Layers of possibilities

KGHM Polska Miedź - copper muscle of the Polish Just Transition

Brussels, July 2020

Key information about the KGHM Group

KGHM Group in brief

One of the world's largest producers of copper and silver with nearly 60 years of experience in mining and metallurgy

702.000 tonnes of copper production and 1417 tonnes of silver production in 2019

Fully integrated company with complete chain of extraction and processing of valuable natural resources

Member of the prestigious indices Respect Index & FTSE4Good published by the WSE and LSE*

A stable and competitive position in a key sector for the global economy - copper mining and processing

An organization with strong values-based roots, focused on corporate social responsibility

*In 2018 KGHM joined the **FTSE4Good** index. Being a member of the FTSE4Good index series confirms KGHM's efforts in the field of environmental protection, social responsibility and corporate governance. KGHM perceives joining the FTSE4Good index as an award for its solid performance in complying with demanding ESG standards.
LSE - *London Stock Exchange;* WSE - *Warsaw Stock Exchange*

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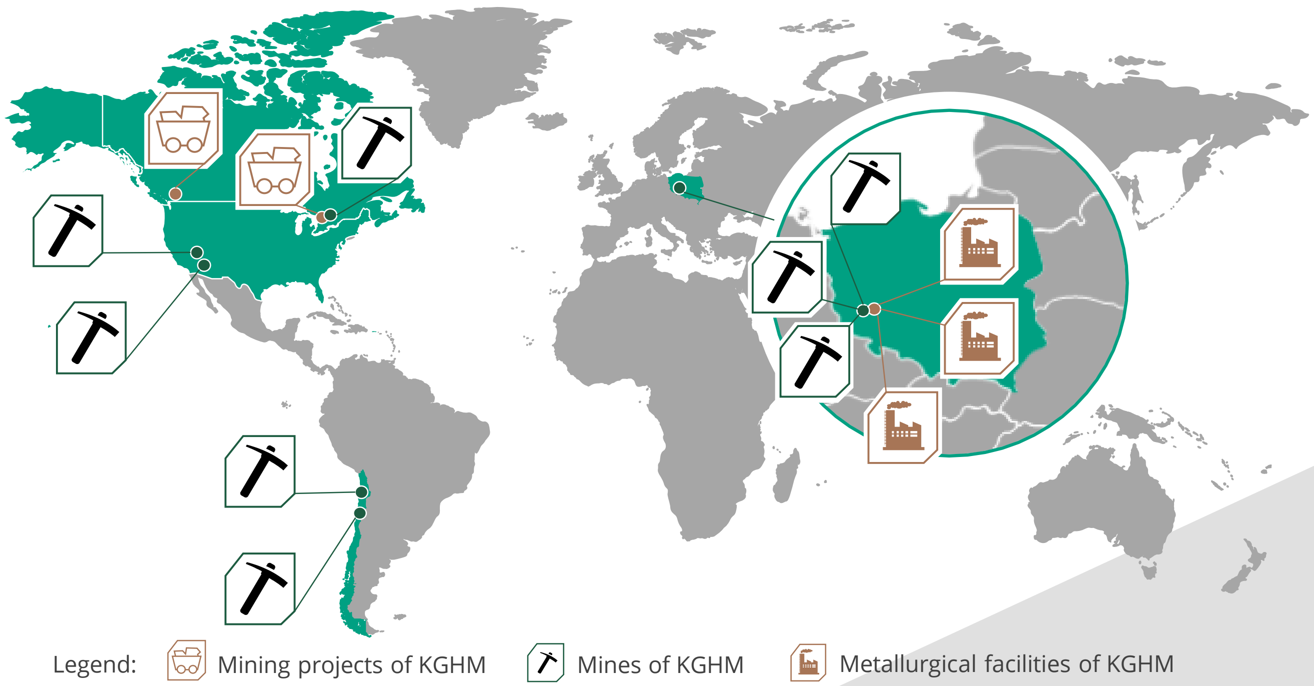
Important player on the global copper and silver markets



8th largest copper producer — Cu

2nd largest silver producer — Ag

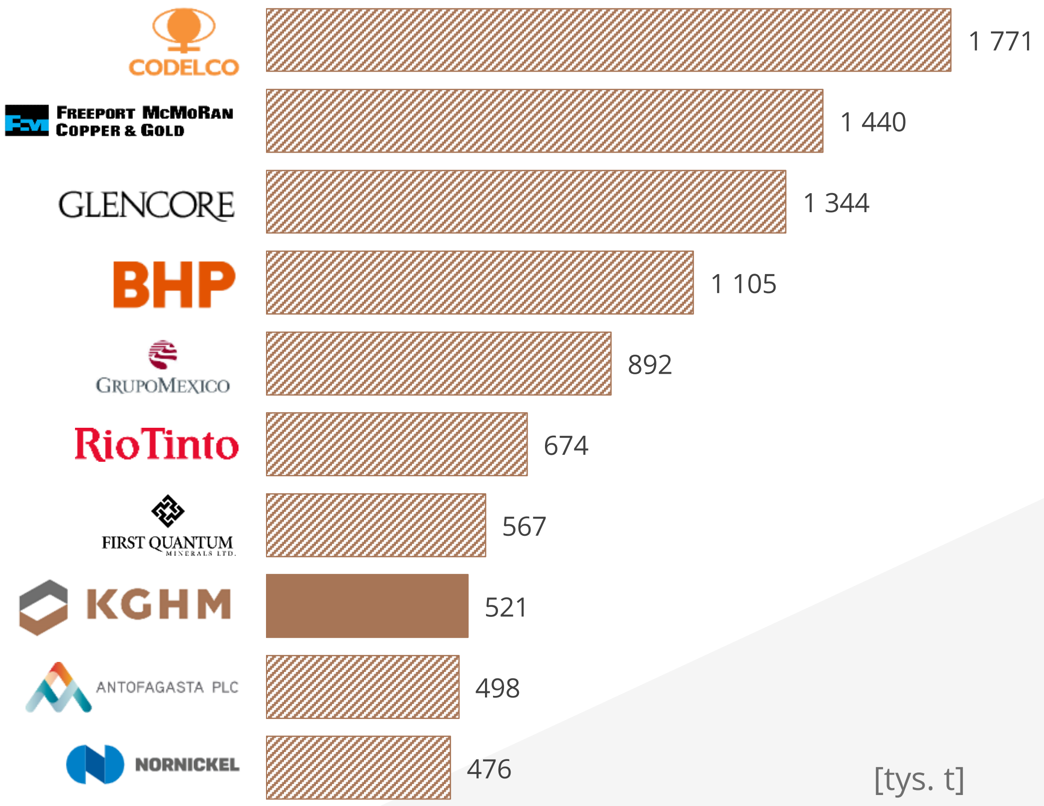
Other KGHM Group products:

- Molybdenum
- Lead
- Nickel
- Gold
- Palladium
- Platinum
- Rhenium
- Sulphuric acid
- Selenium
- Copper sulphate
- Nickel sulphate

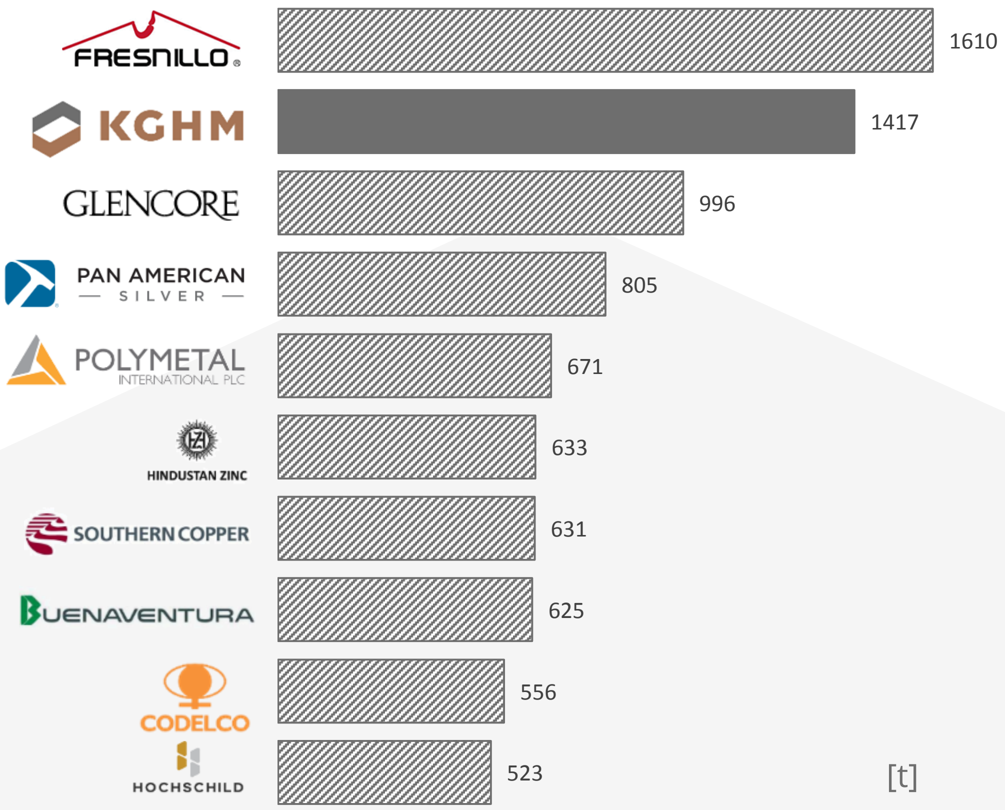
Geology	Mining		Metallurgy	
Exploration and evaluation	Ore extraction	Ore enrichment	Smelting and refining	Casting

Among world's biggest copper and silver producers

Mined copper production 2018 1)



Silver production 2019 2)



1) Copper Market Outlook, CRU, April 2019
2) World Silver Survey 2020

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Energy transformation in KGHM

Energy consumer and producer

KGHM - no. 1 electricity consumer in Poland, 2,8 TWh. 20-25% comes from own sources, rest from the market

Two gas-steam CHP plants in Polkowice and Głogów, each with a capacity of **42 MWe** (electric), **40 MWt** (thermal). Built 2011-2016, cost: **EUR 170 million**

KGHM's CHP plants **operate for 11 months during the year**, reaching an **efficiency level** of **80%**

The **electricity** produced is **100% used for** KGHM's **own needs** on-site

100% of the produced **heat energy** is transferred **to the heating systems** of Polkowice, Lubin and Głogów (**165,000 inhabitants** in total)

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Trail towards green copper

- **Ecology** as one of four **strategic directions** for KGHM's development
- Our objective is to ensure a supply of **green energy** for safety and climate neutrality reasons
- By the end of 2030, **up to 50%** of KGHM's annual demand (1,6 TWh) will be covered by **own energy sources**
- There will be a considerable share of **renewable energy** (300 MW) from **solar and wind projects**

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Energetics development program

Renewable energy investments

- Photovoltaic
  - 200 ha of own lands for development, out of which 160 ha in close vicinity of energy consumption sites
- On-shore wind farms
  - Virtual PPAs[1)]
  - Acquisitions

Optimisation of gas-steam units

- Increasing power production in existing gas-steam blocks and decreasing the amount of coal-based energy from the market

Research & Development

- Waste heat utilisation from metallurgy and mining processes
- Energy storage for optimisation and stabilisation
- Waste fuels utilisation

Competence building

- Adjusting company structure for changing environment
- Building competencies to secure energy deliveries
- Supporting the development of an energy-friendly legislative environment

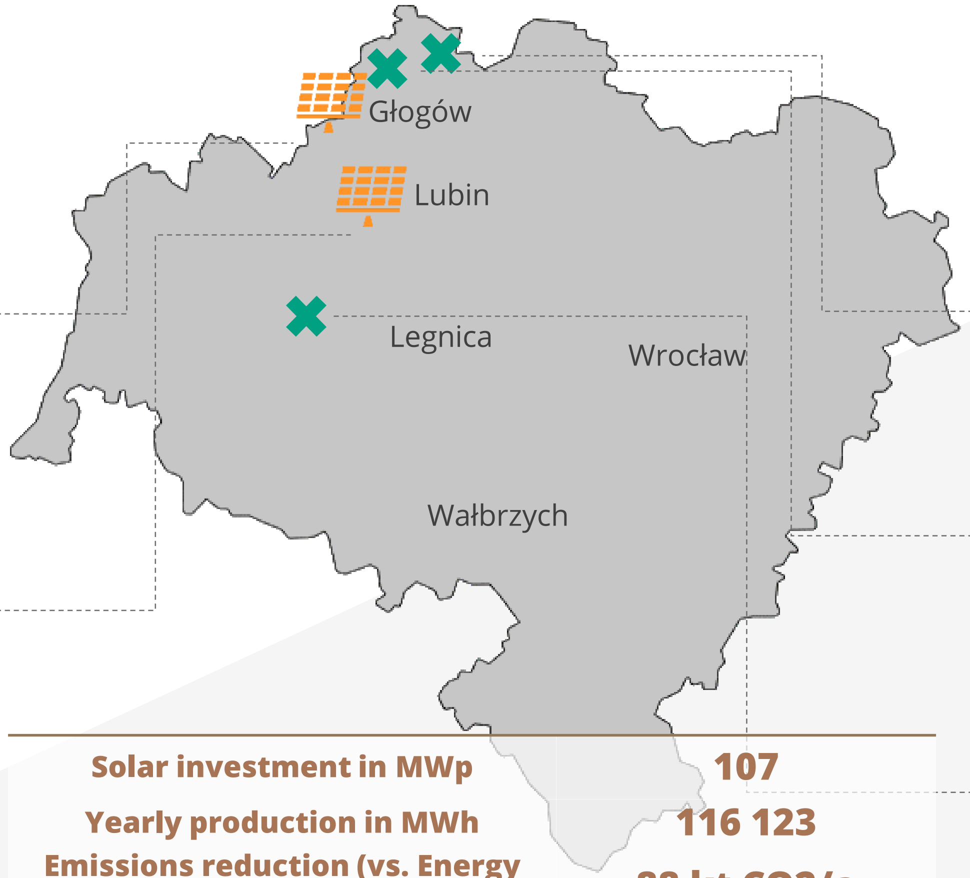
1) PPA – Power Purchase Agreement

First photovoltaic projects

Design phase

PV[1] 1. HMG
4 MW Głogów Copper Smelter and Refinery
Start of production
Q3 2021

PV 2. Piaskownia Obora
5 MW in the reclamation area of the Obora sandpit
Start of production
Q2 2022



Solar investment in MWp	107
Yearly production in MWh	116 123
Emissions reduction (vs. Energy from market)	88 kt CO2/a
Approx. CAPEX (mln EUR)	75

Pre-design phase

3. Wierzba I
16 MWp[2]

4. Wierzba II
50 MWp

5. Konrad
30 MWp at the former Konrad Mine

1) PV – photovoltaic
2) MWp – peak megawatt

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What can the money change?

The method and cost of financing will significantly affect the **economical feasibility** (NPV) of new investments

To achieve the strategic goal, **different approaches are being considered** – from increased gas usage, through gas/PV/wind mix to RES only with existing gas-steam blocks gradual withdrawal

Estimated CAPEX differs from **100 m€** (low reduction of CO_2 emissions) up to **670 m€** (approx. 1 Mt CO_2 annually reduction)

As the energy produced in Poland emits approx. 0,8 t CO_2/MWh, the support for such investments will **firmly contribute to decarbonisation**

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Why cash and not debt?

- Copper price **volatility** and the constant need to **sustain production through investments** leads to a significant increase in the KGHM's debt during economic slowdown
- Struggle with **increasing costs** (environmental standards & investments) and **strong competition** from outside Europe
- Credit agreements with banks set **upper debt limits** (so-called **covenants**)
- In this situation **we reduce our dependence** on loans and try **not to increase** current **debt**
- We would also welcome other ways of financing our investments without **burdening the balance sheet**

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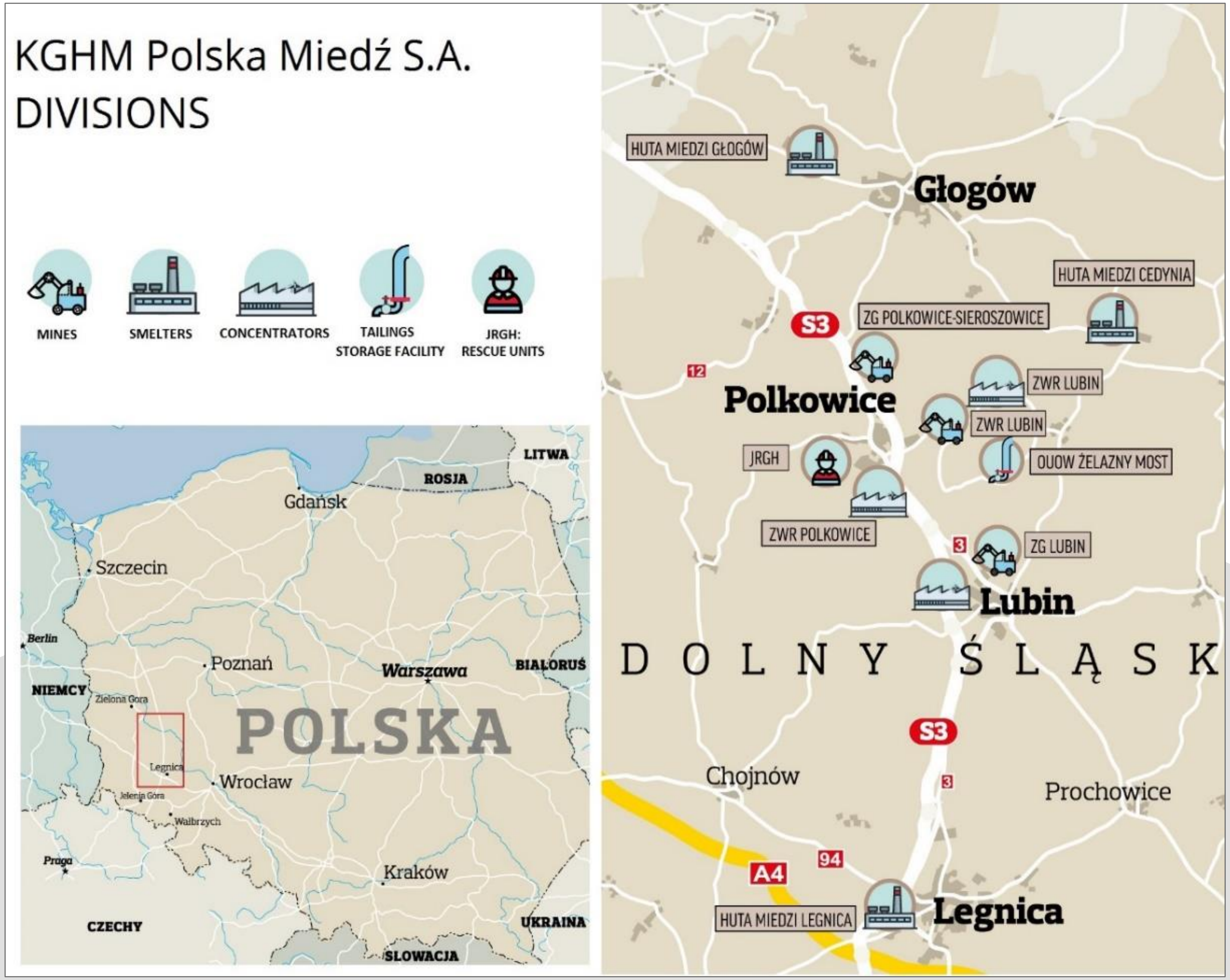
Polish potential for coal-to-copper mining transformation

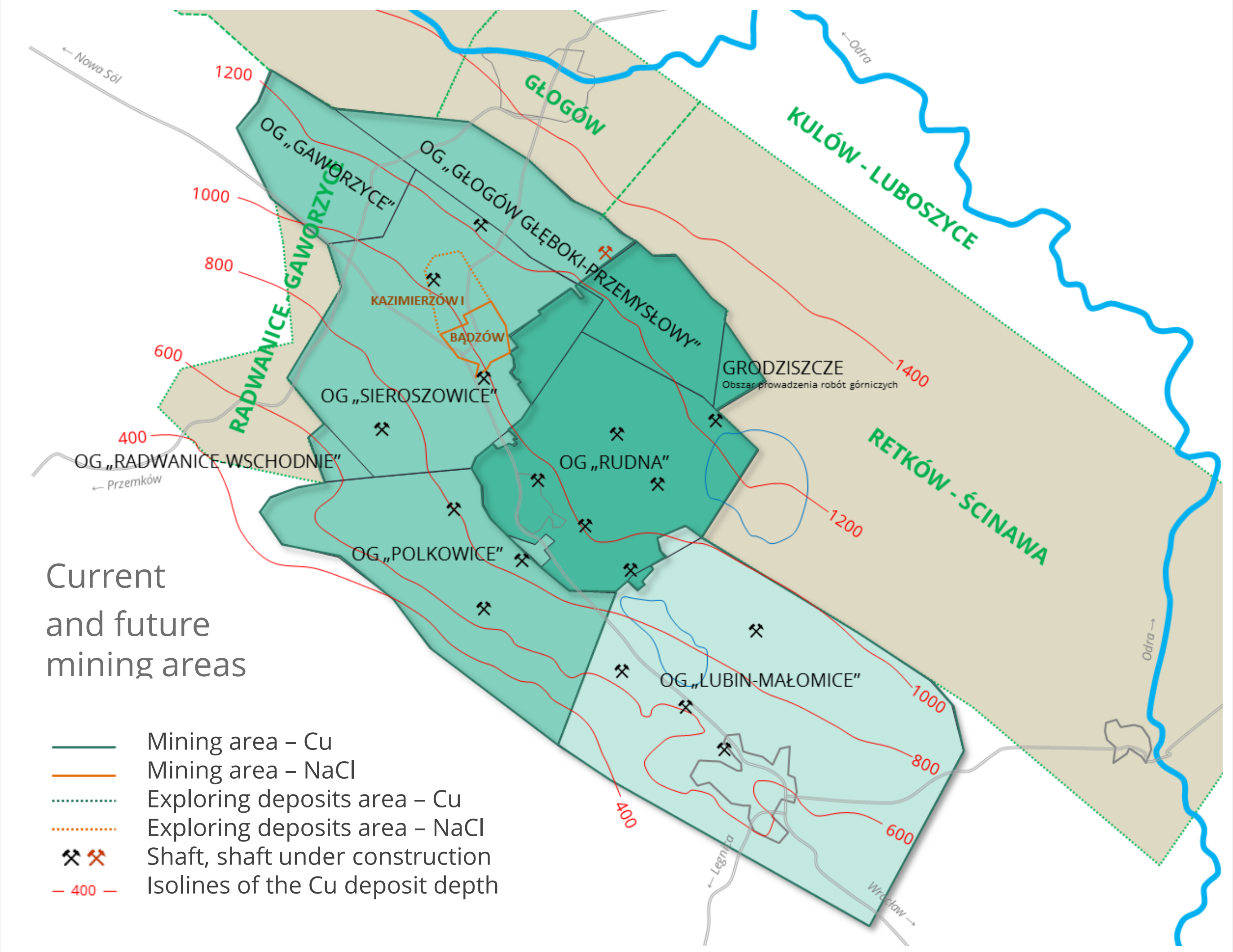
Lower Silesia Copper Basin

- Our copper ore deposits are located in **Lower Silesia, southwestern Poland**
- The area is **approx. 550 km2**, situated 80 km west of **Wrocław** and 70 km north of Wałbrzych (one of the traditional coal centres)
- The main cities of the district are **Lubin** (73,000), **Głogów** (69,000), **Polkowice** (23,000) and **Legnica** (100,000)
- More than **34,000 people employed** in the KGHM Group, the vast majority of them (about 31 500) in Poland
- Basing on Polish deposits (**one of the largest in the world**), we can **continue production** for at least **30-40 years**



Sustainable & Responsible Raw Materials - role of Polish deposits

- Climate-neutral Europe **only** possible with sufficient amount of **non-ferrous metals**
- The **growing deficit of European extraction** makes EU dependent on **uncertain and high carbon footprint** imports
- Meanwhile the **current crisis** presents an **historic opportunity** to improve Europe's **strategic autonomy** in raw materials
- The situation could be resolved by the **resources of KGHM** located **in Poland**



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No-one left behind

Support for KGHM will also **help the region**, which is still partly **affected by the end of coal exploration**

For several decades, coal mining has been **the most important industry** of Wałbrzych and its surroundings (**Lower Silesian Coal Basin**). Lower Silesia is close to Upper Silesia, the most coal-dependent region in Poland

This means better than in other regions **availability of qualified personnel** who could now take up employment in **copper mining**

It's much easier to train coal miner to work in copper mine than in other sectors. Such employment would be **the best fulfillment of the Just Transition idea**

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What do we need?

Regulatory support: all **EU policies** affecting raw material companies should be **subjected to the main objective of decarbonisation** with **sustainable & responsible European raw materials**

Financial support for **creating new jobs** in the non-ferrous metals sector in Europe – **investments in mining infrastructure**, shafts and conveyor belts, underground machines

Faster and less complicated administrative proceedings: mining license, environmental and water permits, spatial development plans

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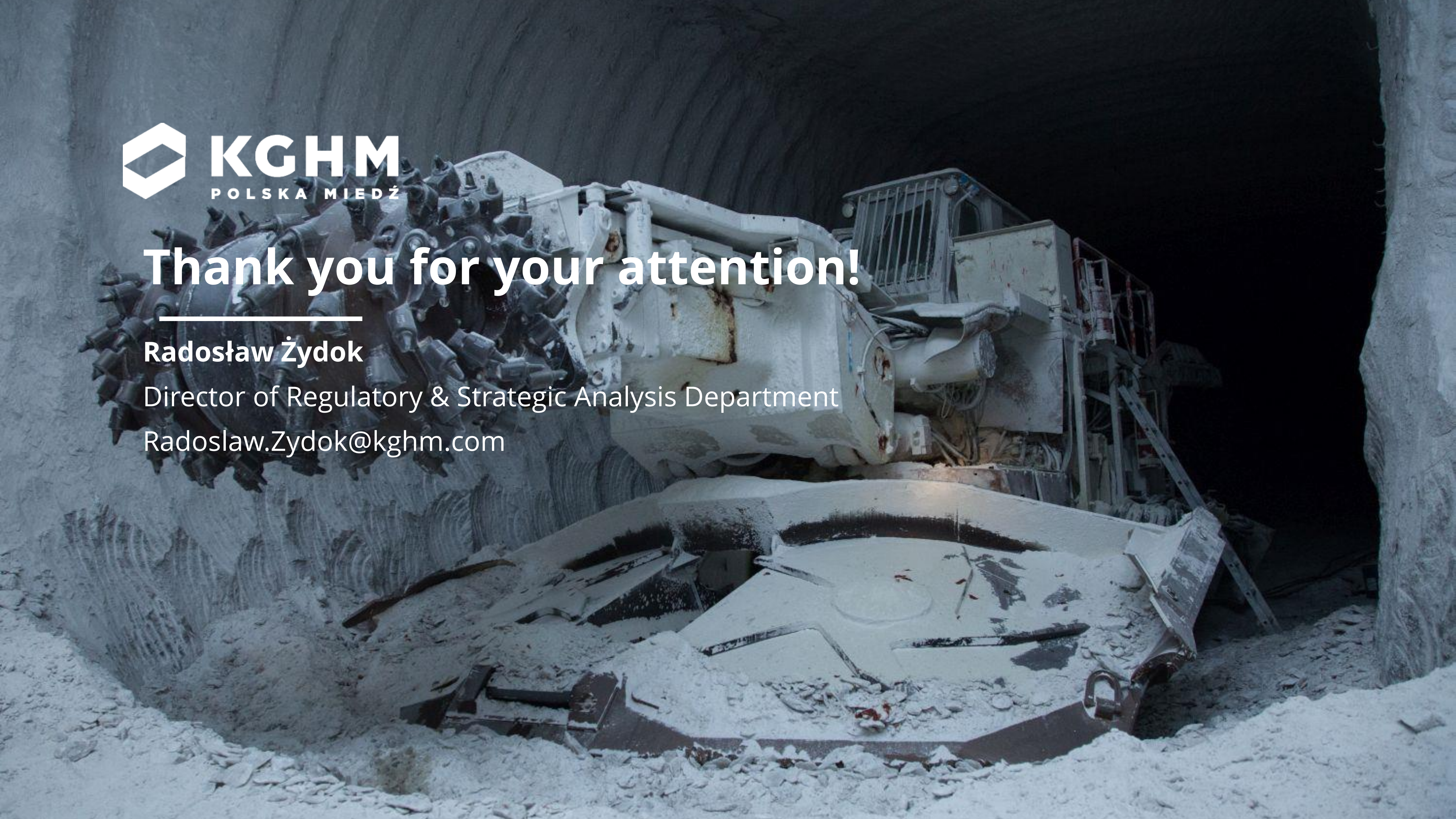

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Thank you for your attention!

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