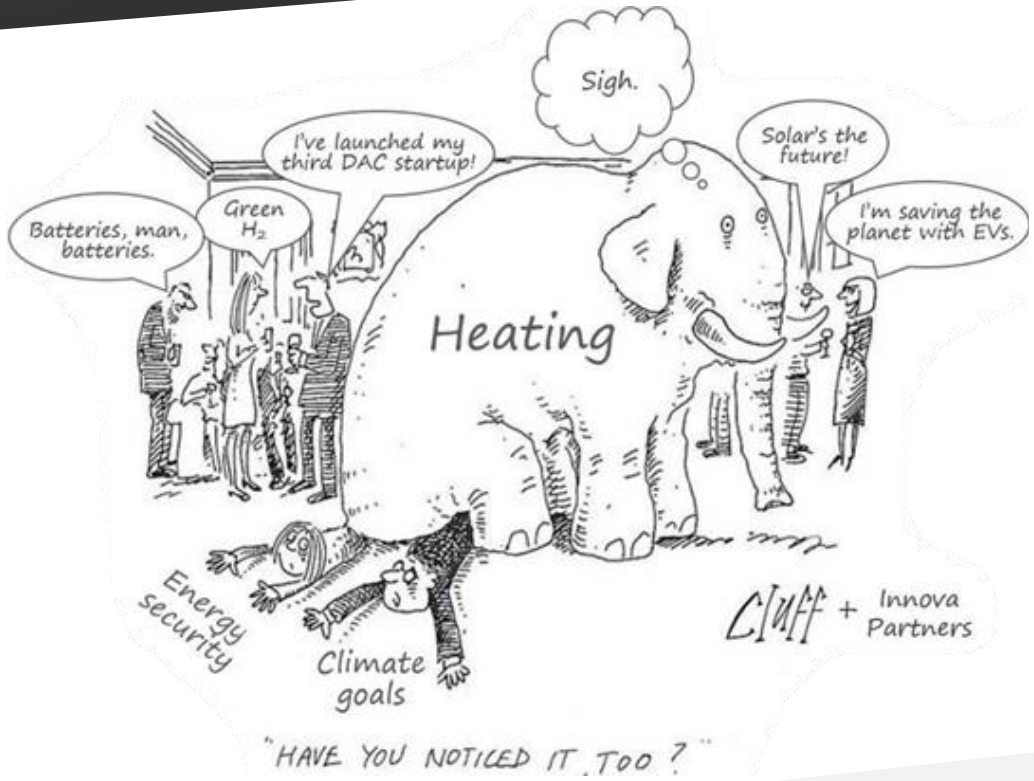
9th Annual EPRI-IEA Workshop Challenges in Decarbonisation

IEA EPRI ELECTRIC POWER RESEARCH INSTITUTE

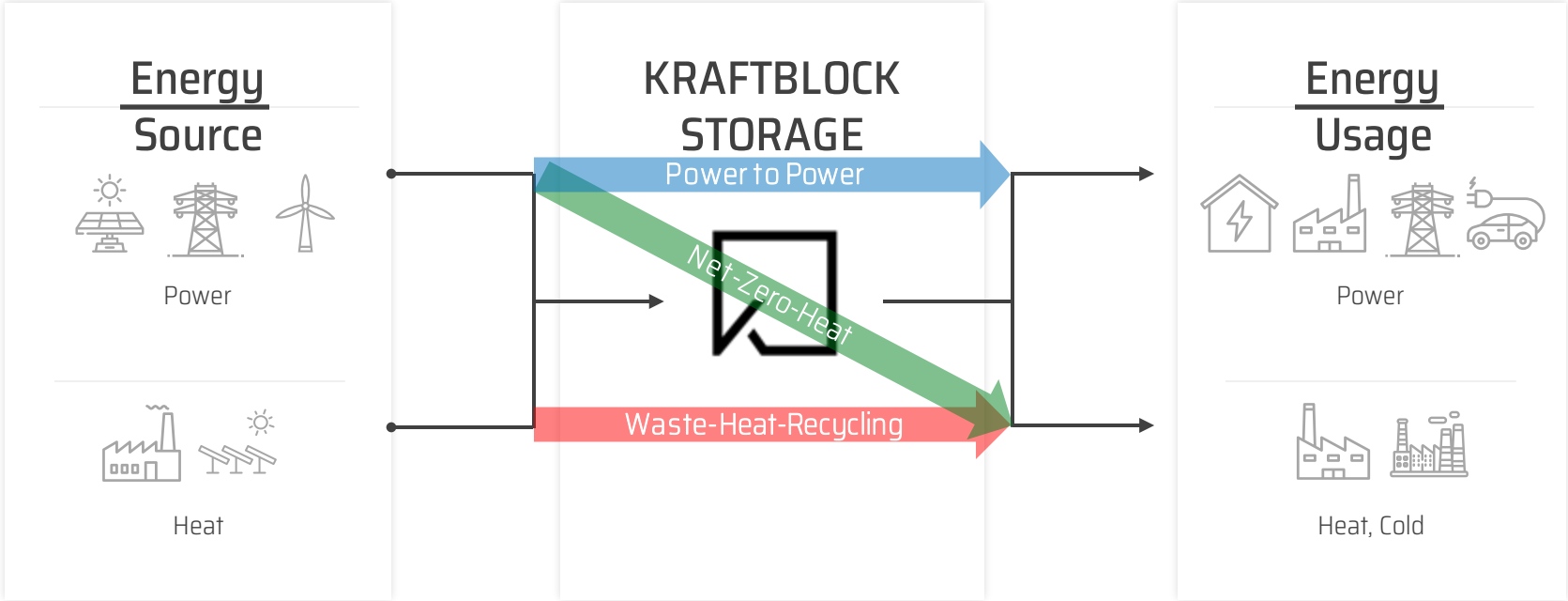
RETHINKING Energy Storage!

Paris, Oct 7 2022

LET'S TALK HEAT



MULTIFUNCTIONAL SYSTEM



CORE CHARACTERISTICS

PATENTED

Up to **1,300°C** temperature

High Temperature

(Dis-)Charing unit **integrated**

Storage System

Infrastructure is **state-of-the-art**

Multifunctional

Outstanding **capacity** up to **1.2 MWh/m³**

No rare earth materials – **85% recycled materials**

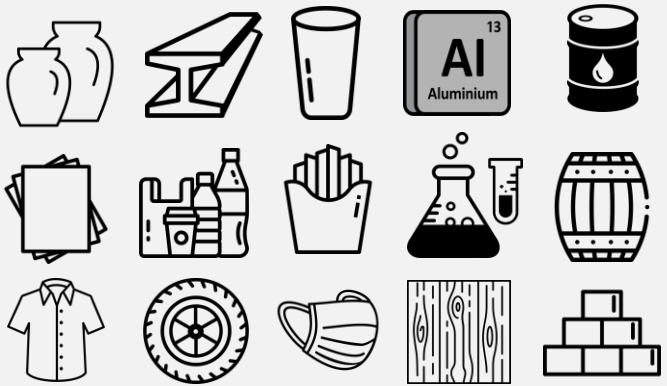
Modular, scalable energy storage 4 MWh upwards

Infinite lifespan & easily recyclable & eco-friendly

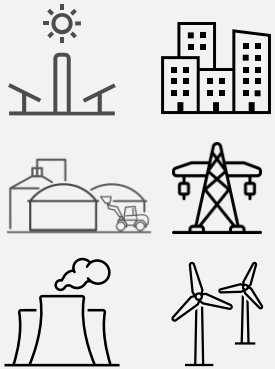
SCOPE OF IMPACT

Applications of Kraftblock‘s systems

Industries



Utilities & Other



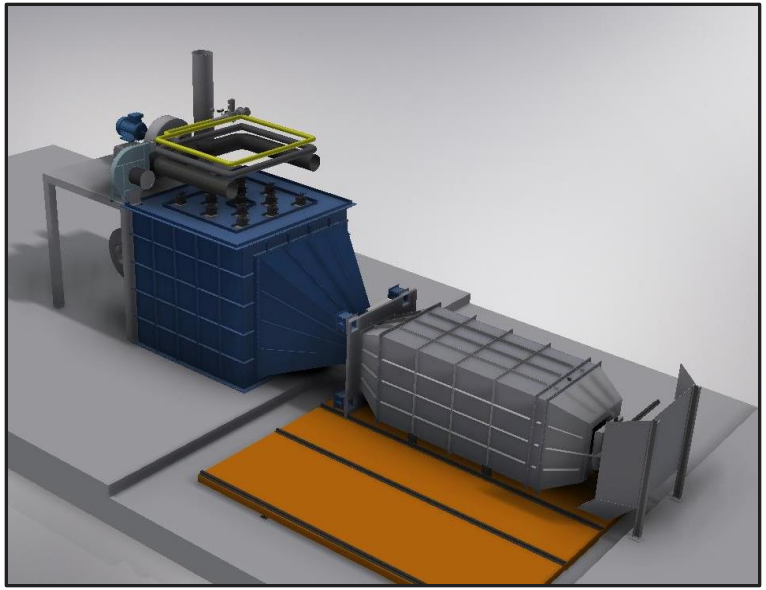
Multifunctional application for decarbonisaton throughout all **heat driven industries** as well as in the **utility field**

Excess Heat of a CHP
Capacity: 2MWh-5MWh

Savings:

- 330 tons on CO_2/year
- 1,5GWh natural gas

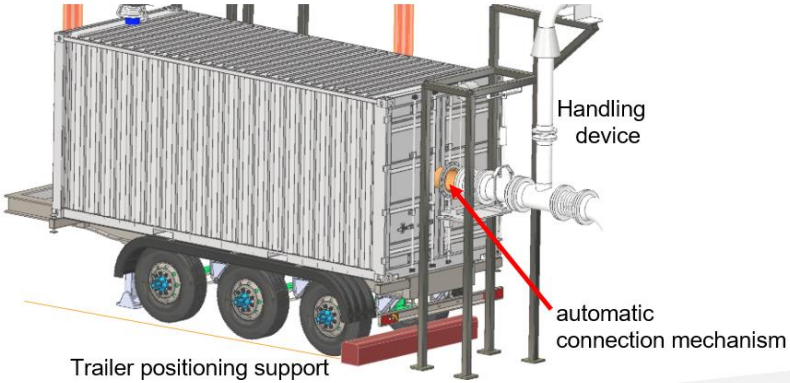
FLARE-GAS-RECYCLING



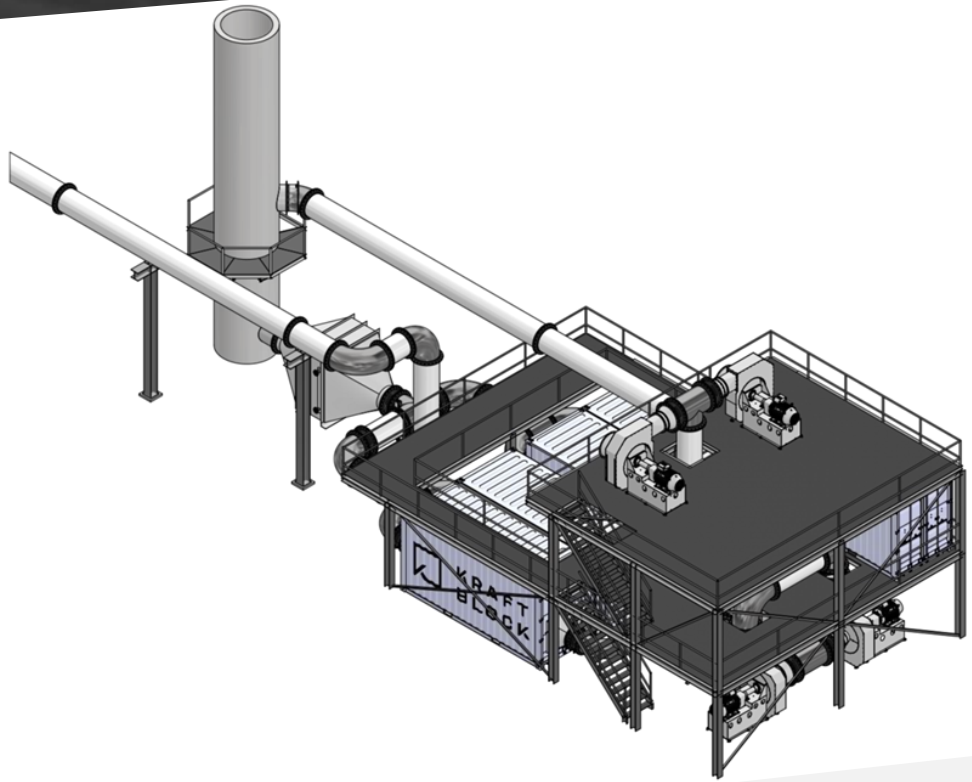
RECYCLING of 100 GWh/a flare gas

Savings:
- ❑ 9,300 tons CO_2/year
- ❑ and 42 GWh gas

Internal: Support of Steam production
External: Supply of mobile heat



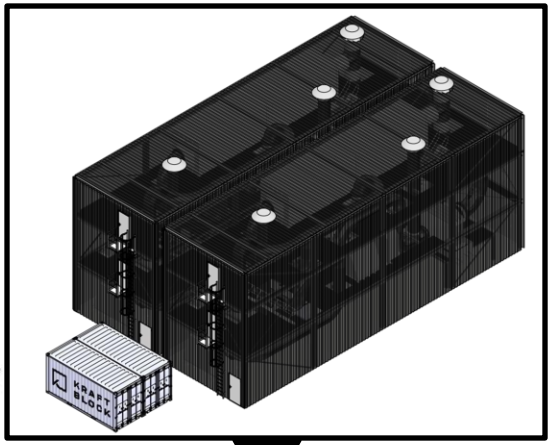
WASTE-HEAT-RECYCLING



Recycling of 7,300MWh waste heat

Savings:
- 1.600 tons CO_2/year

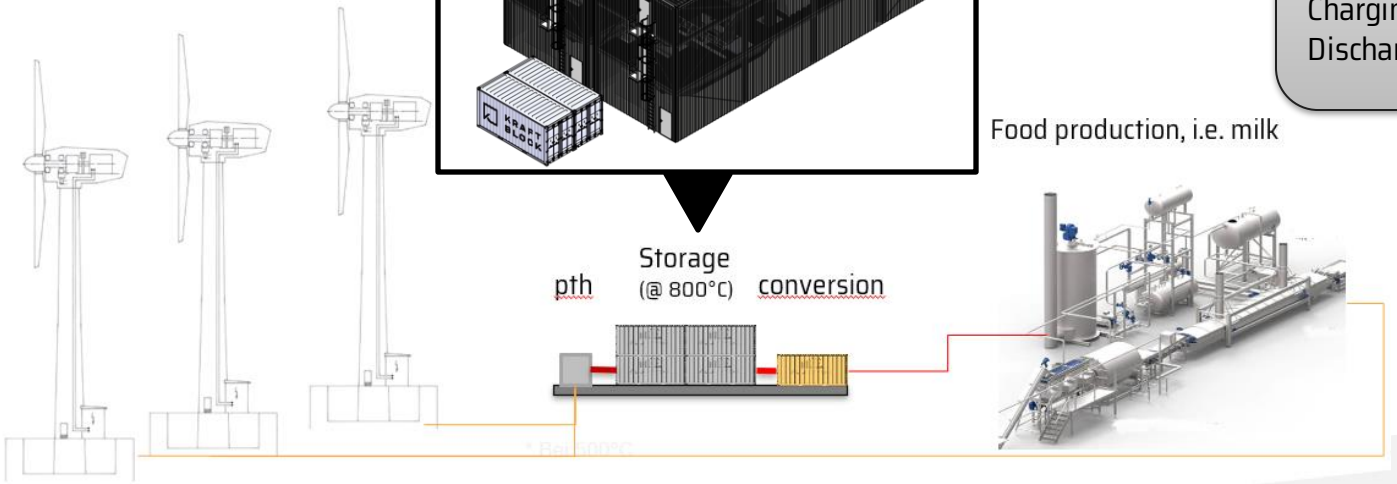
Internal use: Back-up System and production support



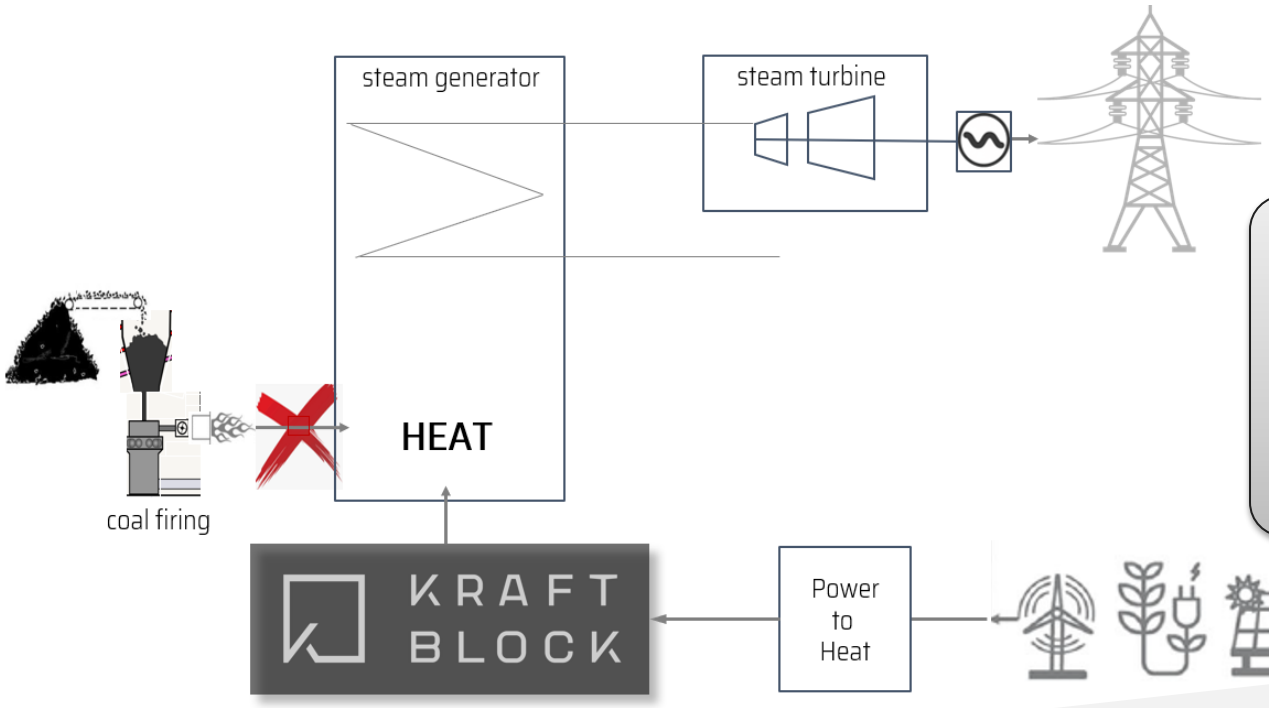
REPLACEMENT of a 25MW Gas Boiler

Savings:
- ❑ **45.000 tons CO_2/year**
- ❑ 225GWh gas

Fully modular
Charging: 4-6 hours/day
Discharging: 24/7

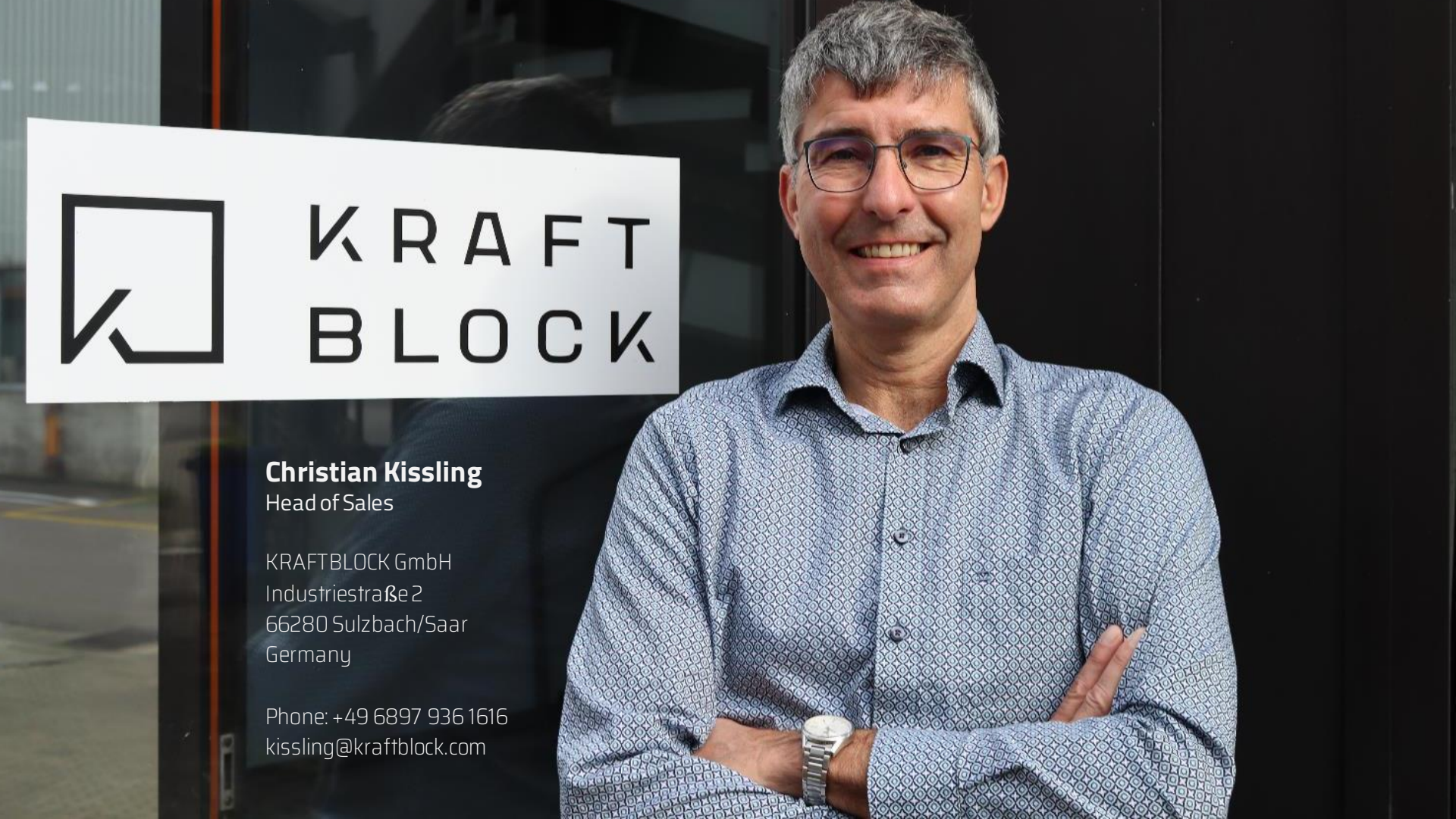


REPURPOSING POWER ASSETS



GRID SECURITY & STABILISATION

Using existing assets and grid connection, enabled by charging the Kraftblock storage up / over 1000°C with excess power from renewable resources



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