



Empa NEST in Dübendorf, built with HiLo

LEADER IN CIRCULAR ECONOMY

CAPITAL MARKETS DAY 2021

MAGALI ANDERSON / CHIEF SUSTAINABILITY AND INNOVATION OFFICER

BERTHOLD KREN / CEO CLUSTER CENTRAL EUROPE EAST



LEADER IN CIRCULAR ECONOMY

HOLCIM IS MAKING A DIFFERENCE



LEADER IN CIRCULAR ECONOMY

OUR INTEGRATED BUSINESS MODEL RECYCLING OVER 46 MILLION TONS



Repair mortars

Addressing refurbishment markets



Cool roofs, green roofs extending lifetime of roofing membranes and systems

Extend lifetime of buildings

3D Printing

Building more with less

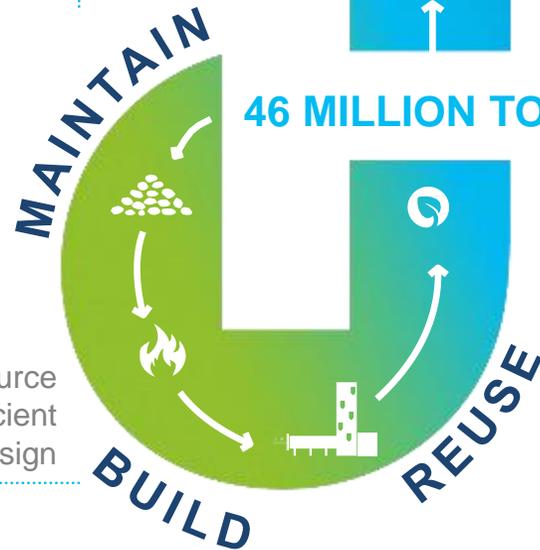
BIM

Virtual co-construction of building and infrastructure projects



Global material platform transforming road construction towards resources efficiency & sustainability

Resource efficient design



Construction & Demolition Waste

Virgin materials extraction

Fossil free energy & decarbonated materials



Aggeo

High quality aggregate from 100% recycled content



ECO Pact

RMX concrete enabling circular and carbon-neutral construction



ECOPlanet
The Green Cement

The world's 1st circular cement with 20% Construction Demolition Waste inside



Roofing membranes and ISO waste used as alternative fuels



Waste management solutions



LEADER IN CIRCULAR ECONOMY

FAST EXECUTION OF ACTION PLAN TO INCREASE CIRCULARITY



↗ **Increase recycled content in our CEMENT TO 30%**
from 22% today

🌱 **Substitute 37% OF THE FUEL**
we use by generating energy from non-recyclable waste

♻️ **Recycle 10 mt of Construction & Demolition Waste**
by 2025

x2 **Enhance the circularity**
of our product portfolio, doubling our recycling ratio

CONSTRUCTION AND DEMOLITION WASTE HOLCIM BEST POSITIONED TO RECYCLE

Following the waste management hierarchy we recycle CDW in all business segments

CEMENT

- Construction & Demolition Waste fines used as **industrial mineral components**
- **Alternative Raw Materials**, including decarbonated sources

- **Recycled aggregates used in RMX**
- **Returned concrete recycled**

READY-MIX CONCRETE



AGGREGATES

- **Recycled Aggregates**

- **Roofing**
 - Extended lifetime
 - Repair/renovation offerings
- **Recycled Asphalt Pavement**

SOLUTIONS & PRODUCTS

Construction & Demolition Waste volumes today

6 Mt

- Recycled aggregates used in concrete or cement
45 - 50%
- Recycled Asphalt
~ 40%

- Holcim **best positioned to recycle** - Use in aggregates, cement and concrete production
- Construction & Demolition Waste disposal, a **one-stop shop for customers**
- **Unique expertise:** ECOPlanet / Susteno Cement Switzerland with 20% Construction & Demolition Waste
- **Shaping norms and standards in the EU:** By 2023, use of Construction & Demolition Waste as mineral Component in cement will be accepted

SCALING UP NEW SOURCES OF MINERAL COMPONENTS

DEVELOPING SOLUTIONS FOR LOW CARBON CEMENT

MATERIAL							
ORIGIN	Steel manufacturing byproduct	Coal fired powerplant byproduct	Natural resource	Natural resource	Natural resource + calcination process*	Natural resource/ byproducts other industries**	Materials from building demolitions
AVAILABILITY	Local sourcing / global trading		Own quarry	Own quarry + local sourcing	Local sourcing / global trading		Local sourcing

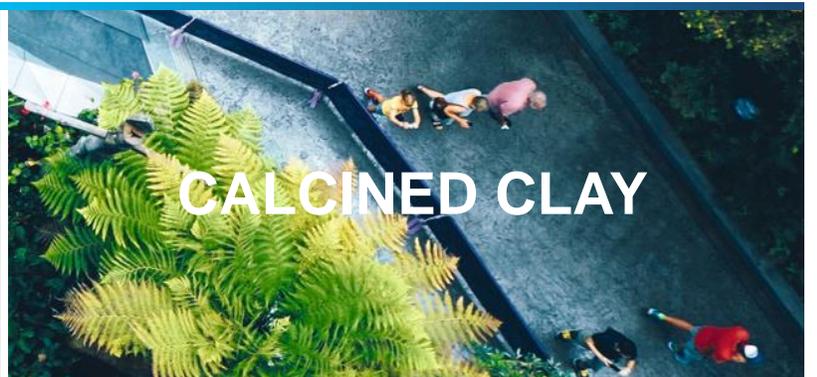
- Securing long-term sourcing
- Developing innovative Mineral Component (MIC) solutions
- Holcim expertise to maximize MIC usage
- Shaping products standards

SCALING UP NEW SOURCES OF MINERAL COMPONENTS

DEVELOPING SOLUTIONS FOR LOW CARBON CEMENT



POLAND	SWITZERLAND	FRANCE
<ul style="list-style-type: none"> Decarbonated industrial wastes used as alternative raw material Lignite Fly Ash project in Kujawi in Poland <p>Benefits:</p> <ul style="list-style-type: none"> Replacing ~100 to 200 kt p.a. of virgin materials (limestone, Sand or Bauxite) CO₂ reduction: ~50 kt / year Payback: ~2 years Cost saving of ~ CHF 3.3 m p.a. 	<ul style="list-style-type: none"> Pioneering concept Upcycle wastes including decarbonated materials (such as mineral sludges) into new clinker substitutes <p>Benefits:</p> <ul style="list-style-type: none"> Low CO₂ footprint – 250 kg CO₂ /t cem Used in ECOPlanet/Susteno Cement Avoids use of natural resources and saves landfill and quarry space Cost saving of ~ CHF 4 m p.a. 	<ul style="list-style-type: none"> ProximATech Calcined Clay based MIC in Saint Pierre La Cour plant, France Major step towards green cement ECOPlanet; mass market application Volumes: 110 kt / year <p>Benefits:</p> <ul style="list-style-type: none"> CO₂ reduction: 76 kt / year Payback: 6 years



RETZNEI PLANT IN AUSTRIA

A BEST-IN-CLASS EXAMPLE

RECYCLING CENTER

RECYCLE

Construction and Demolition Waste



110'000 TONS PER YEAR (or)
20 Trucks per day of Construction
Demolition Waste recycled

All waste are **RECYCLED** or
RECOVERED



ECOPlanet Truck, Austria

ALTERNATIVE FUELS CHAMPION

BEST IN CLASS plant for Alternative
fuel usage in Holcim



96% ALTERNATIVE FUELS usage
annually

WIDE RANGE of Alternative fuels used
incl. Municipal Solid Waste, Refuse-derived
fuel (RDF), Biomass

ACCELERATION OF GREEN PRODUCTS

ECOPlanet

40'000 tons of ECOPLANET SOLD IN 2021

10% of domestic cement volume sold to be
ECOPLANET IN 2022

NEXT RANGE of ECOPLANET to be launched
in **2023** with Construction Demolition waste after



HOLCIM