

# Driving Change in Obesity

Sarah Le Broq, UK  
Living with obesity

# Acknowledgements

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## LETTER FROM EXECUTIVE VICE PRESIDENT, COMMERCIAL STRATEGY & CORPORATE AFFAIRS

# I challenge you to think beyond the conventional.

Dear students,

I am very happy to announce Novo Nordisk as the case company for the CBS Global Case Competition 2024.

At Novo Nordisk we have for the last century been on a mission to drive change. Starting in the early 1920s, when insulin was a novel discovery, to the present day as a market leader within several chronic diseases, we have been pioneers at the heart of healthcare transformation.

However, the demand for enhanced innovation to accomplish our goal has never been more pressing, particularly considering the significance of obesity as one of the paramount healthcare and societal challenges globally. We are working to change how the world perceive people with obesity and to make obesity a global healthcare priority. The narrative of obesity requires a fresh perspective, acknowledging its complexity and the depth of its impact on society and on the people living with the disease. Hence, one of the largest challenges we are facing is creating awareness and recognition of the health implications of obesity and why WHO and other global organizations considers it a multifaceted chronic disease.

In the face of a rapidly evolving healthcare landscape, our commitment is to continue driving change, not just within the industry but within society at large. We envision a future where obesity is not just a health concern but a priority that demands attention, empathy, and action.

We are on the edge of a digital revolution in healthcare, where artificial intelligence, machine learning, and mixed reality are not just buzzwords but tools that shape our approach to disease management. In this evolving landscape, we are looking for strategies that redefine the patient experience, that increase disease awareness and educate, and establish benchmarks for success that resonate on a global scale. I challenge you to think beyond the conventional.

I encourage you to delve into in the real-world scenarios that Novo Nordisk encounters daily and I hope that you will gain valuable learnings from working with our business challenges. We look very much forward to seeing your perspectives and solutions.

Kind regards,

*I wish you all my best of luck.*



Camilla Sylvest  
Executive Vice President, Commercial Strategy & Corporate Affairs

# Legal Disclaimer

Novo Nordisk takes compliance with applicable laws, regulations and industry standards very seriously, and expects case participants to adhere to the same high standards. Case proposals or presentations that do not meet these high standards will be excluded from the competition. In this regard, Novo Nordisk draws participants' attention to the legal requirement (applicable in the EU and elsewhere) that prescription medicines may not be promoted to members of the public.

Novo Nordisk requires that case proposals and presentations exclude any direct/indirect reference to branded medicinal products.

You will be introduced to the hypothetical market Obestria, and all solutions must be address this market rather than real life markets.

Any proposals for real-life markets will be disqualified due to legal restrictions.

While references to real markets are permitted, it is critical that solutions remain focused on the fictional Obestria market.

Your cases (including any tools, software, documents or other materials proposed therein) should comply with the following guidelines:

- Does the material exclude all indirect and direct medicinal product references?
- Does the material include a responsible public health message?
- Is the material clear, accurate, balanced and fair?
- Is there a legitimate purpose/need underlying any proposed patient support solutions (e.g., therapy adherence and administration, or emotional support/ education)?
- Focus on raising awareness about a disease or therapeutic area and how to manage it.
- The material should not be intended to stimulate an increase in demand for a medicinal product.

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# Welcome to Obestria

Case solvers will this year be asked to delve into a hypothetical country.

References and benchmarks to real markets are allowed, however, solutions are not allowed proposed for real markets. Assume that the hypothetical country is part of the world as we know it today and that real companies also exists in the hypothetical country.

Obestria, a newly established republic, emerged from a peaceful revolution.

The country's history is rich with tales of resilience and innovation, shaped by its strategic location as a trade nexus. Today's Obestria is a testament to its tumultuous yet triumphant history. The country has harnessed its rich historical experiences to build a progressive society.

It has become known for its commitment to democracy, social equality, and innovation, making it an attractive location for global companies like Novo Nordisk.

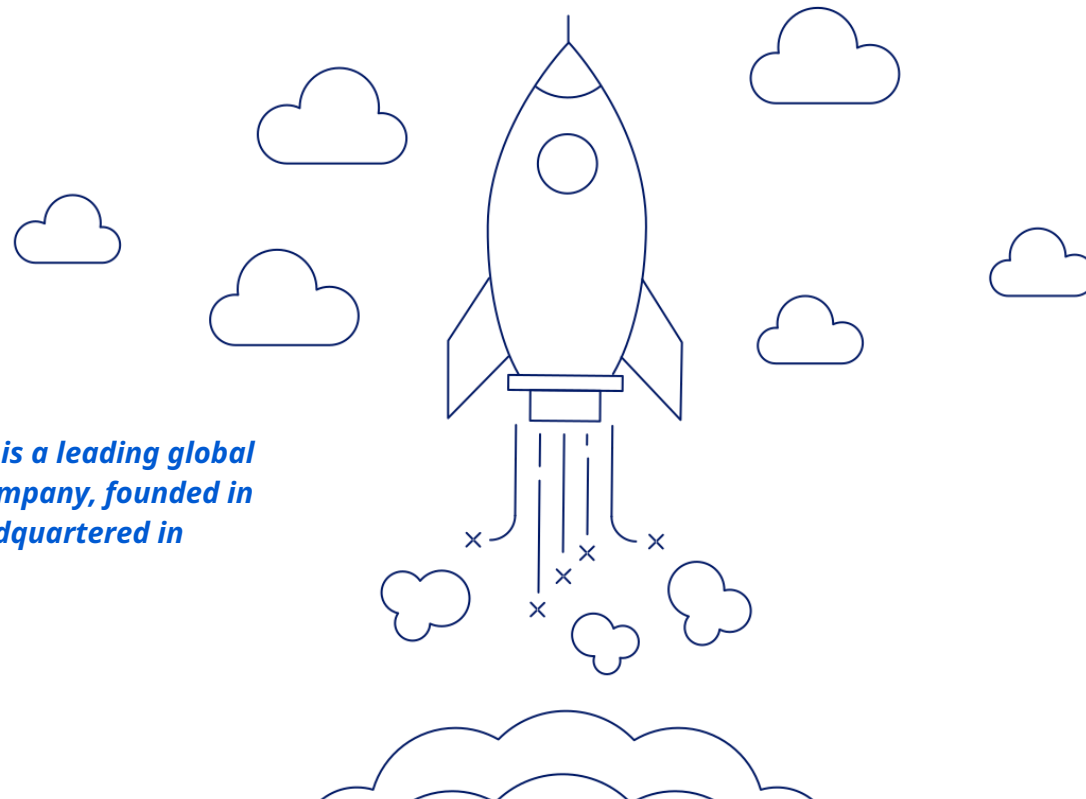
## Novo Nordisk's operation in Obestria

- Novo Nordisk is the largest player in the Obesity Medications market in Obestria.
- The objective is to cement its leading position and stay ahead of competition.
- The strategy in Obestria is aligned with Novo Nordisk's global corporate strategy and the 2025 strategic aspirations.

## Key facts about Obestria

- The population is 55 million.
- 65% of the adult population lives with overweight (BMI  $\geq 25$ ) or obesity (BMI  $\geq 30$ ).
- Aging population with a life expectancy higher than the global average.
- Patient Pull expected to make up 50-60% of total Obesity Medication prescriptions.
- Well-functioning health-care system.
- A highly technologised population.
- Obesitria is a unicameral parliamentary democracy with a multi-party system.
- Though a politically stable country, the last 10 years have seen a succession of centre-left coalitions that have increased investment in healthcare from 5% to 7% of GDP since 2013.

***Novo Nordisk is a leading global healthcare company, founded in 1923 and headquartered in Denmark.***



# Welcome to Obestria

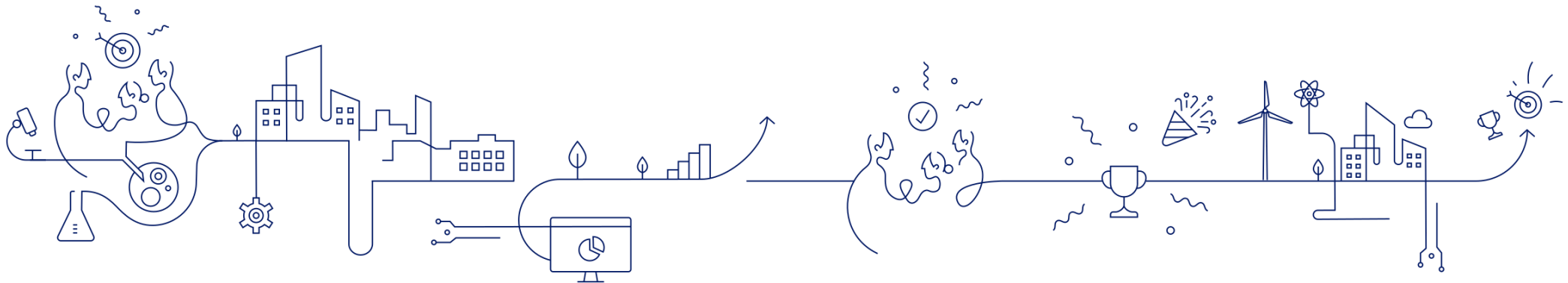
## Economy and key market/ cultural/ socio-demographic trends

- Medicines are typically reimbursed, but Obesity Medications are paid Out of Pocket by the Patient.
- Reimbursement is seen as feasible within the next 2-3 years.
- Private market is growing especially private health clinics and e-health providers.
- The stigma around obesity is changing towards a more positive perception.
- Frequency of general & social media coverage of obesity and Obesity Medication is high.
- Competitive launch is expected during the next year.
- The increased adoption of Obesity Medications is anticipated to affect industries beyond the pharmaceutical.

## Legal considerations

Stringent pharmaceutical regulations apply in Obestria. Novo Nordisk and its activities are subject to strict rules. Please ensure that your cases (including any tools, software, documents or other materials proposed therein) comply with the following requirements:

- Does the material exclude all indirect and direct medicinal product references?
- Does the material include a responsible public health message?
- Is the material clear, accurate, balanced and fair?
- Is there a legitimate purpose/need underlying any proposed patient support solutions (e.g., therapy adherence and administration, or emotional support/education)?
- Focus on raising awareness about a disease or therapeutic area and how to manage it. The material should not be intended to stimulate demand for a medicinal product.



# Setting the Stage

With the combined efforts of more than 64,000 employees and a century of driving change to defeat serious chronic disease, Novo Nordisk stands today as a leading player in the global pharmaceutical industry. In this year's CBS Global Case Competition participants are invited inside the fast-growing Obesity Medications Market to help Novo Nordisk stay ahead of competition and strengthen its global market leadership position. Through the case you will gain valuable insights into Novo Nordisk's value creation, the treatment experience and market trends. The case outlines the complexities of navigating the healthcare landscape, technological innovations, and patient behaviours.

It calls for strategies that not only leverage Novo Nordisk's strengths in innovation and patient care but also necessitate collaboration with stakeholders to enhance disease awareness, treatment accessibility, and adherence. The competition invites participants to propose solutions that embody a holistic approach to obesity management, emphasising the need for a sustainable impact on public health, alongside achieving business objectives. This case highlights the importance of integrating medical treatment with broader health and lifestyle initiatives to effectively combat obesity and improve quality of life for affected individuals. We are looking forward to seeing your solutions on how to solve Novo Nordisk's business challenges in the fictional country Obestia.

Good luck!

# 41.6

million people living with diabetes and obesity reached

232,261

DKK million in net sales

102,574

DKK million in operating profit

68,326

DKK million in free cash flow

64,319

employees worldwide

80

countries with affiliates

5

countries with R&D facilities

## Main Question

How can Novo Nordisk stay ahead of competition and protect its global market leadership position in the Obesity Medications Market?

## Subquestions

- How can Novo Nordisk leverage its internal capabilities and external partnerships to revamp the People with Obesity (PwO) Treatment Experience and differentiate from competition in the next three years?
- Utilise your local knowledge to outline a page about the implementation in the hypothetical country Obestia
- How can your solution strengthen the PwO's disease awareness and provide education?
- What can Novo Nordisk do to quantify and measure the following impact that your solution will unveil? In terms of financial and social measurements and other relevant KPIs.

Solutions must address the hypothetical market Obestia. Solutions developed for real life markets will be disqualified due to legal implications. References and benchmarks to real markets are allowed, however, solutions are not allowed to be proposed for real markets.

You are strongly encouraged to seek real-life insights, reflections, and experiences from patients through social media channels and through conversations with individuals who have first-hand experiences to gain valuable perspectives that can enhance your understanding and analysis of the case.



# Introducing Novo Nordisk

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# History

In 2023 Novo Nordisk could celebrate 100 years of innovation and leadership in diabetes care, as one of the first companies to bring insulin to market. Novo Nordisk has been driven by scientific curiosity and a mission to make a global impact. Today, it stands as one of Europe's most successful companies.

The company's roots trace back to 1922 when Nobel laureate August Krogh, accompanied by his wife, Marie Krogh, had received an invitation from Yale University researchers to embark on a nationwide lecture tour on his medical research.



August Krogh with wife Marie Krogh

It was during this tour Marie Krogh persuaded him to take a detour to Toronto, Canada, due to news about recent discovery on insulin, the hormone used to treat diabetes.

This detour marked the pivotal moment laying the foundation for the trajectory of the company. They returned to Copenhagen, Denmark, with permission to manufacture and sell insulin. August joined forces with Hans Christian Hagedorn and August Kongsted and together established the Nordisk Insulinlaboratorium. But before launching the production of insulin, they hired Harald Pedersen to build machines needed for insulin production. Harald's brother, Thorvald Pedersen, was also hired as a pharmacist. The Pedersen brothers did not work at Nordisk for very long before they decided to manufacture insulin themselves. In 1925 they founded the company Novo Therapeutisk Laboratorium, a competitor to Nordisk Insulinlaboratorium. Despite decades of competition, both Nordisk and Novo thrived, contributing with landmarks on innovations in insulin production. They introduced advancements

such as highly purified insulin, yeast-based insulin, and convenient prefilled insulin injection pens. Novo ventured into enzymes for detergents and hormones, while Nordisk broadened its portfolio to address plasma deficit and blood issues, showcasing their resilience and commitment to innovation in the competitive landscape.

In 1989, Novo and Nordisk officially merged, creating the world's largest insulin producer. Earlier, the merger of Nordisk Insulinlaboratorium, the Nordisk Insulin Foundation, and the Novo Foundation formed the Novo Nordisk Foundation. This foundation, among the world's largest, ensures the company's independence.

In recent years, Novo Nordisk has heightened its focus on type 2 diabetes, acknowledging its strong correlation with obesity. This strategic shift aims to address both diseases simultaneously, recognising that addressing obesity may reduce the incidence of type 2 diabetes.

Today, Novo Nordisk stands as the largest Danish public company by market value, surpassing DK's GDP in 2023.

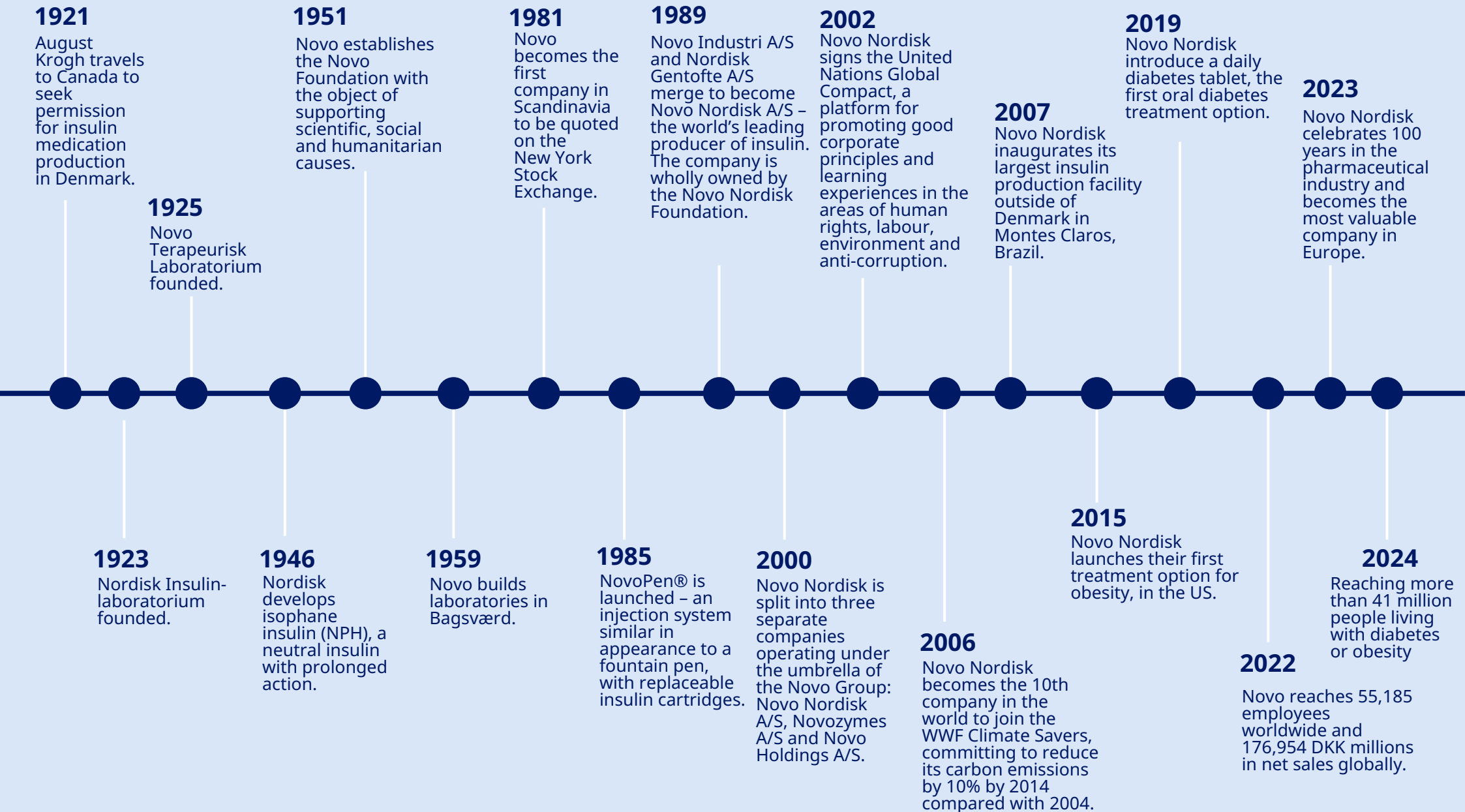
With a global presence, the company is dedicated to help almost 40 million patients managing diabetes, obesity, and other chronic conditions.

Its impact extends beyond medical care, aiming to enhance the lives of patients by facilitating lasting lifestyle changes for enduring success in their health journeys.



Novo Nordisk Headquarters in Bagsvaerd, north of Copenhagen, designed by Henning Larsen Architects.

# Timeline



- Global Headquarters  
Denmark
- 5 Regional Headquarters  
China, Japan (Japan & Korea),  
Switzerland (Europe and IO), US
- 5 Strategic Production sites  
Brazil, China, Denmark, France, US
- 3 Strategic R&D centres  
China, Denmark, US



Novo Nordisk markets its products in

**180**

countries worldwide

**80**

affiliates

Novo Nordisk has a vast global presence, operating in numerous countries worldwide.

This extensive reach allows the company to deliver its healthcare solutions across different markets, adapting to various healthcare and regulatory landscapes.

Novo Nordisk's global footprint is a reflection of its commitment to making a difference in the lives of patients with chronic diseases like diabetes and obesity, no matter where they are.

## Resources

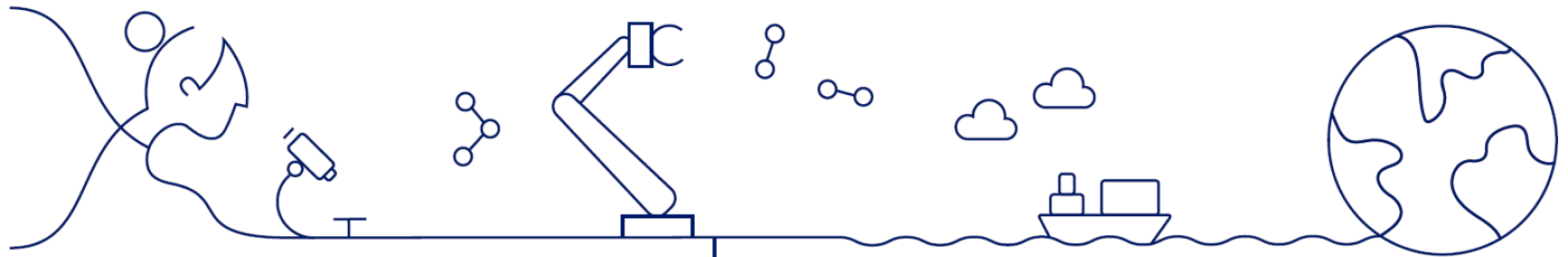
Insights from patients, healthcare experts and partners  
Raw materials  
Diverse talent  
Financial resources

## Research and development

## Manufacturing

## Distribution

## Patients



Reached an all-time high 41.6 million people living with diabetes and obesity



Reached 6.7 million vulnerable patients with our insulin medicines through access and affordability initiatives



Invested over DKK 45 billion in R&D – a 35% increase vs 2022



Invested more than DKK 25 billion to meet demand for current and future products



Added more than 9 thousand employees bringing Novo Nordisk's total workforce to over 64 thousand, while supporting job-creation amongst our suppliers



Reduced our CO<sub>2</sub> equivalent emissions from operations and transportation by 34% vs 2019, while supporting our 60,000-plus suppliers with the transition to 100% renewable power



A total tax contribution of DKK 51 billion



Paid out DKK 61.7 billion via dividends and share buybacks to shareholders, including Novo Holdings A/S

# Executive Management



**Lars Fruergaard Jørgensen**

President and chief executive officer (CEO). Born November 1966. Male.

*Other positions and management duties:* President of the European Federation of Pharmaceutical Industries and Associations (EFPIA).



**Maziar Mike Doustdar**

Executive vice president. International Operations. Born August 1970. Male.

*Other positions and management duties:* Member of the board of directors and the personnel and remuneration committee of Orion Corporation.



**Ludovic Helfgott**

Executive vice president. Rare Disease. Born July 1974. Male.

*Other positions and management duties:* President of the Novo Nordisk Haemophilia Foundation Council.



**Karsten Munk Knudsen**

Executive vice president. Chief financial officer (CFO). Born December 1971. Male.

*Other positions and management duties:* Member of the board of directors, chair of the audit committee and member of the equity & capital markets committee of Hempel A/S. Member of the board of directors and chair of the audit committee of 3Shape Holding A/S



**David Moore**

Executive vice president. Corporate Development. Born January 1974. Male.

*Other positions and management duties:* Member of the board of directors of Naveris Inc., Radius Health Inc. and Novasenta Inc.



**Tania Sabroe**

Executive vice president. People & Organisation. Born July 1977. Female.

*Other positions and management duties:* No other management positions.



**Marcus Schindler**

Executive vice president. Research & Early Development and chief scientific officer (CSO). Born September 1966. Male.

*Other positions and management duties:* Adjunct Professor of Pharmacology at the University of Gothenburg.



**Camilla Sylvest**

Executive vice president. Commercial Strategy & Corporate Affairs. Born November 1972. Female.

*Other positions and management duties:* Vice chair of the board of directors of Danish Crown A/S. Member of the board of directors of Argenx SE.

The Executive Management Team in Novo Nordisk is responsible for the day-to-day management of the company, development and implementation of strategies and policies, the company's operations and organisation and timely reporting to the Board of Directors and Novo Nordisk's stakeholders.

To maintain a competitive edge in the fast-evolving healthcare sector, Novo Nordisk continually refines its corporate strategy.

This ensures alignment with the current market landscape and inherent challenges, while steadfastly adhering to its core ethos encapsulated by The Novo Nordisk Way.

The corporate strategy furthermore ensures that Novo Nordisk can achieve its strategic aspirations for 2025. The strategy is built upon four key strategic areas.


In the context of the hypothetical nation of Obestria, where obesity is a significant health concern, Novo Nordisk's strategic focus on innovative treatments and therapies for obesity becomes paramount.

By tailoring its initiatives to address the specific healthcare needs of Obestria, Novo Nordisk aims to not only meet market demands but also contribute meaningfully to public health outcomes in this fictional yet representative setting.




**Purpose and sustainability (ESG)**

- Progress towards zero environmental impact
- Being respected for adding value to society
- Being recognised as a sustainable employer



**Commercial execution**

- Strengthen Diabetes leadership - aim at global value market share of more than 1/3
- More than 25 billion DKK in Obesity sales by 2025
- Secure a sustained growth outlook for Rare disease



**Innovation and therapeutic focus**

- Further raise the innovation-bar for diabetes treatment
- Develop a leading portfolio of superior treatment solutions for obesity
- Strengthen and progress the Rare disease pipeline
- Establish presence in Other serious chronic diseases focusing on CVD, MASH and CKD



**Financials**

- Deliver solid sales and operating profit growth
- Drive operational efficiencies across the value chain to enable investments in future growth assets
- Deliver free cash flow to enable attractive capital allocation to shareholders

## INNOVATION AND THERAPEUTIC FOCUS

Novo Nordisk is on a trajectory to further elevate the standard of diabetes care through innovation, striving to exceed current benchmarks in treatment efficacy and patient experience.

The organisation is dedicated to assembling a leading portfolio that offers superior solutions for obesity management, reflecting a deep commitment to addressing this global health challenge comprehensively.

Progressing the rare disease pipeline remains a key ambition, aiming to bring breakthrough therapies to those with unmet medical needs.

Additionally, Novo Nordisk is expanding its influence into the management of other serious chronic diseases, with particular emphasis on cardiovascular diseases (CVD), Non-Alcoholic Steatohepatitis (NASH), and Chronic Kidney Disease (CKD).

Central to these endeavours is the company's dedication to purpose and sustainability, integrating these core values into every facet of their strategic growth and patient care initiatives.

  
Innovation and  
therapeutic focus

- Further raise the innovation-bar for diabetes treatment
- Develop a leading portfolio of superior treatment solutions for obesity
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- Establish presence in Other serious chronic diseases focusing on CVD, MASH and CKD



## PURPOSE AND SUSTAINABILITY (ESG)

Novo Nordisk's commitment to purpose and sustainability is integral to their corporate ethos.

They are dedicated to progressing toward zero environmental impact, highlighting their proactive stance on climate change and resource management.

The company aims to be esteemed for its contributions to society, recognising the importance of creating value beyond the healthcare industry.

To achieve these goals, Novo Nordisk ensures that it maintains distinct core capabilities and continually evolves its corporate culture to support innovation, responsibility, and environmental stewardship.

These efforts reflect the company's holistic approach to sustainability, with a clear vision for a healthier planet and society.

Purpose and  
sustainability  
(ESG)

- Progress towards zero environmental impact
- Being respected for adding value to society
- Being recognised as a sustainable employer

COMMERCIAL EXECUTION

Novo Nordisk is charting a course to augment its commercial success with an emphasis on strengthening its foothold in the diabetes market, aiming to capture more than a third of the global value market share. The global obesity epidemic is now estimated to affect more than 750 million people. Importantly, the pipeline contains new products that may offer even greater weight loss efficacy.

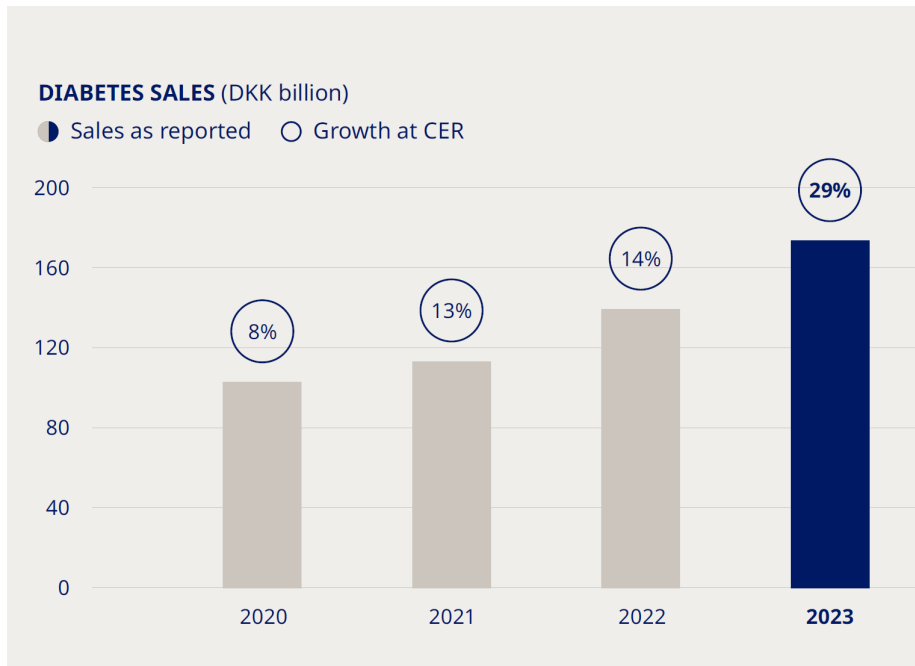
*Novo Nordisk aspires to amplify its presence in the obesity market, with ambitious plans to double its sales figures and reach obesity medication sales of over DKK 25 billion by 2025.*

This expansive vision extends to the realm of rare diseases, where Novo Nordisk is focusing on ensuring continued growth through strategic innovation and robust pipeline development. These efforts exemplify the company's commitment to leading the charge in addressing some of healthcare's most pressing challenges.



Commercial execution

- Strengthen Diabetes leadership - aim at global value market share of more than 1/3
- More than 25 billion DKK in Obesity sales by 2025
- Secure a sustained growth outlook for Rare disease



**FINANCIALS**

Novo Nordisk is poised to maintain robust sales and operating profit growth, underpinned by a strategic focus on operational efficiencies throughout the value chain.

This efficiency drive is instrumental in funding future growth assets. In International Operations (IO), the company targets a sales growth of 6-10%, while in the U.S., a significant transformation is underway with 70% of sales undergoing a strategic shift.

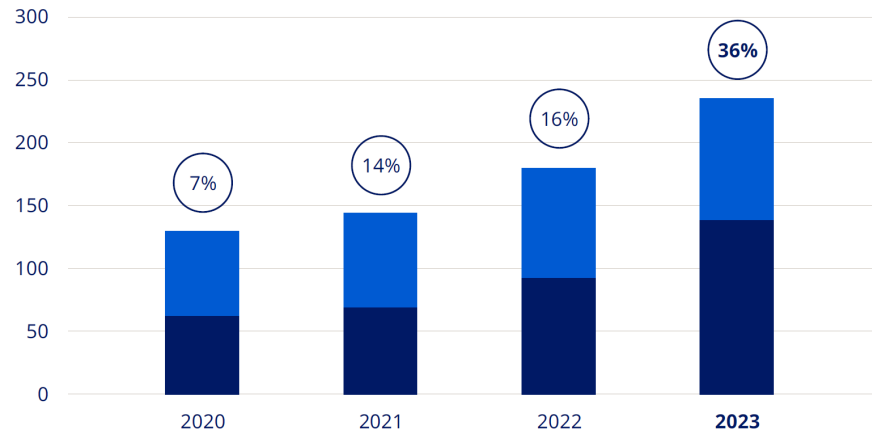
Furthermore, Novo Nordisk is committed to generating substantial free cash flow, ensuring an attractive capital allocation for shareholders.

Financials

- Deliver solid sales and operating profit growth
- Drive operational efficiencies across the value chain to enable investments in future growth assets
- Deliver free cash flow to enable attractive capital allocation to shareholders

**FINANCIAL PERFORMANCE** (DKK billion)

- North America Operations net sales
- International Operations net sales
- Growth at CER



# Strategic Aspiration

## SUSTAIBABLE BUSINESS

Striving for social and environmental responsibility, Novo Nordisk aims to conduct its business in a manner that positively impacts people and communities.

They define success by the solutions they provide and the improved health and well-being of those who benefit.

Additionally, Novo Nordisk is on a dedicated journey towards achieving zero environmental impact across all its business activities.

### STRATEGIC ASPIRATIONS 2025

1. Progress towards zero environmental impact
2. Being respected for adding value to society
3. Being recognised as a sustainable employer

Novo Nordisk is built around the Novo Nordisk Way, a commitment to be a sustainable business and have a clear patient-centric purpose: driving change to defeat serious chronic diseases.

The overarching objective is to foster long-term value creation for patients, employees, partners, shareholders, and the broader societal context.

This commitment underscores their dedication to responsible business practices and their aspiration to positively influence diverse stakeholders.

### THE NOVO NORDISK WAY

Founded on a visionary mission to improve the lives of those affected by diabetes, the Novo Nordisk Way is a set of guiding principles that works as facilitation to ensure that everyone lives up to these essentials. Hence, they underpin every decision made in Novo Nordisk.

## THE NOVO NORDISK WAY ESSENTIALS

- 1 We create value by having a patient-centred business approach.
- 2 We set ambitious goals and are empowered to achieve them.
- 3 We are accountable for our financial, environmental and social performance.
- 4 We are curious and innovate for the benefit of patients and society at large.
- 5 We build and maintain good relations with our stakeholders.
- 6 We value diversity and treat everyone with respect.
- 7 We focus on performance and personal development.
- 8 We have a healthy and engaging working environment.
- 9 We strive for agility and simplicity in everything we do.
- 10 We never compromise on quality and ethics.

# Purpose

*“Our purpose is to drive change to defeat serious chronic diseases, built upon our heritage in diabetes. We do so by pioneering scientific breakthroughs, expanding access to our medicines and working to prevent and ultimately cure the diseases we treat”*

Novo Nordisk, committed to helping individuals with chronic diseases, does not view competition in the anti-obesity market as the primary threat.

Instead, they perceive it as a contributing factor that fosters awareness of obesity as a heterogeneous and complex disease.

This approach involves reshaping the narrative surrounding obesity, recognising it as a multifaceted health issue.

In navigating this intricate environment, it becomes imperative to evaluate it from various perspectives.



Through their diverse initiatives, Novo Nordisk is dedicated to enhancing individuals' well-being and mental health.

At the national level, their efforts extend beyond immediate concerns, aiming to address and mitigate long-term public health challenges.

By adopting a comprehensive strategy rooted in the triple bottom line, which considers economic, social, and environmental impacts, Novo Nordisk strives to make a positive and sustainable impact on the complex landscape of obesity and its associated health implications.

This approach reflects their commitment to holistic well-being, recognising the interconnected nature of individual and societal dimensions in the pursuit of improved public health outcomes.

# Therapy Areas

Novo Nordisk is deeply involved in the battle against a variety of serious diseases.

The focus encompasses several critical areas, each demanding a unique approach in research, treatment, and management.

## CARDIOVASCULAR DISEASES

Cardiovascular diseases, major global health threats, are another area where Novo Nordisk is actively working to mitigate risk factors and manage complications. They've expanded their research to include neurodegenerative diseases like Alzheimer's, dedicating efforts to developing novel treatments for this complex condition.

In addition, Novo Nordisk is exploring rare diseases such as primary hyperoxaluria, demonstrating their commitment to a broad spectrum of healthcare challenges. Their initiatives reflect a dedication to innovation and patient care across various medical fields, striving to enhance outcomes and quality of life for patients worldwide.

## DIABETES

In diabetes care, Novo Nordisk tackles both Type 1 and Type 2 diabetes.

Type 1 diabetes, an autoimmune disease, requires lifelong insulin therapy, while Type 2, often lifestyle-related, calls for a multifaceted approach including medication, diet and exercise.

## RARE DISEASES

Novo Nordisk also advances research in pediatric growth disorders, understanding the nuances to offer precise treatments. In the field of blood disorders, Novo Nordisk is making strides with haemophilia and sickle cell disease, seeking innovative therapies for these genetic conditions. They are also confronting metabolic associated steatohepatitis (MASH), a serious liver condition linked to obesity and diabetes, showing their integrated approach to metabolic diseases.

## OBESITY

Another major focus is obesity, a complex and chronic disease with a multitude of health implications. Novo Nordisk's approach here goes beyond weight loss; recognising obesity as a serious, chronic, and progressive disease, they aim to understand its multifactorial causes, which include biological, psychological, and environmental factors.

The holistic strategy is driven by the idea that effective treatment must address all aspects of the disease. Novo Nordisk work on developing comprehensive solutions that support long-term weight management and overall health improvement, illustrating their dedication to enhancing patient care and outcomes in the realm of obesity.



# Technological and Digital Efforts

## A DIGITAL REVOLUTION IS UNDERWAY IN HEALTHCARE.

More than ever, there is huge interest in using digital services, data and technology to improve the lives of people living with a serious chronic disease.

This has brought about a shift in the industry, and there is now a large and untapped potential for incorporating technology in the full value chain.

Novo Nordisk leverages a range of advanced technologies in order to sustain its market leading position and to continue offering

unparalleled support to its patients. The digital strategy is transforming every level of the business, from the way they research and develop new treatments to how they partner with startups and institutions.

Novo Nordisk is focusing on three digital strategic aspirations:

**Optimise** aims to enhance efficiency using data, automation, and robotics.

**Augment** seeks to improve patient outcomes by combining treatments with diagnostics, devices, and digital data.

**Explore** looks to create value through digital means independent of drugs and involves partnerships with start-ups and institutions for holistic care.

Novo Nordisk has established a network of Digital Innovation Hubs

in the most active and vibrant health-tech ecosystems in the world.

These Hubs are a vital component of their progress in digital.

They will be a key link with local, digital healthcare startups but also with different players of the digital innovation ecosystem.

This approach also aligns with the evolving healthcare needs of Obestria, where technology integration holds promise for addressing chronic diseases such as obesity.



## TECHNOLOGICAL AND DIGITAL EFFORTS

### DISEASE MANAGEMENT PARTNERSHIPS

Novo Nordisk believe that digital health and digital therapeutics solutions can enhance outcomes by promoting data-driven, individualised dialogues between patients and healthcare professionals, and by simplifying treatment interventions.

In the last year, partnerships with five leading glucose monitoring companies have been established, focusing on non-exclusive data exchange with smart insulin pens. This collaboration aims to improve treatment efficacy and patient outcomes.

### INCREASED AI EFFORTS

Novo Nordisk has established an AI and Analytics Department, with an overall goal of establishing a world-class, industry leading AI organisation to serve patients and drive direct value and impact to the Novo Nordisk portfolio and pipeline.

As part of the continued focus Novo Nordisk has formed a strategic partnership with Microsoft. This collaboration aims to expedite the R&D process by harnessing AI's capabilities in analysing big data and developing new drug targets.

### AUGMENTED INSTRUCTIONS

Mixed Reality technology is employed in the manufacturing processes. This innovation combines the virtual and real worlds to minimise human errors and enhance training. It is instrumental in equipping new and existing staff with vital technical skills.

This is particularly useful for employees performing complex tasks on production lines or for training purposes.

Instead of reading a traditional 2D instruction, the employee can put on the device and get an "augmented" instruction - with 3D animations in the surroundings of the actual equipment at a production line.

### NOVO NORDISK SEEKS TO EXPLORE COLLABORATIONS WITH FIRMS THAT CAN HELP:

- Facilitate treatment initiation – ensure patients are receiving the medication they are prescribed.
- Improve adherence – ensure patients do not neglect or forget a dose.
- Increase stay-time – ensure patients prescribed Obesity Medications are helped to remain on treatment if desired and medically appropriate.
- Improve dose-optimisation – ensure patients are not under- or over- dosed relative to their prescription and resultingly have poor disease control.

***“As a leading global healthcare company, it is not just our ambition but also our responsibility to innovate across every part of the patient journey.”***



**Maziar Mike Doustdar**

**EVP International Operations at Novo Nordisk**

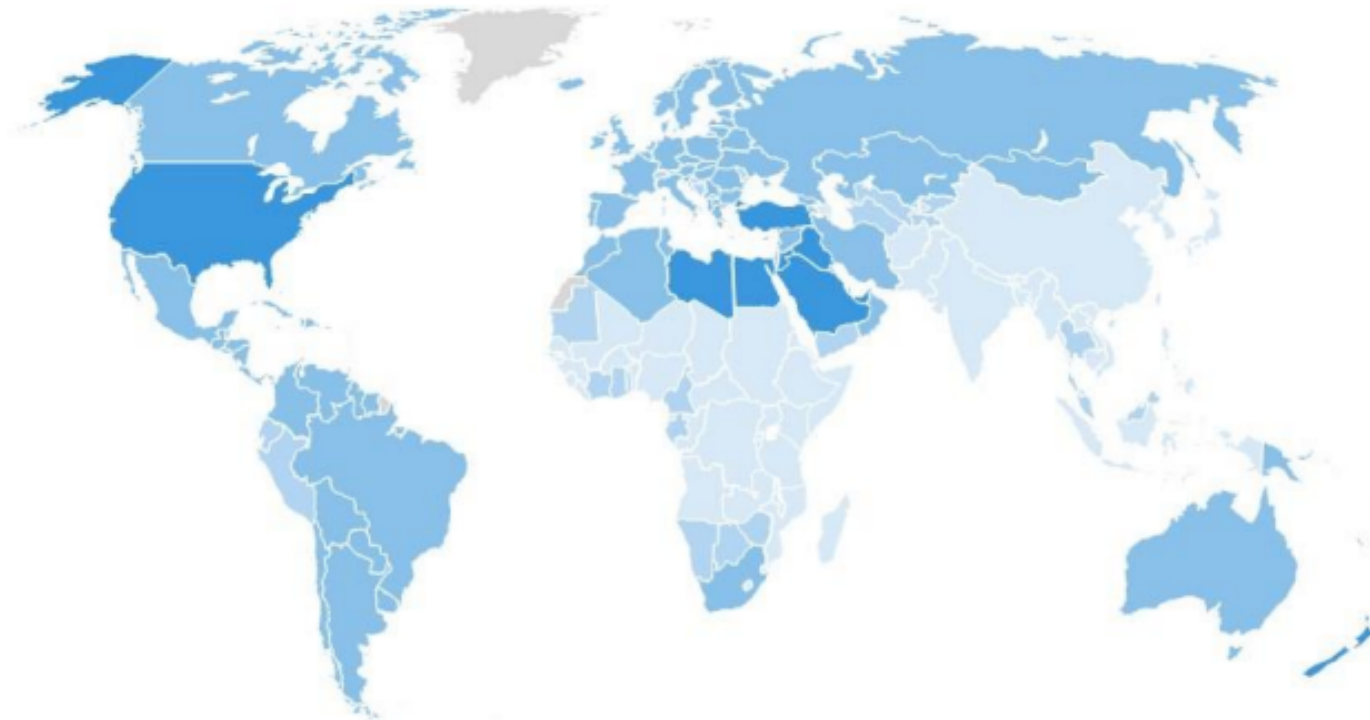


# A Fast-Growing Market

- 27 Global Pharmaceutical Industry
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## Obesity is a global epidemic affecting more than 764 million people<sup>1</sup>



### Obesity Prevalence (%)



Note: Obesity is defined as BMI ≥ 30; PwO: People with obesity  
1 World Obesity Atlas 2022

# Global Pharmaceutical Industry

While traditional pharmaceutical companies typically possess research and discovery (R&D) capabilities, along with the necessary capital and personnel to bring a drug to market, they are no longer the sole navigators of the treatment experience.

As various treatment experiences and therapy areas evolve, consumer-oriented companies play an increasingly substantial role in obesity treatment. This change is not a threat but rather an enabler to support the patient throughout the entire treatment experience by parties specialised in supporting on a specific part of the experience.

As a result, the inclusion of entrants from sectors with a focus on end-users is deemed necessary and is seen as promising opportunities for Novo Nordisk.

The horizon now extends to include players from diverse sectors, such as digital therapeutics, medical devices, wearables (like the Apple Watch), and entities like Weight Watchers and NUPO in the food industry.

This shift transcends the boundaries of pharmaceutical companies, encompassing fast-moving consumer goods (FMCG) and technology industries.

As patient-centric care takes center stage, the involvement of these external entities underscores a collaborative approach, where innovation from various sectors converges to shape the future of healthcare solutions.



Shirley Stewart, US  
Living with Type 2 diabetes

**Market Sizing**

Obesity is a complex chronic disease and is influenced by factors such as genetics, physiology, environment, job and education, and what is going on in the brain. Understanding these factors is crucial as obesity is linked to various diseases such as type 2 diabetes, heart disease, and specific types of cancer.

Additionally, millions suffer from the stigma and bias every day. It was not until 2013 that the American Medical Association officially classified obesity as a chronic disease, a pivotal moment that heightened awareness of the medical interventions necessary for both treatment and prevention.

*Estimates for global levels of overweight (BMI ≥25kg/m<sup>2</sup>) and obesity (BMI ≥30kg/m<sup>2</sup>) reveal that over 4 billion people may be affected by 2035, compared to over 2.6 billion in 2020.*

This signifies a substantial increase from 38% of the world's population in 2020 to over 50% by 2035, excluding children under 5 years old.

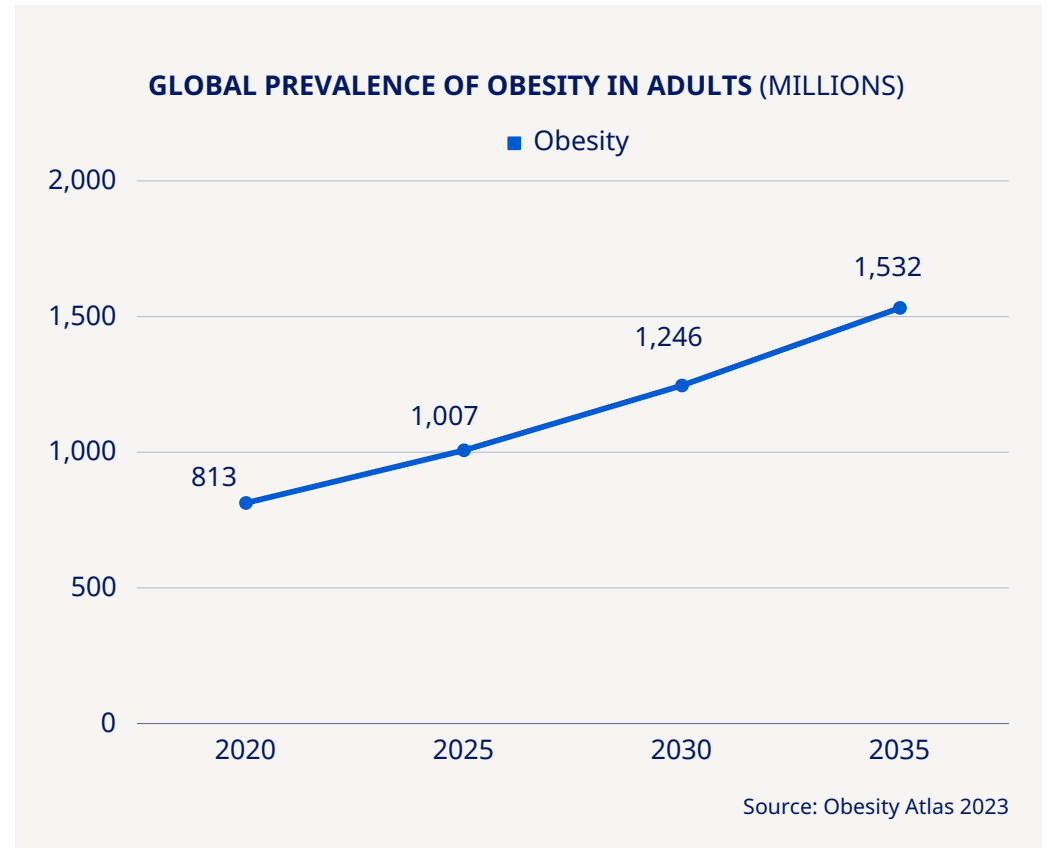
Additionally, it is recognised by the WHO as the fifth-leading risk factor contributing to global deaths.

The Obesity Medications market is poised for significant growth, projecting a compounded annual growth rate (CAGR) of 31.1% through the forecast period to 2031, reaching a substantial \$37.1 billion across the seven major markets. <sup>1</sup>

Core beliefs shaping this trajectory include that the healthcare system cannot sustain treating the many, biology and technology expand innovation therapies, and PwO remain the primary decision makers. Societal challenges, including an aging population, further underscore the complexity of addressing obesity at a global level.

In addressing the growing issue of obesity, it is essential to recognise its global prevalence and the interconnectedness of factors influencing its rise, regardless of geographical boundaries. While the case focuses on the hypothetical country of Obestria, the trends and market dynamics observed align with real-world scenarios.

As solutions are crafted for Obestria, it's crucial to consider their potential for global scalability. The challenges posed by obesity transcend borders, with millions worldwide affected by its consequences.



<sup>1</sup> US, France, Germany, Italy, Spain, UK, and Japan.

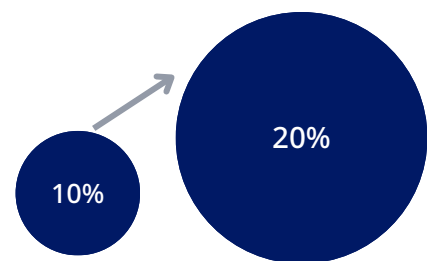
### Growth and Evolution

Even with the implementation of obesity treatments, there is a significant expected growth in the global population of PwO aged 5 and above, increasing from 14% in 2020 to 24% in 2024.

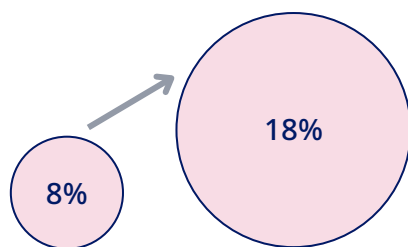
This demographic shift is expected to impact nearly 2 billion adults, adolescents, and children, with the most significant surge in obesity occurring among the younger age groups.

Elevated BMI levels contribute to issues such as absenteeism, presenteeism, premature retirement, or even death.

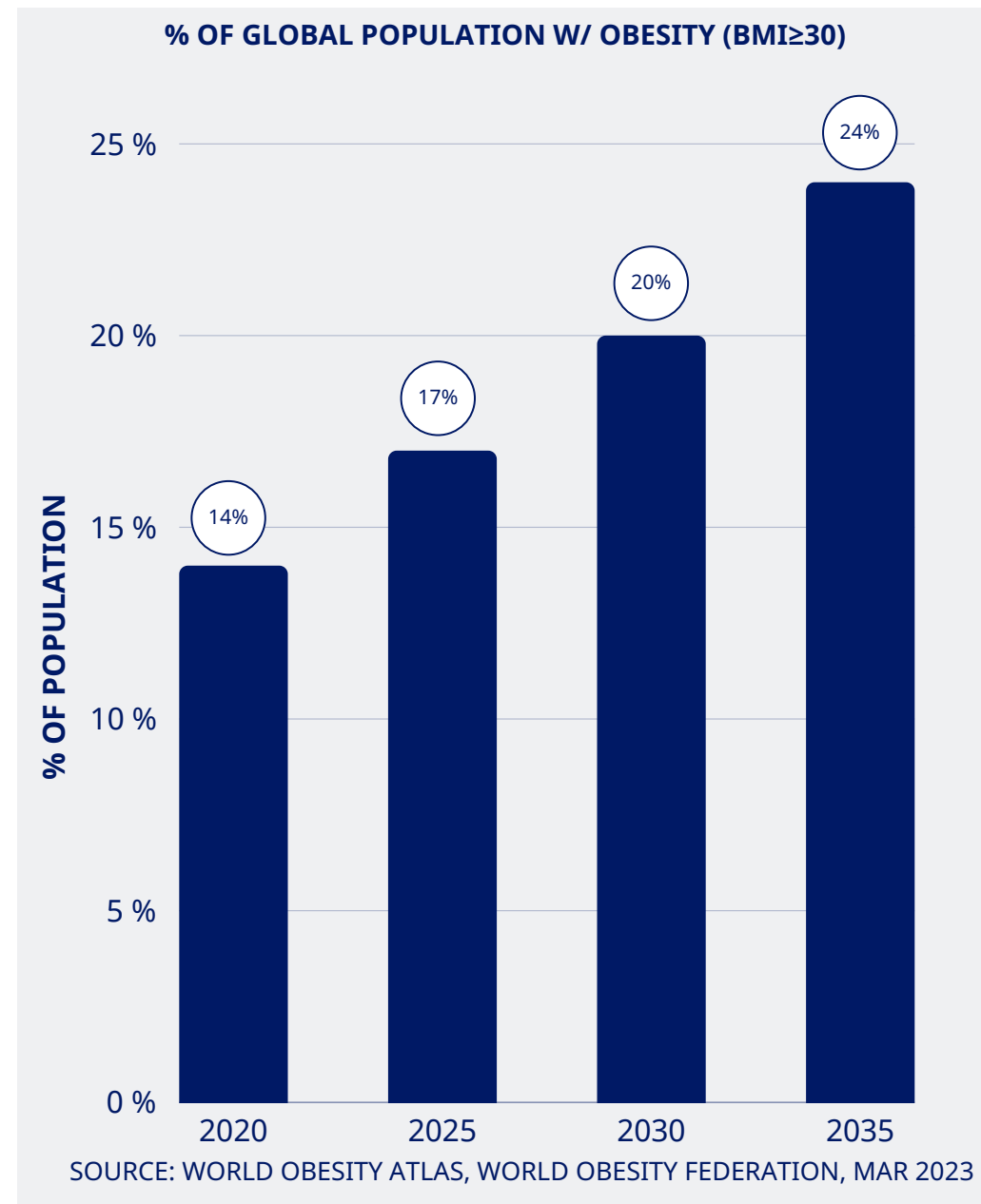
The economic burden of managing obesity and its consequences is set to escalate from US\$1.96 trillion to US\$4 trillion by 2035, potentially leading to a 2.9% reduction in global GDP in the same year.



% increase for boys from 2020-2035



% increase for girls from 2020-2035



# Core Beliefs

Three core beliefs expected to have a significant impact on future market.

## HEALTHCARE SYSTEM CANNOT SUSTAIN TREATING THE MANY



The increasing prevalence of obesity alongside its nature as a heterogeneous disease will put tremendous pressure on healthcare systems that are already lacking sufficient resources and capabilities to care for all, resulting in prioritisation of severe cases for obesity care and reimbursement.

## PWO REMAIN CENTRAL DECISION MAKER

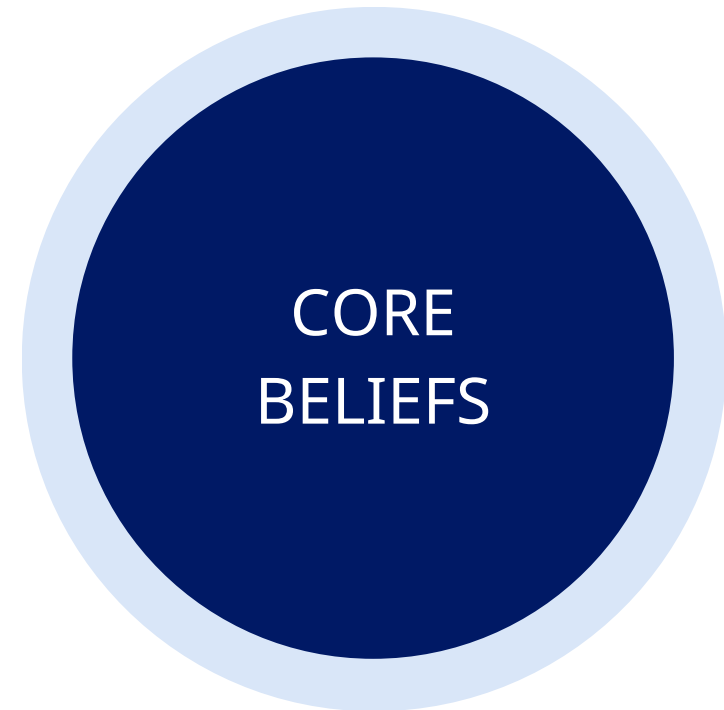


People with obesity play a central role in deciding on their care. The influence of these individuals in decision-making is expected to rise, driven by an increasing focus on overall health and well-being. This trend is further propelled by a substantial number of people with obesity seeking assistance beyond traditional healthcare systems and covering expenses out of pocket. <sup>1</sup>

## BIOLOGY AND TECHNOLOGY EXPAND INNOVATION FRONTIERS



Innovation is expected to intensify with tech giants, digital players, biotech and large PharmaCos focusing on holistic patient-centric solutions beyond weight loss to impact health gain.



<sup>1</sup> Note that prescribers are responsible for the final decision on which medicine(s) to prescribe.

# The Changing Narrative

While the longstanding narrative surrounding obesity has often centred on personal responsibility and lifestyle choices, there is a growing recognition of the multifaceted nature of this issue. Beyond mere habits, obesity is increasingly understood as a complex biological condition with genetic, environmental, and socio-economic factors at play. This evolving understanding is reshaping societal attitudes towards obesity, challenging the prevailing stigma that individuals with obesity face.

Traditionally, weight stigma has perpetuated discrimination and hindered access to adequate healthcare for those affected. However, a paradigm shift is underway, emphasising that obesity is not solely a matter of willpower but a chronic disease requiring comprehensive treatment and support. As this perspective gains traction, there is hope for greater empathy, inclusivity, and effective interventions to address obesity in our communities, including in the hypothetical country of Obestria.

This collective movement towards empathy, societal recognition, government acknowledgment, and patient advocacy marks a comprehensive transformation in how obesity is perceived and addressed in various sectors. This change is critical as the increasing recognition of obesity as a disease may cause additional people longing for treatment to

seek professional help.

The change in the obesity narrative is multi-faceted.

A notable change is the shift to a more empathetic tone in media, an increased recognition among societies within healthcare, more government recognition, and patient groups who are encouraging PwO to seek treatment.

*“Together with our partners, we are committed to driving change in how the world sees, prevents and treats obesity. As leaders within the science of obesity, we are working to make obesity a healthcare priority, defeat stigma and support better access to evidence-based care.”*



Juan Pablo Villasenor, Mexico  
Living with cardiovascular disease and obesity

# Emerging Trends in Patient Behaviour

Diving into the emerging patient and consumer trends reveal several noteworthy developments.

## Changing Demographics

Worldwide, populations are aging, marking a departure from historical patterns of youthful demographics and shorter lifespans.

This aging trend is primarily driven by two demographic shifts: a noticeable increase in life expectancy and a less overt but impactful decline in birth rates. With reduced birth rates, younger generations become relatively smaller compared to older ones, resulting in an overall rise in the average age of the population.

## Lifestyle

There is a notable trend towards lifestyle interventions as a key aspect of addressing health issues, including obesity.

Patients and consumers are increasingly seeking holistic solutions that encompass not only pharmaceutical interventions but also lifestyle changes to achieve sustainable health outcomes.

## Consumer-like behaviour

An evident shift is underway in the healthcare sector, where patients are increasingly adopting a proactive stance in determining their treatment options.

This change is marked by a desire for personalised experiences, convenient solutions, and an active role in managing their health.

Notably, this trend is influencing how healthcare companies, including those focused on obesity treatment, engage with their target audience.

## Healthcare

The evolving landscape of healthcare is impacting how obesity is approached and managed.

There is an increased emphasis on patient-centered care, preventive measures, and a broader understanding of health that goes beyond traditional medical interventions. This holistic view is

influencing the strategies of companies involved in therapy areas of obesity.

## A tech perspective on the industry

The industry is experiencing a technological shift, with advancements in digital health and telemedication gaining prominence.

There is a recognition that can play a crucial role in managing health conditions, including obesity.

However, the pharmaceutical industry, in general, may be perceived as lagging behind in adopting these technological innovations compared to other sectors.



Hataichanok Singhaseni, Thailand  
Living with obesity



# Beyond Medications: The PwO Treatment Experience

- 34 The PwO Treatment Experience
- 35 Novo Nordisk Aspiration for a Seamless PwO Experience
- 36 The Potential Ripple Effects

Wynford Eagle, UK  
Living with obesity

# Beyond Medications: The PwO Treatment Experience

## The Treatment Experience

Novo Nordisk's treatment experience is centred around patient care, particularly for those living with chronic conditions like diabetes and obesity. Their approach emphasises not only the delivery of innovative medications but also the provision of comprehensive care plans, which may include patient education, dietary guidance, and lifestyle management support (subject to local requirements).

Patient support solutions of the kind mentioned are regulated very differently depending on the market, and are in some countries and circumstances not permissible.

## PwO support solutions

- Local and global digital offerings helping PwO navigate the treatment experience.
- Extensive support resources to ensure long-term change. Includes a dedicated Health Coach and a personal web portal that tracks progress.
- Also, a variety of material on financials, including tools that can help detect if a medication is covered by the patient's insurance plan.

## Healthcare professional locator

- Embedded in the "Truth About Weight" site, this function locates weight management providers near the person with obesity.
- Weight management providers specialise in helping people manage weight. They are specially trained to treat obesity and other health conditions related to weight management and obesity.
- Management providers create individual plans that consider your medical needs, preferences, culture, traditions, lifestyle.

## Truth About Weight

Part of several initiatives trying to change the narrative of obesity.

Obesity is more than just a lifestyle issue; it is a heterogeneous and complex disease.

Based on a BMI calculator the patient is shown a variety of recommendations, these are not recommendations related to medical advice or prescription services.

The site takes a holistic approach, combining medical treatment options with lifestyle changes such as nutrition, mental health, and sleep.

### Find your local weight management provider

Talk to your weight management provider about treatment options that could prevent the weight you lose from coming back.

Select your country ▾

Find now



[Truth About Weight: Link](#)

# Novo Nordisk Aspiration for a Seamless PwO Experience

When I interact with Novo Nordisk Obesity Medications treatment, I feel understood and met where I am



I learn about preventative measures and intervention options to take action on my situation



I get personalised support on long term weight management

I get help and guidance on how to live better with weight

I get relevant perspectives and opportunities when I engage in community conversations about obesity

My HCP and I know which treatment path to expect based on data from PwO like me and can plan ahead



I get personalised treatment experiences through digital tools and support to get back on track when I fatigue

# The Potential Ripple Effects

With the increased focus on treating obesity as a heterogeneous and complex disease the impact will go beyond the pharmaceutical industry and is expected to change the world as we know it today.

As obesity is expected to affect more than 50% of the population by 2035, increased treatment efforts will change sectors spanning from the fast-food industry to financial services.

The ripple effects can be divided into three main categories: Healthcare delivery, Consumption, and Lifestyle.

The high rates of obesity significantly impact healthcare, potentially reshaping the industry's landscape.

This includes reduced demand for weight-loss meal providers, alterations in insurance premiums, and Obesity Medications being covered under programs like the US Medicare Prescription Drug Act. Research reveals a shift in consumer buying habits, with a notable decrease in calorie intake

and meal frequency due to Obesity Medications, leading to less consumption of high-sugar and high-fat foods.

By 2035, demand for certain food categories might drop by significantly, while products like protein shakes and bars could see increased popularity. Beverage choices are changing too, with a considerable decline in sugary and alcoholic drinks.

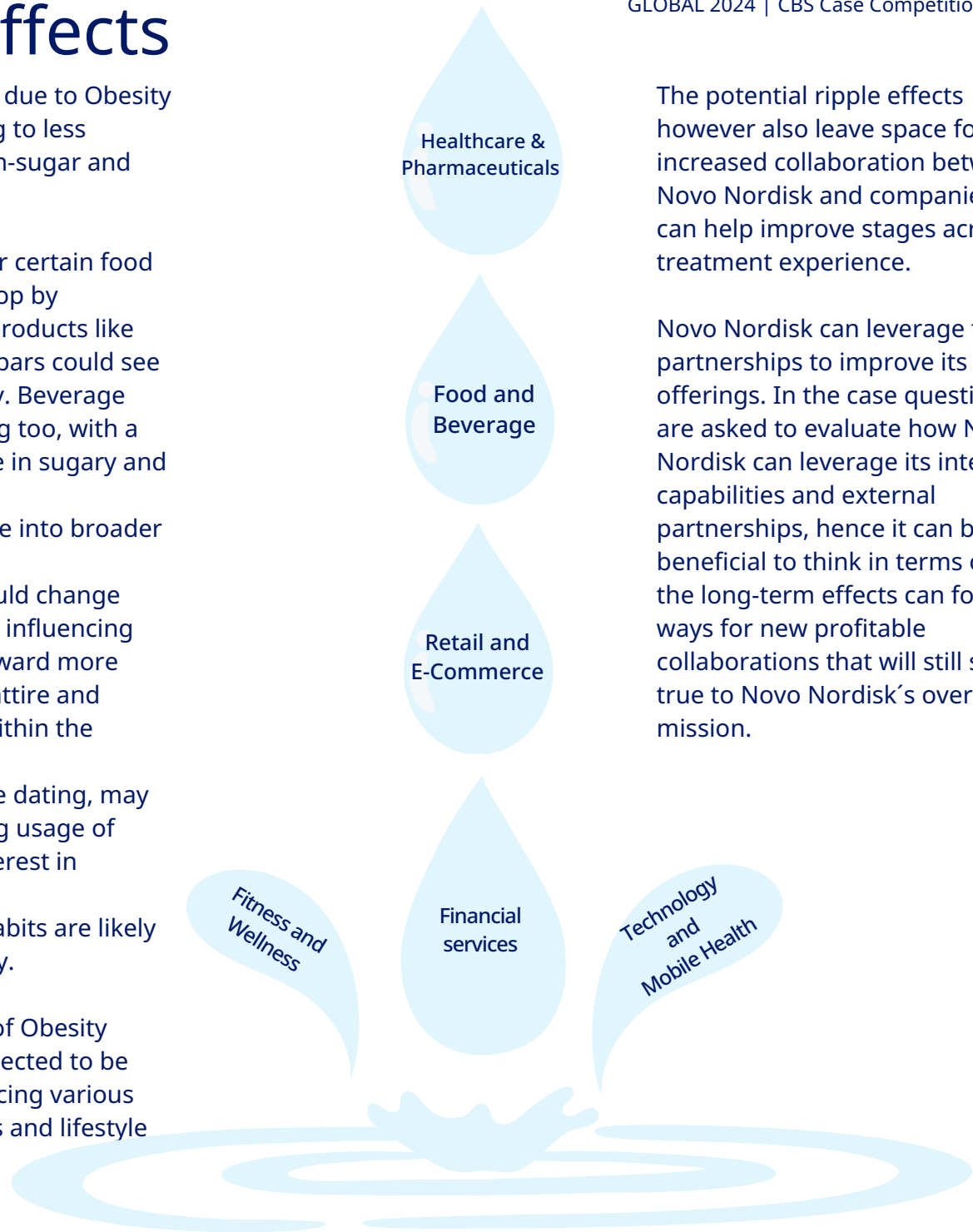
These changes ripple into broader lifestyle alterations.

Improved health could change dietary preferences, influencing trends in fashion toward more casual and athletic attire and affecting demand within the beauty industry.

Social behaviors, like dating, may also evolve, boosting usage of dating apps and interest in intimate apparel.

Fitness and travel habits are likely to adjust accordingly.

Overall, the effects of Obesity Medications are expected to be widespread, influencing various consumer behaviors and lifestyle sectors.



The potential ripple effects however also leave space for increased collaboration between Novo Nordisk and companies that can help improve stages across the treatment experience.

Novo Nordisk can leverage these partnerships to improve its patient offerings. In the case question, you are asked to evaluate how Novo Nordisk can leverage its internal capabilities and external partnerships, hence it can be beneficial to think in terms of how the long-term effects can foster ways for new profitable collaborations that will still stay true to Novo Nordisk's overall mission.

# Closing Remarks

Novo Nordisk and its partners are dedicated to reshaping global perceptions, prevention, and treatment approaches toward obesity. The escalating global concern surrounding obesity presents opportunities for Novo Nordisk to enhance its comprehensive strategy for addressing this issue. However, societal and cultural factors, along with issues of access, play pivotal roles in effectively reaching and treating PwO.

Given the rapid growth of the Obesity Medications market, it is imperative for Novo Nordisk to sustain its leading position in the industry.

This necessitates a re-thinking of both internal capabilities and external partnerships. In response to this challenge, your task is to devise innovative solutions that will enable Novo Nordisk to not only maintain its competitive edge but also uphold its global market leadership.

The emphasis should be on demonstrating that a superior treatment experience for People with Obesity (PwO), fostering patient awareness and education, and generating profits are all achievable simultaneously.

The solutions must be designed for Obestria, but may be globally scalable.

It is essential to state any assumptions made during the analysis to ensure that the proposed solutions are both implementable and viable, aligning with Novo Nordisk's core values.

## Evaluation

Your recommendation will be evaluated based on the following, equally weighted, criteria:

- 1 The creativity of your solution.
- 2 The depth of analysis and research conducted to support your answers.
- 3 The feasibility of implementing the recommendations.
- 4 The validity of the business case.
- 5 The structure, storyline, and presentation of your recommendations
- 6 Compliance and adherence to legal requirements including limiting solution to address fictional country Obestria and no mentioning of branded medications.

### Disclaimer

Novo Nordisk asks you to think beyond making an APP.

*Happy case solving!*



- 39 Appendix 1: Financial Highlights
- 40 Appendix 2: Sales by Geographic Area
- 41 Appendix 3: Sales by Therapeutic Area

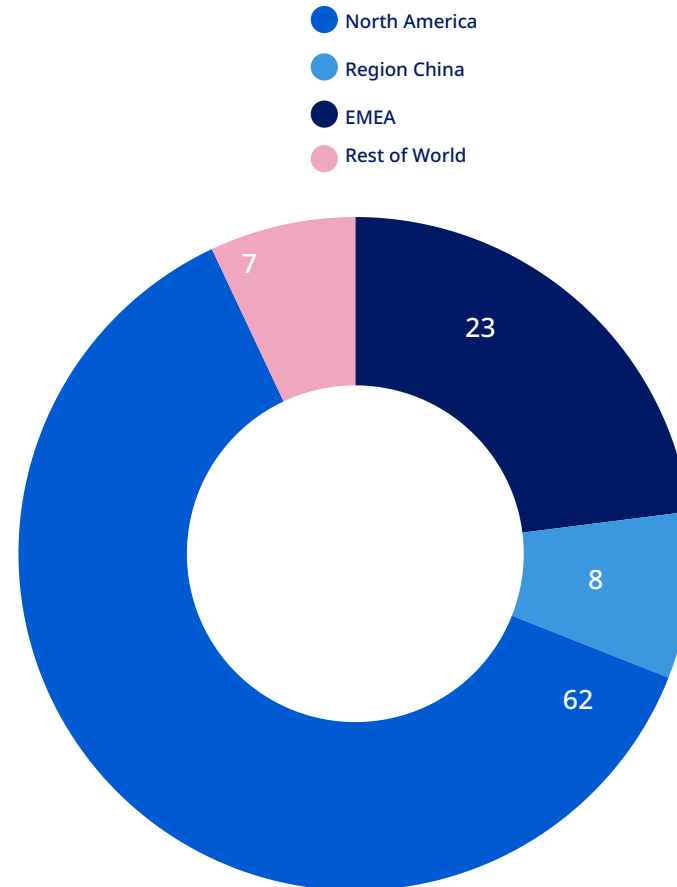
# Financial Highlights

DKK million	2019	2020	2021	2022	2023	2022-23	DKK million	2019	2020	2021	2022	2023	2022-23
<b>Financial performance</b>						<b>Change</b>	<b>Financial ratios</b>						<b>Change</b>
Net sales	122,021	126,946	140,800	176,954	232,261	31%	Gross margin <sup>3</sup>	83.50%	83.50%	83.20%	83.90%	84.60%	
Sales growth as reported	9.1%	4.00%	10.90%	25.70%	31.30%		Sales and distribution costs in percentage of sales	26.10%	25.90%	26.30%	26.10%	24.40%	
Sales growth in constant exchange rates <sup>1</sup>	5.60%	6.70%	13.80%	16.40%	35.60%		Research and development costs in percentage of sales	11.70%	12.20%	12.60%	13.60%	14.00%	
Operating profit	52,483	54,126	58,644	74,809	102,574	37%	Operating margin <sup>3</sup>	43.00%	42.60%	41.70%	42.30%	44.20%	
Operating profit growth as reported <sup>1</sup>	11.10%	3.10%	8.30%	27.60%	37.10%		Net profit margin <sup>3</sup>	31.90%	33.20%	33.90%	31.40%	36.00%	
Operating profit growth in constant exchange rates	5.60%	6.80%	12.70%	14.60%	43.70%		Cash to earnings <sup>1</sup>	88.40%	67.80%	61.40%	103.30%	81.60%	
Depreciation, amortisation and impairment losses	5,661	5,753	6,025	7,362	9,413	28%	Return on invested capital <sup>1</sup>	98.00%	82.80%	69.00%	73.60%	88.50%	
EBITDA	58,144	59,879	64,669	82,171	111,987	36%	<b>Share performance and capital allocation</b>						
Net financials	-3,930	-996	436	-5,747	2,100		Basic earnings per share/ADR in DKK <sup>3,5</sup>	8.21	9.03	10.4	12.26	18.67	52%
Profit before income taxes <sup>3</sup>	48,553	53,130	59,080	69,062	104,674	52%	Diluted earnings per share/ADR in DKK <sup>3,5</sup>	8.19	9.01	10.37	12.22	18.62	52%
Effective tax rate	19.80%	20.70%	19.20%	19.60%	20.10%		Total number of shares (million), end of year <sup>3,5</sup>	4,800	4,700	4,620	4,560	4,510	-1%
Net profit <sup>3</sup>	38,951	42,138	47,757	55,525	83,683	51%	Dividend per share in DKK <sup>3,4,5</sup>	4.18	4.55	5.2	6.2	9.4	52%
Purchase of property, plant and equipment <sup>3</sup>	8,932	5,825	6,335	12,146	25,806	112%	Total dividend (DKK million) <sup>4</sup>	19,651	21,066	23,711	27,950	41,987	50%
Purchase of intangible assets	2,299	16,256	1,050	2,607	13,090	402%	Dividend payout ratio <sup>3,5</sup>	50.50%	50.00%	49.60%	50.30%	50.20%	
Cash used for acquisition of businesses <sup>1</sup>	--	--	18,283	7,075	--		Share repurchases (DKK million) <sup>3,5</sup>	15,334	16,855	19,447	24,086	29,924	24%
Free cash flow	34,451	28,565	29,319	57,362	68,326	19%	Closing share price (DKK)	194	214	368	469	698	49%
Total assets	125,612	144,922	194,508	241,257	314,486	30%							
Equity	57,593	63,325	70,746	83,486	106,561	28%							

1. See Non-IFRD financial measures. 2. EBITDA is defined as 'net profit', adjusted for 'income taxes' and 'financial items', 'depreciation and amortisation' and 'impairment losses'. 3. See Financial definitions in annual rapport 2023. 4. Total dividend for the year including interim dividend of DKK 3.00 per share, corresponding to DKK 13,430 million, which was paid in August 2023. The remaining DKK 6.40 per share, corresponding to DKK 28,557 million, will be paid subject to approval at the Annual General Meeting in March, 2024.

5. As of 13 September 2023, the trading unit of Novo Nordisk B shares listed on NASDAQ Copenhagen and ADRs listed on the New York Stock Exchange (NYSE) was changed from DKK 0.20 to DKK 0.10. Comparative figures have been restated to reflect the change in trading unit from 0.20 to DKK 0.10.

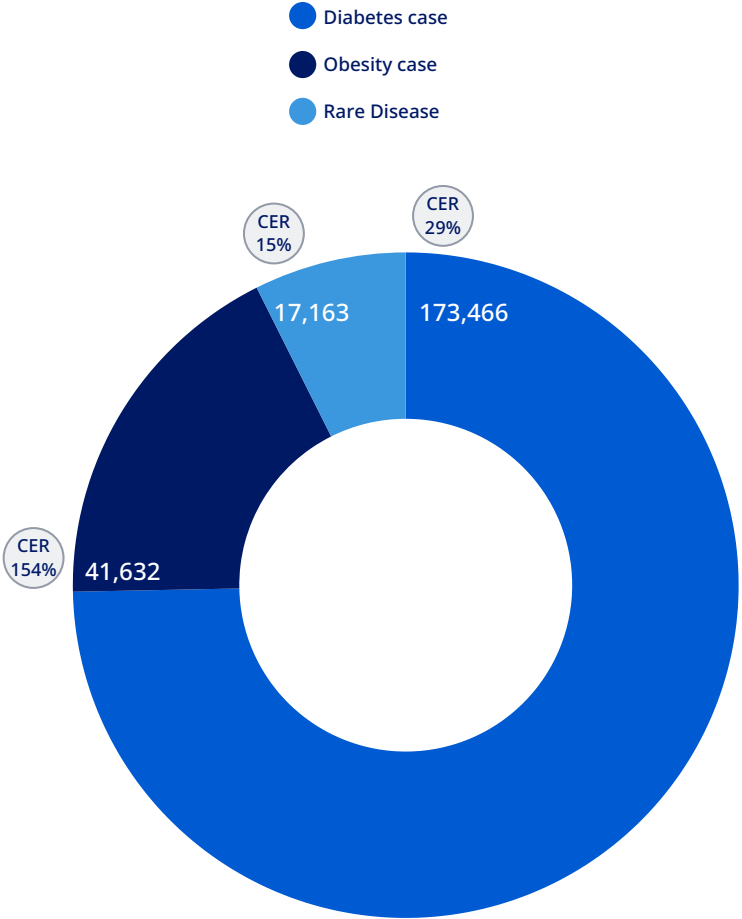
## Net Sales by Business Segments and Geographical Areas, Value (%)



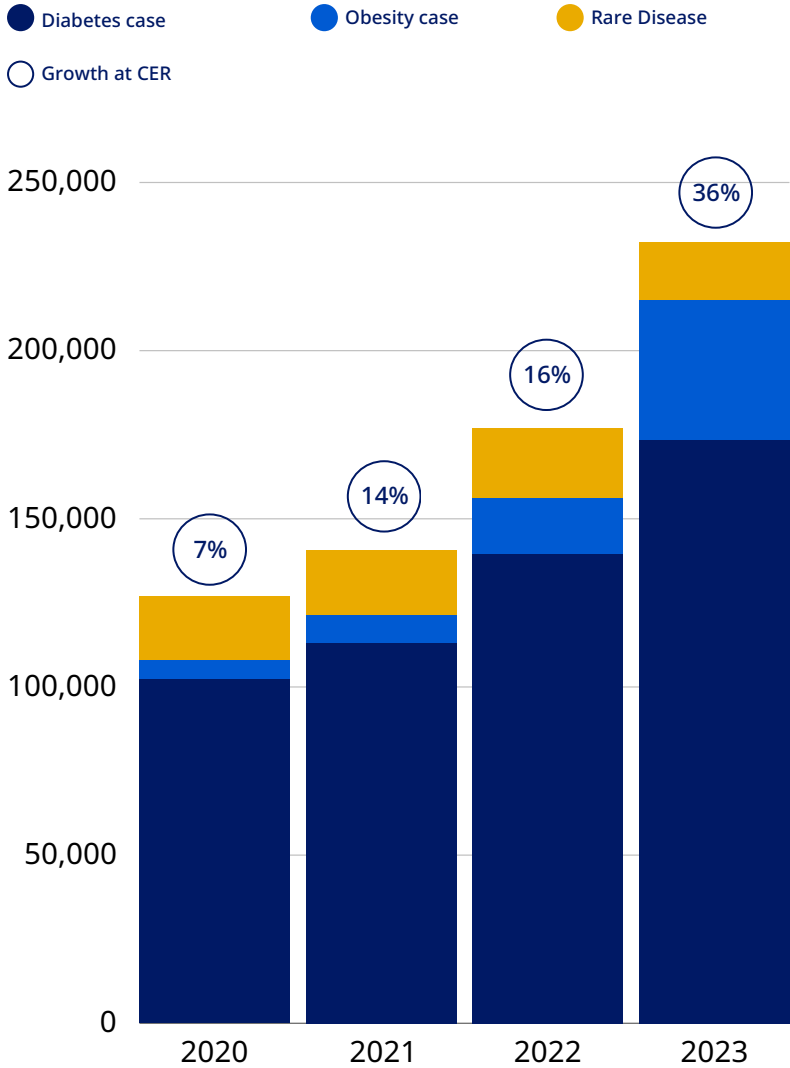


# Sales by Therapeutic Area

**2023**  
Sales by therapeutical area  
(DKK million)



Sales by therapeutical area  
(DKK billion)





February 2024

