



LG CHEM INNOVATIVE SUSTAINABILITY

VISION & CORE VALUES

WE CONNECT SCIENCE TO LIFE FOR A BETTER FUTURE



CUSTOMER FOCUS



AGILITY



PASSION



COLLABORATION



SUSTAINABILITY

A top-down photograph of two young children lying on their stomachs on a lush green lawn. The child on the left is a boy with short brown hair, wearing a bright blue t-shirt and orange and black checkered shorts. He is looking up at the camera with a slight smile, his hands resting behind his head. The child on the right is a girl with long blonde hair, wearing a light blue dress with a small dark pattern. She is also looking up at the camera. The word "SUSTAINABILITY" is printed in large, bold, white capital letters across the center of the image, partially overlapping both children.

SUSTAINABILITY



SUSTAINABILITY GOALS

Carbon Neutral Growth by 2050



SUSTAINABILITY GOALS

Renewable Energy 100% by 2050

A photograph of three young children sitting at a table, focused on playing with colorful plastic building blocks. The child on the left is a girl with dark hair in a ponytail, wearing a pink shirt, building a red-roofed structure. The middle child is a boy with light hair, wearing a grey shirt, reaching for a blue toy car. The child on the right is a boy with light hair, wearing a white shirt, stacking yellow and red blocks. The background is a softly blurred indoor setting with shelves.

SUSTAINABILITY GOALS

Products that Value Environment,
Society, and Economy

A photograph of a recycling facility. Three workers wearing white protective suits, masks, and gloves are sorting through a large pile of plastic bottles. The bottles are of various colors (brown, green, clear) and are piled high on a conveyor belt or sorting area. The background shows industrial structures and windows.

SUSTAINABILITY GOALS

Transition to a Circular Economy



SUSTAINABILITY GOALS

Zero Waste to Landfill



SUSTAINABILITY GOALS

Ethical and Sustainable Supply Chain

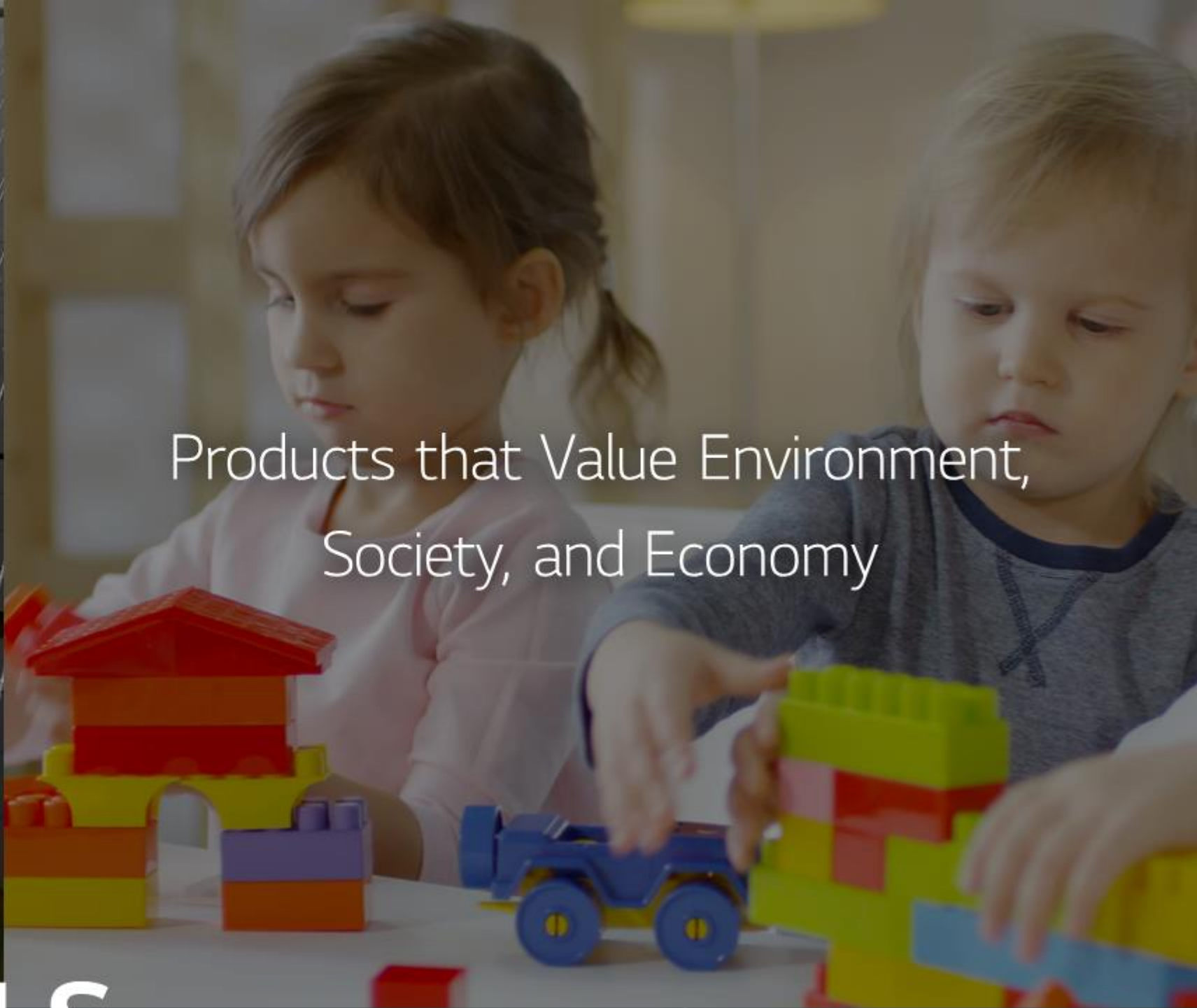




Carbon Neutral Growth
by 2050



Renewable Energy 100%
by 2050



Products that Value Environment,
Society, and Economy

SUSTAINABILITY GOALS



Ethical and
Sustainable Supply Chain



Zero Waste to Landfill



Transition to
a Circular Economy

Sustainability that goes into every steps in our value chain



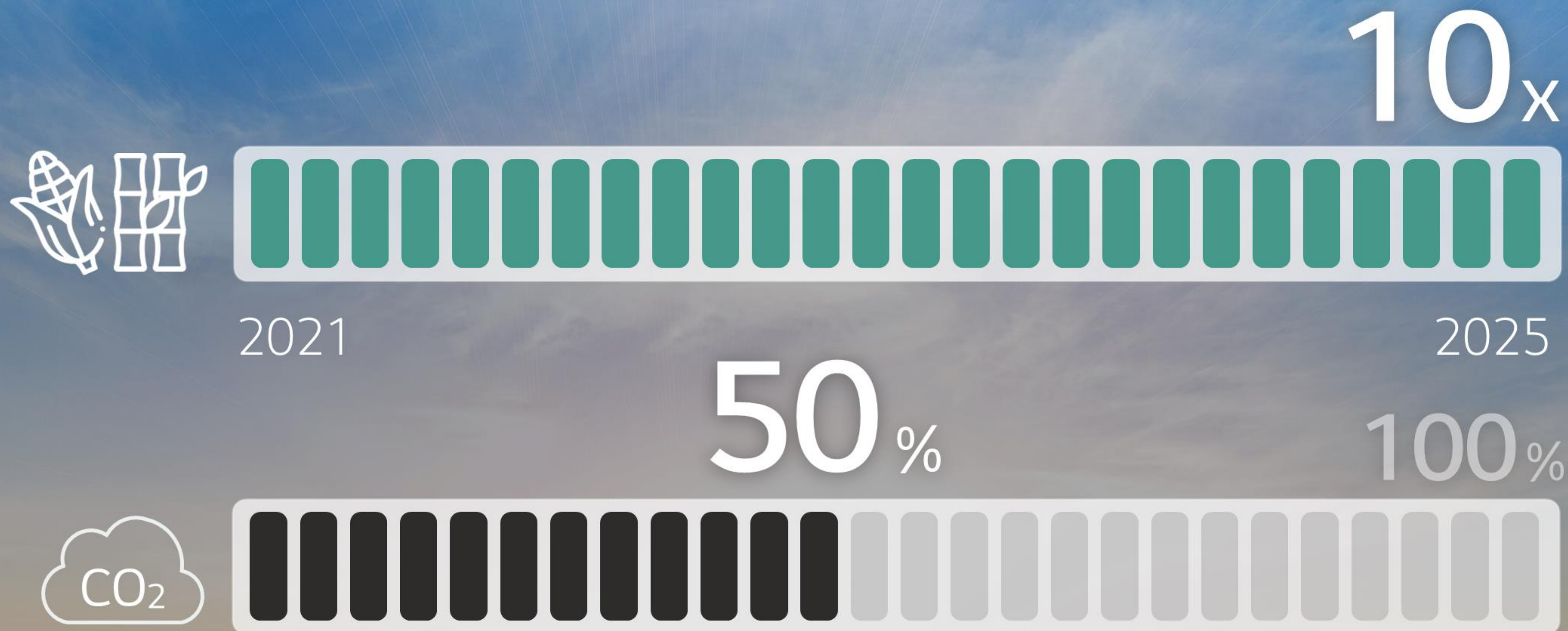


Investment & Procurement

Climate Action

Procuring renewable raw materials for production of eco-friendly products

Renewable Raw Materials Procurement



The use of renewable raw materials helps reduce the dependency on fossil resources with less carbon emissions.
We aim to increase the volume of the materials up to 10 times than now by 2025.



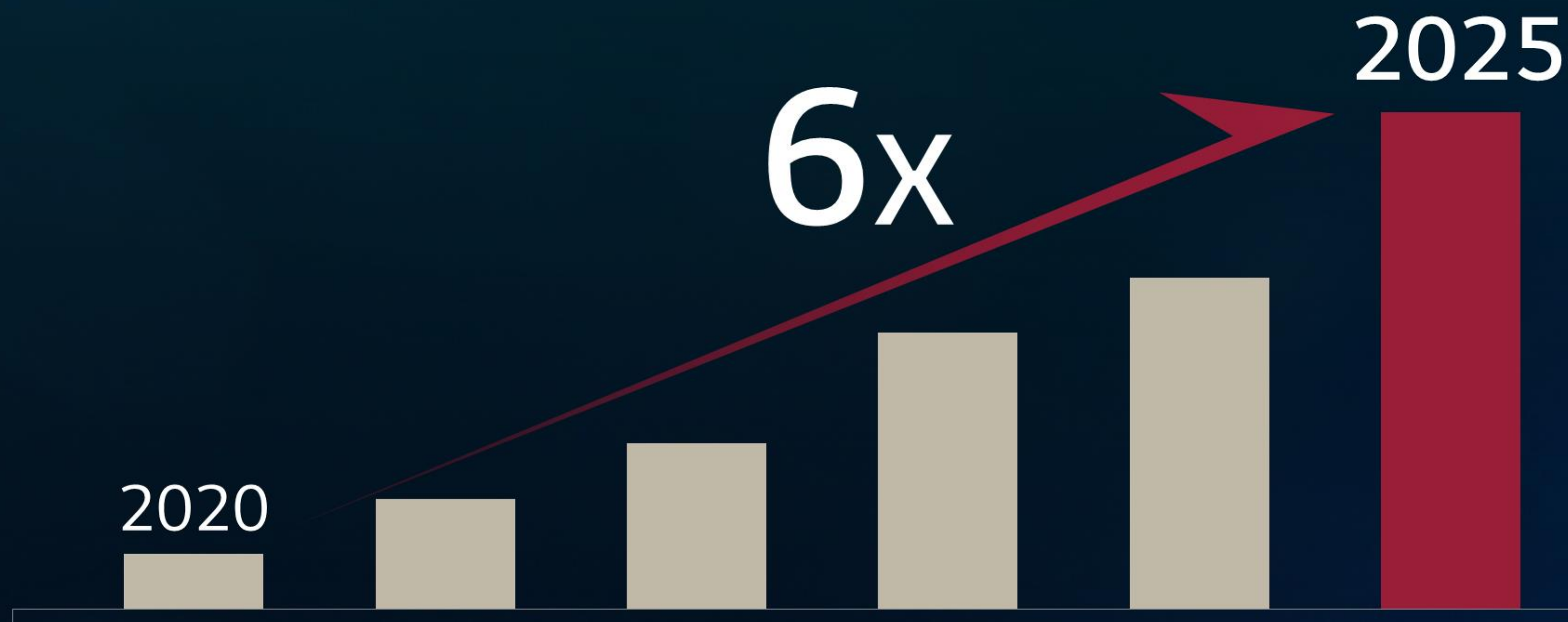
Investment & Procurement

Circular Economy

Mechanical recycling for minimizing carbon footprint

PCR materials Procurement

Post Consumer Recycled



To have a competitive edge in rapidly growing market,
we take preemptive measures by increasing the volume of recycled materials up to 6 times.





Investment & Procurement

Responsible Sourcing

Supporting the well-beings of people and protecting the environment in our supply chain

Clean Metal 100%

20
21

Due diligence on cathode materials

We put in place rigorous measurement against key metals used for lithium-ion battery

'Responsible Sourcing Policy' enacted

The policy is in line with the 'OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas'

2020

First Korean Battery Manufacturer to join RMI

In order to secure transparency and traceability over the entire supply chain, We are working together with Responsible Minerals Initiative

2019

First Korean Company to perform on-site audit on Cobalt mines in the DRC

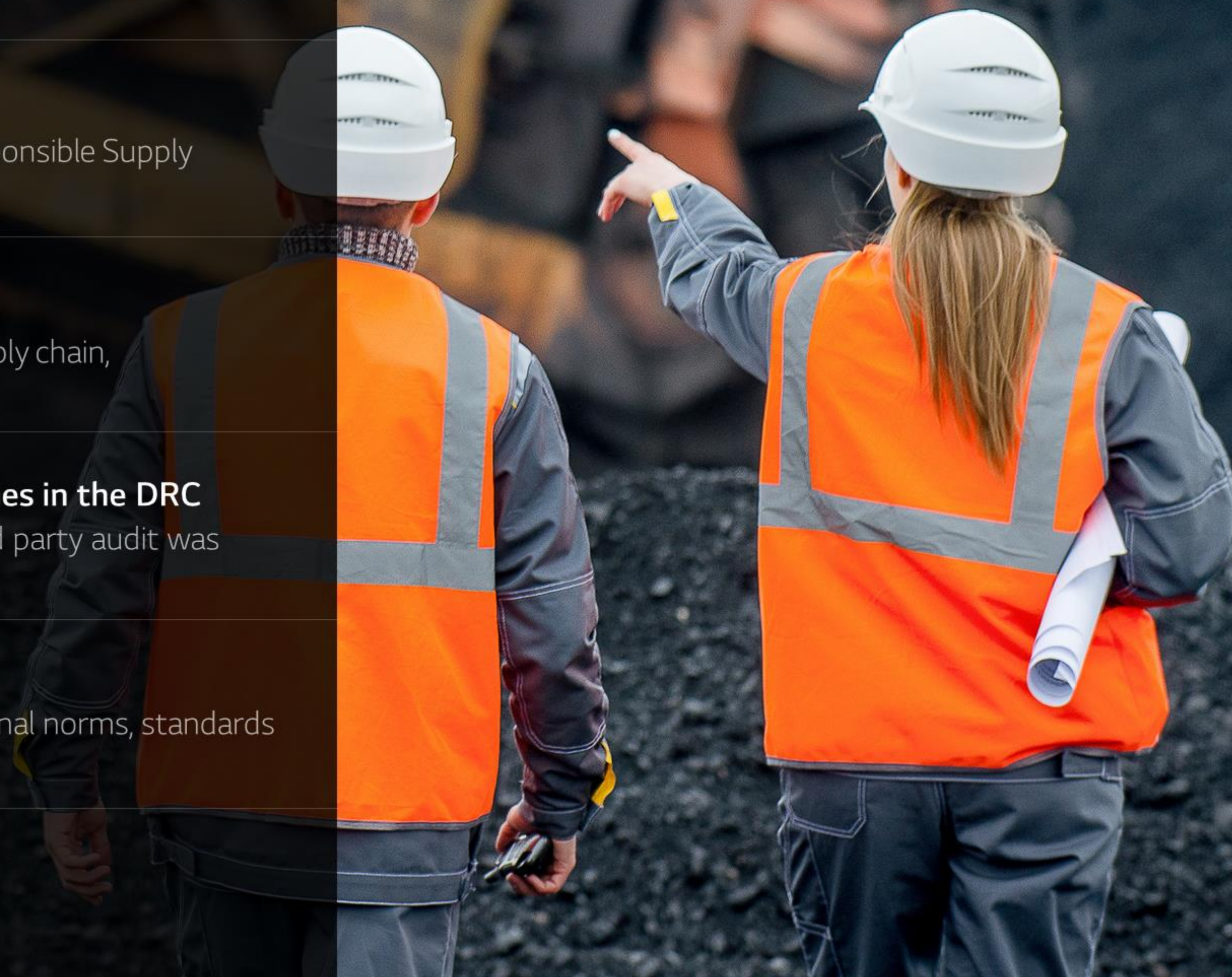
To ensure there is no human rights violation in our supply chain, 3rd party audit was conducted in collaboration with a customer and a supplier

2018

'Code of Conduct for Suppliers' implemented

The 'LG Chem Code of Conduct for Suppliers' is based on international norms, standards and legal requirements to fulfill our social responsibilities

2016





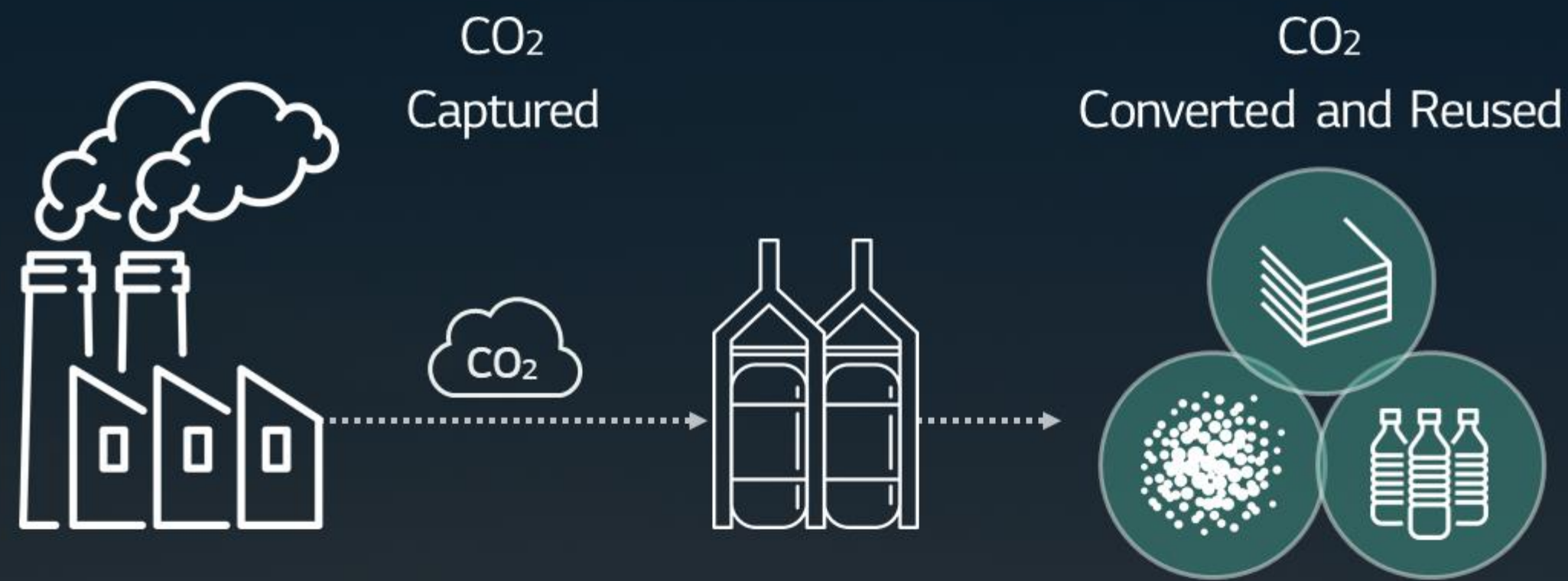
R&D

Climate Action

Pursuing breakthrough technologies for decarbonization

CCU

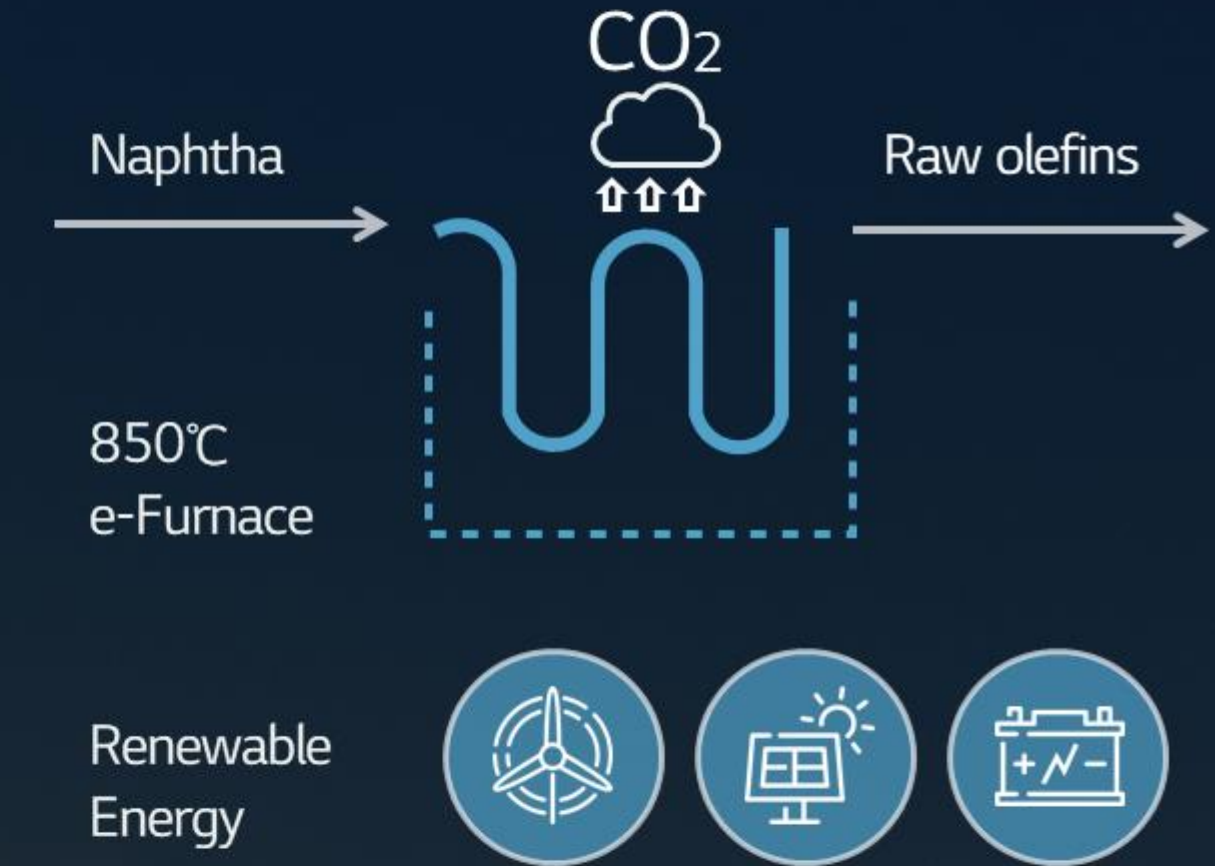
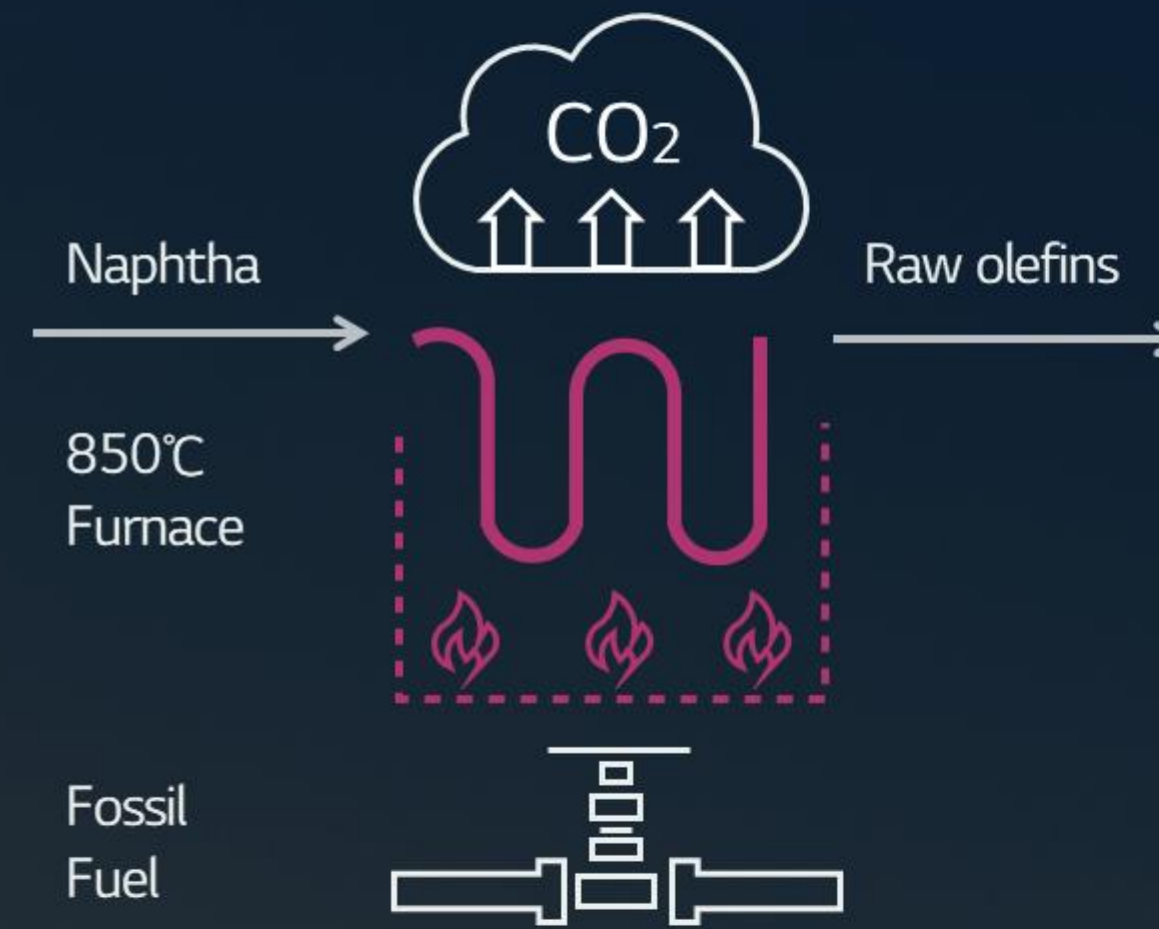
(Carbon Capture and Utilization)



Electrically Heated Steam Cracker

Conventional Furnace

e-Furnace



CO₂ plastic to be commercialized by 2030

e-Furnace to be introduced by 2025





R&D

Responsible Products

A transition to materials based on recycled and renewable sources



Sustainable Portfolio

Current Products

PVC	PE
Alcohol	PS
SBR	BPA
Acrylic	ABS
SAP	PC



Sustainable Solutions

PCR-ABS
PCR-PC
Bio-balanced Product
PBAT
PLA
Chemical Recycled Product
Bio-SAP

We develop products with less carbon-intensity by using recycled and renewable materials.



Production

RENEWABLE ENERGY 100

Committed to sourcing renewable energy for all operations sites



RENEWABLE ENERGY 100

Overseas by 2030

Domestic by 2050

2020
Michigan, USA



2019
Wroclaw, Poland



2020
Wuxi, China



2021
Osan, Korea



2021
Yeosu, Korea



LG CHEM



LG ENERGY SOLUTION

※ As of today, a total of 260 GWh per year, equal to the effect of planting 2.7 million trees, has been converted to renewable energy.



Production

Climate Action

Using less energy across our entire production process to reduce carbon emissions

Improving Energy Efficiency in Production Process

2021 Installing high-efficiency equipments

2021 Introducing 'Continuous Process'

2021 Measuring and improving energy usage by setting up digital transformation

2023 Transition to low carbon fuels such as hydrogen



Energy Efficiency

CO₂





Production

Circular Economy

Making better use of valuable resources and materials through recycling

M-Recycle & C-Recycle

M-Recycle Expand overseas business of PCR products by 2022

C-Recycle To be commercialized by 2025



Expanding mechanical and chemical recycling
production plant

Utility Recycle



Heat, steam, and water to be recycled in production



Sales & Use

Responsible Products

Bringing the environmentally friendly portfolio to life for a sustainable future

Responsible Products

PLA

Poly Lactic Acid



PBAT

Poly Butylene Adipate-co-Terephthalate



PCR-ABS

Post Consumer Recycled
Acrylonitrile Butadiene Styrene



PCR-PC

Post Consumer Recycled
Poly Carbonate



ISCC: International Sustainability and Carbon Certification



Sales & Use

Responsible Products

Measuring our environmental footprint through life cycle assessment

Life Cycle Assessment

A holistic approach to the environmental impacts of our products at every stage of their life cycle will enable us to reduce our footprint.

Raw Materials
(Scope3)



Production Plants
(Scope1)



Energy
(Scope2)





Disposal

Landfill Zero

Diverting waste to valuable resources in support of the circularity

Landfill Zero mandate for all operations sites

Waste from Michigan plant of LG Energy Solution,
LG Chem's 100% wholly owned subsidiary

97.4%



Recycled

2.5%



Converted
to Energy

less than 1%



To Landfill

Generating less waste through circularity helps
reduce CO2 emissions and save the disposal costs



RE:ACT

TO ZERO

