Our long-term targets guide us toward our overall goal of helping the world become more sustainable, at the same time as ensuring Novozymes’ continued growth and value creation.

The triple bottom line
Novozymes seeks to generate economic, environmental and social value. This is the triple bottom line approach we have always taken and which is engrained in our purpose, strategy and long-term targets.

Long-term sustainability targets
We launched our six long-term sustainability targets in 2015, inspired by the UN’s Sustainable Development Goals (SDGs). These 17 goals provide the foundation for our transformative plan of action to address the global challenges facing society now, and to an even greater extent in the coming years, such as widespread poverty and hunger, climate change and strains on natural resources such as water.

The SDGs encourage global businesses, national governments and the wider society to use and develop solutions that contribute toward sustainable growth. Novozymes was one of the first companies to link its business targets to the SDGs.

The opportunity to provide solutions to these global challenges translates into business opportunities for Novozymes. Our proactive approach toward addressing these challenges with new and innovative products means that we are in a good position to help customers face the challenges of today – and tomorrow.

Long-term financial targets
Novozymes’ long-term financial targets reflect a commitment to deliver economic value through organic sales growth at an attractive earnings level, while investing sensibly to drive additional long-term profitable sales growth. Delivering high economic value ensures that we are able to continue investing in innovation and driving a sustainability agenda.

With 4% organic sales growth, the 2017 results were satisfactory, and within the guidance provided at the start of the year. However, the growth falls short of the ambitions of a company such as Novozymes, which intends to have a profound impact on the world.

Growing organic sales is Novozymes’ top priority, because only by selling more of our solutions will we achieve the sustainable impact we strive for and live up to our purpose. We expect to see organic sales growth of 4-6% in 2018. We will continue to invest in strengthening our leadership position within industrial biotechnology and by unleashing the potential of our innovation pipeline (see Business model). We are confident that this will enable us to accelerate sales growth.

From the perspective of profitability and return on capital, Novozymes’ other two long-term financial targets are EBIT margin of 26% or above, and ROIC including goodwill of 25% or above. The ROIC target excludes the impact of potential acquisitions. For 2018, we expect ROIC to be 24-25%. This is attributable to our relatively high capital investments in our new innovation campus in Lyngby, Denmark, expanding our capacity in Nebraska, US, and our new production site in Mumbai, India, to support our long-term growth ambitions.

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

Our long-term sustainability targets
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 in 2020

Enable
Novozymes’ employees to develop by 2020
Reach 6 billion people with our biological solutions by 2020

Every time a consumer uses a product that has been produced using or treated with Novozymes’ technology, or contains one or more of our solutions, 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 linked to our sales performance. The target achievement is essentially an estimation of how many people use a product that was produced using, treated with or contains one or more Novozymes innovations.

This target relates to SDG 12 Responsible consumption and production. Our solutions enable more efficient use of natural resources, lower use of chemicals and a reduced environmental impact. By giving more people access to biological solutions, we enable sustainable consumption and production.

Achievements in 2017
- In 2017, an estimated 5.2 billion consumers used more than one of our solutions on a weekly basis – up from 5.0 billion in 2016
- Brewing, laundry and starch industry sales in Africa, India and Southeast Asia were the main contributors to this growth

What’s next?
A favorable increase in reach is dependent on successful strategy execution in each industry and expanded sales in emerging markets.

5.2 billion
We now reach an estimated 5.2 billion people with our solutions on an annual basis.

Case
Custom-made for Asia and Africa

With solutions designed specifically for doing laundry in Africa and Asia, Novozymes is introducing more consumers to the benefits of enzymatic detergents.

People do laundry in different ways all over the world. For example, many African and Asian families do laundry by hand five to six times per week, with each wash often requiring up to six buckets of water. While habits differ, all consumers want clean clothes and a detergent that can remove stubborn stains.

Detergent producers in emerging markets understand these challenges and want tailored solutions.

Removing tough stains
In 2017, Novozymes launched three new blends of Medley®, our suite of plug-and-play enzyme blends for liquid detergents. These unique blends remove embedded food stains, ensure whiteness and color care, and perform significantly better on cuff and collar stains. They also keep clothes looking new by removing damaged fibers from the surface of the fabric. These multi-enzyme blends enable producers to stand out from the competition and build their brands.

Progress® In, also launched in 2017, is Novozymes’ first product designed specifically for the broad detergent markets in the emerging markets. For use in powder detergents, the product can easily be applied to the detergent to remove the most common stains.

By replacing surfactants and chemicals with enzymes, Progress® In enables producers to spend less on chemicals and deliver a product aimed at emerging markets that allows consumers to do laundry with less water, energy and effort.
Ensuring access to good-quality education for all is crucial for global sustainable development. Novozymes’ employees have a wealth of knowledge about science and sustainability, 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 they will get involved in creating and using sustainable biological solutions. The activities described in this target are purely for educational purposes and are not related to Novozymes’ sales and marketing.

This target relates to SDG 4 Quality education. By helping young people understand the potential of biology, Novozymes is helping them to acquire the knowledge and skills to promote sustainable development. Our program also ensures that we roll out new solutions to improve learning outcomes related to biology.

Achievements in 2017
In 2017, Novozymes educated more than 188,000 people – this brings our total to more than 310,000 since 2015. Our activities included:

- In the US, more than 40 events run by Novozymes employees helped to teach 21,000 parents and students about the wonders of biotechnology
- In Brazil, we sponsored book fairs, science fairs and other educational activities for high school students
- In India, we conducted three initiatives for children to learn more about biotechnology and science and to promote action toward a sustainable future
- Novozymes China ran interactive biology courses for children in Beijing. The Little Biologist initiative also showed how biotechnology could help achieve the SDGs and encouraged university students to share knowledge about biology
- During October and November, Novozymes employees taught elementary schoolchildren worldwide about fungi and enzymes as part of our Teach for Tomorrow program

What’s next?
In the coming year, we will build on the success of our programs across all regions. We also intend to develop new partnerships with relevant educational organizations.

At Novozymes, we believe that sparking an early interest in biology and biotechnology positively impacts how children approach science-based learning and careers.

Studies show that children between the ages of six and 14 are capable of learning about biotechnology and other science subjects in a relevant and engaging way.

To spark a love of science in schoolchildren, we launched the Teach for Tomorrow initiative as part of the fifth annual European Biotech Week.

Novozymes employees, irrespective of their scientific background, were encouraged to give local elementary school students a basic introduction to enzymes, fungi and biology.

Lessons included a simulation of how the mycelium of a fungus spreads underground and how the fungus uses enzymes to acquire energy. Children used simple tools such as a ball of yarn and pipe cleaners.

Employees received appropriate training and teaching materials from experts in biology and pedagogy from Copenhagen University.

Employees could also take a masterclass in biotechnology taught by in-house scientists. The class focused on protein engineering and how Novozymes finds enzymes in nature.

The Teach for Tomorrow initiative resulted in Novozymes employees teaching more than 3,000 children about the wonders of biology.

“To spark a love of science in schoolchildren, we launched the Teach for Tomorrow initiative as part of the fifth annual European Biotech Week.”

Read more about our educational initiatives in Note 8.4 Corporate citizenship
To make the necessary impact on the world, we need strong partners dedicated to working with us to solve key global issues. By 2020, we aim to form five high-impact partnerships with public or private organizations that share our agenda and support Novozymes' commercial activities.

This target relates to SDG 17 Partnerships for the Goals.

**Achievements in 2017**

below50 is an ongoing partnership created by the SE4All Sustainable Bioenergy Accelerator at the World Business Council. The partnership aims to help decarbonize transportation through the use of sustainable fuels that reduce CO₂ emissions by more than 50% compared with conventional fossil fuels.

In 2017, Novozymes focused on strengthening the below50 partnership to attract new members capable of creating regional hubs. below50 hubs now exist in Australia, Brazil and North America. The hubs focus on converting global climate commitments into practical country-specific action. In 2017, below50 collaborated closely with the BioFuture platform and the International Energy Agency (IEA) to promote the use of low-carbon fuels at large events in the UAE, China, the EU and Brazil. As a consequence:

- The International Civil Aviation Organization (ICAO) is moving ahead with its agenda to promote alternative aviation fuels
- The IEA published a bioenergy roadmap at COP23 that promotes low-carbon fuels and bioenergy
- The Food and Agriculture Organization (FAO), IEA Bioenergy and the International Renewable Energy Agency (IRENA) published a statement highlighting how more bioenergy can help countries meet the Sustainable Development Goals

In June, below50 also officially joined the We Mean Business coalition and is now associated with the world’s most successful programs for driving corporate sourcing of renewable energy. SE4ALL has also been invited to collaborate on setting up the African Biomass Data Initiative, which aims to optimize the use of biomass for energy in sub-Saharan Africa.

**What’s next?**

In 2018, we will continue to develop existing partnerships and work to create new promising partnerships.

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**Probiotics**

Probiotics are naturally occurring live microbes with the power to improve the gut flora of poultry, swine and other animals. Robust gut flora can improve animal health.

In 2017, Novozymes and Boehringer Ingelheim entered into a strategic collaboration to develop and commercialize probiotic products for hatcheries, which is where eggs are hatched before the chicks move on to grow-out farms.

Every year, millions of chicks are born in hatcheries around the world. Administering probiotics as early as possible ensures that chicks get a healthy start in life, from the moment they hatch.

Probiotics are considered a natural alternative to antibiotic growth promoters. Rising global meat consumption, along with legislative and consumer demands, has led to growing calls for alternatives such as probiotics.

‘The collaboration deepens Novozymes’ capabilities within probiotics and helps poultry producers deliver greater quantities of safe, affordable protein,” says Susanne Palsten Buchardt, Vice President of Animal Health & Nutrition.

The collaboration caters to the first crucial step in the bird’s life cycle. Novozymes’ solutions are also used in the important growth phase that follows – we already offer in-feed probiotics for the grow-out phase, supporting good gut health as chicks mature into full-grown birds. Our feed enzymes also improve the bird’s uptake of nutrients from the feed, preventing loss of valuable nutrients.

The strategic collaboration with Boehringer Ingelheim is a good example of how we work together with partners to drive impact. We will continue to build and mature the partnership to increase its impact in the years to come.
Our aim by 2020 is to deliver 10 transformative innovations that create significant impact for our customers and make the world more sustainable. When evaluating our innovation efforts and pipeline, we consider the financial and transformative potential of each innovation and measure its impact against the SDGs.

This target relates to SDGs 2, 6, 7, 9, 12 and 13. By working on transformative innovations, Novozymes is enhancing scientific research and upgrading the technological capabilities of industrial sectors globally. Our innovation will further contribute to achieving SDG impacts related to agriculture, water treatment, energy consumption, sustainable consumption, and production and climate change.

Achievements in 2017
With the launch of Frontia®, Novozymes entered a new area of the grain-milling process to deliver higher yields and other improvements in starch processing. Enzymes had not previously been used in the first step of starch processing, making this a transformative innovation.

In December 2017, we launched our first solution from the freshness & hygiene platform for Household Care. This new enzyme targets malodor in textiles and the kinds of stains that build up over time and are consequently very complex to treat, as they contain body soils as well as dirt and pollution from the environment. This is an exciting and transformative innovation, and one of our greatest breakthrough technologies for years in Household Care.

What’s next?
From 2015 to 2017, Novozymes delivered four transformative innovations. In addition to Frontia® and our new solution for freshness & hygiene, we launched Alterion® in 2015 and Acceleron® B-300 SAT in 2016.

An overview of some of the most promising programs in the innovation pipeline can be found in the Business model section.

Starch processing is a competitive industry in which manufacturers face tight margins. They require processes to help them improve the utilization and processing of raw materials in order to save on costs.

Starch is typically extracted from crops such as corn, wheat and potatoes, and converted into ingredients for use in a variety of products, including confectionery, soft drinks, pet food and cosmetics.

Launched in the second quarter of 2017, Frontia® is an enzymatic corn separation solution. This transformative innovation targets the wet-milling phase, which is the first stage in the starch conversion process. Enzymes have never before been used as part of this stage of the production process, making Frontia® a step change in the market.

Frontia® breaks down corn fibers and improves separation of protein. It releases starch and protein trapped in the corn fibers that would otherwise be inaccessible using mechanical separation, thereby increasing the yield of these valuable process streams. This revolutionary product demonstrates how Novozymes continues to deliver significant innovation in the starch market.

Molecules developed for other purposes
Two of the main molecular building blocks used in Frontia® come from enzymes originally developed for biomass conversion in the cellulosic ethanol and feed industries.

This kind of cross-fertilization of ideas is made possible by the cross-industry knowledge sharing and basic application research of Novozymes’ R&D organization.

“Enzymes have never before been used as part of this stage of the production process, making Frontia® a step change in the market.”
Our products help customers avoid CO₂ emissions and improve their sustainability performance by reducing their consumption of energy, raw materials and chemicals. To help mitigate climate change impacts across the value chain, we aim to save 100 million tons of CO₂ in 2020 through the application of our solutions.

This target relates to SDG 13 Climate action. By enabling low-carbon production, Novozymes helps improve climate change mitigation capacity in a number of industries.

Achievements in 2017
We estimate that our solutions saved customers a total of 76 million tons of CO₂ in 2017. This figure is based on life cycle assessments (LCAs) spanning raw material extraction, production use and final disposal.

Our products for fuel ethanol and laundry make a significant contribution to this target. With fuel ethanol, the process of producing biobased feedstocks is less carbon intensive than fossil fuel extraction. Our laundry products enable consumers to wash at lower temperatures, thereby reducing energy consumption and avoiding carbon emissions.

What's next?
Delivering on the CO₂ savings target is closely connected to the volume of enzymes brought to market. Fuel ethanol, in particular, has significant potential to contribute further to the achievement of the SAVE target.

On top of the volume growth of the existing product portfolio, we continue to explore other opportunities to increase our CO₂ savings. This includes expanding sales of existing or new products with positive CO₂-saving profiles.

In 2017, Novozymes published the Acre Study, which considers the potential of an average acre in a US corn field. Using conventional farming methods, that 1 acre produces 153 bushels of corn that is used to feed 900 chickens. However, by adding biological solutions to that 1 acre, the Acre Study shows how the same land can produce more feed, food and energy with lower greenhouse gas emissions.

76 million tons
Our solutions saved customers an estimated total of 76 million tons of CO₂ in 2017.
Enable Novozymes’ employees to develop by 2020

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. It will also ensure that all employees realize their full potential.

This target relates to SDG 8 Decent work and economic growth and SDG 5 Gender equality.

Achievements in 2017

• 94% of all Novozymes employees have Individual Development Plans containing targets and actions. This exceeds our target of 85%
• By 2020, Novozymes aims to have 30% or more women in senior management. At the end of 2017, 26% of senior management were women
• For several years, Novozymes has conducted annual People’s Opinion surveys to measure employee satisfaction. In 2017, we implemented a new quarterly survey focusing on a subset of questions from the People’s Opinion survey
• We designed a new “Lead the Way” program that encourages leaders to excel in the workplace of tomorrow, amid ever-changing decision matrices and employee expectations
• Regional leadership pipelines were strengthened through targeted talent development initiatives

What’s next?
In the coming years, we will work on the following focus areas to enable Novozymes employees to develop their skills:

• Unfolding the potential of talents across our global organization, with particular focus on building capabilities and talent in our high-growth markets and high-investment business areas
• Further developing our leaders to enable them to lead a multigenerational, multicultural workforce in a changing business environment
• Promoting more agile and flexible working structures, and building the skills and mindset required to embrace digitalization

Case
Building better leaders

In 2017, 34 Novozymes leaders took part in the three-month Action Learning Initiative. The initiative engages leaders in real-life challenges, helps them network with their peers and provides coaching from senior leadership. The aim is to build and maintain the talent pipeline at Novozymes at the same time as delivering strong business results.

We asked two of the participants to reflect on their experiences:

Jonathon Wang, Sr. Manager, Business Operations, US

“We’re stretched, we grow our intelligence and skills, and grow as leaders. The Action Learning Initiative gives leaders affirmation, but shows that more is expected of them. We discussed what a winning culture is at Novozymes, and what it takes to build self-confidence and courage, and deliver clear results that keep Novozymes the leader in the biotech space. I’m working to transmit that mentality to my team. I ask my account managers how they intend to achieve their results and improve their customer-focused activities. It empowers them, but it’s also tough.”

Viviane Pereira de Souza, Industry Sales Manager, Household Care, Brazil

“In Latin America, the culture is risk averse. But innovative companies enable their people to take risks and solve problems. I work in a mature, well penetrated industry, where my team and I know what has been tried before in the market. But we also know that markets and times change and that we can’t miss an opportunity. The Action Learning Initiative is about changing our mindset: How to think outside the box, to create opportunity and tackle the fear of failure. I’m now encouraging that mindset in my team.”