standard conditions for executive officers of Danish listed companies, including the periods of notice that both parties are required to give and noncompetition clauses. If the executive officer's contract of employment is terminated by the company without misconduct on the part of the executive officer, the executive officer has the right to compensation, which, depending on the circumstances, may amount to a maximum of two years' base salary and pension contributions.

Changes in the Executive Leadership Team
In February 2016, Novozymes announced a change in the organizational structure. As part of the reorganization, Novozymes appointed former Vice President of Sales Tina Sejersgård Fanø as Executive Vice President (EVP), Agriculture & Bioenergy; former Vice President of Sales Anders Lund as EVP, Household Care & Technical; and former EVP, Business Operations, Andrew Fordyce transferred into the role of EVP, Food & Beverages.

Furthermore, Per Falholt, former Executive Vice President, R&D, stepped down from the Executive Leadership Team. He continues to support Novozymes in a consulting role on technology scouting. Thomas Nagy, former Executive Vice President, Supply Operations, left Novozymes. Per Falholt and Thomas Nagy will continue to receive salary and bonuses during the notice period (12 months) as well as termination compensation (24 months), totaling DKK 40.7 million. Furthermore, they will participate in the stock-based incentive program during the notice period, the fair value of which is DKK 21.3 million. The severance packages were fully expensed in 2016.

6.2 Stock-based payment

Novozymes has established stock-based incentive programs for the Executive Leadership Team, vice presidents and directors, and other employees. The purpose of these programs is to ensure common goals for Management, employees and shareholders. Allocation of programs has been, and remains, dependent on profit, value-creation and, in most cases, sustainability targets being achieved. At the time of granting stock options, there is no difference between exercise price and share price.

In 2014, a three-year incentive program for the Executive Leadership Team was established, covering the period 2014-2016. The program was a combination of stock options and stock, with half of the incentive program allocated in stock and half in stock options. Stock options have been awarded annually in 2014, 2015 and 2016, while the stock will be allocated in 2017. The accumulated economic profit generated in the three-year period was DKK 6.1 billion, exceeding the DKK 5.5 billion target and resulting in the full program being awarded. A total of 215,974 shares will be released in January 2017, as shares purchased using dividends during the three-year period are included.

The program contains a maximum-value clause, allowing the Board of Directors to choose to limit the total allocation of stock and stock options if the intrinsic value of the program exceeds DKK 268 million at the end of the program. However, there will be no limitation on the total allocation, as the intrinsic value is DKK 57 million for the current Executive Leadership Team.

The total fair value of the program at grant date was DKK 134 million, which is expensed over a six-year period. The value of the stock has been expensed over the three-year period. The stock options have a vesting period of four years, followed by an exercise period of five years. The fair value of the stock options will be expensed over a four-year period for each of the three allocations.

Furthermore, a three-year program was established for vice presidents and directors in 2014. The total fair value at grant date was DKK 150 million, which is expensed over a six-year period. The value of the stock has been expensed over the three-year period. To a large degree, the program used the same mechanisms as the program for the Executive Leadership Team. 100% of the program has been awarded to vice presidents and 93% to directors. In total, 98% of the program has been awarded with an intrinsic value of DKK 108 million, thereby below the maximum-value clause of DKK 300 million. The final number of shares of stock allocated under this program to be released in January 2017 is 404,505.

For other employees, a three-year incentive program was established in 2014 with annual awards in 2014, 2015 and 2016. The awarded stock options have a vesting period of four years, after which there is an exercise period of five years. The fair value of the three-year program is DKK 120 million, which will be expensed over a four-year period for each of the three allocations.

The cumulative targets for economic profit, EBIT and sustainability for 2014-2016 were partly met, triggering an allocation of 93% of the maximum possible allocation, with an intrinsic value of DKK 8 million. The Executive Leadership Team, vice presidents and directors, who were already included in existing incentive programs, were excluded from this program.

In previous years, stock option programs were established for all or selected groups of employees, conferring the right to purchase one share per stock option. Allocations were made on the basis of the individual employee's base salary and achievement of a series of business targets – both financial and nonfinancial – set by the Board of Directors for each year. The stock options have a vesting period of four years, followed by an exercise period of five years. In order to exercise the options, the employee must still be employed on the exercise date. This does not apply to persons who have retired, taken a voluntary early retirement pension or been given notice.

§ ACCOUNTING POLICIES

The Group has established stock-based incentive programs comprising equity-settled and cash-settled programs.

The fair value of the employee services received in exchange for the grant of stock options and stock awards is calculated using the value of the granted stock options and stock awards.

The fair value of stock-based payment on the grant date is recognized as an employee cost over the period in which the stock options vest. In measuring the fair value, account is taken of the number of employees expected to gain entitlement to the options as well as the number of options the employees are expected to gain. This estimate is adjusted at the end of each period such that only the number of options to which employees are entitled or expected to be entitled is recognized.

The value of equity-settled programs is recognized in Shareholders' equity. The value of cash-settled programs, which are recognized as Other liabilities, is adjusted to fair value at the end of each period, and the subsequent adjustment in fair value is recognized in the income statement under Financial income or Financial costs.

6.2 Stock-based payment (continued)

The number of outstanding options (excl. stock awards) has developed as follows:

	Executive Leadership Team	Vice presidents and directors	Other employees	Total	Avg. exercise price per option	Grant date fair value per option	Grant date fair value total
	Number of options	Number of options	Number of options	Number of options	DKK	DKK	DKK Million
Outstanding at January 1, 2016	1,231,992	3,802,574	2,317,133	7,351,699	200		
Change in Management	(244,290)	244,290		-			
Granted*	467,927	745,634	837,438	2,050,999	274	50	103
Exercised	(12,385)	(599,133)	(264,069)	(875,587)	82		
Forfeited	-	(34,140)	(108,816)	(142,956)	278		
Expired	-	(2,160)	(25,010)	(27,170)	99		
Outstanding at December 31, 2016	**1,443,244**	**4,157,065**	**2,756,676**	**8,356,985**	**230**		
Outstanding at January 1, 2015	1,010,673	4,297,788	1,840,122	7,148,583	152		
Granted*	463,749	564,325	845,172	1,873,246	301	51	96
Exercised	(242,430)	(877,159)	(315,771)	(1,435,360)	309		
Forfeited	-	(180,910)	(52,390)	(233,300)	151		
Expired	-	(1,470)	-	(1,470)	69		
Outstanding at December 31, 2015	**1,231,992**	**3,802,574**	**2,317,133**	**7,351,699**	**200**		
Number of exercisable options at December 31, 2016				1,200,563	89		
Number of exercisable options at December 31, 2015				2,089,597	86		

* The allocation of stock options for 2014-2016 will be adjusted in January 2017 based on the cumulative level of target achievement in the period.

For stock options outstanding at December 31, 2016, the range of exercise prices is DKK 78-317 per option (2015: DKK 78-317 per option), and the weighted average remaining term to maturity is six years (2015: six years). The weighted average share price for stock options exercised during 2016 was DKK 287 (2015: DKK 309). The number of stock options outstanding with a remaining term to maturity of up to five years is 2,461,568 (2015: 2,089,597), with a range of exercise prices of DKK 78-209 (2015: DKK 78-165) and an average exercise price of DKK 138 (2015: DKK 86). The remaining outstanding stock options have a weighted average remaining term to maturity of seven years (2015: seven years), a range of exercise prices of DKK 233- 317 (2015: DKK 178-317) and an average exercise price of DKK 268 (2015: DKK 246).

Most programs are equity settled, and no liability is recognized for these. In the case of allocations in countries where ownership of foreign stock is not permitted, the value of stock options is settled in cash, and a liability of DKK 24 million has been recognized for this in 2016 (2015: DKK 45 million). The intrinsic value of exercisable cash-settled programs in 2016 was DKK 16 million (2015: DKK 49 million).

During 2016, DKK 144 million arising from stock-based payment has been recognized in the income statement (2015: DKK 106 million), of which DKK 136 million is from equity-settled programs (2015: DKK 101 million). This includes DKK 21 million related to the remaining total costs from outstanding programs in connection with the reorganization redundancies.

6.2 Stock-based payment (continued)

The fair value of services received is measured with reference to the fair value of the equity instruments granted. Fair value at grant date is measured using the Black–Scholes model, using the average exercise price (which is 0 for stock awards), the option term and the following significant assumptions:

	2016	2015
Expected future dividends per share, DKK	28.5	26.3
Volatility, %	25.1	22.9
Annual risk-free interest rate, %	0.1	0.0
Weighted average share price at grant date, DKK	274	301

The fair value of stock options granted during 2016 is to be expensed over the four-year vesting period.

Furthermore, the options are expected to be exercised two years a er the vesting period, on average, or at the option's expiry date if this is within one year. Volatility is estimated using the historical volatility over the last three years. The risk-free interest rate is based on Danish government bonds with a maturity equivalent to the option's term to maturity.

The fair value of stock awards outstanding at December 31, 2016, is DKK 149 million (2015: DKK 257 million). The fair value of stock awards granted during 2016 was DKK 0 million (2015: DKK 0 million).

The number of non- vested stock awards at December 31, 2016, is 612,577 (2015: 777,076).

At the beginning of 2016, a four-year incentive program was established for the Albumedix leadership team, covering the period 2016- 2019. The program is a warrant program conferring the right to purchase new shares in Albumedix A/S subject to a certain minimum increase in equity value, and includes a maximum value clause.

Total fair value at grant date was DKK 6 million, which will be expensed over a four-year period. The warrants have a vesting period of four years and will be granted in 2020.

6.3 Commitments and contingencies

DKK million	2016	2015
Recognized in the income statement in respect of rentals	119	112
Rental commitments expiring within the following periods from the reporting date:		
Less than 1 year	107	100
Between 1 and 2 years	85	77
Between 2 and 3 years	59	52
Between 3 and 4 years	42	43
Between 4 and 5 years	28	31
After 5 years	139	71
Rental commitments at December 31	**460**	**374**

Of this, commitments to related parties at December 31, 2016, amount to DKK 31 million, compared with DKK 34 million at December 31, 2015. The above rental commitments relate to noncancelable operating leases, primarily for buildings and offices.

DKK million	2016	2015
Other commitments		
Contractual obligations to third parties relating to property, plant and equipment	979	452
Other guarantees		
Other guarantees and commitments to related companies	75	80
Other guarantees and commitments	288	359

Contractual obligations to third parties relating to capital expenditure were significantly impacted in 2016 by the decision to establish a new innovation campus in Denmark.

Pending litigation and arbitration
Novozymes is engaged in certain legal proceedings. In the opinion of the Board of Directors and Executive Leadership Team, settlement or continuation of these proceedings will not have a material effect on the Group's financial position. A liability has been recognized under provisions where the risk of a loss on a legal proceeding is considered more likely than not.

Contract conditions
Several of the partnership contracts to which Novozymes is a party could be terminated by the opposite party in the event of significant changes concerning ownership or control of Novozymes. Furthermore, a few contracts contain provisions that restrict Novozymes' licenses to use specific forms of technology in such situations.

Novozymes is committed to establishing a biological learning center in conjunction with the innovation campus currently under construction in Lyngby. The monetary commitment cannot be estimated reliably at the moment.

Novozymes is committed to increasing its production capacity in Latin America if a specific customer reaches certain milestones. The amount required to meet this commitment cannot be estimated reliably at the moment.

6.4 Related party transactions

Novozymes A/S is controlled by Novo A/S, domiciled in Hellerup, Denmark, which holds 71% of the votes in Novozymes A/S. The remaining stock is widely held. The ultimate parent of the Group is the Novo Nordisk Foundation (incorporated in Denmark).

Related parties are considered to be Novo A/S and the Novo Nordisk Foundation, and the Board of Directors and the Executive Management of these entities together with their immediate families. Other related parties are considered to be the Novo Nordisk Foundation's subsidiaries and associates, such as the Novo Nordisk Group, the NNIT Group and the Chr. Hansen Group, associates of Novozymes A/S, as well as the Board of Directors and the Executive Leadership Team of Novozymes A/S together with their immediate families. Related parties also include companies where the above persons have control or joint control.

All agreements relating to these transactions are based on market price (arm's length). The majority of the agreements are renegotiated regularly. The Group has had the following transactions with related parties:

Transactions

DKK million	2016	2015
The Novo Nordisk Group		
Sale of goods and materials	74	57
Sale of services	76	108
Purchase of goods and materials	(91)	(92)
Purchase of services	(72)	(93)
The NNIT Group		
Purchase of services	(41)	(48)
The Chr. Hansen Group		
Sale of goods and materials	25	20

Outstanding balances

DKK million	2016	2015
The Novo Nordisk Group		
Receivables	64	42
Payables	(117)	(102)
The NNIT Group		
Payables	(9)	(12)
The Chr. Hansen Group		
Receivables	3	1

There have not been any material transactions with related parties other than the transactions described above, and normal remuneration of the Board of Directors and Executive Leadership Team, which is presented in Note 6.1.

6.5 Fees to statutory auditor

DKK million	2016	2015
Statutory audit	8	9
Other assurance engagements	-	-
Tax assurrance services	4	6
Other services	1	5
Fees to statutory auditor	**13**	**20**
Audit fee ratio	0.63	1.22

Audit fee policy
It is Novozymes' policy that the annual fee for nonaudit services provided by the statutory auditor elected by the Annual Shareholders' Meeting must not exceed the annual fee for statutory audit services measured at Group level. The audit fee ration can only exceed 1 with the approval of the Audit Committee. In 2016, no such approvals were given.

In 2015, approval was given for a nonrecurring advisory service of DKK 3.5 million related to the potential spinoff or closing down of the hyaluronic acid activities.

New upcoming rules arising from the EU audit reform has led to restrictions on the size and type of nonaudit services that the auditor may perform while performing the audit. Novozymes does not receive any nonaudit services that are prohibited.

6.6 Cash flow

DKK million	Note	2016	2015
Non-cash items			
Accrued interest income and interest costs		26	27
(Gain)/loss on financial assets, etc., net		(21)	43
Depreciation, amortization and impairment losses	3.1, 3.2	1,014	1,127
Realized loss and allowances for doubtful trade receivables		15	11
Financial (gain)/loss on sale of assets		(7)	11
Unrealized foreign exchange (gain)/loss		(20)	(97)
Tax	2.6	831	796
Stock-based payment	6.2	144	106
Change in provisions		22	(38)
Profit/loss in associates		31	6
Non-cash items		**2,035**	**1,992**
Business acquisitions and purchase of financial assets			
Acquisition of Organobalance GmbH	3.5	(146)	-
Other acquisitions and purchase of financial assets		(15)	(242)
Cash flow from acquisitions		**(161)**	**(242)**
Cash and cash equivalents, net			
Cash and cash equivalents		812	839
Credit institutions - on demand		(7)	(43)
Cash and cash equivalents, net, at December 31		**805**	**796**

Undrawn committed credit facilities were DKK 3,500 million at December 31, 2016 (2015: DKK 2,000 million), all of which expires in 2018-2021.

§ ACCOUNTING POLICIES

The Consolidated statement of cash flows, which is compiled using the indirect method, shows cash flows from operating, investing and financing activities, and the Group's cash and cash equivalents at the beginning and end of the year.

Cash flow from operating activities comprises net profit adjusted for non-cash items, paid financial items, corporate income tax paid and change in working capital. Cash flow from investing activities comprises payments relating to the acquisition and sale of companies and non-controlling interests, intangible assets, and property, plant and equipment.

Cash flow from financing activities comprises proceeds from borrowings, repayment of principal on interest-bearing debt, payment of dividends, proceeds from stock issues, and the sale of treasury stock and other securities.

Cash and cash equivalents comprises cash at bank and in hand less current bank loans due on demand.

6.7 Events after the reporting date

No events have occurred after the balance sheet date of importance to the consolidated financial statements.

6.8 Group companies

	Country	Activity						Issued common stock/paid-up stock	Percentage of shares owned
Parent company									
Novozymes A/S	Denmark	■	□	●	◆	○	DKK	620,000,000	
Subsidiaries									
Novozymes BioAg S.A.	Argentina	■	□	●	◆		ARS	70,260,400	100
Novozymes Australia Pty. Ltd.*	Australia			●			AUD	500,000	100
Novozymes Belgium BVBA*	Belgium			●			EUR	18,600	100
Novozymes Latin America Ltda.*	Brazil	■	□	●	◆		BRL	23,601,908	100
Novozymes BioAg Productos Para Agricultura Ltda.	Brazil		□	●			BRL	78,334,641	100
Novozymes BioAg Limited	Canada	■	□	●	◆		CAD	4,079,799	100
Novozymes Canada Limited	Canada	■	□	●			CAD	100	100
Novozymes (China) Biotechnology Co. Ltd.	China	■	□	●			CNY	859,058,400	100
Novozymes (China) Investment Co. Ltd.	China			●	◆		CNY	816,449,373	100
Novozymes (Shenyang) Biologicals Co. Ltd.	China	■	□	●			CNY	31,793,578	100
Suzhou Hongda Enzyme Co. Ltd.	China	■	□	●			CNY	356,744,150	96
Novozymes (China) Biopharma Co. Ltd.	China	■	□	●			CNY	327,242,564	100
Novozymes Bioindustrial A/S*	Denmark					○	DKK	1,100,000	100
Novozymes Bioindustrial China A/S*	Denmark					○	DKK	729,700,000	100
Albumedix A/S*	Denmark			●		○	DKK	612,000	100
Novozymes BioAg A/S*	Denmark					○	DKK	600,000	100
Novozymes France S.A.S.*	France			●			EUR	2,490,453	100

6.8 Group companies (continued)

	Country	Activity				Issued common stock/paid-up stock	Percentage of shares owned
Novozymes Deutschland GmbH*	Germany	●			EUR	255,646	100
Organobalance GmbH	Germany	□	●	◆	EUR	34,000	100
Novozymes Hong Kong Ltd.	Hong Kong			○	HKD	768,285,140	100
Novozymes Biopharma Hong Kong Co. Ltd.	Hong Kong			○	HKD	1	100
Novozymes South Asia Pvt. Ltd.	India	■	□	●	◆	INR	1,550,000,020	100
Novozymes Italia S.r.l.*	Italy		●		EUR	10,400	100
Novozymes Japan Ltd.*	Japan		●	◆	JPY	300,000,000	100
Novozymes Malaysia Sdn. Bhd.*	Malaysia		●	◆	MYR	6,666,414	100
Novozymes Mexicana, S.A. de C.V.*	Mexico		●		MXN	338,100	100
Novozymes Mexico, S.A. de C.V.	Mexico		●		MXN	35,224,200	100
Novozymes Netherlands BVBA*	Netherlands		●		EUR	18,000	100
Novozymes RUS LLC*	Russia		●		RUB	10,010,000	100
Novozymes Singapore Pte. Ltd.*	Singapore			○	SGD	59,071,000	100
Novozymes South Africa (Pty) Ltd.*	South Africa		●		ZAR	50,000,000	100
Novozymes Korea Limited*	South Korea		●		KRW	300,000,000	100
Novozymes Spain S.A.*	Spain		●		EUR	360,607	100
Novozymes Sweden AB*	Sweden		●		SEK	500,000	100
Novozymes Switzerland AG	Switzerland	■	●		CHF	5,000,000	100
Novozymes Switzerland Holding AG*	Switzerland			○	CHF	3,000,000	100
Novozymes Enzim Dis Ticaret Ltd. Sirketi*	Turkey		●		TRY	21,000	100
Albumedix Ltd.	UK	□	●	◆	GBP	22,535,113	100
Novozymes UK Ltd.*	UK	■	●		GBP	1,000,000	100
Novozymes BioAg, Inc.	USA	■	□	●	USD	1	100
Novozymes Biologicals, Inc.	USA	■	□	●	◆	USD	3,000,000	100
Albumedix Inc.	USA		●		USD	1	100
Novozymes Blair, Inc.	USA	■	□		USD	1	100
Novozymes, Inc.	USA			◆	USD	1,000	100
Novozymes North America, Inc.	USA	■	□	●	◆	USD	17,500,000	100
Novozymes US, Inc.*	USA			○	USD	115,387,497	100
Pacific Vet Group-USA, Inc.	USA		□	●	◆	USD	11,237	100

6.8 Group companies (continued)

	Country	Activity		Issued common stock/paid-up stock	Percentage of shares owned
Joint operations/associates					
Houseowners' Association Smørmosen*	Denmark		DKK		
Houseowners' Association Hallas Park*	Denmark		DKK		
Microbiogen PTY Ltd.*	Australia		AUD		23.10
Beta Renewables S.p.A.*	Italy		EUR		9.95
MagnaBioAnalytics LLC	USA		USD		19.35

■ ISO 14001-certified sites. All major companies are also ISO 9001-certified.
□ Production
● Sales & Marketing
◆ Research & Development
○ Holding companies, etc.
* Owned directly by Novozymes A/S

Environmental data

We measure our environmental performance in areas that have an impact on the environment. One of the most important measures is our estimate of the CO2 emissions avoided as a result of customers' application of Novozymes' products in their products or processes. We also focus on our own CO2 emissions and use of resources, and the resulting impact on the environment.

Estimated CO2 savings from customers' application of Novozymes' products

69 million tons

CO2 intensity reduction compared with 2014 basline

16%

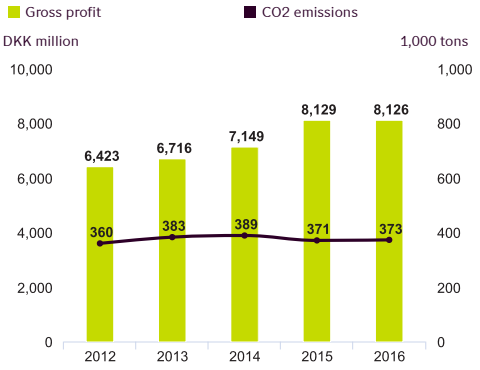
Renewable energy share of total energy consumption

24%

7.1 Climate change

Climate change and its associated impacts pose multiple risks to Novozymes' supply chain and operations, including regulatory action and physical or reputational damage. At the same time, increasing demand for low-carbon products and solutions offers further opportunities for Novozymes to grow its business. That is why mitigating climate change impacts remains high on Novozymes' agenda. Novozymes' approach to managing climate change impacts is well integrated into its business strategy and targets, and can be seen in its position paper on climate change. Several departments work closely together to influence the climate change agenda and drive performance, both inside and outside the organization.

Gross profit vs. CO2 emissions (scope 1+2)



Novozymes' CO_2 intensity reduction target is an indicator of its efforts to make operations less carbon intensive. In 2016, Novozymes' CO_2 emission intensity reduction was 16%, falling short of the 20% target, primarily due to slower-than-expected gross profit development.

Novozymes strives to implement various energy efficiency projects that make its operations less carbon intensive. In 2016, effort was put into identifying a strong pipeline of projects that will help Novozymes achieve its 2020 CO_2 target. A key component of these projects will be ensuring that best practices are shared and implemented globally, across production plants.

! CRITICAL ACCOUNTING ESTIMATES AND JUDGMENTS

Novozymes uses LCAs to estimate the CO_2 emissions that customers avoid by using Novozymes' products in their processes or products. A calculation methodology to consolidate the LCAs has been defined and consistently applied, but the individual LCAs depend on assumptions and estimates, which means that the result of the calculation will be an approximation.

§ ACCOUNTING POLICIES

The estimated reduction in CO_2 emissions resulting from customers' application of Novozymes' products is based on annually updated life cycle assessments (LCAs) of Novozymes' products. The LCAs are prepared and updated by Novozymes and subject to assumptions and estimates.

Reported CO_2 emissions comprise scope 1, scope 2 and emissions from outbound transport of products.

CO_2 from internally generated energy (scope 1) is calculated based on the amount of fuel consumed, using local emission factors.

CO_2 from externally generated energy (scope 2) is reported in accordance with both the market-based and the location-based method, as defined by the Greenhouse Gas (GHG) Protocol. The location-based method uses annually determined local emission factors from power plants or their organizations. If emission factors are not available, annually determined emission factors from Danish authorities and suppliers are used.

Transport-related CO_2 emissions (scope 3) are calculated based on principles described in the GHG Protocol. Reported quantities comprise CO_2 emissions related to transport from all primary enzyme production sites to the customer where Novozymes pays for the freight. Transport between production sites is also included. Transport of raw materials to a production site is not included. CO_2 emissions generated at external warehouses are not included. Emission data are calculated based on distance and emission factors from the GHG Protocol.

The environmental impact potentials for global warming and ozone layer depletion are calculated on the basis of data published by the US Environmental Protection Agency (EPA) and the Montreal Protocol published by the United Nations Environment Programme (UNEP).

CO_2 intensity is measured as CO_2 emissions (scope 1+2) less emissions from energy offset by green energy produced from Novozymes' waste (i.e. net emissions added by Novozymes' processes), divided by gross profit. The intensity reduction is calculated as the relative improvement in intensity compared with the base year (2014).

For sites acquired in 2015 or later, the baseline index is calculated based on the data reported in the first full year of operating as a Novozymes site. Divested sites are removed from the index for the full period. Newly constructed sites are included from the first quarter after qualification.

7.1 Climate change (continued)

CO_2-equivalent emissions

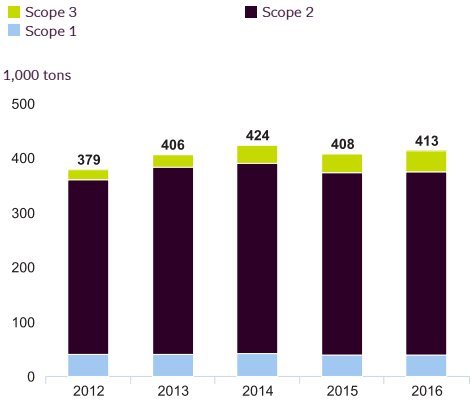
1,000 tons	2016	2015
Natural gas	38	36
Gas oil, light fuel oil and diesel oil	-	1
HCFCs	1	2
Scope 1	**39**	**39**
District heat	8	9
Electricity	258	259
Steam	69	66
Scope 2 (market-based)	**335**	**334**
Ship	5	6
Truck	17	14
Air freight	17	15
Scope 3	**39**	**35**
Emissions, total ESG	**413**	**408**

Market-based vs. location-based scope 2 emissions

1,000 tons	2016	2015
Scope 2 CO_2 emissions (market-based)	335	334
Scope 2 CO_2 emissions (location-based)	389	414

In accordance with the Scope 2 Guidance from the GHG Protocol, scope 2 CO_2 emissions must be reported in two ways, referred to as a location-based and a market-based method. At Novozymes, market-based reported CO_2 emissions differ from location-based emissions for emissions from electricity purchased at all Danish sites. This electricity comes from wind farms and makes up approximately 22% of total energy consumed.

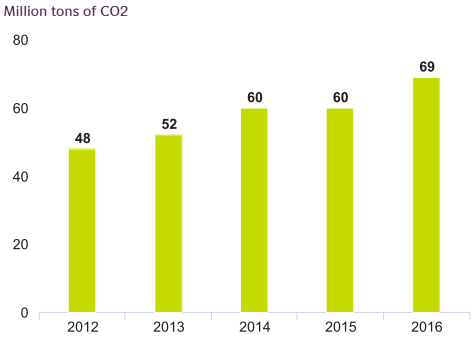
5-year GHG emissions by scope (CO2 -eqv.)



7.1 Climate change (continued)

The application of Novozymes' products enables customers and end consumers to reduce CO_2 emissions by lowering energy, water, raw material and chemical consumption in their operations compared with using conventional technologies. Novozymes' SAVE target measures the net positive CO_2 impact of Novozymes' products on society. Novozymes' customers avoided an estimated 69 million tons of CO_2 emissions by applying its products in 2016, meeting the target for the year. The annual savings achieved are equivalent to taking approximately 30 million cars off the road.

Estimated annual CO2 savings



Since 2004, Novozymes has conducted peer-reviewed life cycle assessment (LCA) studies to document the environmental impact of its biosolutions, covering the entire life cycle of these products from cradle to grave. Results are used to show customers and partners ways to reduce their CO_2 emissions and leverage the positive impact on climate change made possible by Novozymes' products. To learn more, please see Novozymes' approach to LCA.

In 2016, a life cycle assessment was carried out for the application of RONOZYME® HiStarch (an amylase) in chicken feed in Brazil. The study was externally reviewed in accordance with ISO 14040. RONOZYME® HiStarch improves the digestibility of starch, allowing farmers to change the composition of feed ingredients and reduce the demand for fat, which is the most expensive ingredient. The fat saved can be used for biodiesel production, thereby reducing fossil diesel combustion, or to replace vegetable oils.

Novozymes is the founding member of the Sustainable Bioenergy Group (SBG) of the Sustainable Energy For All (SE4ALL) initiative. The SBG aims to identify opportunities and deliver sustainable solutions for bioenergy, focusing on emerging markets and rural communities in developing countries. Read more about Novozymes' position on biofuels. In 2016, Novozymes became one of the founding members of Below50, an initiative launched by WBCSD in partnership with RSB (Roundtable for Sustainable Biomaterials) and the United Nations Sustainable Energy For All (Bioenergy Accelerator) initiative under the Low Carbon Fuels workstream to promote low-carbon transport fuels. Read more in Issue-based and sector initiatives in the Communication on Progress.

Novozymes has a strong tradition of transparent reporting of its climate change impacts and submits its climate change performance data to recognized platforms, including CDP (formerly Carbon Disclosure Project) and RobecoSAM's Dow Jones Sustainability Index.

7.2 Energy

Novozymes' biosolutions enable customers to save energy. Furthermore, with growing constraints on global energy reserves, continuously optimizing the energy used in its operations is material to Novozymes.

Novozymes' approach to operational energy management is based on two levers: improving energy efficiency in production by optimizing processes and implementing energy-saving projects, and increasing the sourcing of energy from renewable sources. Targets for energy efficiency and renewable energy drive overall energy performance. For more information on targets, please refer to the Targets section.

Novozymes' Supply Operations and Sourcing departments manage and monitor all energy efficiency and renewable energy sourcing efforts.

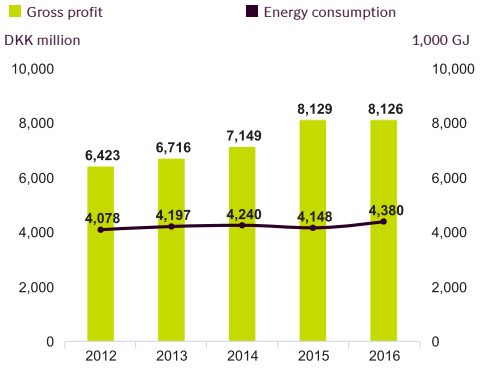
In 2016, Novozymes achieved a 10% improvement in energy efficiency compared with 2014. This was short of the 2016 target of 18%, primarily due to slower-than-expected gross profit development.
Furthermore, Novozymes' anaerobic digesters faced operational challenges globally, and site teams are therefore working to optimize their operations. In 2016, total energy from renewable sources accounted for 24% of the total energy consumed. The majority of the renewable energy came from the Horns Rev II wind farm in Denmark.

In 2016, Novozymes became a silver member of the Business Renewables Center (BRC) community. BRC is a member-based platform that focuses on streamlining and accelerating the process of procuring large-scale wind and solar energy.
Going forward, Novozymes will focus on replicating the best energy-saving projects globally to help achieve the 2020 energy efficiency target.

Energy consumption by primary source

1,000 GJ		2016	2015
Natural gas		691	661
Biogas		55	24
Gas oil, light fuel oil and diesel oil		5	11
Internally generated energy, total		**751**	**696**
Electricity - conventional		1,636	1,525
Electricity - renewable		967	949
District heat - conventional		156	160
District heat - renewable		9	11
Steam		861	807
Externally purchased energy, total		**3,629**	**3,452**
Energy consumption, total	ESG	**4,380**	**4,148**
Energy production from waste		72	77

Gross profit vs. energy consumption



7.2 Energy (continued)

§ ACCOUNTING POLICIES

Net energy consumption includes quantities consumed both in the production process and in other areas, less energy production from Novozymes' waste.

Internally generated energy is measured as fuel consumption converted to energy based on the lower combustion value and weight by volume, except in the US, where legal requirements for reporting of CO_2 state that the higher combustion value is to be applied. Fuel consumption comprises all types of fuels used to produce electricity, heat and steam on site and is converted to energy using factors supplied by utility providers or local authorities. Fuel for transportation is not included.

Externally generated energy is the input to Novozymes of externally generated electricity, heat and steam.

Energy produced from waste or wastewater is renewable and amounts to the total energy (heat, electricity or steam) produced by an internal or external utility provider. An example is energy produced from biomass waste or biogas.

Reported quantities are based on meter readings, with the exception of steam, which may be subject to calculation.

Energy efficiency is measured by dividing net energy consumption by gross profit. The efficiency improvement is calculated as the relative improvement in efficiency compared with the base year (2014).
The quantities used in the calculation correspond to those reported as net energy consumption, i.e. purchased energy less energy produced from Novozymes' biomass waste.

For sites acquired in 2015 or later, the baseline index is calculated based on the data reported in the first full year of operating as a Novozymes site. Divested sites are removed from the index for the full period. Newly constructed sites are included from the first quarter after qualification.

The renewable energy percentage is calculated by dividing consumed renewable energy by total energy consumption. Renewable energy used at Novozymes sites comprises energy that is generated from natural processes and continuously replenished. Sources include solar, wind and hydro power-based electricity and energy from biogas.

7.3 Water

Enzyme manufacturing is a water-intensive process that also generates significant amounts of wastewater. Novozymes strives to use water efficiently and comply with wastewater discharge regulations in all regions of operation.

Many of the raw materials required in enzyme manufacturing are agriculture based and water intensive to produce. Downstream, some of Novozymes' biological solutions can help customers and consumers save water during application compared with conventional methods, and wastewater treatment solutions help to improve the quality of treated water generated in some cases, while improving treatment processes in others.

Novozymes focuses on managing water within its operations to mitigate the risks associated with water usage and wastewater disposal.

Novozymes' sustainability policy and its long-term target to improve water efficiency in its own operations drive water management within operations. For more information on water targets, please refer to the Targets section.

Water by primary source

1000 m³		2016	2015
Drinking water		4,984	4,733
Industrial water		1,931	1,943
Steam		310	289
Water, total	ESG	**7,225**	**6,965**

§ ACCOUNTING POLICIES

Water includes drinking water, industrial water and externally supplied steam. Drinking water is water of drinking water quality. Industrial water is water that is not of drinking water quality, but is suitable for certain industrial processes, for example for use in cooling towers. Industrial water can come from lakes or wells.

The reported quantities are stated based on the metered intake of water to Novozymes and include quantities consumed both in the production process and in other areas. The reported quantities of steam are converted to volume of running water and are therefore subject to calculation.

Water efficiency is measured by dividing water consumption by gross profit. The efficiency improvement is calculated as the relative improvement in efficiency compared with the base year (2014). The quantities used in the calculation correspond to those reported as water consumption.

For sites acquired in 2015 or later, the baseline index is calculated based on the data reported in the first full year of operating as a Novozymes site. Divested sites are removed from the index for the full period. Newly constructed sites are included from the first quarter after qualification.

Wastewater is measured as the volume discharged by Novozymes or calculated based on water consumption.

7.3 Water (continued)

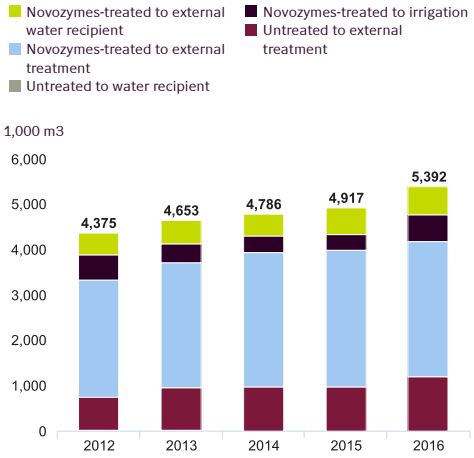
Two departments are responsible for water management: Supply Operations and Quality, Environment & Safety. Together, they implement projects that improve water efficiency and reduce wastewater in Novozymes' production. The wastewater is treated internally or externally in biological wastewater treatment systems before being discharged to the recipient or used in agriculture for irrigation.

In 2016, Novozymes' water efficiency improvement was 6%. This was lower than expected because of slower-than-expected gross profit development and ongoing challenges in the reverse osmosis system for water reuse at the Kalundborg site in Denmark. Going forward, the focus will be on replicating successful projects for wastewater capture and reuse across sites.

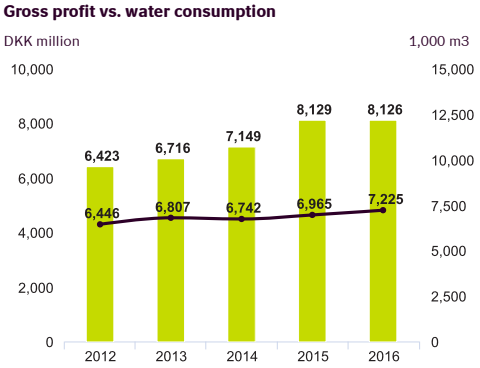
Wastewater treatment

1,000 m³		2016	2015
Wastewater used for irrigation		596	358
Wastewater discharged		4,796	4,559
Wastewater volume, total	ESG	**5,392**	**4,917**

Wastewater by treatment method



Gross profit vs. water consumption



7.4 Waste

Novozymes continuously strives to optimize its operations in order to reduce and mitigate negative impacts on the environment. That is why the responsible disposal of waste and by-products is important to Novozymes' operations.

Novozymes' waste and by-products consist of three broad categories: biomass, nonhazardous solid waste and hazardous waste. Each production site regularly reports waste and by-products generated according to category and disposal method.

Biomass, which accounts for approximately 98% of the total waste and by-products generated by Novozymes' manufacturing sites, is a by-product rich in nitrogen and phosphorus. The majority of biomass generated is recovered, converted and sold to local farmers as NovoGro®, an organic agricultural fertilizer. In 2016, Novozymes diverted 97% of its biomass from landfill and incineration in this way.

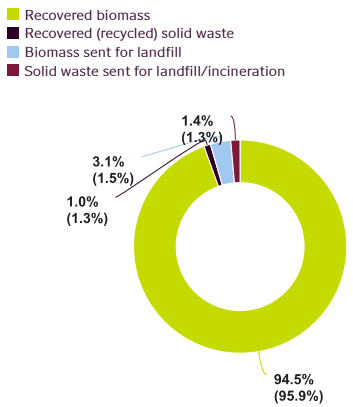
Solid nonhazardous and hazardous waste include materials such as paper, food waste, laboratory waste and chemicals. This accounts for approximately 2% of the total waste and by-products generated. While Novozymes strives to increase the amount of solid waste diverted from landfill and incineration, the relative impact is too minor to set a target.

One example of how Novozymes worked to increase its diversion rate in 2016 comes from Brazil, where the site team developed new partnerships with local firms to co-process solid waste. The production site now sends the majority of its solid waste to a local cement kiln for energy recovery and the organic food waste for animal feed.

In 2016, the total solid waste disposed of to landfill and/or incineration was 6,420 tons. The rate of recycling of solid waste was 44% in 2016, compared with 50% in 2015.

Novozymes' management approach to waste and by-products is site specific. This is because waste handling is a complex issue that is regulated locally and involves many external service providers. Going forward, Novozymes intends to improve transparency regarding waste management and recycling potential across its production sites. In the coming years, Novozymes plans to pilot a new framework to identify opportunities to increase waste diversion across three of its largest production sites in Denmark, the US and China.

Waste and by-products recovered 2016 (2015)



Biomass

1,000 tons		2016	2015
NovoGro®		375	309
NovoGro® 30		152	153
Compost		13	47
Landfill		10	8
Biomass, total	ESG	**550**	**517**

§ ACCOUNTING POLICIES

Biomass is measured or calculated on the basis of volume or weight produced and transported from Novozymes as liquid fertilizer (NovoGro®), converted to a fertilizer product with a higher dry matter content (NovoGro® 30 or compost) or dried and used as fuel for energy production. Biomass from a newly built plant is sent for landfill with energy production (biogas) as a temporary disposal method.

Waste is the registered volume of waste broken down into hazardous and nonhazardous waste, and by disposal method. The amount recycled is the quantity recycled internally or sent to an external service provider for recycling. Biomass is not included in the reported amounts of waste.

7.4 Waste (continued)

Waste

1,000 tons	2016	2015
Nonhazardous waste		
Incineration	1.9	1.2
Landfill	4.1	3.8
Recycling (external)	4.3	4.4
Recycling (internal)	0.1	-
Other	-	0.2
Nonhazardous waste, total	**10.4**	**9.6**
Hazardous waste		
Incineration	1.4	1.4
Landfill	-	0.1
Recycling (external)	0.2	0.1
Recycling (internal)	1.4	2.1
Other	0.1	0.1
Hazardous waste, total	**3.1**	**3.8**
Waste, total ESG	**13.5**	**13.4**

7.5 Environmental compliance, etc.

ACCOUNTING POLICIES

Breaches of environmental regulatory limits is measured as the number of incidents in the reporting year considered not to be in conformity with environmental permits or requirements under environmental law. Breaches related to annual control measurements of spills reported in previous years are not included, as they are not indicative of performance during the reporting year.

Neighbor complaints refers to the number of registered environmental complaints, primarily odor and noise related.

7.6 Bioethics & gene technology

Novozymes' business is based on bioinnovation – including, but not limited to, advances in biotechnology and gene technology. That is why bioethics and gene technology are material issues for Novozymes' operations and its relationships with external stakeholders. Novozymes' position paper on gene technology articulates its management approach to supporting safe and sustainable use, and the adoption of robust, science-based regulations for processes and products involving gene technology. The company acknowledges the need for engaging with stakeholders to improve the general level of knowledge about bioinnovation and gene technology, and their role in society.

Novozymes endorses the globally recognized principles on the utilization of genetic resources set out by the United Nations Convention on Biological Diversity (CBD). The company has internal procedures to ensure that it lives up to its commitments to the CBD and is actively engaged with a number of industry associations and task forces in implementing the Nagoya Protocol on Access and Benefits Sharing. Going forward, Novozymes will assess the outcomes of CBD13 and undertake a broader strategic discussion regarding its management and reporting of biodiversity issues.

7.7 Product safety & stewardship

Many of Novozymes' biological solutions serve as ingredients in consumer goods (e.g. in laundry and dishwashing detergents) or are used as industrial processing aids (e.g. in the manufacture of bread and baked goods, juice and alcoholic beverages, cooking oil and textiles). That is why ensuring product safety and stewardship is material to Novozymes' operations and its customer relationships. Novozymes' approach to product safety and stewardship is to mitigate the risk of potential harm to both human health and the environment during the manufacture, handling and use of its products. This approach is outlined in the Quality and Product Safety Policy and at Novozymes.com. Implementation of this policy is a central element of Novozymes' Quality Management System, which complies with ISO 9001 standards.

In addition, Novozymes has outlined its approach and position on topics related to product safety and stewardship, such as REACH, labeling of enzymes and animal testing.

Structured and documented processes for product stewardship, from development to delivery of a product, are enforced globally and audited by the independent body Bureau Veritas. While this approach is implemented through a number of cross-functional teams, primary responsibility rests with the Vice President for Intellectual Property, Regulatory and Product Safety.

Social and governance data

We measure our social performance using a number of indicators in the areas of labor practices & human rights, occupational health & safety, business ethics, corporate citizenship and customer satisfaction. These indicators provide an overview of progress made and enable us to understand the trends, so we can respond to risks and opportunities related to talent attraction and retention as well as business development.

Share of promoted employees who are women

36%

No. of accidents per million working hours

2.2

Employee satisfaction and motivation score (on a scale of 0-100)

76

8.1 Labor practices & human rights

Employees are a key driver of Novozymes' growth and are essential to the successful execution of our strategies. Novozymes is responsible for ensuring that human rights are respected throughout its value chain. It is therefore crucial for Novozymes to focus on employee development and diversity in all its operations and on human rights throughout the value chain.

We have implemented a common management and reporting structure for labor practices and human rights. For a description of the mechanisms that Novozymes implements to ensure a respectful and motivating working environment, please refer to our position on Human rights at Novozymes.com.

Labor practices: The responsibility for ensuring equal rights for all employees and promoting diversity rests with our People and Organization (P&O) function. Our approach to diversity and equal opportunities is detailed in our position on diversity and equal opportunities.

			2016	2015
Rate of employee turnover - retirement		%	0.8	1.0
Rate of employee turnover - dismissal		%	2.6	2.7
Rate of employee turnover - voluntary		%	7.0	5.4
Rate of employee turnover, total		%	**10.4**	**9.1**
Rate of absence				
Senior management, management, professional and administrative		%	1.4	1.3
Skilled workers, laboratory technicians, other technicians and process operators		%	2.8	2.8
All employees	ESG	%	2.0	2.0
Other employee statistics				
Average age		Years	41.2	40.9
Average seniority		Years	9.4	9.3
Number of expatriates		No.	37	53
Employees promoted who are women		%	36	41
Average spent per employee		DKK	3,353	4,814
Costs as percentage of total employee costs		%	0.6	0.8

Employment and promotions are based on merit, without any discrimination, exclusion or preference. We give important consideration to diversity in the context of talent attraction, promotion and succession planning. Furthermore, Novozymes recognizes and respects the right to form and join associations and to bargain collectively. Our P&O function works to facilitate the fulfillment of these fundamental rights in countries with limited labor legislation.

In 2016, 36% of the employees promoted were women, meaning that we did not meet our 2016 target of ensuring that at least 40% of employees promoted were women. Our long-term target is to ensure that women hold at least 30% of senior management positions by 2020, and we believe that our continued focus and initiatives will support our journey toward meeting this target.

Employee turnover is an indication of organizational health. In 2016, the rate of employee turnover increased from 9.1% to 10.4%, mainly due to the reorganization in 2016, which led to an increase in voluntary terminations.
The rate of absence has been broken down into grouped job categories, based on whether the work carried out is primarily office based, and is therefore not stated for each job category.

Employee development: Our P&O function conducts an annual People's Opinion survey to identify areas that need continuous attention and further improvement. The survey provides important insights into Novozymes' performance as an employer and into where improvements can be made. In 2016, our annual People's Opinion survey achieved a response rate of 93%. We met our targets related to workplace development for the third year in a row. "Employee satisfaction and motivation" scored 76 out of 100 in the survey, exceeding our target of 75.

8.1 Labor practices & human rights (continued)

Human rights: We seek to take appropriate measures to avoid and mitigate adverse human rights impacts. In 2016, we revamped our human rights risk-monitoring approach so as to meet growing expectations from our investors and customers and to comply with UN Guiding Principles. In order to identify risks of human rights violations in our value chain, Corporate Sustainability carried out a human rights impact assessment. Stakeholders from relevant functional areas, including Sourcing, Quality, Environment & Safety and P&O, across regions including China, India, Brazil, North America and EMEA, were trained in human rights risks specific to their respective regions and subsequently consulted. Their inputs were analyzed, and a plan to address gaps was discussed with the respective teams.

The human rights impact assessment identified the following potential human rights risks in Novozymes' regions: discrimination, income equality, living wages, right to work and right to equal pay for equal work. No human rights violations were identified during the impact assessment. Novozymes has a number of practices and procedures in place that have been evaluated as sufficient to address these potential risks.

As a global company, Novozymes has both global and region-specific procedures and tools for managing employee relations and mitigating human rights risks. In 2017, we will focus on building employee awareness of these procedures and tools. Furthermore, we will strengthen internal human rights impact assessment capabilities across the relevant functions.

§ **ACCOUNTING POLICIES**

Absence is stated as time lost due to the employee's illness, including pregnancy-related sick leave, and occupational accidents and diseases. The rate of absence is calculated as the number of registered days of absence as a percentage of the total number of normal working days in one year, less vacation and public holidays.

The rate of employee turnover is calculated as employee turnover divided by the average number of permanent employees. Employee turnover is measured as the number of permanent employees who left the Group during the last four quarters (excluding employees at divested entities transferred to the acquiring company).

Average age and seniority are calculated as the sum of employees' total seniority in whole years at the reporting date, divided by the number of employees.

Expatriation refers to Novozymes employees temporarily reassigned within Novozymes from the country of original employment for a period that extends beyond six months.

Training costs is the costs of external training courses and seminars, translated into Danish kroner at average exchange rates. Training costs is also shown as a percentage of total employee costs.

Employees promoted who are women measures the percentage of women among those promoted to manager, senior manager, director, senior director or VP from a level below, or hired externally at these levels.

8.2 Occupational health & safety

As a sustainable company, the health and safety of employees is a fundamental part of our business strategy.

Novozymes' core OH&S strategy is to ensure that robust processes, hardware, standards, tools and training are fully integrated into our way of working. In addition to this, we ensure OH&S focus throughout the organization through initiatives driven locally as part of a global framework.

Several ongoing global initiatives to improve employees' physical and mental well-being are structured to meet local needs. Novozymes has stepped up its efforts to improve the psychosocial work environment through global awareness and transformation training.

To improve our eye safety efforts, we have launched a new mandatory requirement for safety glasses to be worn in all laboratory areas globally. Across our business portfolios, a proactive health surveillance program has been implemented to identify and alleviate adverse health reactions – however unlikely – before they become serious.

At Novozymes, we know our OH&S responsibilities extend beyond our immediate employees, and we therefore conduct safety awareness programs for contract workers to ensure that they understand their rights and responsibilities.

In 2016, we experienced a decrease in the frequency of occupational accidents, resulting in a frequency of 2.2 lost-time injuries per million working hours, which is still above our target of 1.7 for 2016. We found that some of these accidents involved falling and tripping, and further investigation revealed that these occurred due to mobile device distractions. We have therefore launched various "Stop and Text" awareness campaigns to minimize slips, trips and falls that occur when employees use smartphones while in motion.

Consequences of occupational accidents

No.		2016	2015
Return to original job		23	23
Return to a different job in the same department		-	2
Transfer to a different job outside Novozymes		-	1
Out of work or early retirement		1	-
Case pending		1	-
Occupational accidents with absence, total	ESG	**25**	**26**
Total days of absence related to accidents registered in the same year		272	765
Injury severity rate		11	29

§ ACCOUNTING POLICIES

Occupational accidents is defined as the reported number of occurrences arising out of or in the course of work that result in fatal or nonfatal injury with at least one day's absence from work apart from the day of injury.

Occupational diseases is defined as the number of diseases contracted as a result of exposure to risk factors arising from work activity and notified as work related in accordance with national legislation.

The consequences of occupational accidents with absence and occupational diseases are measured by recording the work situation once the outcome of the incidents has stabilized, for example whether the employees have returned to their original jobs, and the total number of calendar days of absence.

Frequencies of occupational accidents with absence and occupational diseases are stated per million working hours.

The injury severity rate is calculated by dividing total days of absence related to accidents registered in the same year by the number of occupational accidents.

8.2 Occupational health & safety (continued)

Consequences of occupational diseases

No.		2016	2015
Return to original job		2	5
Return to a different job in the same department		3	2
Transfer to a different job in another department		-	3
Transfer to a different job outside Novozymes		1	1
Out of work or early retirement		2	1
Case pending		-	-
Occupational diseases, total	ESG	**8**	**12**
Total days of absence related to diseases registered in the same year		7	160

Types of occupational diseases

No.		2016	2015
Musculoskeletal disorder		1	3
Skin disease		4	2
Enzyme allergy		2	5
Respiratory disease		1	2
Occupational diseases, total	ESG	**8**	**12**

We have also increased focus on the psychosocial work environment through selected markers in the annual People's Opinion survey. The results show that scores are at a high level similar to 2015. This means that most employees are satisfied with the psychosocial work environment (scores are mainly above 80 out of 100) and that there are very few complaints about bullying and harassment (score of 91 out of 100). For the first time in 2016, the survey incorporated questions concerning safety culture and management focus. All teams and sites will follow up on these results to ensure a healthy work environment and employees' physical and mental well-being.

Novozymes will be rolling out a new global OH&S performance management process that will seek to balance global and local standards and initiatives. The new setup will cascade relevant KPIs to appropriate functions.

8.3 Business ethics

Business ethics are essential to Novozymes' business operations, as acting ethically helps attract and retain investors, employees and customers. Novozymes seeks appropriate measures to work against all forms of corruption, including extortion and bribery. Novozymes has adopted six integrity principles to support the commitment to doing business in a responsible way – protecting the integrity of our business. These principles form the ground rules for engaging with third parties and apply to all employees anywhere in the world. Please see our Position on Business integrity at Novozymes.com.

Novozymes' management approach to advancing anti-corruption and business integrity aspects is embedded in its corporate values and policies. Furthermore, a dedicated committee on business integrity follows up on employee training, handles reporting of business integrity-related matters and offers guidance requested by employees. All employees have access to guidance and may anonymously raise concerns about business ethics and corruption, including possible breaches of our integrity principles, through a variety of grievance channels – see more about our grievance channels at Novozymes.com. Questions related to business integrity are included in our annual People's Opinion survey, as they help us to identify issues and areas that require further guidance and support.

Novozymes is not only responsible for its own operations globally but also has a responsibility for ensuring that the business partners that represent us are equally committed to preventing corruption and bribery. Our stakeholders expect that of us, and legislators increasingly expect it too. And for Novozymes, engaging with the right business partners is a central part of sustainable business. In 2016, third-party due diligence and compliance processes were upgraded to obtain increased assurance that Novozymes' partners in the sales channel conduct business with integrity and that they share its values and requirements for legal compliance. In 2017, efforts will be made to further increase the span and robustness of these processes.

§ ACCOUNTING POLICIES

Completion of business integrity training refers to the percentage of selected employees who have undergone business integrity training in the last training period. New entities are included within six months of acquisition. Business integrity training is conducted for employees who can potentially influence third-party interactions or decisions as part of their job role. This comprises employees in professional, managerial or administrative positions.

The reporting criteria for competition law violations are whether it has been established by an authority member of the International Competition Network or by a competent court anywhere in the world that a company in the Novozymes Group has violated applicable anti-trust regulations.

All allegations of fraud are investigated until it can be determined whether they can be substantiated. The number of fraud cases represents substantiated and unsubstantiated matters reported to the Audit Committee in the reporting year.

Novozymes defines fraud as an offence where an employee or third party either:

- takes or removes the company's property without its consent with the intent of depriving the company of it, or
- intentionally deceives the company by giving false documentation or by suppressing the truth in order to obtain a personal gain.

8.3 Business ethics (continued)

Completion of business integrity training for employees

Novozymes conducts annual training in business integrity to ensure that employees are well equipped to uphold our business integrity principles and to handle ethical dilemmas that they may encounter in their everyday work. The global e-learning program has been designed and rolled out by Novozymes' Legal Compliance Officer under the supervision of Novozymes' Business Integrity Committee. The training includes a reinforcement of employees' commitment to business integrity as well as case studies mimicking real cases in Novozymes or from the media noted during the year. In 2016, we achieved a completion rate of 99%, compared with 98% in 2015. The 2015 result has been recalculated in accordance with updated accounting policies. In 2016, part of the training program focused on conflicts of interest as a corruption risk to help employees prepare for situations where such conflicts might occur.

Breaches of competition law

There were no violations of competition law in 2016.

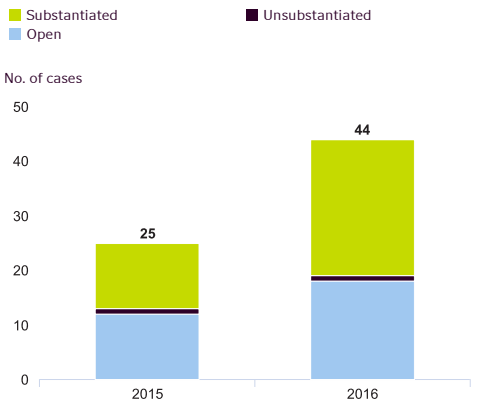
Anti-trust

In 2016, relevant employee groups participated in the recurring anti-trust e-learning, launched in 2014. The compliance training has global reach and provides general guidance on compliance with anti-trust law. In 2016, the training focused on how to interact with competitors in a proper manner (anti-cartel guidance), one of the fundamental rules of anti-trust law.

Fraud cases

Novozymes works proactively to prevent, detect and respond to fraud, and has continuously increased its internal awareness and proactive initiatives in relation to fraud.

Investigated fraud cases



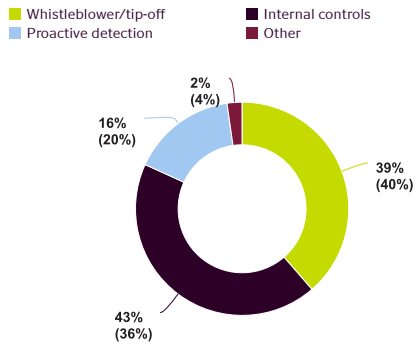
The increase in investigated fraud cases is primarily due to an increase in external fraud attempts by unknown perpetrators (such as CxO fraud and fraudulent invoices) and an increased organizational awareness, which has led to increased reports by employees.

The investigated fraud cases in 2016 did not have a material financial impact on Novozymes.

Reporting channel

As part of the internal control system, all identified fraud cases and concerns raised, either through Novozymes' Whistleblower Hotline or other reporting channels, are reported to the Audit Committee on a quarterly basis.

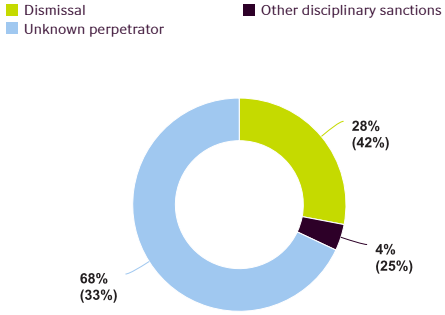
Reporting channels 2016 (2015)



Disciplinary sanctions

All allegations of fraud are appropriately investigated and concluded in accordance with internal policies and procedures. Substantiated fraud will lead to proportionate disciplinary sanctions for the parties involved. Reporting to the police is assessed on a case-by-case basis. During 2016, eight cases were reported to the police.

Consequences of substantiated fraud cases 2016 (2015)



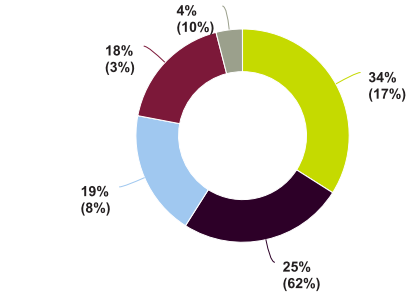
8.4 Corporate citizenship

Various educational programs have been implemented by different regions to meet our long-term target of educating 1 million people about the potential of biology.

Read more about Educate in the Target section.

In 2016, Novozymes engaged with more than 106,000 learners. An overview of the distribution of learners reached by the different regions is provided in the adjacent chart.

Learners reached by geography 2016 (2015)



ACCOUNTING POLICIES

Learners reached comprises the total number of learners Novozymes reaches via its Educate activities. An educate activity is an activity that engages the learner to a degree sufficient to confirm that awareness has been created.

CRITICAL ACCOUNTING ESTIMATES AND JUDGMENTS

Methodologies to count and consolidate learners reached have been defined and are applied, but the reported numbers are still subject to assumptions and estimates, for example when recording the number of participants at a conference, which means that the result of the calculation will be an approximation.

8.5 Customer satisfaction measurement

Our customers' opinions are powerful indicators of whether our products and services are meeting our ambitions and of how we are perceived as a company. Novozymes has therefore set a corporate target for Customer Satisfaction Measurement (see Targets in Management's Review) in order to monitor the satisfaction of our customers and collect feedback on areas for improvement on an annual basis.

Novozymes' Commercial Development function ensures that customer satisfaction is measured annually and that the feedback is collected, analyzed and addressed in the relevant functional areas. Commercial Development also ensures that our account managers get the necessary support to meet current customer demands as well as to engage with potential new customers.

In 2016, Novozymes conducted a survey using the Net Promoter Score (NPS) methodology. The NPS is based on customers' answers to a single question: "How likely are you to recommend Novozymes to others?" and ranges from -100 to +100. The response rate of Novozymes' direct customers invited to participate in the survey was approximately 70%. In 2016, Novozymes scored +45 points in the Customer Satisfaction Measurement survey. This is high compared with the survey conducted in 2013, when the NPS was +34.

The survey shows that Novozymes' employees are well regarded and that our customers appreciate our commercial and technical services. Account managers, in particular, were seen as key drivers of impact with customers. The main areas for improvement for Novozymes were to become more proactive, share information better, and continue to hire knowledgeable and friendly people.

Going forward, our account managers will translate the learnings from the survey into action plans to better satisfy our customers.

§ ACCOUNTING POLICIES

The Net Promoter Score is derived from an annual questionnaire measuring how likely the customer is to recommend Novozymes to others. The NPS is calculated as the share of promoters (on a scale of 0-100) less the share of detractors (also on a scale of 0-100). The resulting score is a number between -100 and +100.

8.6 Responsible sourcing

Novozymes' supplier management and responsible sourcing approach are the responsibility of the Sourcing & Global Services function.

Agricultural raw materials are a major constituent of our production processes, which is the reason for our continuous high focus on environmental, social and governance issues.

All our suppliers of directly sourced agricultural raw materials must meet our deforestation requirements in terms of not contributing to further deforestation and zero tolerance for land grabbing.

Since 2009, the scope of Novozymes' supplier program for responsible sourcing has been to systematically assess suppliers from both a risk and opportunity perspective. The program evaluates suppliers based on their commercial, quality and sustainability performance, and sets out clear requirements for our suppliers through Novozymes' Supplier Guidelines, which include criteria related to quality, environment, employee health & safety, human & labor rights, business ethics and supply chain management.

Statement of the Board of Directors and Executive Leadership Team

The Board of Directors and Executive Leadership Team have today considered and approved the Annual Report of Novozymes A/S for the financial year January 1 – December 31, 2016.

The Consolidated Financial Statements have been prepared in accordance with International Financial Reporting Standards as adopted by the EU, and the Parent Company Financial Statements have been prepared in accordance with the Danish Financial Statements Act. Moreover, the Consolidated Financial Statements and the Parent Company Financial Statements have been prepared in accordance with additional Danish disclosure requirements for listed companies. Management's Review has also been prepared in accordance with Danish disclosure requirements for listed companies.

In our opinion, the accounting policies used are appropriate, and the Group's internal controls relevant to preparation and presentation of the Annual Report are adequate. The Consolidated Financial Statements and the Parent Company Financial Statements give a true and fair view of the financial position of the Group and the Parent Company at December 31, 2016, and of the results of the Group and the Parent Company operations, and of consolidated cash flows for the financial year 2016.

In our opinion, Management's Review includes a true and fair account of the developments in the operations and financial circumstances of the Group and the Parent Company, of the result for the year, and of the financial position of the Group and the Parent Company as well as a description of the most significant risks and elements of uncertainty facing the Group and the Parent Company.

In our opinion, Novozymes A/S adheres to the AA1000 AccountAbility principles, and environmental and social data are stated in accordance with the accounting policies.

We recommend that the Annual Report be adopted by the Annual Shareholders' Meeting.

Bagsvaerd, January 18, 2017

Executive Leadership Team

Peder Holk Nielsen
President & CEO

Thomas Videbæk

Benny D. Loft

Board of Directors

Henrik Gürtler
Chairman

Anders Hentze Knudsen

Lars Bo Køppler

Jørgen Buhl Rasmussen
Vice Chairman

Agnete Raaschou-Nielsen

Mathias Uhlén

Heinz-Jürgen Bertram

Lars Green

Lena Bech Holskov

Independent Auditor's Report

To the Shareholders of Novozymes A/S

Our opinion
In our opinion, the Consolidated Financial Statements give a true and fair view of the Group's financial position at December 31, 2016 and of the results of the Group's operations and cash flows for the financial year January 1 to December 31, 2016 in accordance with International Financial Reporting Standards as adopted by the EU and further requirements in the Danish Financial Statements Act.

In our opinion, the Parent Company Financial Statements give a true and fair view of the Company's financial position at December 31, 2016 and of the results of the Company's operations for the financial year January 1 to December 31, 2016 in accordance with the Danish Financial Statements Act.

In our opinion, the Consolidated environmental data and the Consolidated social and governance data for the financial year January 1 to December 31, 2016 are prepared in accordance with the accounting policies for the Consolidated environmental data and the Consolidated social and governance data.

What we have audited
Novozymes' Consolidated Financial Statements for the financial year January 1 to December 31, 2016 comprise the consolidated income statement and statement of comprehensive income, the consolidated balance sheet, the consolidated statement of changes in equity, the consolidated cash flow statement and the notes to the financial statements, including summary of significant accounting policies.

Novozymes' Parent Company Financial Statements for the financial year January 1 to December 31, 2016 comprise the income statement, the balance sheet, the statement of changes in equity and the notes to the financial statements, including summary of significant accounting policies.

These are collectively referred to as the "Financial Statements."

Novozymes' Consolidated environmental data and Consolidated social and governance data for the financial year January 1 to December 31, 2016 comprise the environmental performance and data, the social and governance performance and data and the related notes, including summary of significant accounting policies.

These are collectively referred to as the "Environmental, Social and Governance Data."

Basis for opinion
We conducted our audit in accordance with International Standards on Auditing (ISAs) and the additional requirements applicable in Denmark. Our responsibilities under those standards and requirements are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements and the Environmental, Social and Governance Data* section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence
We are independent of the Group in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (IESBA Code) and the ethical requirements that are relevant to our audit of the Financial Statements in Denmark. We have also fulfilled our other ethical responsibilities in accordance with the IESBA Code.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Financial Statements for 2016. These matters were addressed in the context of our audit of the Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matter	*How our audit addressed the key audit matter*
Partnerships and collaboration agreements (revenue recognition and intangible assets) Novozymes has entered into partnerships and collaboration agreements. These partnerships and collaborations include complex mechanisms for sharing profit and expenses and, due to the complexity of the agreements, there are several uncertainties in relation to the interpretation of the agreements. In addition, intangible assets are associated with these partnerships and collaborations. Management's assessment of the risk of impairment of the carrying amount of intangible assets requires judgment in relation to the identification of Cash Generating Units (CGUs) and the underlying assumptions in the Group's impairment model. We focus on this area because the agreements and the related accounting treatment of e.g. revenue recognition are complex and because establishing appropriate accruals and impairment tests requires significant judgment and estimation by Management. Refer to notes [2.2] and [3.1].	We have tested relevant controls including applicable information systems and Management's review controls implemented to ensure that revenue and costs from the partnerships and collaboration agreements are accounted for correctly on an ongoing basis. We obtained Management's calculation for deferred income and profit-sharing accruals under the applicable agreements, and corroborated inputs and key assumptions – both to internal and independent sources – and considered the historical accuracy. In respect of the intangible assets, we assessed the Group's impairment review methodology, including the identification of CGUs. We challenged the underlying key assumptions within the Group's impairment model, including discount rates, growth rates and cash flow projections. We evaluated Management's sensitivity analysis and performed our own sensitivity analysis on the key assumptions used. We assessed whether the disclosures in relation to intangibles were appropriate and met the requirements of accounting standards.

Statement on Management's Review
Management is responsible for Management's Review, pages 3-64.

Our opinion on the Financial Statements does not cover Management's Review, and we do not express any form of assurance conclusion thereon.

In connection with our audit of the Financial Statements, our responsibility is to read Management's Review and, in doing so, consider whether Management's Review is materially inconsistent with the Financial Statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

Moreover, we considered whether Management's Review includes the disclosures required by the Danish Financial Statements Act.

Based on the work we have performed, in our view, Management's Review is in accordance with the Consolidated Financial Statements, the Parent Company Financial Statements, and the Consolidated environmental data and the Consolidated social and governance data, and has been prepared in accordance with the requirements of the Danish Financial Statements Act. We did not identify any material misstatement in Management's Review.

Management's Responsibility for the Financial Statements and the Environmental, Social and Governance Data
Management is responsible for the preparation of Consolidated Financial Statements that give a true and fair view in accordance with International Financial Reporting Standards as adopted by the EU and further requirements in the Danish Financial Statements Act, and for the preparation of Parent Company Financial Statements that give a true and fair view in accordance with the Danish Financial Statements Act, and for such internal control as Management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Furthermore, Management is responsible for preparing the Consolidated environmental data and the Consolidated social and governance data in accordance with the accounting policies stated in the Environmental, Social and Governance Data, and for such internal control as Management determines is necessary to enable the preparation of Environmental, Social and Governance Data that are free from material misstatement, whether due to fraud or error.

In preparing the Financial Statements, Management is responsible for assessing the Group's and the Parent Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless Management either intends to liquidate the Group or the Parent Company or to cease operations, or has no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Statements and the Environmental, Social and Governance Data
Our objectives are to obtain reasonable assurance about whether the Financial Statements and the Environmental, Social and Governance Data, as a whole, are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs and the additional requirements applicable in Denmark will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the Financial Statements and the Environmental, Social and Governance Data. As part of an audit in accordance with ISAs and additional requirements in Denmark, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the Financial Statements and the Environmental, Social and Governance Data, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's and the Parent Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Management.

- Conclude on the appropriateness of Management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's and the Parent Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the Financial Statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group or the Parent Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the Financial Statements, including the disclosures, and whether the Financial Statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information and environmental, social and governance information of the entities or business activities within the Group to express an opinion on the Consolidated Financial Statements and the Consolidated Environmental, Social and Governance Data. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and, where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Financial Statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report, unless law or regulation precludes public disclosure about the matter, or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Hellerup, 18 January 2017

PricewaterhouseCoopers

Statsautoriseret Revisionspartnerselskab
CVR No.: 33771231

Mogens Nørgaard Mogensen
State Authorized Public Accountant

Rasmus Friis Jørgensen
State Authorized Public Accountant

Independent assurance statement on Novozymes' adherence to the AA1000 AccountAbility Principles

To the stakeholders of Novozymes
We have been engaged by Novozymes A/S' Management to provide moderate assurance (review) as to whether Novozymes adheres to the AA1000 AccountAbility Principles.

Regarding the audit of the Consolidated Environmental and the Consolidated Social and Governmental data, we refer to the Independent Auditor's Report.

Management's responsibility
Adherence to the AA1000 AccountAbility Principles of Inclusivity, Materiality and Responsiveness is the responsibility of Management.

Assurance provider's responsibility
As assurance provider, it is our responsibility, based on our work, to make observations and recommendations with respect to the nature and extent of Novozymes' adherence to the AA1000 AccountAbility Principles.

Our team of experts has competencies with regard to assessing sustainability management systems. In 2016, we have not performed any tasks or services for Novozymes or other clients that would have conflicted with our independence, nor have we been responsible for the preparation of any part of the Annual Report. Thus, we are independent as defined in the AA1000 Assurance Standard (AA1000AS (2008)), and we consider our team qualified to carry out this independent assurance engagement.

Scope, standards and criteria used
We have planned and performed our work based on AA1000AS, using the criteria in the standard to perform a Type 1 engagement.

We have worked to obtain a moderate assurance (review) as to Novozymes' adherence to the AA1000 AccountAbility Principles.

Methodology, approach, limitation and scope of work
Our methodology has included procedures to obtain evidence of Management's commitment to the AA1000 AccountAbility Principles and of the implementation of systems and procedures in support of the principles.

Based on an assessment of materiality and risk, our work has included:

1. Review of processes related to how Novozymes identifies its stakeholders and engages them in relevant business decisions to develop and implement responses to sustainability;
2. Review of the process that Novozymes has used to identify and determine issues that are relevant and significant (material) to the organization and its stakeholders, and of whether these issues are included in the sustainability reporting; and
3. Enquiries and interviews with members of the Board of Directors, members of the Executive Leadership Team and Corporate Sustainability regarding Novozymes' commitment and adherence to the AA1000 AccountAbility Principles, and the existence of systems and procedures to support adaptation of the principles in the organization.

Conclusion
Based on our review, nothing has come to our attention causing us to believe that Novozymes does not adhere to the AA1000 AccountAbility Principles.

Observations and recommendations
According to AA1000AS (2008), we are required to include observations and recommendations for improvements in relation to Novozymes' adherence to the AA1000 AccountAbility Principles. We have no significant recommendations regarding inclusivity, materiality and responsiveness.

Regarding inclusivity
Novozymes continues to demonstrate a strong commitment to accountability with systems and processes in place to support stakeholder engagement in sustainability issues. With the reorganization of Novozymes' business, focus has been maintained on strategic stakeholder engagement and using sustainability-related insights as a basis for building strategic partnerships and alliances, and product innovation, development and marketing. The new structure is also intended to facilitate divisional and market-level innovation in future.

Regarding materiality
Novozymes continues to discuss, evaluate and determine the materiality of sustainability issues on an ongoing basis at Board level and in the Executive Leadership Team through the new Portfolio Board and other governance processes involving senior management across the organization. We have noted that work is ongoing to further embed and align considerations of material sustainability issues in core business processes, including product innovation.

We have also noted that Novozymes' strategic external engagement and partnerships on sustainability issues is intended to help provide insights to support enhanced forecasting of future market conditions and changes in customer behavior as part of actions to improve analysis of future risks and opportunities for the business.

Regarding responsiveness
In 2016, Novozymes reorganized its business into a new divisional structure to provide increased agility and flexibility to respond to markets and customers within its different business areas. The commitment to being responsive to stakeholder needs and concerns is evident from senior management's continued engagement with stakeholders at a global and local level and within the divisions. Novozymes is also continuing work to better understand and quantify the sustainability benefits of its products.

Hellerup, 18 January 2017

PricewaterhouseCoopers

Statsautoriseret Revisionspartnerselskab
CVR No.: 33771231

Mogens Nørgaard Mogensen
State Authorized Public Accountant

Rasmus Friis Jørgensen
State Authorized Public Accountant

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Income statement, Novozymes A/S

DKK million	Note	2016	2015
Revenue	2.1	7,648	7,647
Cost of goods sold	2.2	(3,637)	(3,696)
Gross profit		**4,011**	**3,951**
Sales and distribution costs	2.2	(998)	(978)
Research and development costs	2.2	(1,451)	(1,431)
Administrative costs	2.2	(574)	(544)
Other operating income	2.3	1,600	1,517
Operating profit / EBIT		**2,588**	**2,515**
Income from investments in subsidiaries	3.3	1,683	747
Share of losses in associates	3.3	(31)	(6)
Financial income	4.1	96	220
Financial costs	4.1	(62)	(209)
Profit before tax		**4,274**	**3,267**
Tax		(589)	(628)
Net profit		**3,685**	**2,639**
Proposed appropriation of net profit			
Dividend to shareholders		1,142	1,062
Revaluation reserve according to the equity method		133	854
Retained earnings		2,410	723
		3,685	2,639
Proposed dividend per share		DKK 4.00	DKK 3.50

Balance sheet, Novozymes A/S

Assets

DKK million	Note	Dec. 31, 2016	Dec. 31, 2015
Intangible assets	3.1	**1,056**	**835**
Property, plant and equipment	3.2	**3,320**	**2,884**
Investments in subsidiaries	3.3	8,638	8,195
Investments in associates	3.3	60	91
Other long-term receivables	3.4	4	89
Other financial assets		130	121
Receivables from Group enterprises	3.3	1,458	1,421
Financial fixed assets		**10,290**	**9,917**
Fixed assets		**14,666**	**13,636**
Raw materials and consumables		149	131
Work in progress		382	325
Finished goods		787	719
Inventories		**1,318**	**1,175**
Trade receivables		941	990
Receivables from Group enterprises		510	1,291
Tax receivables		92	-
Other receivables	3.4	117	181
Receivables		**1,660**	**2,462**
Cash at bank and in hand		**429**	**382**
Current assets		**3,407**	**4,019**
Assets		**18,073**	**17,655**

Liabilities and shareholders' equity

DKK million	Note	Dec. 31, 2016	Dec. 31, 2015
Common stock	5.6	620	626
Treasury stock		(4,355)	(3,363)
Revaluation reserve according to the equity method		1,787	1,654
Reserve for development cost		136	-
Retained earnings		12,534	11,092
Proposed dividend		1,142	1,062
Shareholders' equity		**11,864**	**11,071**
Deferred tax	3.5	367	207
Other provisions		29	98
Provisions		**396**	**305**
Credit institutions	4.2	1,727	1,215
Payables to Group enterprises		-	861
Non-current liabilities		**1,727**	**2,076**
Credit institutions		119	48
Trade payables		546	602
Payables to Group enterprises		2,684	2,819
Tax payable		-	21
Other payables		737	713
Current liabilities		**4,086**	**4,203**
Liabilities		**5,813**	**6,279**
Liabilities and shareholders' equity		**18,073**	**17,655**

Statement of shareholders' equity, Novozymes A/S

DKK million		Common stock	Treasury stock	Revaluation reserve according to the equity method	Reserve for development costs	Retained earnings	Proposed dividend	Total
Shareholders' equity at January 1, 2016		**626**	**(3,363)**	**1,654**		**11,092**	**1,062**	**11,071**
Adjusted opening balance					86	(86)		**-**
Net profit for the year				133		3,552		**3,685**
Capitalized development costs					50	(50)		**-**
Dividend paid							(1,104)	**(1,104)**
Dividend paid relating to treasury stock							42	**42**
Proposed dividend, gross						(1,190)	1,190	**-**
Proposed dividend relating to treasury stock						48	(48)	**-**
Purchase of treasury stock			(2,000)					**(2,000)**
Sale of treasury stock			69					**69**
Write-down of common stock		(6)	939			(933)		**-**
Currency translation adjustments of investments in subsidiaries, etc.				-		133		**133**
Value adjustment of derivatives						(61)		**(61)**
Other adjustments						29		**29**
Shareholders' equity at December 31, 2016	B/S	**620**	**(4,355)**	**1,787**	**136**	**12,534**	**1,142**	**11,864**

NOTE SECTION 1

1 Accounting policies

The financial statements of Novozymes A/S have been prepared in accordance with the Danish Financial Statements Act (accounting class D) and the regulations of Nasdaq OMX Copenhagen on the presentation of financial statements by listed companies. Novozymes has adopted the amended Danish Financial Statements Act effective for annual reports beginning on or after January 1, 2016. The adoption has not had effect on recognition or measurement but has resulted in increased disclosures for the financial statements of Novozymes A/S for 2016.

The accounting policies are the same as for the consolidated financial statements with the adjustments described below. For a description of the Group's accounting policies, please refer to the consolidated financial statements.

Recognition and measurement in general
Income is recognized in the income statement as it is earned. Value adjustments of financial assets and liabilities measured at fair value or amortized cost are also recognized in the income statement.

All costs incurred in generating the year's revenue are also recognized in the income statement, including depreciation, amortization and impairment losses.

Assets are recognized in the balance sheet when it is considered probable that future economic benefits will flow to the company and the value of the asset can be measured on a reliable basis. Liabilities are recognized in the balance sheet when they are considered probable and can be measured on a reliable basis. When first recognized, assets and liabilities are measured at cost. Thereafter assets and liabilities are measured as described below for each item.

The recognition and measurement principles take due account of predictable losses and risks occurring prior to the presentation of financial statements that confirm or refute the conditions prevailing on the reporting date.

Intangible assets
The accounting policies for intangible fixed assets follow those of the Group with the exception of goodwill, which is amortized over its useful life.

An amount equal to the total capitalized development costs after tax is recognized under Shareholders' equity in the Reserve for development costs.

Financial assets
Investments in subsidiaries and investments in associates are recognized initially at cost including transaction costs and measured subsequently using the equity method. The company's share of the equity of subsidiaries, based on the fair value of the identifiable net assets on the acquisition date, minus or plus unrealized intercompany profits or losses, with addition of any residual value of goodwill, is recognized under Investments in subsidiaries and Investments in associates respectively in the balance sheet. If the shareholders' equity of subsidiaries or associates is negative and Novozymes A/S has a legal or constructive obligation to cover the company's negative equity, a provision is recognized.

Net revaluation of investments in subsidiaries and associates is recognized under Shareholders' equity in the Revaluation reserve according to the equity method. The reserve is reduced by payments of dividends to the parent company and adjusted to reflect other changes in the equity of subsidiaries.

The proportionate share of the net profits of subsidiaries less goodwill amortization is recognized under Income from investments in subsidiaries in the income statement. Goodwill is amortized over 15 years using the straight-line method.

Dividend
The dividend proposed for the financial year is shown as a separate item under Shareholders' equity.

NOTE SECTION 2

2.1 Revenue

DKK million		2016	2015
Geographical distribution:			
Denmark		196	177
Rest of Europe, Middle East & Africa		4,660	4,505
North America		1,080	1,267
Asia Pacific		1,370	1,281
Latin America		342	417
Revenue	I/S	**7,648**	**7,647**

2.2 Employee costs

DKK million	2016	2015
Wages and salaries	1,639	1,663
Pensions - defined contribution plans	173	170
Other social security costs	25	26
Other employee costs	187	141
Employee costs	**2,024**	**2,000**
Average number of employees in Novozymes A/S	2,660	2,767

Reference is made to Note 6.1 to the consolidated financial statements concerning remuneration of the Board of Directors and Executive Leadership Team.

2.3 Other operating income

DKK million		2016	2015
Royalty income relating to subsidiaries		1,560	1,494
Other		40	23
Other operating income	I/S	**1,600**	**1,517**

NOTE SECTION 3

3.1 Intangible assets

DKK million		Goodwill	Acquired patents, licenses and know-how, etc.	Completed IT development projects	IT development projects in progress	2016 Total	2015 Total
Cost at January 1		366	1,112	340	24	1,842	1,694
Additions from business acquisitions		-	-	-	-	-	98
Additions during the year		22	227	43	72	364	51
Disposals during the year		-	-	(20)	-	(20)	(1)
Transfers to/(from) other items		-	-	47	(47)	-	-
Cost at December 31		**388**	**1,339**	**410**	**49**	**2,186**	**1,842**
Amortization and impairment losses at January 1		(69)	(684)	(254)		(1,007)	(703)
Amortization for the year		(24)	(68)	(51)		(143)	(131)
Impairment losses		-	-	-		-	(174)
Disposals during the year		-	-	20		20	1
Amortization and impairment losses at December 31		**(93)**	**(752)**	**(285)**	-	**(1,130)**	**(1,007)**
Carrying amount at December 31	B/S	**295**	**587**	**125**	**49**	**1,056**	**835**

No impairment losses on intangible assets have been recognized in 2016 (2015: An impairment loss of DKK 174 million was recognized on the intangible asset related to the partnership with Beta Renewables S.p.A. Reference is made to note 3.1 in the consolidated financial statement concerning intangible assets).

3.2 Property, plant and equipment

DKK million	Land and buildings	Production equipment and machinery	Other equipment	Property, plant and equipment under construction	2016 Total	2015 Total
Cost at January 1	2,216	4,293	822	273	7,604	7,376
Additions during the year	234	67	28	343	672	328
Disposals during the year	-	(1)	(3)	-	(4)	(100)
Transfers to/(from) other items	24	69	15	(108)	-	-
Cost at December 31	**2,474**	**4,428**	**862**	**508**	**8,272**	**7,604**
Depreciation and impairment losses at January 1	(1,171)	(2,959)	(590)		(4,720)	(4,589)
Depreciation for the year	(46)	(140)	(48)		(234)	(221)
Disposals during the year	-	1	1		2	90
Depreciation and impairment losses at December 31	**(1,217)**	**(3,098)**	**(637)**		**(4,952)**	**(4,720)**
Carrying amount at December 31 B/S	**1,257**	**1,330**	**225**	**508**	**3,320**	**2,884**

Capitalized interest
Interest of DKK 4 million (2015: DKK 0 million) has been capitalized under Additions during the year above and under Investing activities in the statement of cash flows. Capitalization rate: 1.78%.

Land and buildings with a carrying amount of DKK 397 million (2015: DKK 412 million) have been pledged as security to credit institutions. The mortgage loan expires in 2029.

NOTE SECTION 3

3.3 Financial fixed assets

DKK million		Investments in subsidiaries	Investments in associates	Receivables from Group companies	Total
Cost at January 1, 2016		6,504	128	1,421	8,053
Additions during the year		397	-	58	455
Disposals during the year		(118)	-	(21)	(139)
Cost at December 31, 2016		**6,783**	**128**	**1,458**	**8,369**
Revaluation reserve at January 1, 2016		1,691	(37)		1,654
Share of net profit/(loss)		1,683	(31)		1,652
Dividends received		(1,567)	-		(1,567)
Currency translation adjustment		96	-		96
Other adjustments		(48)	-		(48)
Revaluation reserve at December 31, 2016		**1,855**	**(68)**		**1,787**
Carrying amount at December 31, 2016	B/S	**8,638**	**60**	**1,458**	**10,156**

Reference is made to Note 6.8 to the consolidated financial statements concerning investments in subsidiaries.

Reference is made to Note 3.4 to the consolidated financial statements concerning joint operations and associates.

NOTE SECTION 3

3.4 Other receivables

DKK million		2016	2015
Prepaid expenses		63	117
Derivatives		5	20
Other receivables		53	133
Other receivables at December 31		**121**	**270**
Recognized in the balance sheet as follows:			
Non-current	B/S	4	89
Current	B/S	117	181
Other receivables at December 31		**121**	**270**

3.5 Deferred tax

DKK million		2016	2015
Deferred tax at January 1		207	246
Adjustment for previous years		21	2
Tax related to the income statement		57	6
Tax on shareholders' equity items		82	(47)
Deferred tax at December 31	B/S	**367**	**207**

NOTE SECTION 4

4.1 Financial income and costs

DKK million	2016	2015
Interest income relating to subsidiaries	69	97
Interest costs relating to subsidiaries	(11)	(12)

4.2 Credit institutions

DKK million	2016	2015
Long-term debt to credit institutions falling due after 5 years	527	245

NOTE SECTION 5

5.1 Contingent liabilities and pending litigation

Rental and leasing commitments related to noncancelable operating lease contracts expire within the following periods from the reporting date:

DKK million	2016	2015
Recognized in the income statement in respect of rentals	61	56
Rental commitments expiring within the following periods from the reporting date:		
Less than 1 year	47	46
Between 1 and 2 years	34	25
Between 2 and 3 years	16	8
Between 3 and 4 years	8	4
Between 4 and 5 years	3	3
More than 5 years	9	12
Contingent liabilities at December 31	**117**	**98**
Other contingent liabilities		
Contractual obligations to third parties relating to property, plant and equipment	833	364
Other guarantees and commitments to related companies	2,203	2,210
Other guarantees and commitments to third parties	58	114

Pending litigation and arbitration

Reference is made to Note 6.3 to the consolidated financial statements concerning pending cases.

NOTE SECTION 5

5.2 Related party transactions

Transactions

DKK million	2016	2015
The Novo Nordisk Group		
Sales	149	148
Purchases	(152)	(172)
The NNIT Group		
Purchases	(41)	(48)
The Chr. Hansen Group		
Sales	22	14

Outstanding balances

DKK million	2016	2015
The Novo Nordisk Group		
Receivables	23	22
Payables	(73)	(68)
The NNIT Group		
Payables	(9)	(12)
The Chr. Hansen Group		
Receivables	3	-

Reference is made to Note 6.4 to the consolidated financial statements concerning other transactions with related parties.

5.3 Fees to statutory auditor

DKK million	2016	2015
Statutory audit	4	4
Other assurance engagements	-	-
Tax advisory services	2	2
Other services	-	3
Fees to statutory auditor	**6**	**9**

Reference is made to Note 6.5 to the consolidated financial statements concerning fees to statutory auditor.

NOTE SECTION 5

5.4 Statement of cash flows

Reference is made to the Consolidated statement of cash flows.

5.5 Segment information

Reference is made to Note 2.1 to the consolidated financial statements concerning segment information.

5.6 Common stock and treasury stock

Reference is made to Note 5.5 to the consolidated financial statements concerning common stock and treasury stock.

Glossary

Advance pricing agreement (APA)
Agreement with the tax authorities in one or more countries on the split of taxable income between countries.

Amortization
Amortization is an accounting term that refers to the process of allocating the cost of an intangible asset over a period of time.

Audit fee ratio
Nonaudit services/ total fees to statutory auditor.

Biocontrol
Biocontrol products are microbial-based solutions, alternative or complementary to traditional herbicides, fungicides and insecticides.

Bioenergy
Bioenergy comes in the form of liquid fuels, electricity, heat and steam, and is produced from primary crops or biomass such as sugarcane, grains, agricultural residues, algae and household waste. In liquid forms, it is typically used to replace gasoline and diesel in transportation.

Biofuel
Biofuels are liquid fuels produced from primary crops or biomass such as sugarcane, grains, agricultural residues, algae and household waste. They are typically used to replace gasoline and diesel in transportation. One of the advantages of biofuels is that they are the only existing liquid alternative to fossil fuels.

Biomass
Organic material, predominantly plants or plant residues.

Biomass conversion
A biological method for turning agricultural residues and waste into high-quality fuels, electricity or renewable chemicals.

Bushel
A unit of measure for fruits and grains equivalent to 8 US gallons or about 35 liters. A bushel of corn (shelled) weighs approx. 25.4 kilos.

CDP
Formerly known as the Carbon Disclosure Project, CDP is an independent not-for-profit organization working to drive greenhouse gas emission reductions. CDP acts on behalf of 827 investors with assets of USD 100 trillion and evaluates companies on their performance in relation to climate change and water scarcity.

Cash flow
The difference between the available cash at the beginning and end of an accounting period.

Cellulosic ethanol
Biofuel made from cellulosic materials, which include agricultural residues such as corn cobs, stover and straw; forestry waste such as saw dust, trimmings and chips; and municipal solid waste.

Diluted number of shares
Average number of shares outstanding, including in-the-money stock options.

Earnings per share (diluted)
Net profit (attributable to shareholders in Novozymes A/S) divided by the weighted average number of shares outstanding (diluted).

EBIT
Earnings before interest and tax.

EBIT margin
Earnings before interest and tax as a percentage of revenue.

EBITDA
Earnings before interest, tax, depreciation and amortization.

EBITDA margin
Earnings before interest, tax, depreciation and amortization as a percentage of revenue.

Effective tax rate
Income tax expense as a percentage of profit before tax.

Efficiency improvement
Improvement in water and energy efficiency (and reduction of CO_2 intensity) is measured by the reduction in an index that comprises resource use divided by gross profit, compared with the same index for 2014 efficiency levels. Consequently, these indexes measure Novozymes' ability to create value while reducing its environmental footprint.

Enzymes
Proteins that act as catalysts, helping to convert one substance into another.

Equity ratio
Total shareholders' equity as a percentage of balance sheet total at year-end.

Estimated CO_2 reductions from customers' application of products
By applying life cycle assessments, Novozymes estimates the CO_2 emissions avoided when customers apply Novozymes products in their own products or production processes, compared with using conventional technology.

Free cash flow
Cash flow from operating activities minus cash flow from investing activities and changes in net working capital.

Frequency of occupational accidents and occupational diseases

$$\frac{\text{No. of occupational accidents x 1,000,000}}{\text{Total no. of contractual working hours for all employees x 1,600}}$$

$$\frac{\text{No. of occupational diseases x 1,000,000}}{\text{Total no. of contractual working hours for all employees x 1,600}}$$

Global Reporting Initiative (GRI)
An international, multistakeholder body working on a standardized framework for reporting environmental, social and economic information. See www.globalreporting.org.

Gross profit
A company's total revenue (equivalent to total sales) minus the cost of goods sold.

Inoculant
Inoculants are beneficial microorganisms that promote plant health.

Learners reached
A learner is a person who has been engaged in a Novozymes Educate activity, for example a workshop or an educational activity that requires active participation from the learner.

Life cycle assessment
An environmental assessment tool that addresses environmental impacts from all processes in the production of products, from raw material extraction through production and product use to final disposal.

Materiality
The materiality assessment process identifies topics that pose both risks and opportunities for Novozymes' business strategy, based on a systematic analysis of internal and external stakeholder perspectives. Relevant topics are those that may reasonably be considered important for reflecting the organization's economic, environmental and social impacts, or for influencing the decisions of stakeholders, and therefore potentially merit inclusion in the report.

Microbes
Microscopic, living, single-celled organisms such as bacteria and fungi.

Microbial
Relating to or caused by microorganisms.

Microorganisms
Microscopic, living, single-celled organisms such as bacteria and fungi.

Net interest-bearing debt
The market value of interest-bearing liabilities (financial liabilities) less the market value of cash at bank and in hand and other easily convertible interest-bearing current assets.

Net interest-bearing debt-to-EBITDA
Net interest-bearing debt / EBITDA

Net working capital
All current assets less current liabilities used in, or necessary for, the company's operations. The main components are inventories, accounts receivable and accounts payable.

Operating profit (EBIT)
Operating profit is the profitability of the business, before taking into account interest and taxes. To determine operating profit, operating expenses are subtracted from gross profit.

Organic sales growth
Sales growth from existing business, excluding sales from acquiring new businesses, measured in local currency.

Renewable energy
Renewable energy is the proportion of the energy used at Novozymes sites that consists of continuously replenished energy generated from natural processes. Sources include solar, wind and hydro power-based electricity and energy from biogas.

Return on equity
The return on equity ratio or ROE is a profitability ratio that measures a firm's ability to generate profits from its shareholders' investments in the company.

Return on invested capital (ROIC)
EBIT after tax as a percentage of average invested capital. EBIT is adjusted for net foreign exchange gains/losses.

Revenue
The amount of money a company earns through the sale of goods and services.

RobecoSAM
RobecoSAM is an investment specialist focused on Sustainability Investing.

Starch
Long chains of sugar molecules. Starch is the main component of cereal grains such as corn, wheat and rice. Enzymes are used as a catalyst in the production of starch, speeding up the production process and boosting yields.

Sustainable Development Goals
The UN Sustainable Development Goals (SDGs), officially known as "Transforming our world: the 2030 Agenda for Sustainable Development," are an intergovernmental set of 17 aspirational goals with 169 targets. The goals were officially implemented on September 25, 2015, at the United Nations Headquarters in New York.

UN Global Compact
The Global Compact is an international UN initiative with the intention of bringing companies together with UN agencies, labor and civil society to support 10 principles in the areas of human rights, labor standards, the environment and anticorruption.
See www.unglobalcompact.org.

WACC
Weighted average cost of capital.

About the report

At Novozymes, our reporting ambition is to provide one integrated report that connects the company's business model, strategy, targets and performance through integrated financial and sustainability data.

The Novozymes Report 2016 is available in a full online version at report2016.novozymes.com. The online report features interactive graphics and videos for a full multimedia experience and more insight.

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The website contains The Novozymes Report 2016 – which, pursuant to section 149 of the Danish Financial Statements Act, is an extract of the company's annual report – and the financial statements of the parent company Novozymes A/S. Together these form the company's annual report that is filed with the Danish Business Authority.

PwC has audited the consolidated financial statements, the parent company financial statements, and the environmental and social data. PwC has also been the sustainability assurance provider, basing its assurance on the AA1000 Assurance Standard (2008).

The audit covers financial, environmental and social data. These are marked "Audited by PwC." See also the statements in the report.

PwC has not audited the sections of the report found under the headings The big picture, Our business, Governance and Sustainability indices & data. The Sustainability indices & data section includes our Communication on Progress with respect to the UN Global Compact principles, our report index based on the Global Reporting Initiative (GRI), as well as detailed sustainability data from our main activities in Argentina, Brazil, Canada, China, Denmark, India, the UK and the US.

The report has been produced in accordance with International Financial Reporting Standards (IFRS), the Danish Financial Statements Act and the additional requirements of Nasdaq Copenhagen A/S for the presentation of financial statements by listed companies. It has also been inspired by the GRI's G4 Sustainability Reporting Guidelines.

Forward-looking statements

This annual report contains forward-looking statements, including statements about future events, future financial performance, plans, strategies and expectations. Forward-looking statements are associated with words such as, but not limited to, "believe," "anticipate," "expect," "estimate," "intend," "plan," "project," "could," "may," "might" and other words of similar meaning.

Forward-looking statements are by their very nature associated with risks and uncertainties that may cause actual results to differ materially from expectations, both positively and negatively. The risks and uncertainties may, among other things, include unexpected developments in i) the ability to develop and market new products; ii) the demand for Novozymes' products, market-driven price decreases, industry consolidation, and launches of competing products or disruptive technologies in Novozymes' core areas; iii) the ability to protect and enforce the company's intellectual property rights; iv) significant litigation or breaches of contract; v) the materialization of the company's growth platforms, notably the opportunity for marketing biomass conversion technologies or the development of microbial solutions for broad-acre crops; vi) political conditions, such as acceptance of enzymes produced by genetically modified organisms; vii) global economic and capital market conditions, including, but not limited to, currency exchange rates (USD/DKK and EUR/DKK in particular, but not exclusively), interest rates and inflation; viii) significant price decreases for inputs and materials that compete with Novozymes' biological solutions. The company undertakes no duty to update any forward-looking statements as a result of future developments or new information.

Explore our online report at
report2016.novozymes.com

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