

How to build successful steel business by using scrap

WCEF, Helsinki – WWF Accelerator Session

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The best time to start building the circular future for the next generation is today

Global megatrends driving our business

Climate change and limited resources

- Green transition
- Circular Economy

Urbanization

- Infrastructure and construction
- Mobility

Population and economic growth

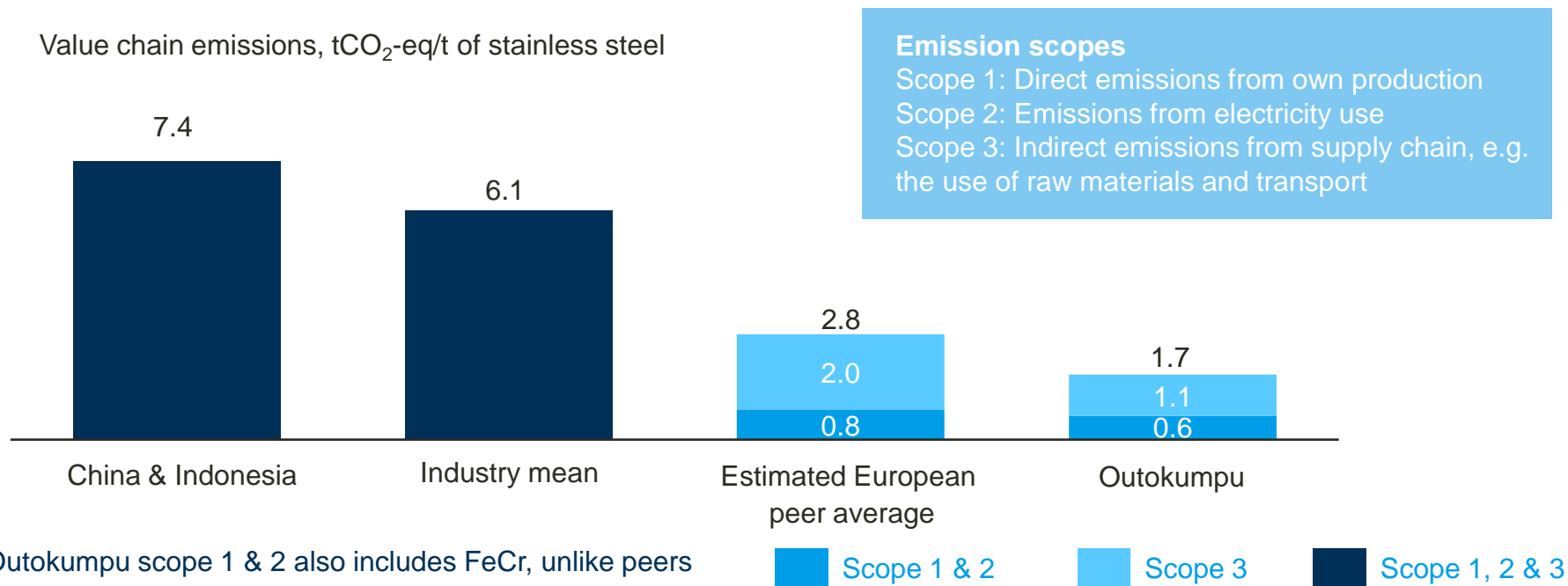
- Healthcare
- Clean water
- Appliances

Driving circular economy with stainless steel



Outokumpu is the industry benchmark for stainless steel carbon footprint

Value chain emissions, tCO₂-eq/t of stainless steel



Source: ISSF calculation for stainless steel industry mean emissions with 40% scrap recycling and 30% nickel pig iron for 2020, 3rd party estimate of European peer average emissions in scope 3 for 2019

Ambitious climate targets

We are the only stainless steel company with an approved SBTi target aligned with the

1.5°C

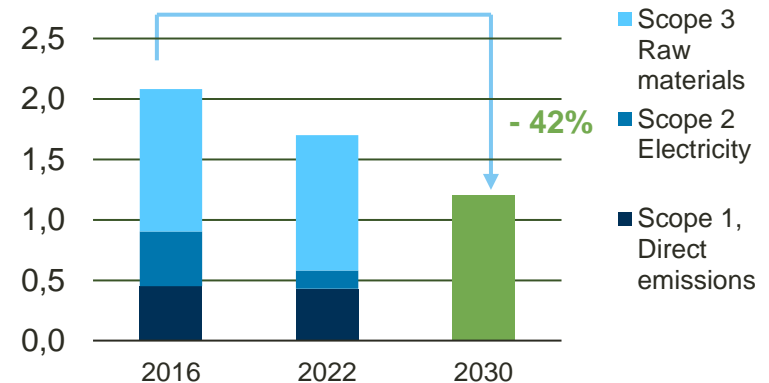
ambition



SCIENCE
BASED
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Emission intensity (tCO₂/t of stainless steel)



Key levers for emission reduction

Efficiency &
yield improvements

Decarbonize fuel mix

Systematic
sustainability evaluation

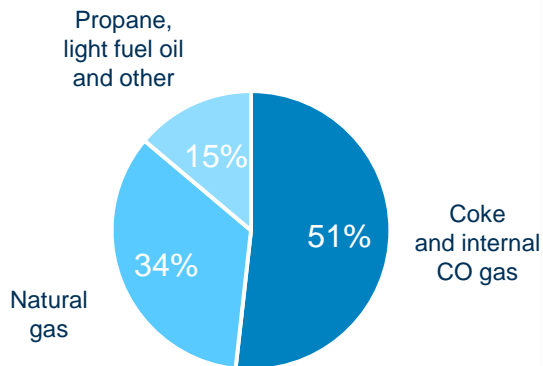
Investments within
overall strategy

Our starting point for emission reductions

Emissions per scope in 2022

Scope 1

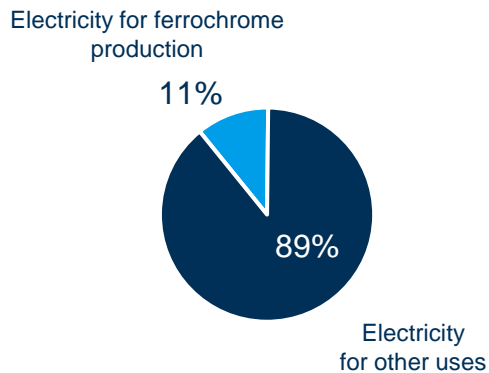
Addressing coke and fuel use has a significant impact on Scope 1 emissions.



Total: 1,043 ktCO₂

Scope 2

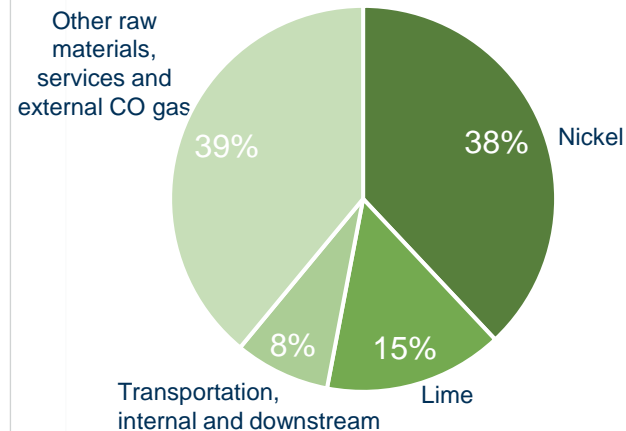
Absolute emissions can be significantly reduced by increasing the share of low-carbon electricity.



Total: 368 ktCO₂

Scope 3

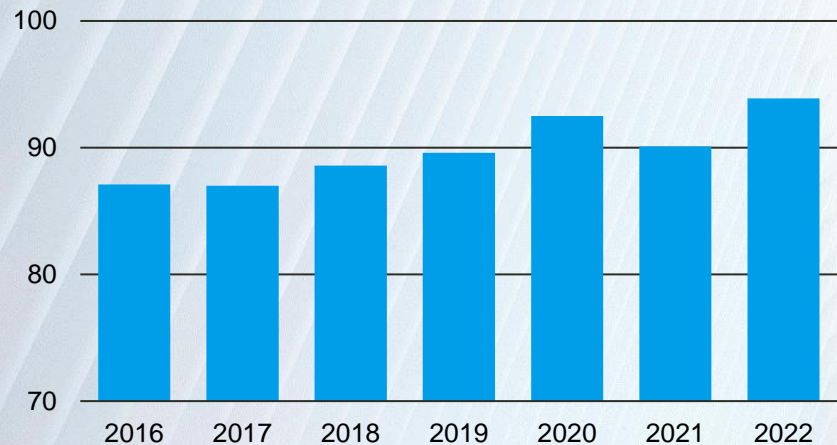
The main four raw materials amount to ~70% of our value chain emissions.



Total: 2,718 ktCO₂

Recycled material content – the highest recycled material content in the industry

Recycled material content in Outokumpu's production (%)



Scrap content in stainless steel by region

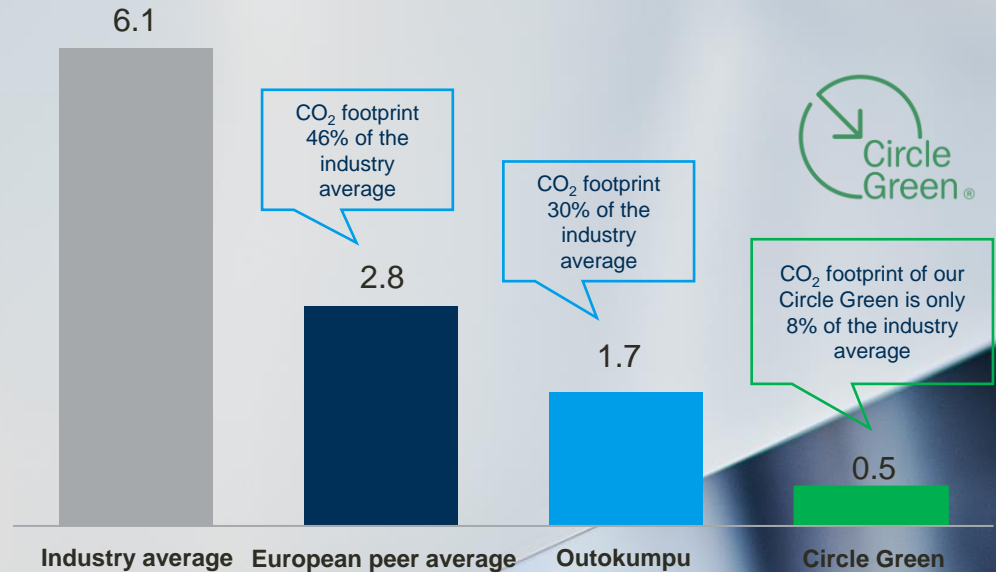


*) Includes Russia, Ukraine, South Africa & Brazil

We are the industry leader in sustainability – Outokumpu Circle Green has 92% lower CO₂ footprint than industry average

Expanding gap
between Outokumpu
and competitors
creates a leverage
for green line
products

CO₂ emission tons per produced ton of stainless steel

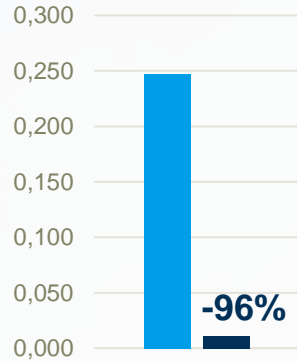


CO₂ reduction results

**Overall
CO₂
reduction
64%**

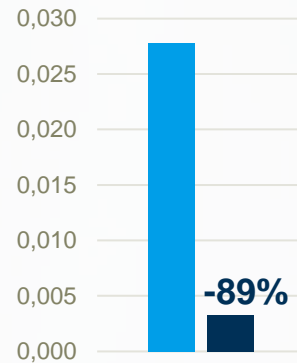
Driven by material and consumable selection in combination with very targeted production.

Scope 1



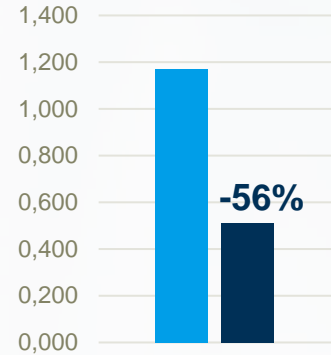
■ Reference melt
■ Optimised melt

Scope 2



■ Reference melt
■ Optimised melt

Scope 3



■ Reference melt
■ Optimised melt

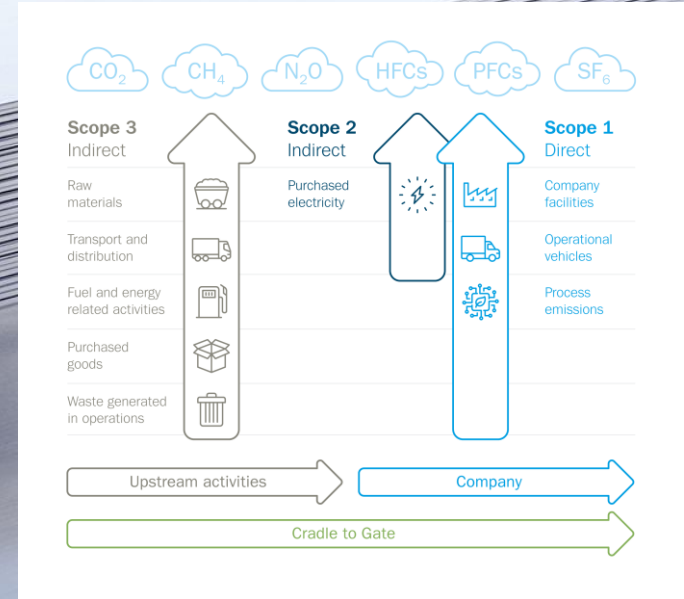
Product carbon footprint (PCF) cradle to gate

Product carbon footprint measures emissions caused by a product from the extraction of raw materials to our gate. It enables customers to evaluate their scope 3 emissions and enables to minimize their carbon footprint by selective material sourcing.

Material specific CO₂ footprints* available since 2022:

- Tonnage-weighted average of different plants and production routes
- Differentiation by product type: slab, hot rolled (BHB, WHB) and cold rolled
- Calculation verification by third party

*Including Scope 1, 2 and 3







Every piece of scrap has a part to play in a more sustainable future. It is in our hands to give it the opportunity. Outokumpu Inner Circle® invites you on our mission to make stainless steel a key part of strengthening the European circular economy.

The program brings transparency to supply chains and smooths out the path from stainless steel to usable scrap, and from scrap to ever more sustainable stainless steel production – effectively optimizing access to circularity for everyone. Joining creates a positive impact for both your business and the environment. Together we show strong initiative and leadership by spearheading the move towards a more circular and closed-loop economy.

Let's put all the pieces together.
Welcome to the Inner Circle.

The change we are about to make

1.

Strengthening the European circular economy across many dimensions.

2.

Bringing full transparency to the product life cycle and supply chain.

3.

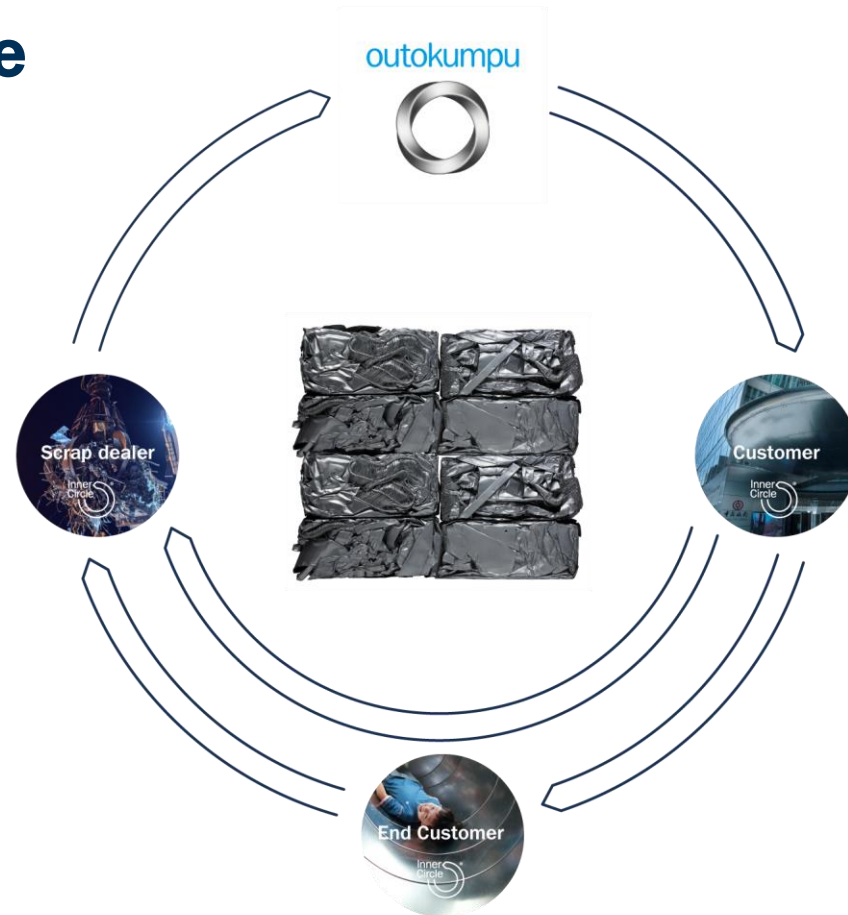
Moving together towards a more sustainable circular economy.

Environmental Benefits

- Shortening scrap metal routes and optimizing logistics
- Returning scrap metal to sustainable production
- Closing the loops in stainless steel production for environmental benefit
- Leveraging existing, already efficient supply chains



The Inner Circle model





Juha Erkkilä

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Excellence & Reliability