



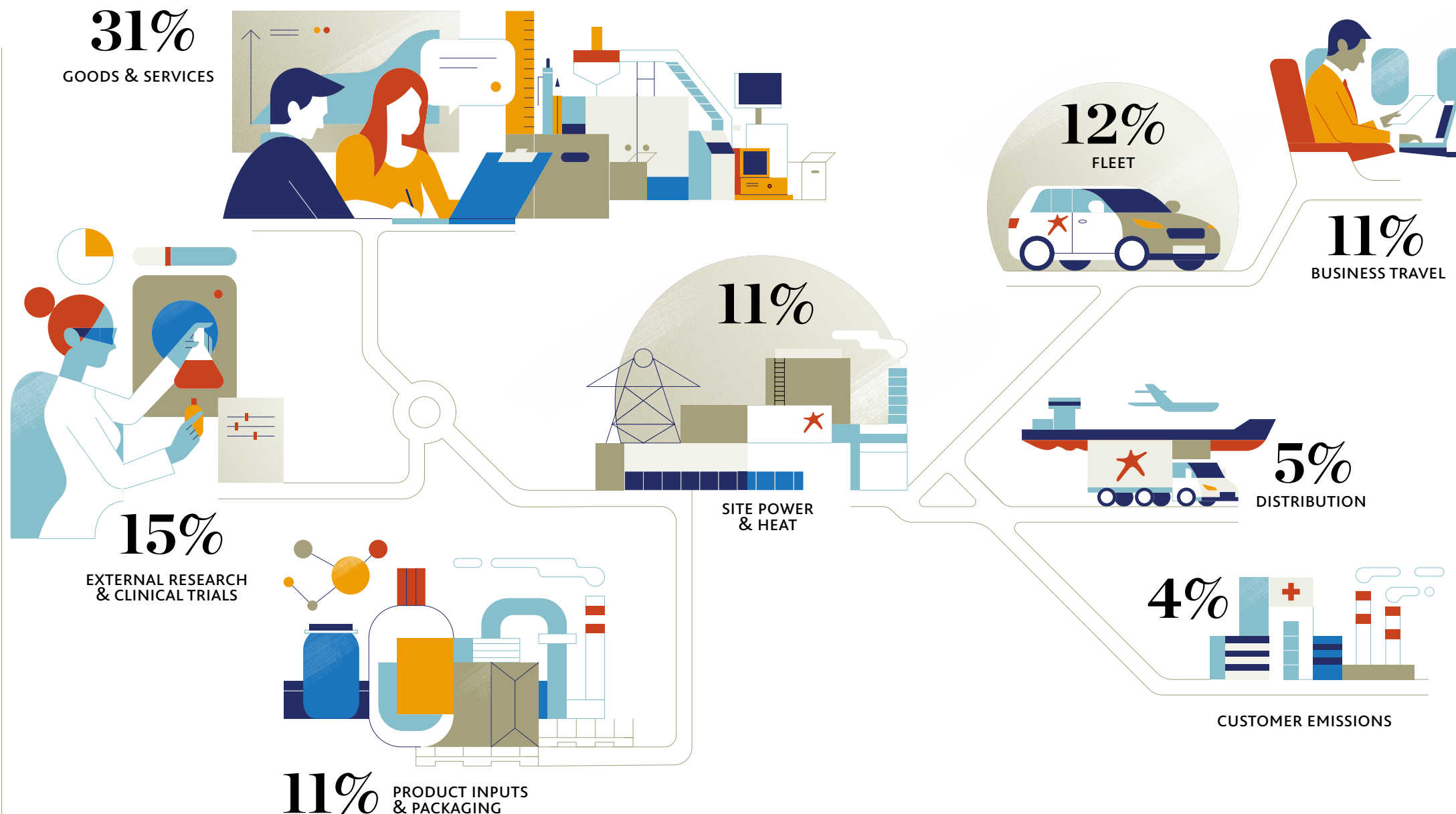
# Transition plan towards zero emissions

Published in 2023

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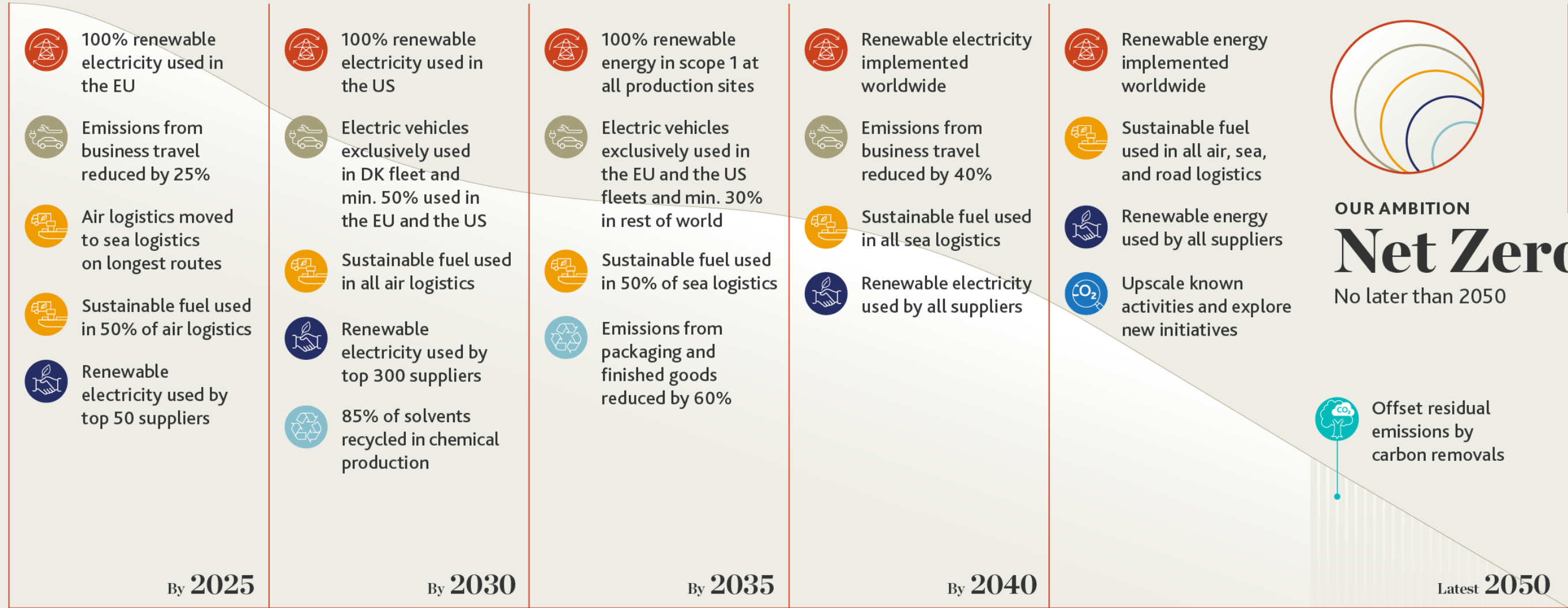
The transition plan was approved by Lundbeck's Executive Management in November 2022.

The transition plan consists of this publicly available document and a back-up document that in combination follows the guidance of the Carbon Disclosure Project (CDP), Taskforce on Climate-related Financial Disclosures (TCFD), and the new European Sustainability Reporting Standard (ESRS)

**SHARE OF BASELINE 2019 EMISSIONS**

**TOTAL BASELINE EMISSIONS:  
194.487 TONS CO<sub>2</sub>-e**

# Towards zero emissions



BASELINE 2019



OUR AMBITION  
**Net Zero**  
No later than 2050

Near-term Net Zero target achieved

# Ambitions and targets

Lundbeck’s ambitions and targets within climate action addresses carbon emissions across our entire value chain – from operations and production of raw materials to research, development, manufacturing, marketing, distribution and sale of pharmaceuticals across the world.

## Approach

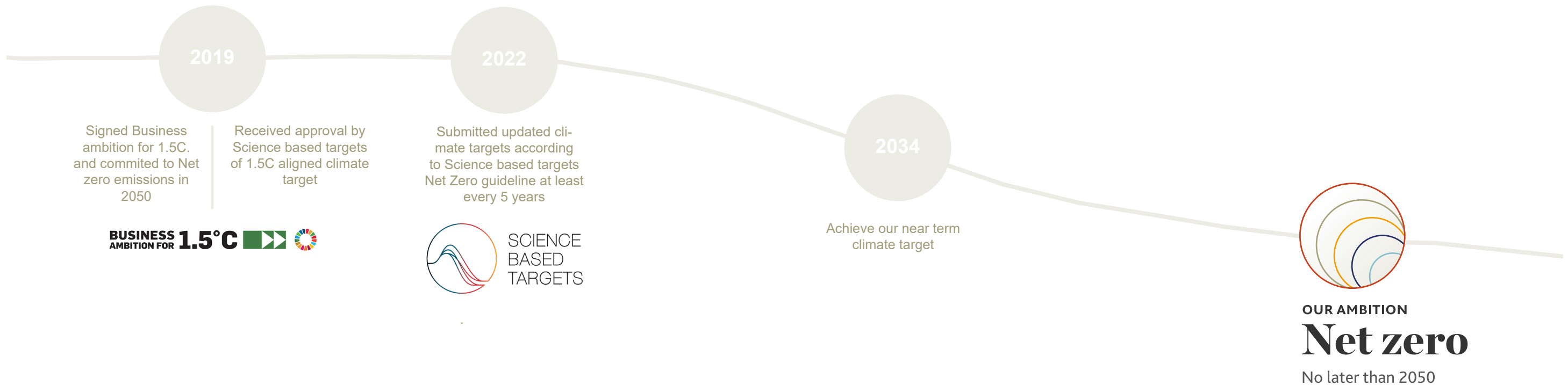
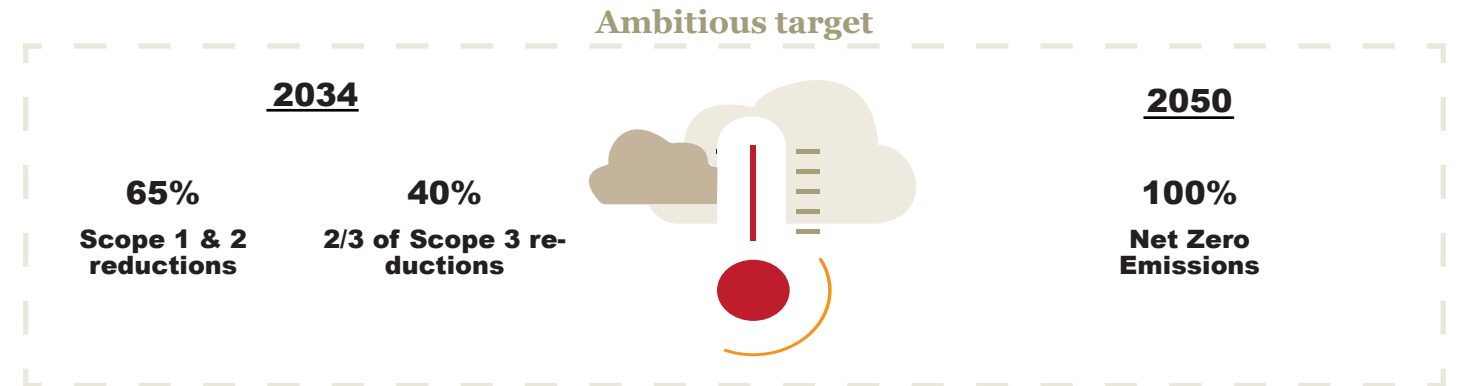
Historically, we have demonstrated our commitment to cut carbon emissions and have been at the forefront of corporate leadership on climate change. We believe we have a responsibility to act. That is why we have committed to net-zero emissions.

Science and innovation are at the heart of what we do. It enables us to foster ground breaking discoveries within neuroscience, but it also shapes our approach within climate action. We believe in science and our targets follow Science Based Targets guidelines and are updated accordingly to reduce emissions in line with the goals of the Paris agreement and EU targets.

## Challenges

Our main challenges for reaching our ambitions and targets are related to:

- Our Scope 3 value chain emissions that constitute app. 80% of total emissions. Close collaboration with suppliers and business partners is therefore key to achieve our targets.
- Our direct Scope 1 emissions from our sites and fleet, where we are dependent on further development of renewable fuels and electricity, capacity of the electricity grid, and the spread of available charging stations.



# Energy in operations



Emissions from our Scope 1 & 2 operations stem from 4 production sites and 4 research, development, and administrative sites in Europe and USA which makes up 11% of our total carbon footprint.

## Approach

Since 2006 we have been dedicated to minimizing our energy consumption by optimizing procedures and renewing equipment and will continue going forward. Additionally we have replaced or intend to replace on-site fossil fuel by renewable fuels and investigate our possibilities for transition to electrical equipment.

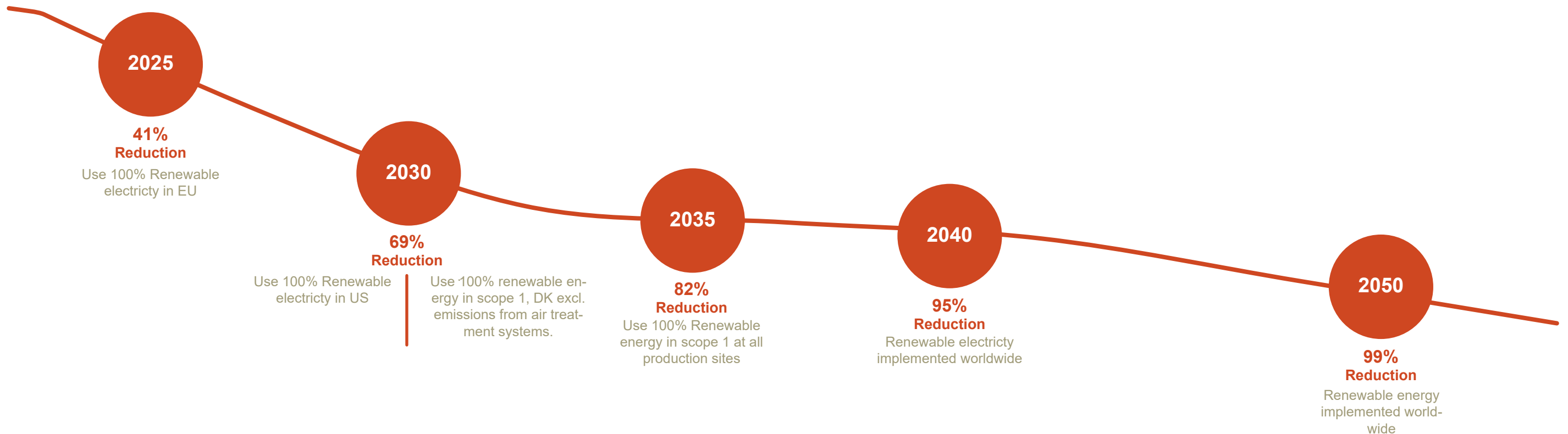
New technologies like Power To X (PTX) as alternative to fossil fuels and possibilities for storage of renewable electricity in batteries will continuously be explored.

From January 2022, the entire electricity consumption at Danish sites has been supplied with renewable electricity. Next step is to supply EU, USA and the rest of our affiliates worldwide with renewable electricity. The preferred approach is to install on-site electricity production or establish Power Purchase Agreements (PPA). Secondly we will buy Renewable Energy Attribute Certificates as defined by RE100 Technical guidance.

## Challenges

Our main challenge for reaching zero emissions lies within our direct Scope 1 emissions from sites:

- Our boilers for production supply and heat are partially fueled by renewable fuels, however the supply of renewable fuels can be limited.
- Complete conversion to electrical equipment or renewable fuel can be challenging due to insufficient grid capacity and other supply related challenges.
- Our air treatment systems are partially fueled by our own waste solvents that otherwise would have been transported for external incineration, resulting in a lighter carbon emission. Emissions from operation of air treatment systems will be a part of our residual emissions that will be off-set by carbon removals.



# Optimization & circularity



Indirect emissions (Scope 3) from product input to our production and facilities stems from supplier emissions related to production of the components and raw materials that Lundbeck procure worldwide. It takes up 11% of our total carbon footprint.

## Approach

For several years we have recycled solvents used in our chemical production, thus reducing the amount of new procured solvents and related indirect carbon emissions. In 2019, we recycled 65% of the solvents, corresponding to a mitigation of approximately 11 tons carbon emissions. We aim to increase recycling to at least 85% by installing additional recycling capacity at our chemical production site in DK or by entering additional agreements with the external recycling companies.

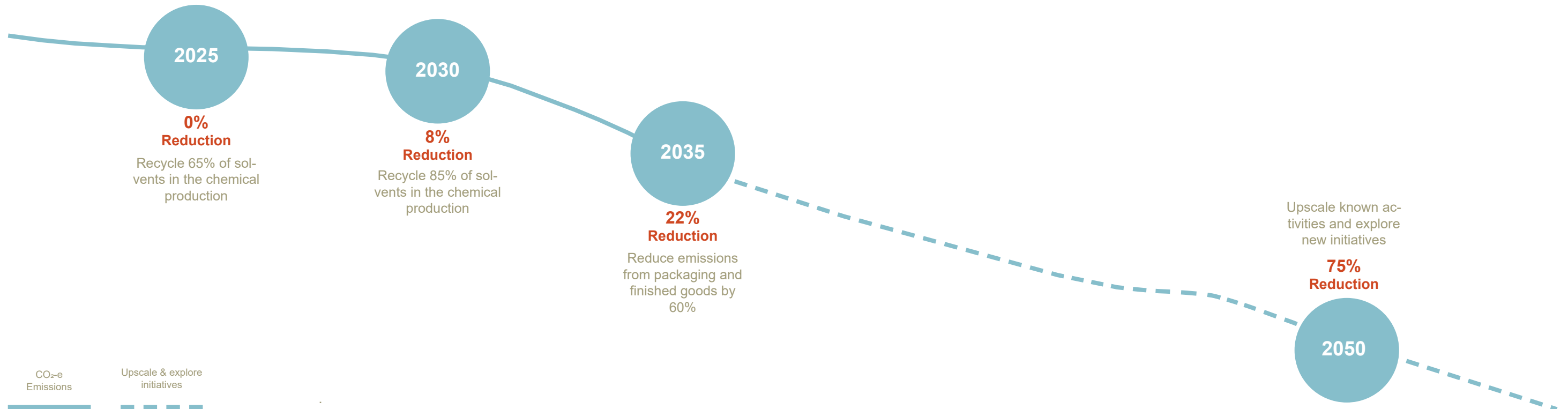
When developing new products we will explore our possibilities within eco-design and circular economy to reduce the amount of materials used while choosing regenerative and “environmental friendly” materials that are designed for recycling systems. E.g. by designing packaging materials that can be recycled or re-used and minimise consumption and waste by using thinner cardboard for the secondary packaging, thinner paper for leaflets and convert to electronic leaflets and remove paper leaflets as soon as legislation allows.

This is supported by our use of Green chemistry principles when designing and optimizing new chemical synthesis with the aim of reducing raw material consumption, optimize yield and substitute to less hazardous chemicals.

## Challenges

Our main challenge is related to the medical legislation that prioritizes patient safety first and upholds strict requirements to purity of raw materials, protection of medicine etc. making it difficult to get new production methods approved e.g.:

- Substitution of aluminium and PVC in our primary packaging materials
- Phasing out paper leaflets in favor of electronic leaflets
- Substitution to biobased raw materials like biobased ethanol rather than synthetic
- High quality standards towards market products, e.g. product durability, resulting in high amounts of waste



# Greening logistics



Indirect emissions (Scope 3) from upstream transportation of goods and services and distribution of our products constitute 5% of our total carbon footprint emissions. Of this, approximately 50% stems from road transport, 40% from airborne transportation and only 3% stems from seaborne transportation.

### Approach

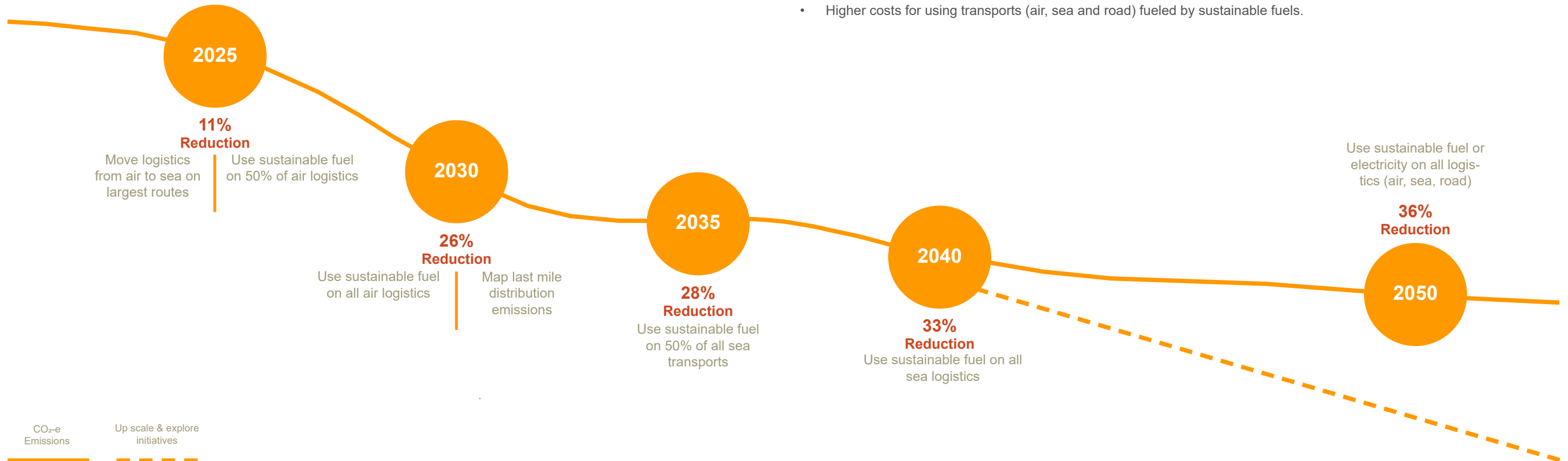
Transitioning as much airborne transportation to seaborne as possible is the preferred and most efficient way to reduce emissions from distribution of our products. Calculations of already moved transports from air to sea show that emissions can be reduced by app 90% when doing so.

As our suppliers gradually can offer transports powered by electricity or sustainable fuels we will choose these less carbon intensive transports.

### Challenges

Our main challenges are related to:

- Limited knowledge and maturity outside EU about less carbon intensive transports making it more difficult to explore and implement such solutions.
- Longer transport duration when converting from air to sea transports can challenge customer demand.
- Biologic products have higher quality requirements for cooling during transportation with large energy consumption compared to chemically synthesized products.
- Higher costs for using transports (air, sea and road) fueled by sustainable fuels.



CO<sub>2</sub>-e Emissions      Up scale & explore initiatives

# Sustainable sourcing



Indirect emissions (Scope 3) from purchasing goods and services such as clinical trials, consultancies, marketing, and machinery are the largest contributors to our carbon footprint. These supplier emissions constitute 46% of our total carbon footprint emissions.

## Approach

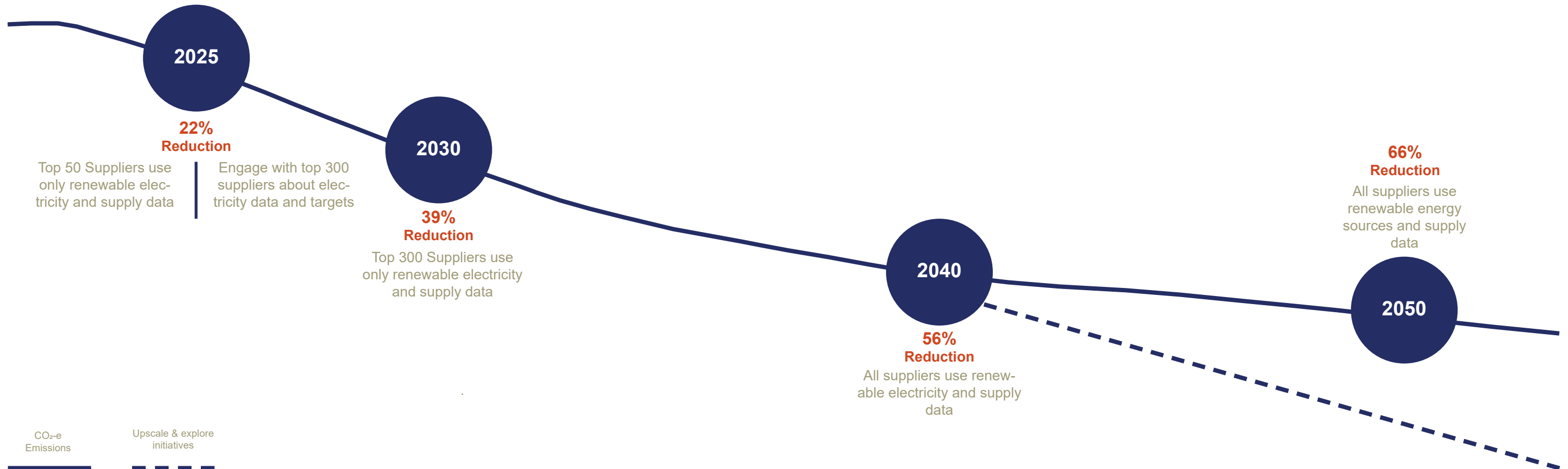
Collaboration with our suppliers about carbon reductions is crucial to achieve our climate ambition. Together with our suppliers we will find ways to reduce emissions e.g. by contractual commitments to use renewable electricity in operations. Reducing emissions from travel activities is also key for many of our suppliers. Within clinical trials we will cooperate with the contract research organisations about increasing the use of remote monitoring to limit the number of travels and encourage increased use of electrical vehicles when travelling by road.

To track improvements at our suppliers we will gather emission data and gradually change from the current situation where app. 60% of data are calculated based on emission factors per spend or volume to actual emissions informed by the suppliers.

## Challenges

Our main challenges are related to

- The variation of climate knowledge, awareness and ambitions at our suppliers. Some suppliers can easily deliver emission data while others are less mature in carbon footprint calculations.
- The lack of a worldwide common system for calculating and collecting emission data results in a variety of calculation methods and several different platforms for emission reporting.
- Differences in climate ambitions both at our suppliers and partners, but also in operating countries.



CO<sub>2</sub>-e Emissions

Upscale & explore initiatives



# Cleaner Travel



Emissions from our fleet (Scope 1) and business travel (Scope 3) across all Lundbeck sites worldwide in research, development, production and sales affiliates takes up 11% of our total carbon footprint.

## Approach

For our fleet we will gradually move to more energy efficient cars and change to Electrical Vehicles (EV's). In 2021, the Head-quarter's car policy was updated requiring cars in the fleet to be at least in energy class A+ according to the European energy efficiency classification system. The car policies worldwide will be revised continuously to account for the pace of technological advances and regulation.

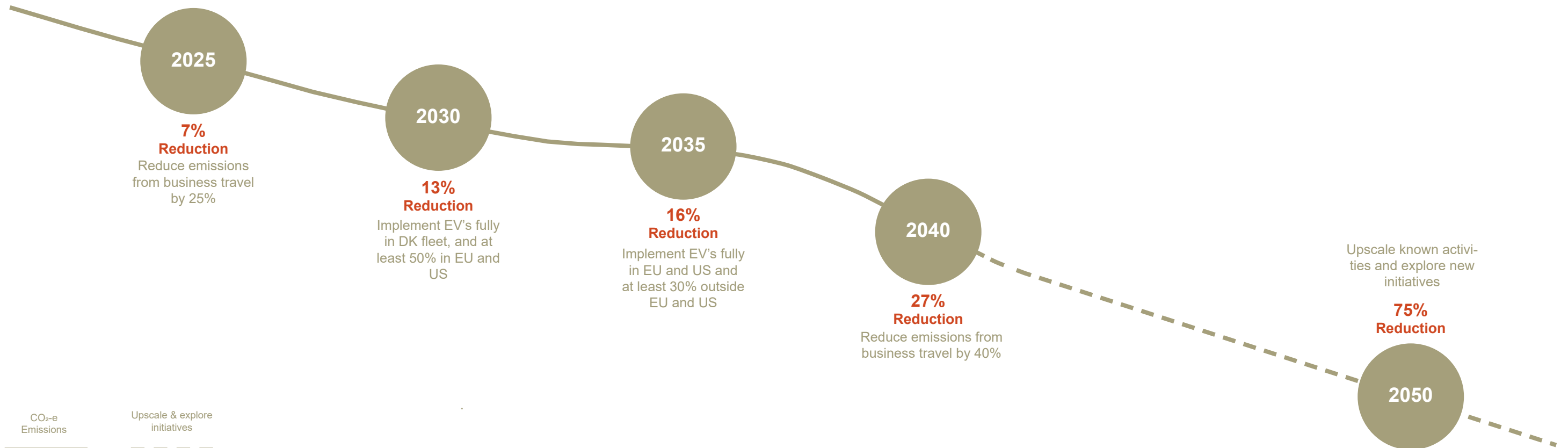
Similarly, there was a new Global Travel Policy launched in 2022, which is focused on business travel. The policy emphasizes three principles:

- Avoid travel when possible and use digital options to stay connected
- When travelling, move towards less carbon intensive options
- Promote climate awareness by setting targets and implementing monitoring systems.

## Challenges

Our main challenge for our fleet is related to:

- The current state of infrastructure of charging stations does not appropriately accommodate our driving sales force. The transition is expected to be faster in Europe than in the U.S. and Canada. Another challenge is related to managing and monitoring charging patterns to favour off-peak hours, where electricity is cheaper.
- The main challenge for business travels relates to the pace and quality of sustainable fuel types that gradually are being developed and used in aircrafts and sea vessels.



# Carbon removals



As our long-term ambition is net zero emissions in 2050, all residual greenhouse gas emissions that cannot be eliminated by reduction initiatives must be neutralized by carbon removals. Our carbon emission footprint will be updated annually and adjusted with the latest emission factors and supplier specific emission data. By doing so, we will continuously be able to track the need for carbon removals. Based on the already identified reduction possibilities, an estimate for residual emissions that must be neutralized by carbon removals is currently 20 – 30% of our total emissions (Scope 1, 2 and 3).

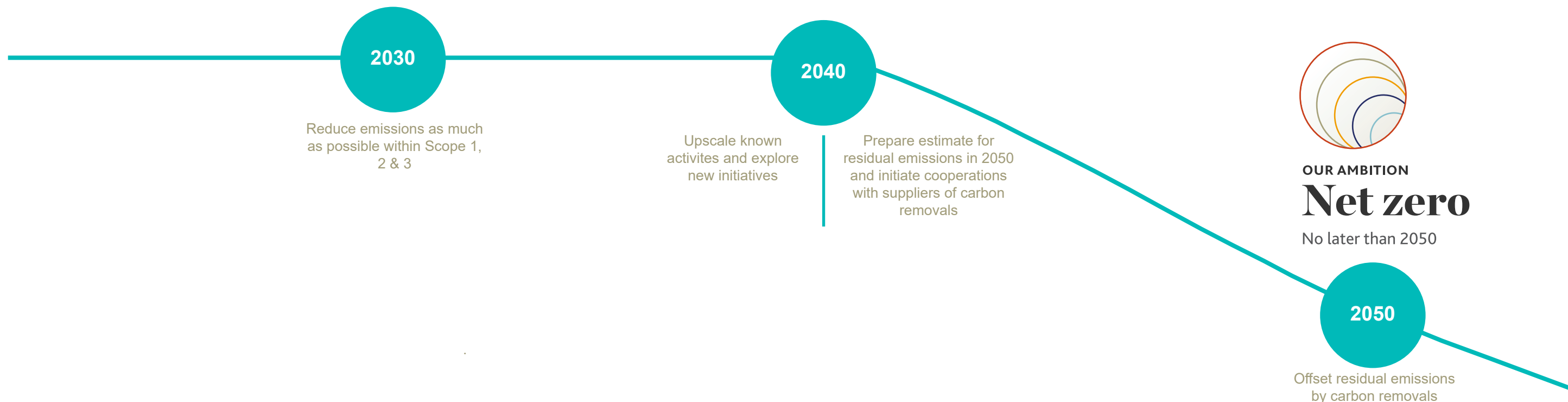
## Approach

Ensuring that the emissions associated with our business and products are reduced towards zero as far as possible is our top priority. Secondly residual emissions will be balanced by carbon removals, through either natural or technological carbon sequestration (for example, reforestation or carbon capture and storage), thereby achieving net-zero emissions.

To secure the quality of the solutions only certified carbon removals following guidance in the Green House Gas protocol and EU rules will be used.

## Challenges

The main challenge is to navigate among the many solutions for carbon removals to find solutions of high quality and long lifespan.





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