



The big picture

In 2016, our customers avoided an estimated 69 million tons of CO₂ 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.

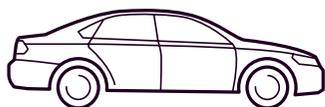


Read more in
Accounts & performance

Key sustainability performance

CO₂ emission reduction

30,000,000



Read more in Note 7.1
Climate change

In 2016, our customers avoided an estimated 69 million tons of CO₂ 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.

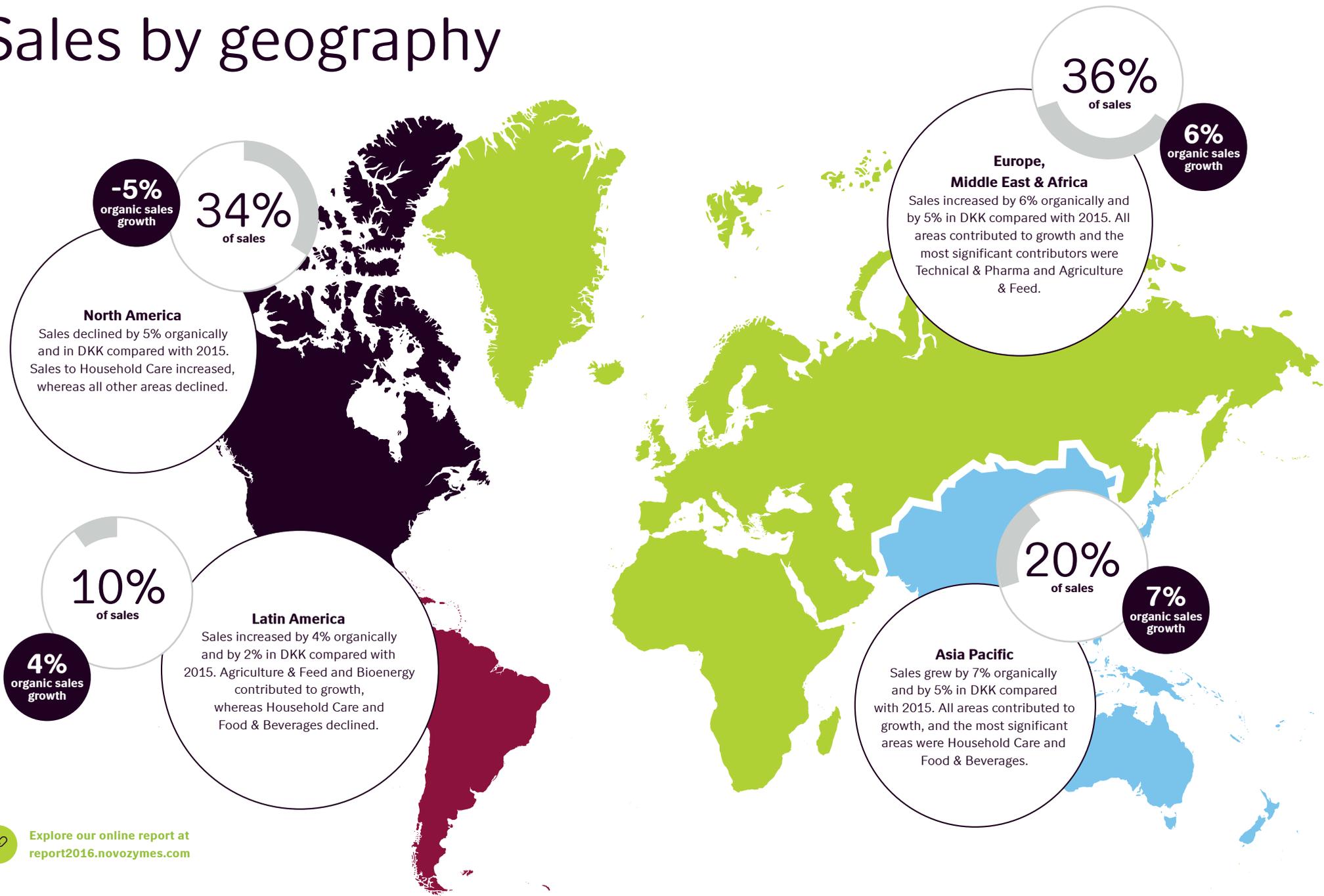


RobecoSAM class rating Silver



Read more in
Accounts & performance

Sales by geography



 Explore our online report at report2016.novozymes.com

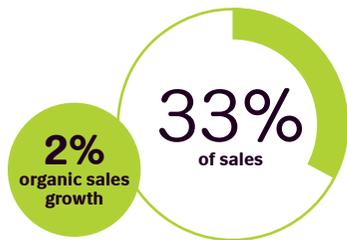
Sales by industry



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.

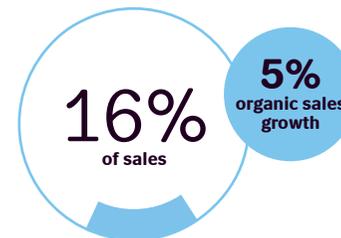
Throughout 2016, ethanol producers have focused on low-cost solutions, resulting in a dynamic market place with negative product mix and price changes. US ethanol production in 2016 is estimated to be up by 3% compared with 2015, and global ethanol production is estimated to be up by 2%.



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



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



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



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

APRIL

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



JUNE

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



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



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



JANUARY

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



MEMBER OF

Dow Jones Sustainability Indices

In Collaboration with RobecoSAM

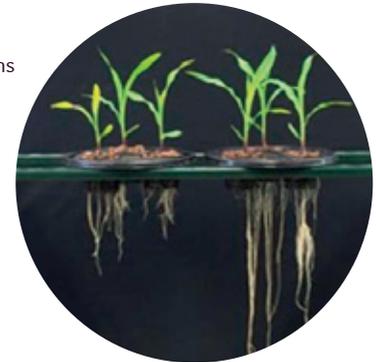
The Dow Jones Sustainability Index ranks Novozymes among the most sustainable companies in the world, with an overall score of 90 out of 100



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

DECEMBER

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



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



NOVEMBER

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



Science 2016 TOP EMPLOYER

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

SEPTEMBER

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



OCTOBER

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



CLIMATE

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.

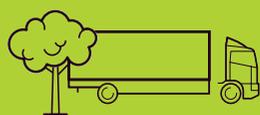
In addition to the 8% returned to capital providers, Novozymes bought back shares worth DKK 2 billion in 2016.

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.

A man with white hair and glasses, wearing a dark suit, light blue shirt, and yellow tie, stands in a hallway. He is looking directly at the camera. The background is a light-colored wall with a white line running diagonally across it.

Letter from the Board of Directors

Pushing through a challenging year

Letter from the Board of Directors

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

A middle-aged man with short, light brown hair is smiling warmly at the camera. He is wearing a dark navy blue suit jacket, a white dress shirt, and a yellow tie with a small, dark polka-dot pattern. He is standing in a modern office hallway with light-colored walls and a white handrail visible on the right side. The lighting is bright and even.

Letter from the CEO

Amplifying the impact of biological solutions in tough markets

Letter from the CEO

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 CO₂ 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



6,500+

patents held by Novozymes



100+

new molecules brought to market since 2000



13%

of Novozymes' total revenue dedicated to R&D

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 CO₂. 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.

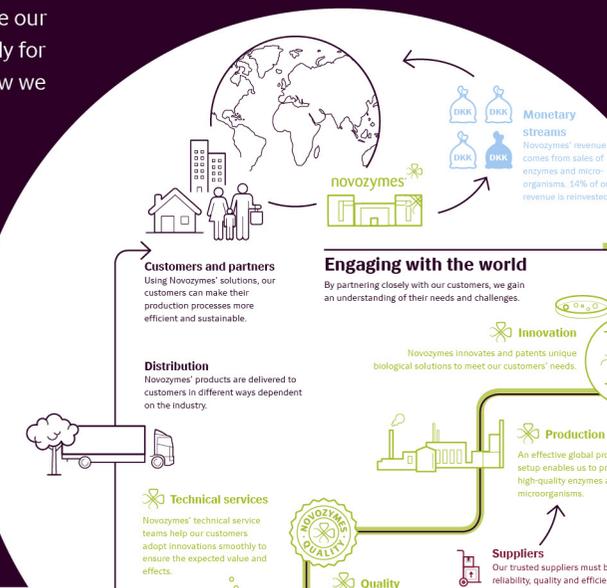
Our purpose

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

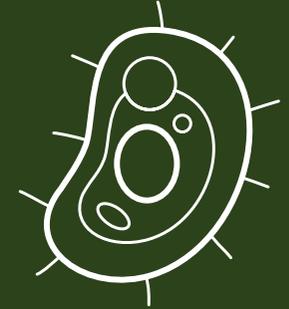
What are enzymes?

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

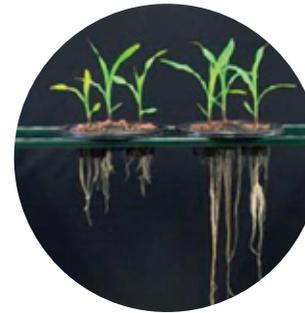
Product launches in 2016



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.



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.



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



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.

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.



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.



Q4 2016

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

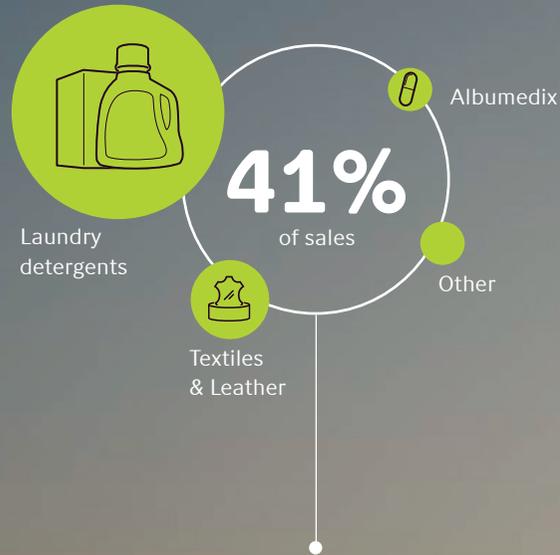


Quara® LowP – an enzymatic solution to help remove naturally occurring gums when refining oil. It also helps producers consistently meet specifications for phosphorus levels, improve oil yield and reduce the use of chemicals in the production process.

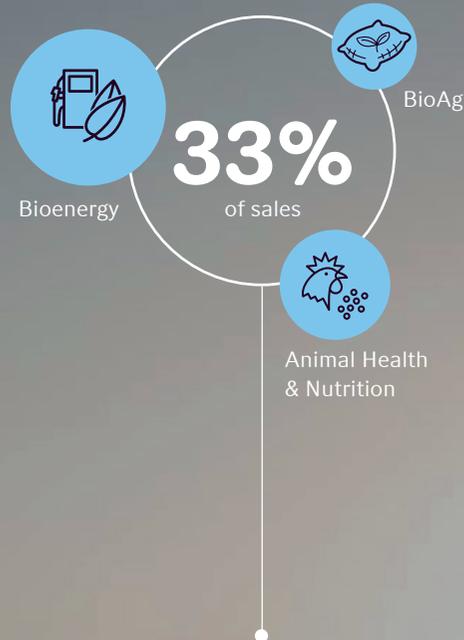


Novozymes' divisions

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.

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.



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.

Household Care

	Current trends	Growth drivers	Growth barriers	Our management approach
Macro trends	Shifting demographics and urbanization	<ul style="list-style-type: none"> • Demand for better-performing products in emerging markets • Growing demand for antibacterial and hygiene solutions for laundry 	<ul style="list-style-type: none"> • Middle-class consumers' ability to differentiate brand performance • Competition putting pressure on detergent prices 	 Lead innovation  Focus on opportunities
	Energy transition	<ul style="list-style-type: none"> • Growing demand for energy-efficient solutions (washing at low temperatures and with low environmental footprint) 	<ul style="list-style-type: none"> • Sustained low surfactant prices reducing adoption of high-performance enzymes 	 Focus on opportunities  Rally for change
	Water scarcity	<ul style="list-style-type: none"> • Demand to clean more with less water 	<ul style="list-style-type: none"> • Low price of water 	 Focus on opportunities
Industry trends	Stronger consumer preference for convenience and cleanliness	<ul style="list-style-type: none"> • Opportunity to work on new solutions and formats (liquids, unit dose compaction, hygiene, etc.) 	<ul style="list-style-type: none"> • 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
	Customer consolidation	<ul style="list-style-type: none"> • Stronger partners with greater reach providing potential for increased sales of Novozymes' solutions 	<ul style="list-style-type: none"> • Stronger partners potentially having more bargaining power 	 Focus on opportunities
	Commodity price volatility driving cost-based optimization of detergent formulations	<ul style="list-style-type: none"> • Growing customer focus on ensuring supply chains and sourcing raw materials from renewable sources 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Growing demand for better and more convenient foods • Improved processing and optimization of raw materials • Growing demand for substitutes for animal protein 	<ul style="list-style-type: none"> • 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
	Digitalization of the global economy	<ul style="list-style-type: none"> • Customers using data analytics to validate efficiency gains achieved 		 Rally for change  Grow people
Industry trends	Consumer focus on health, wellness and natural products	<ul style="list-style-type: none"> • Increased awareness about food safety • Demand for “naturally healthy” products • Growth in market for “food intolerance” products, such as lactose-free dairy 	<ul style="list-style-type: none"> • Consumer skepticism about technology in food & beverage production • Conservative industries 	 Lead innovation  Focus on opportunities  Rally for change
	Increased cost of raw materials	<ul style="list-style-type: none"> • Demand for optimization in raw materials and production processes • Price and yield stability of enzymes 	<ul style="list-style-type: none"> • Customer inertia in changing formulations and adopting new technologies • Low raw material prices disincentivizing customers from adopting enzymatic solutions 	 Lead innovation
	Customers consolidating operations but diversifying brands to cater to hyperlocal consumer preferences	<ul style="list-style-type: none"> • Customer focus on cost optimization, processing aids and brand building • Stronger partners with greater reach 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none">  Lead innovation  Focus on opportunities  Rally for change
	Digitalization of the global economy	<ul style="list-style-type: none"> Modern and automated ethanol facilities using data analytics to monitor performance and potential for optimization gains, driving demand for high-tier enzymes 		<ul style="list-style-type: none">  Focus on opportunities
	US corn ethanol industry affected by low corn prices	<ul style="list-style-type: none"> Continued stable and coherent political mandate driving adoption of biofuels 	<ul style="list-style-type: none"> Lack of political commitment to expanding blending mandates Resistance to exceeding 10% blend 	<ul style="list-style-type: none">  Rally for change  Focus on opportunities
Industry trends	Waning public support for biofuels	<ul style="list-style-type: none"> Growing calls for CO₂ reductions in transportation sector driving demand for ethanol, if positioned as the best low-impact alternative on the market 	<ul style="list-style-type: none"> Competition with other transportation technologies such as electric vehicles to be the “best way” of reducing CO₂ emissions 	<ul style="list-style-type: none">  Rally for change
	Volatile commodity prices squeezing customer margins	<ul style="list-style-type: none"> Price and yield stability of low-tier enzymes Demand for enzymes with optimization potential 	<ul style="list-style-type: none"> Low ethanol prices increasing fight for share Fluctuating value of co-products reducing demand for Novozymes' yield enhancement solutions 	<ul style="list-style-type: none">  Lead innovation  Focus on opportunities

Agriculture & Feed

	Current trends	Growth drivers	Growth barriers	Our management approach
Macro trends	Transition to sustainable agriculture	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Customer skepticism and lack of understanding of biologicals Fragmented and complicated regulation in local markets Limited scientific proof for biologicals 	<ul style="list-style-type: none">  Lead innovation  Focus on opportunities  Rally for change  Grow people
	Shifting demographics and urbanization	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Lack of understanding of the potential of biotechnology in agriculture and feed 	<ul style="list-style-type: none">  Rally for change
	Digitalization of the global economy	<ul style="list-style-type: none"> Rise of precision agriculture validating yield improvements and enabling tailoring of microbial solutions to farmers' specific soil conditions 		<ul style="list-style-type: none">  Lead innovation
Industry trends	Consumer focus on health, wellness and natural products	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Low pricing of traditional fertilizers and pesticides competing with more sustainable solutions Fragmented and complicated regulation in local markets 	<ul style="list-style-type: none">  Lead innovation  Rally for change
	Farmers sensitive to fluctuations in commodity prices	<ul style="list-style-type: none"> High input costs for farmers driving demand for yield-enhancing and sustainable solutions Attractive return on investment from feed enzymes and biologicals 	<ul style="list-style-type: none"> Low commodity prices forcing farmers to cut back on seed treatments Limited scientific proof for biologicals 	<ul style="list-style-type: none">  Lead innovation  Focus on opportunities

Technical

Industry trends Macro trends

Current trends	Growth drivers	Growth barriers	Our management approach
Water scarcity	<ul style="list-style-type: none"> Increasing demand for wastewater solutions due to increasing water quality/pollution cleanup regulations 	<ul style="list-style-type: none"> Water prices potentially so low that there is no incentive to invest in water-saving solutions 	 Lead innovation
Shifting demographics and urbanization	<ul style="list-style-type: none"> Consumer demand in emerging markets for improved textile quality and longevity 	<ul style="list-style-type: none"> Demand for low-quality textiles and raw materials 	 Focus on opportunities  Grow people
Continuous optimization in textile industry	<ul style="list-style-type: none"> Enzymatic solutions potentially optimizing processes and lowering costs 	<ul style="list-style-type: none"> Preference for lower-cost, chemical solutions to enable market growth 	 Rally for change

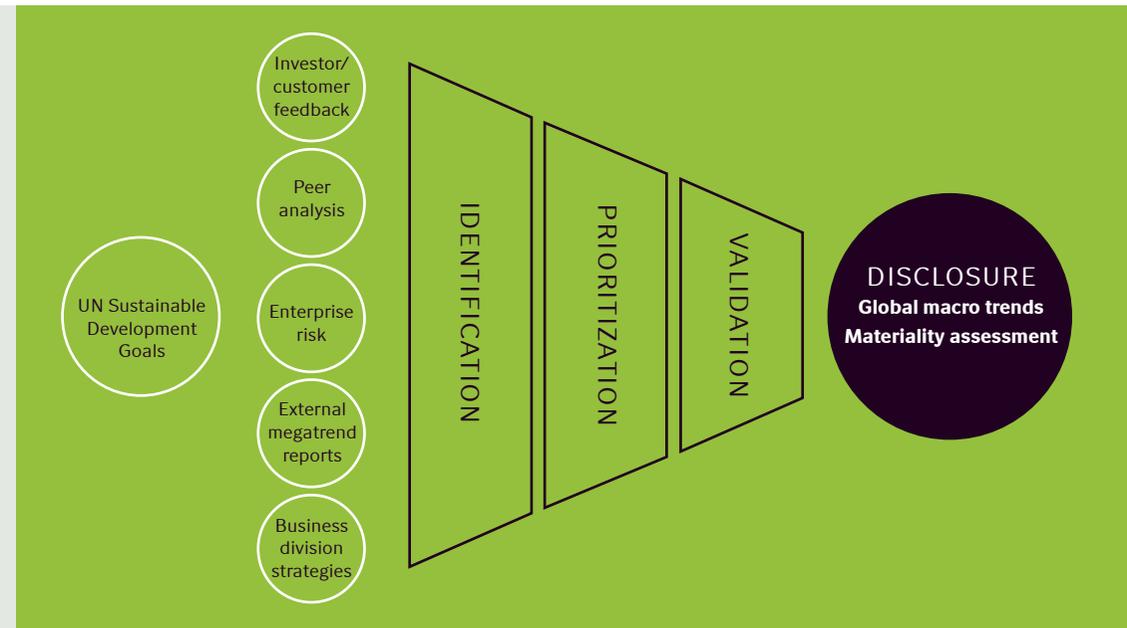
Identifying global macro trends

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.

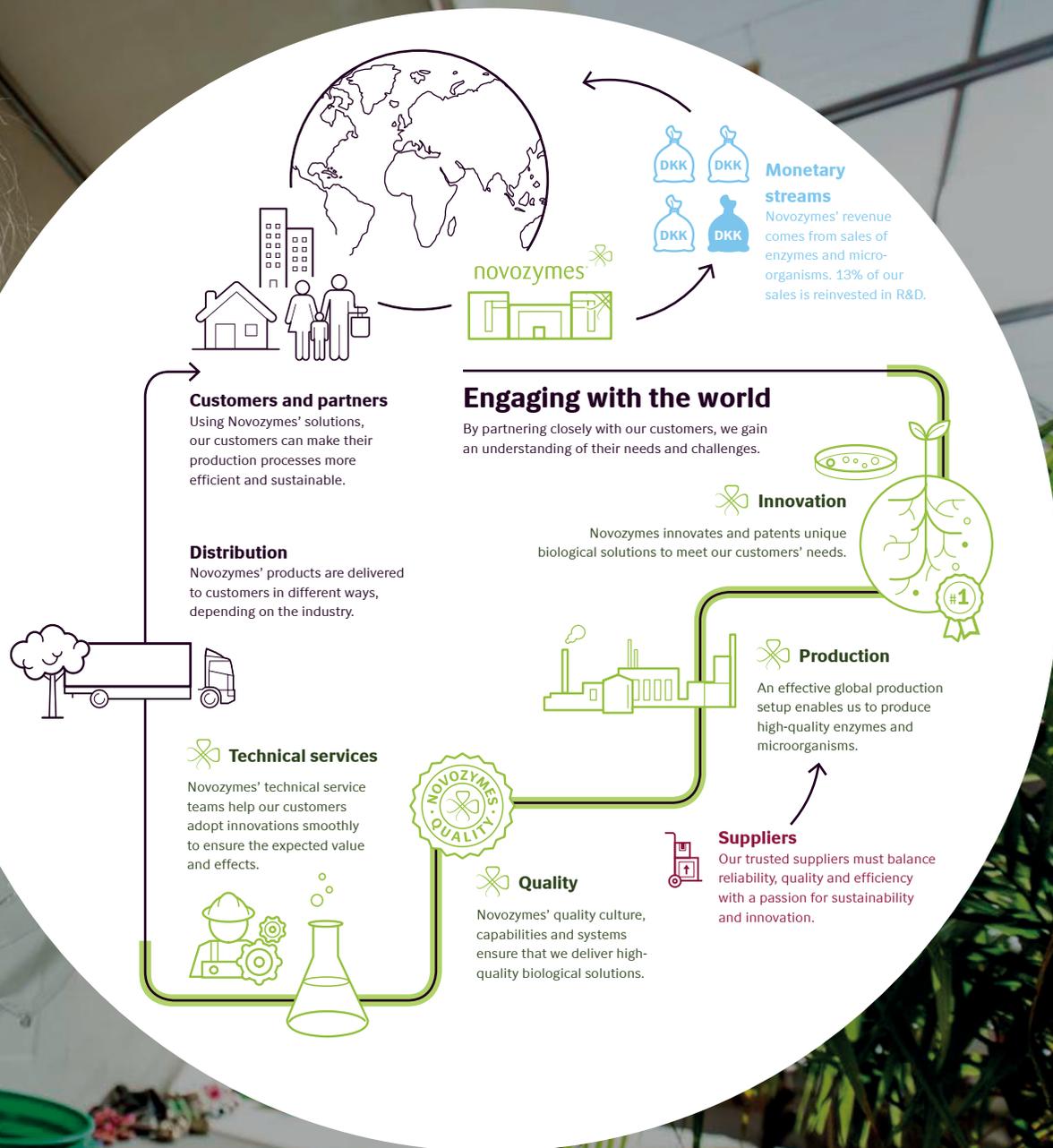
The analysis also included information from diverse sources, such as reports on global risks and opportunities, peer benchmarks and Novozymes' enterprise risks. Internal stakeholders prioritized trends according to relevance to Novozymes' business and importance to stakeholders. The top macro trends 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 CO₂ 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 CO₂ 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.

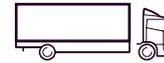


Technical services

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.

Novozymes' four strategic focus areas



Rally for change

We will form partnerships and networks with customers, consumers, governments, suppliers, academia and others around us to make a sustainable difference. Rally for change is about Novozymes actively engaging in global discussions and being a driving force in bringing together like-minded partners with shared goals and ambitions to create more sustainable growth for the world.



Lead innovation

We will inspire and excite our customers by delivering more significant innovation, tailored to their local markets. The technology race is speeding up, so our innovation must go beyond the lab, extending into every interaction we have with customers and consumers.



Focus on opportunities

We will prioritize the customers, markets and activities that hold the biggest opportunities for creating impact. Given Novozymes' broad portfolio of markets and activities, it is critical that we hone our ability to focus on key priorities and maximize value.



Grow people

We want to be better at enabling our employees to develop their professional and leadership skills. This will include more effective development programs, customized to the needs of specific parts of the organization. At the same time, we believe that we can contribute to the growth of people around us through many types of engagements – from working with technicians at customers' plants to help them optimize production, to delivering teaching materials to classrooms.

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.

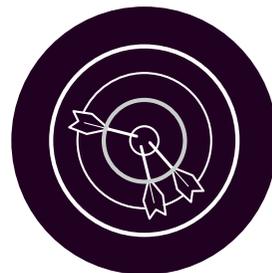
We continued our work to integrate the Sustainable Development Goals (SDGs) into our business processes. In addition, Novozymes was invited to participate in the G20 and B20 Summits in Hangzhou, China, in September. As part of our G20 and B20 commitments, we focused on highlighting the role of sustainable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

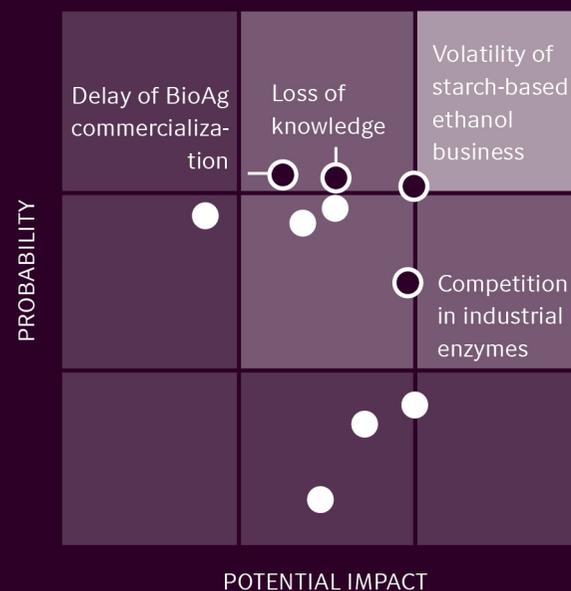
Enterprise Risk Management process



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

Novozyymes 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.

Novozyymes' other two long-term financial targets – EBIT margin at 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.

Novozyymes' long-term targets

Return to historical growth rates

≥ 26% EBIT margin

≥ 25% ROIC incl. Goodwill

Reach 6 billion people with our biological solutions by 2020

Educate 1 million people about the potential of biology from 2015 to 2020

Catalyze 5 global partnerships for change from 2015 to 2020

Deliver 10 transformative innovations from 2015 to 2020

Save 100 million tons of CO₂ by 2020

Enable Novozymes' employees to develop by 2020

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 CO₂ 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.



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 CO₂

Our products help customers improve their environmental performance by reducing their consumption of energy, raw materials and chemicals, and lowering their CO₂ emissions. To help address climate change, we have set a target of saving 100 million tons of CO₂ 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 CO₂ 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 CO₂ 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 CO₂ savings, for example by increasing sales of products with particularly positive CO₂-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



Great employees
make for a great
Novozyms

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

Novozyms 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.

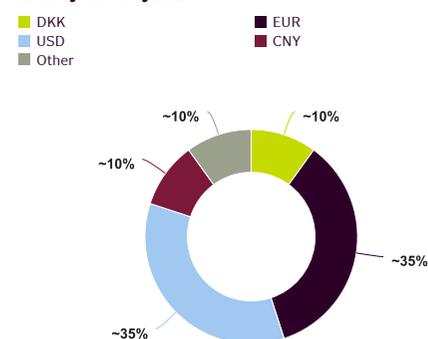
Free cash flow before acquisitions is expected to be DKK 2,000-2,200 million.

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

	2016 realized	2017 target	2020 target
Environment			
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 CO₂.

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

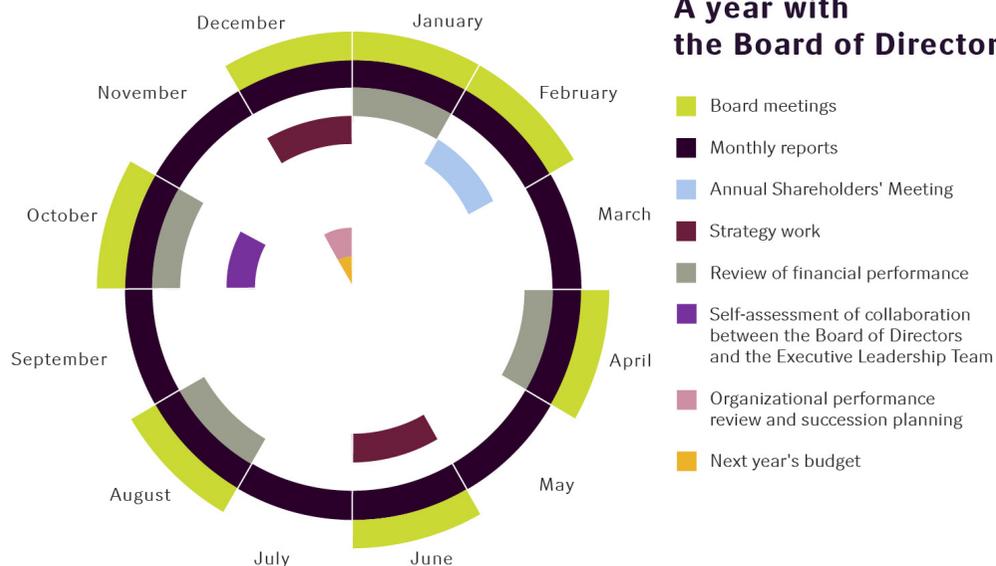
In accordance with Danish legislation, Novozymes has a two-tier management system comprising the Board of Directors and the Executive Leadership Team, with no individual being a member of both. The division of responsibilities between the Board of Directors and the Executive Leadership Team is clearly 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.

A year with the Board of Directors



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.

Novozyymes 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

Novozyymes' 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 Gørtler*

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

Board positions

Chairman:

Ejendomsrådgiver 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
Antibopedia 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.



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).



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

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.

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.

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

DKK million	2016			2015		
	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

DKK '000	2016			2015		
	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.

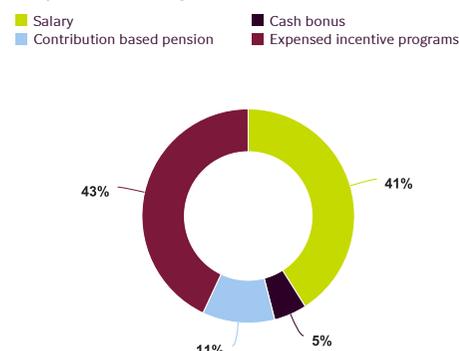
Executive Leadership Team

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

Novozyymes' 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.

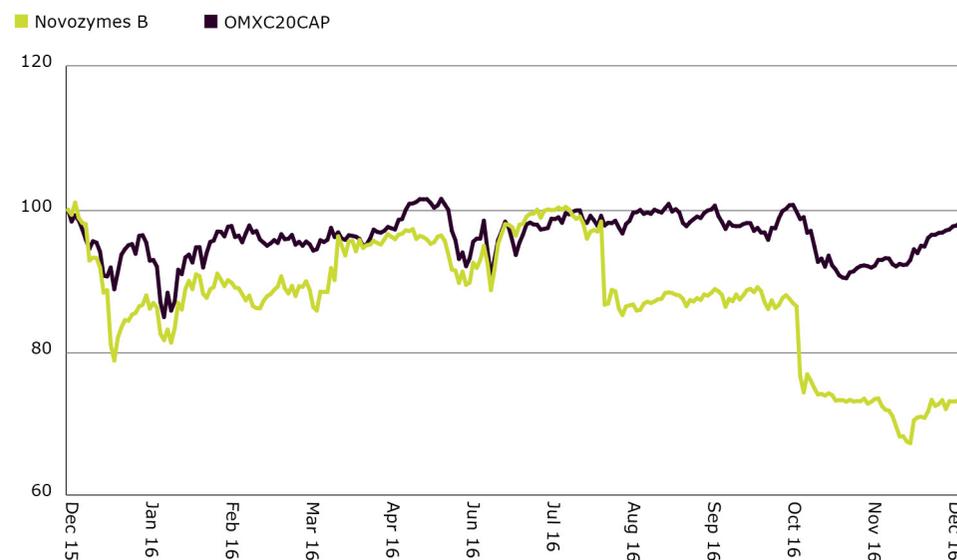
Stock performance

Novozyymes' 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%

Share price development



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.

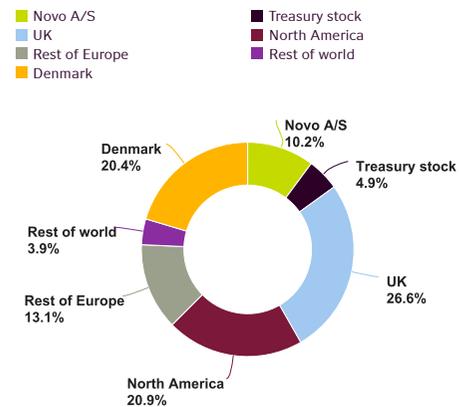
Visit our website for financial reports, current presentations, factsheets, tools and other downloads, and information for private and institutional shareholders.

Ownership structure

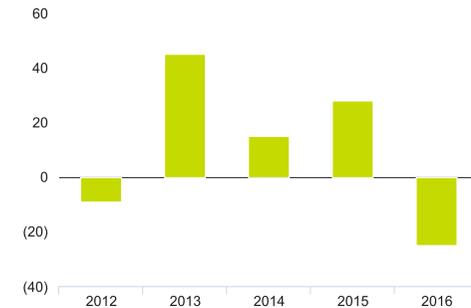
Purpose of the Novo Nordisk Foundation

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.

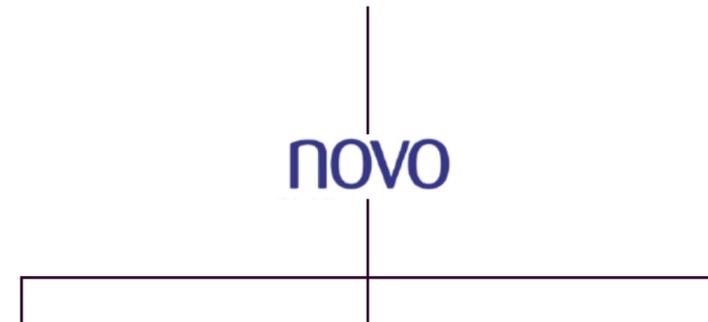
Ownership by geography (B shares)



Total shareholder return, %



novo nordisk fonden



Financial investments:

Venture capital
Seed capital

Novo Group companies:



Large investments:

Sonion
Chr. Hansen
Xellia

