



Transforming the quality and sustainability of food and beverages with biology

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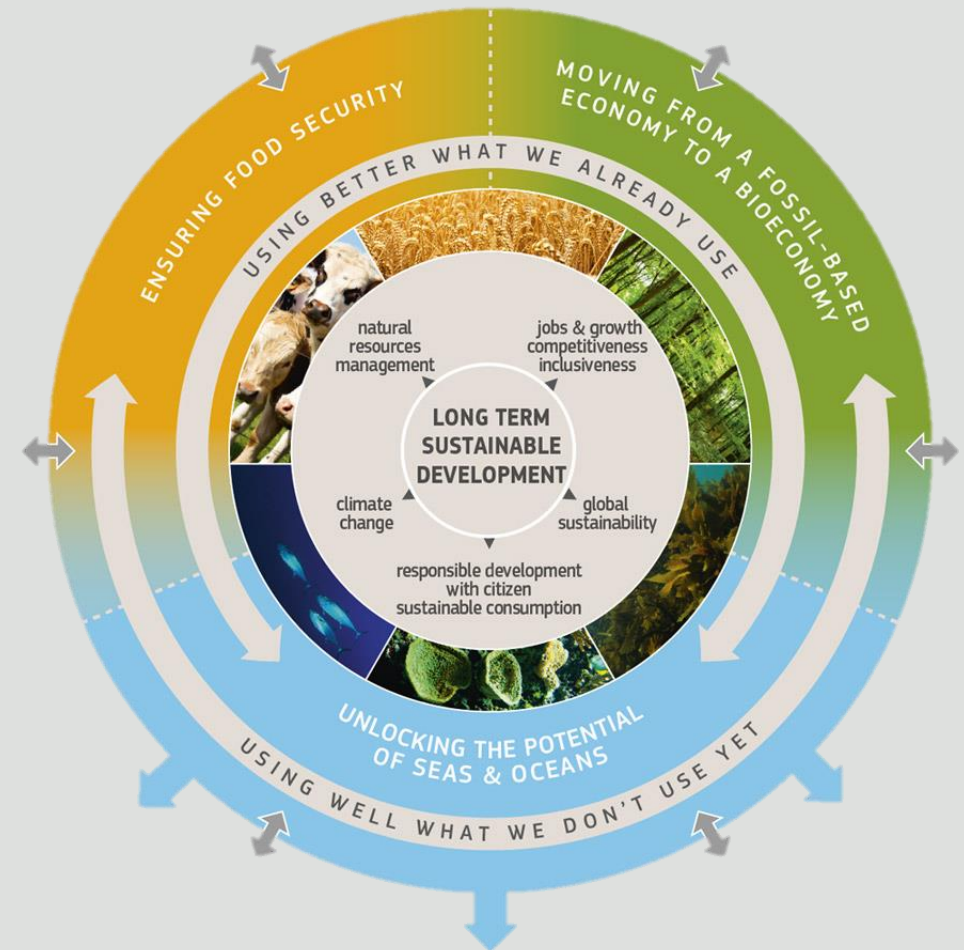
Global macro trends emphasize the need for innovation



Part of the solution lies in the bioeconomy

*“The bioeconomy encompasses those parts of the economy that **use renewable biological resources** from land and sea to produce food, biomaterials, bioenergy and bioproducts.”*

*Sustainable and circular bioeconomy 2018 updated
Bioeconomy Strategy and its Action Plan*



Novozymes in numbers



6,100+

employees

6,500+

patents

700+

products

21.1%

ROIC

30+

different industries

14,374

sales (DKK million)

130

countries

28.1%

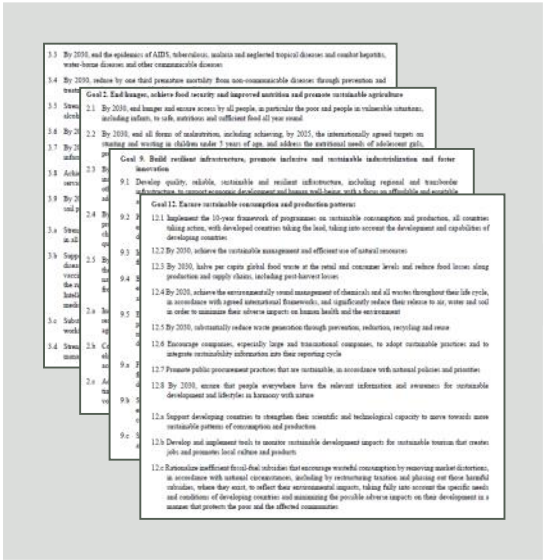
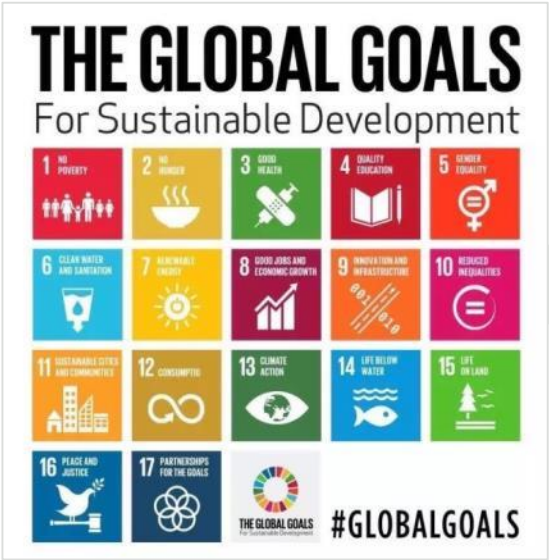
EBIT margin



In 2019, an estimated 5.9 billion people used products made with our solutions on a weekly basis

novozymes

Operationalizing the Global Goals for Sustainable Development



Climate change	Health	Waste
Sanitation	Food supply	Water supply
Energy supply	Land use	Acidification
Resources	Nutrification	Chemicals

17
goals

169
targets

12

Novozymes
Impact Categories

Sustainability drives how we do business

	CLIMATE	WATER	PRODUCTION & CONSUMPTION
WORLD By 2030, we will help...	Limit global warming increase to 1.5 degrees	Ensure clean and efficient water use	Produce more and better products with less impact
2022 targets	Save 60 million tons CO ₂ by enabling low-carbon fuels in the transport sector in 2022	Reach >4 billion people by providing laundry solutions that replace chemicals in 2022	Gain 500,000 tons of food by improving efficiency from farm to table in 2022
NOVOZYMES By 2030, we will achieve...	50% reduction in absolute CO ₂ emissions from operations on our way to carbon neutral in 2050	100% of sites manage water in balance with local conditions	100% of key materials and waste managed in circular systems
2022 targets	Reduce absolute CO ₂ emissions from operations by 25% by 2022	Develop context-based water management programs at 100% of sites by 2022	Achieve 100% circular management of our biomass by 2022 Implement programs to reach zero waste by 2030 at 100% of sites by 2022 Develop plans for circular management of 100% of key packaging materials by 2022



What are enzymes and microorganisms?



Enzymes

Are proteins

Are found in nature

Drive chemical reactions
and break down complex
structures



Microorganisms

Are living organisms

Have natural properties
that influence processes

Are plentiful.
More than 400,000
different microorganisms
are already known

Introducing nature's problem solvers

Sometimes
the greatest
answers in life
are found
in its smallest
components

Enzymes



Microorganisms



Catalyzing processes and
building up or breaking
down molecules



Cleaner clothes
with less consumption
of energy



Better nutrition
with less food waste



Green fuel
to reduce our
dependence on oil



Higher yields
and fewer pesticides

We also work with other proteins, biopolymers and related technologies

Examples of what we can achieve together

Indulgent
Convenient

Natural

Clean label

Less food waste

Low calorie

Low gluten

Low sugar

Low lactose

Less preservatives

Low fat

Sustainability



2003

Lipozyme®

- For margarines produced at lower cost and without harsh chemicals, waste or unhealthy trans fats



2013

Novamyl® 3D and Sensea®

- For more delicious baked goods with cleaner labels and new fresh-keeping branding claims



2015

Ondeal® Pro

- For the same high quality beer, produced with new efficiency, flexibility and sustainability in raw materials



2016

Saphera®

- For low-lactose dairy products with better production control and less added sugar



2017

Frontia®

- For grain processors, drawing a better line to the highest value in wet-milling



2019

Frontia® Jade

- For grain processors in China, extracting extra value from corn by releasing more starch, fibers and protein



2020

Saphera Fiber®

- Increasing fiber and sweetness with no added sugar

The impact we can make together

U.S. rapeseed oil producers **increase efficiency**

while gaining higher yields at reduced costs

Bakers in the Americas

differentiate their brand by
creating tortillas that stay soft, moist and elastic for longer

Latin American dairy producers

stay ahead

of consumer demands by optimizing
lactose-free milk production

Grain processors worldwide need

50% less chemicals for liquefaction

Asian flour mills protect their business by reacting quickly

to raw material changes, ensuring **consistent quality**

African breweries produce the world's first

safe, affordable commercial
cassava beer



Partner to transform the **quality** and **sustainability** of food and beverages

Differentiate

Stay ahead
of changing
demand




Optimize

Increase
efficiency and
flexibility

Expand

Adopt
next-generation
technologies
at scale

Novozymes' purpose

T  **GETHER** WE
FIND
BIOLOGICAL 
ANSWERS FOR
BETTER **LIVES** IN A
GROWING
WORLD 
LET'S RETHINK TOMORROW



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