



“Reduce, reduce, reduce
... and remove the rest”

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On the critical role of carbon removal and how companies can use it smartly

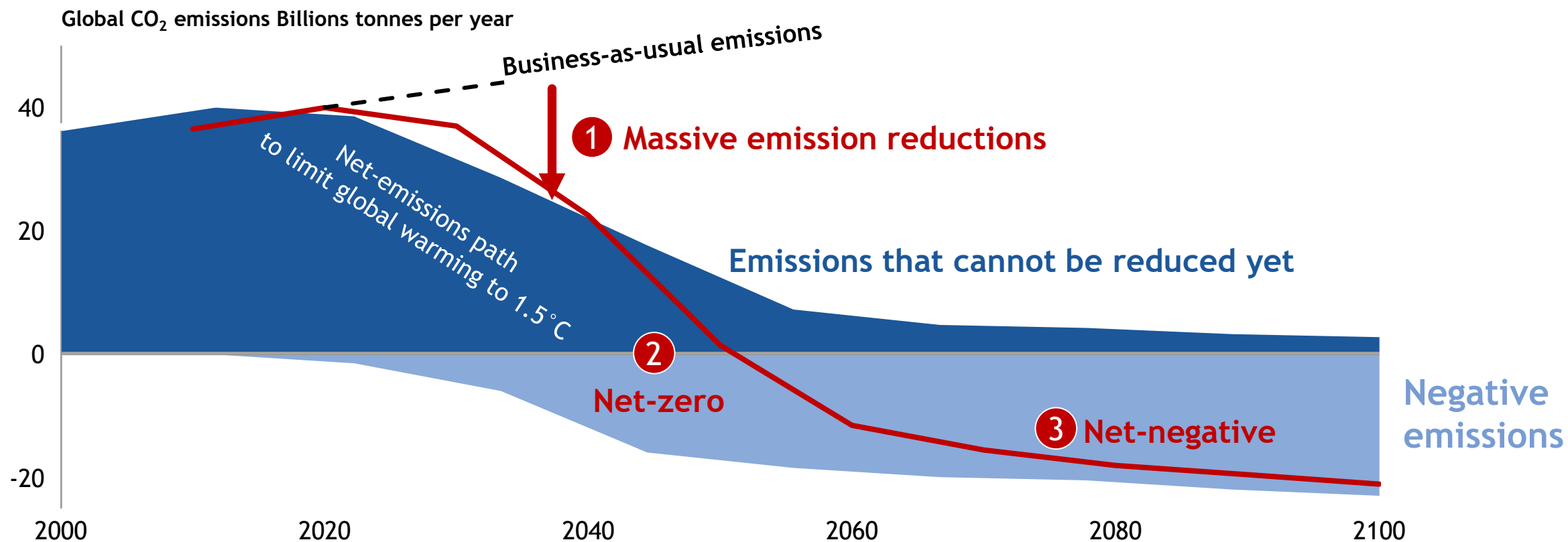
An educational slide deck from CEOs to CEOs,
November 2021

Presentation version - leaner slides, with speaker notes

Developed by the Alliance of CEO Climate Leaders' Carbon Removal Action
Group with contributions of members of the Forum's Global Future Council on
Net-Zero Transition




To limit warming to safe levels in line with the Paris Agreement, we need three things:

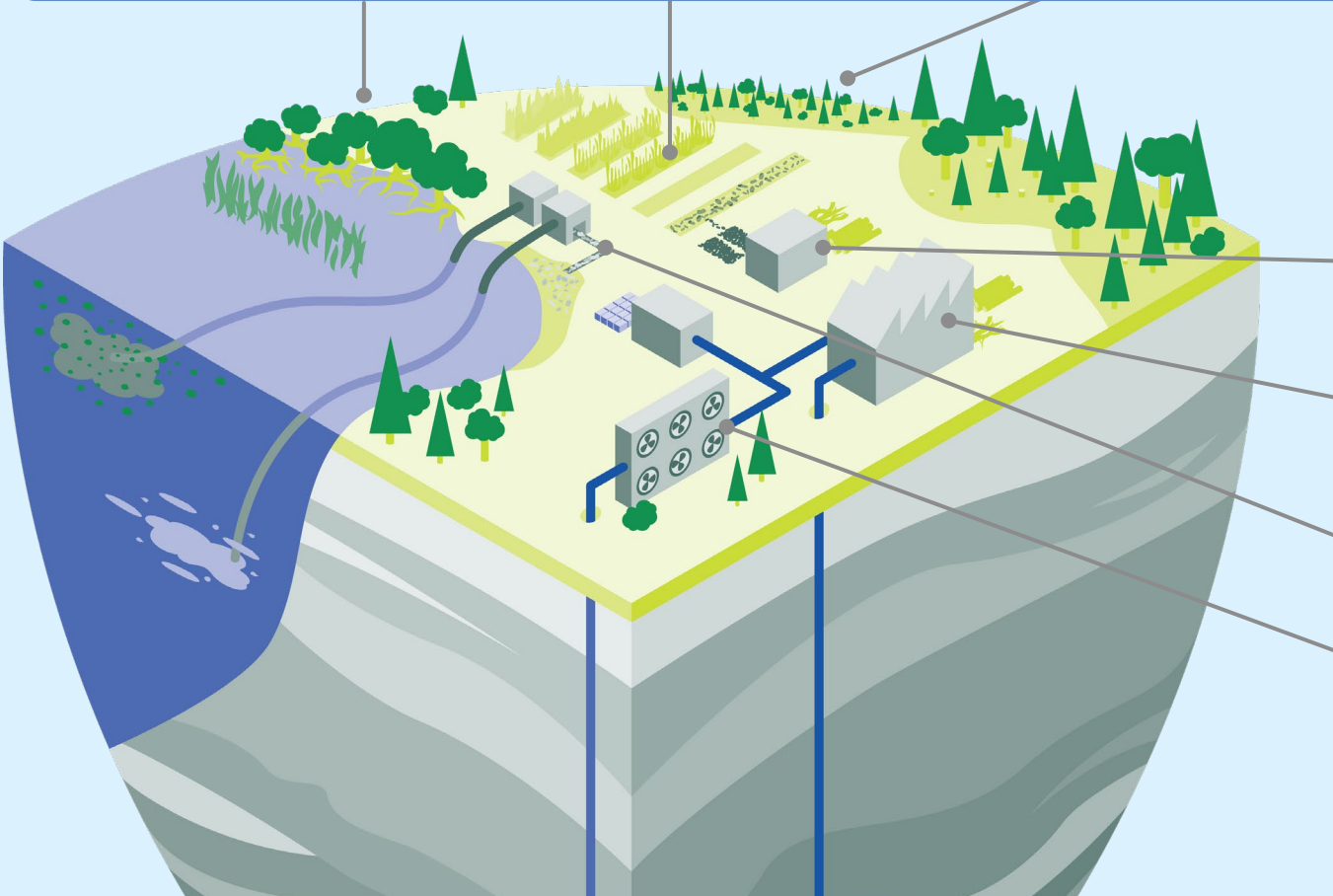
- 1) halve emissions by 2030
- 2) net-zero emissions by 2050
- 3) net-negative emissions after 2050 with up to 5-20bn tonnes CO₂ removed per year







Negative emissions = capturing CO₂ from air and storing it permanently

Nature-based solutions

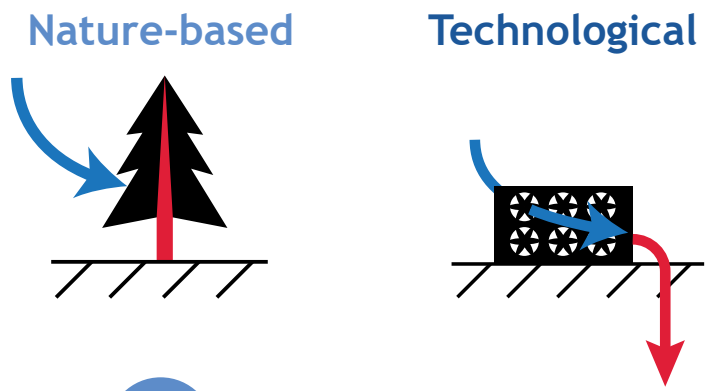
-  Wetland/ocean carbon mgmt
-  Soil carbon sequestration
-  Forestation and forest carbon mgmt.



Technological & hybrid solutions

-  Char from biomass
-  Bioenergy with Carbon Capture and Storage (BECCS)
-  Enhanced mineral weathering
-  Direct Air Capture and Storage (DACs)

Nature-based removals are ready to use, but quality is key



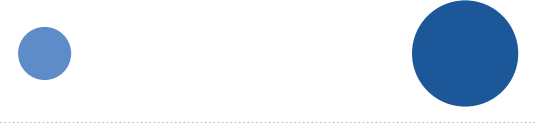
 Readiness/affordability today



 Durability of storage



 Scalability



 Co-benefits if done sustainably

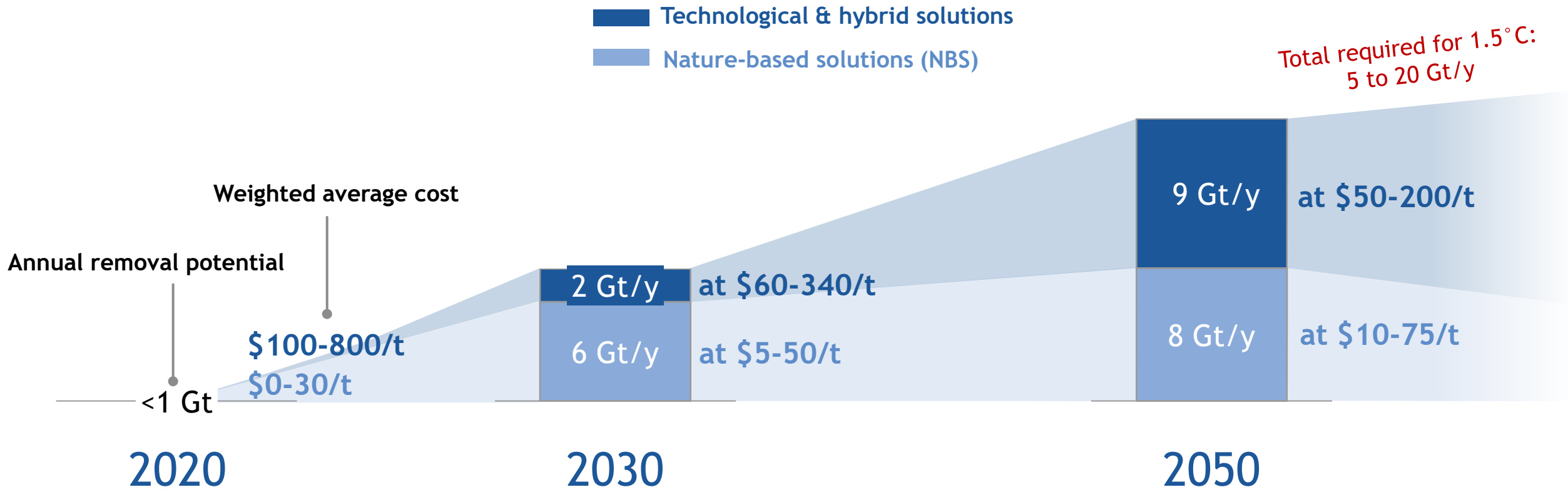


“High-quality removals”

=

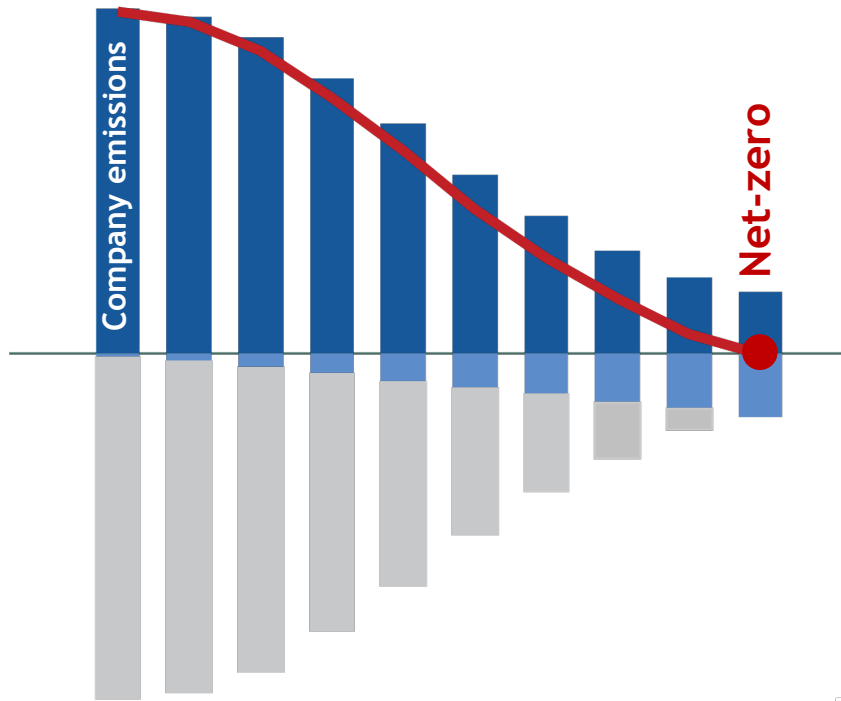
- high durability
- high scalability
- high co-benefits

However, nature-based solutions will not do the job alone
Technological solutions are needed for a stable climate over the long-run



How can companies use removals credibly?

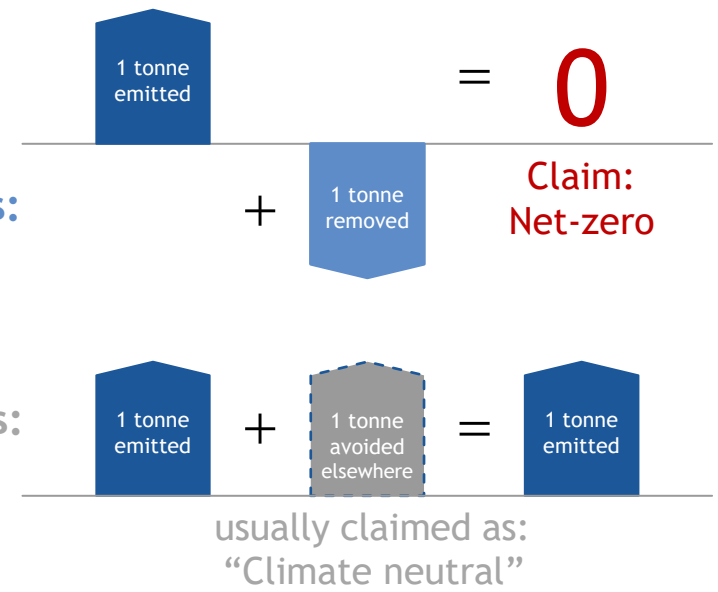
“Net-zero” means focus on reductions and ramp up removals. On top, help others



1 Reduce, reduce, reduce!

2 Ramp up removals, no freeriding!
→ carbon removal certificates:

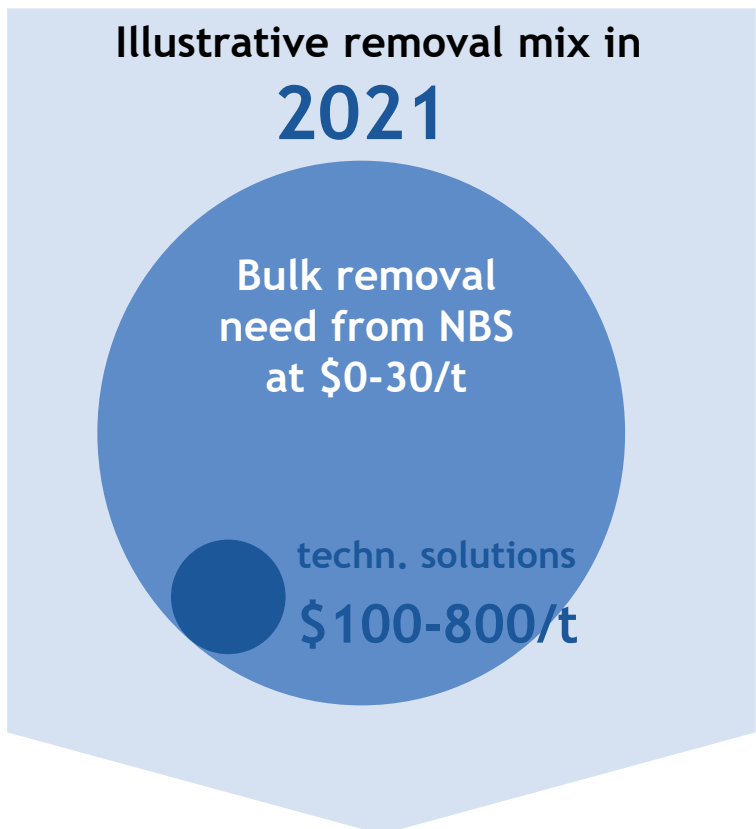
3 Help others to reduce as well
→ conventional carbon offsets:



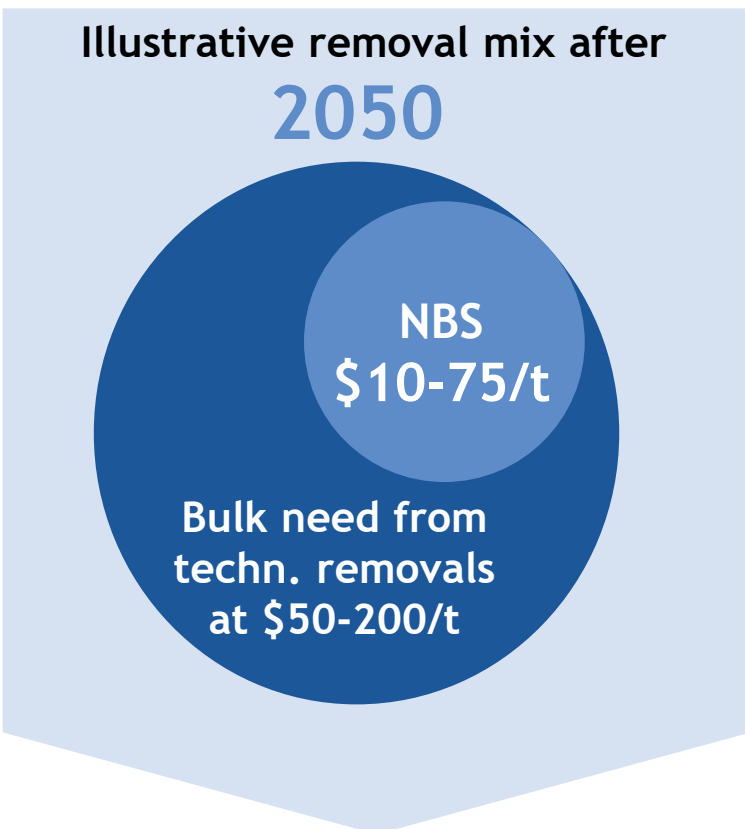
Source of figure: Adapted from Science-Based Target Initiative’s upcoming global standard on corporate net-zero targets

How can companies use removals smartly?

Concerted action and a balanced mix today prevent high price in the future



This mix can keep average removal price well below \$100/t



...we prevent a price rise and keep average removal price to ca. \$100/t

The Group worked to facilitate access to impactful carbon removals

To limit global warming to safe levels, we shall...

- 1 ...reduce, reduce, reduce - and
- 2 ...remove the rest to tackle the unavoided, overshoot, and Earth's own emissions.

Use **nature-based solutions** in its own right, observing strict quality criteria,

and

... use a part of your removal budget for **technological solutions** already now.



The Action Group prepared a short **Procurement Guide for high-quality NBS** based on current best-practice¹



The Action Group recommends technological removals via a **carbon removals purchase facility**

1) In collaboration with WEF Natural Climate Solutions Alliance and WBCSD

Contributors

This slide deck was produced by the Alliance of CEO Climate Leaders Carbon Removal Action Group, chaired by Christian Mumenthaler, Co-Chair of the Alliance of CEO Climate Leaders; Group Chief Executive Officer, Swiss Re, Switzerland.

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The slides are the product of a collaboration between the Carbon Removal Action Group and the Forum's Global Future Council (GFC) on Net-Zero Transition, represented by Myles Allen (GFC Member, Professor of Geosystem Science, Director, Oxford Net Zero, University of Oxford) and Eli Mitchell-Larson (Associate, Oxford Net Zero; Carbon Gap).

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The logo for the World Economic Forum, featuring the words "WORLD ECONOMIC FORUM" in a bold, white, sans-serif font. A white arc is positioned behind the text, starting from the top right and curving under the word "FORUM".

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