

Brussels, 2 February 2026  
(OR. en)

5883/26

COMPET 131  
MI 86  
IND 86  
INTER-REP 6

**NOTE**

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From: General Secretariat of the Council  
To: Delegations

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Subject: Presentation by Elemental Battery Metals Sp. z o.o.(agenda item 2) at the  
Working Party on Competitiveness and Growth (High Level) on 29 January  
2026

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Delegations will find attached a presentation by Elemental Battery Metals Sp. z o.o., with a view to the discussion by the Working Party on Competitiveness and Growth (High Level) at its meeting on 29 January 2026.

This document contains a presentation by an external stakeholder and the views expressed therein are solely those of the third party it originates from. This document cannot be regarded as stating an official position of the Council. It does not reflect the views of the Council or of its members.



# Elemental Holding at a glance

## Largest recycler of PGMs globally and of upstream e-waste in Europe

Current operations		Ongoing downstream and BEV metals expansion	
<b>PGMs</b> <ul style="list-style-type: none"> <li>✓ Leading global recycler of PGMs from spent autocatalysts ("SACs")</li> <li>✓ Among largest global sourcing networks of SACs</li> <li>✓ Producing PGM monolith</li> </ul> 	<b>E-waste / non-ferrous</b> <ul style="list-style-type: none"> <li>✓ Leading European recycler of E-waste</li> <li>✓ US platform through Colt acquisition</li> <li>✓ Large European non-ferrous business focussed on aluminium, copper, and lead</li> <li>✓ Producing copper / gold concentrate</li> </ul> 	<b>PGM smelter and refinery</b> <ul style="list-style-type: none"> <li>✓ Ramping-up a low-emission, high-tech PGM smelter / refinery</li> <li>✓ Powered by renewable energy</li> <li>✓ Processing Elemental PGM monolith as raw material</li> </ul> 	<b>Battery recycling</b> <ul style="list-style-type: none"> <li>✓ Developing largest European LIB recycling platform in Poland (with shredders globally)</li> <li>✓ Battery throughput: &gt;50kt shredding</li> <li>✓ Ramping-up capacity in Poland and FEED stage project in Germany</li> </ul> 
<b>Project Polvolt</b> <b>Black mass refinery</b> <ul style="list-style-type: none"> <li>✓ NMC and LFP black mass refinery</li> <li>✓ Captive feedstock from Elemental's subsidiaries, partners and broader network</li> <li>✓ Powered by renewable energy</li> </ul> 	<b>E-waste / Cu smelter and refinery</b> <ul style="list-style-type: none"> <li>✓ Green secondary copper and precious metals smelter / refinery</li> <li>✓ Fully devoted to processing Elemental E-waste as raw material</li> <li>✓ Powered by renewable energy</li> </ul> 		

### Elemental's strong financial position

Elemental Holding Financials (US\$m)			
	2022	2023	2024
Revenue	1,533	948	983
EBITDA	98	34	92
EBITDA margin	6%	4%	9%
CAPEX	19	91	33

Source: Company information

### Established customer base & trading partners



### Transforming the metals recycling industry

Largest ever equity raise in metals recycling	US\$400m
Substantial grants awarded (Europe and PL)	
Largest recycler of PGMs globally	>0.5 Moz
Strongest M&A track record in the sector	20 deals
Clear path to becoming a large copper producer	>50 kt

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# Accelerated development from an urban miner into a large-scale integrated recycler

Experienced project developer, building and commissioning a EUR200m PGM smelter / refinery, black mass shredder and solar PV farm on time and on budget at Elemental's Zawiercie site in Southern Poland

Equity capital raised	Strategic partnership established	Execution of M&A pipeline	Demonstrated project delivery expertise
 <ul style="list-style-type: none"> <li>Total <b>US\$400m equity capital raised</b> from four institutional investors</li> <li><b>IFC (World Bank), EBRD, PFR and Silk Road Fund</b> together own a minority stake</li> </ul>	 <ul style="list-style-type: none"> <li><b>Strategic partnerships and joint ventures</b> across broader PGM value chain (Mitsubishi Corp) and battery recycling (Ascend Elements)<sup>(1)</sup></li> <li>Partners will <b>accelerate Elemental's growth</b></li> </ul>	 <ul style="list-style-type: none"> <li>Number of <b>complementary M&amp;A transactions executed</b> across PGM and e-waste recycling</li> <li><b>Significantly strengthened US footprint</b></li> </ul>	 <ul style="list-style-type: none"> <li>c. EUR200m PGM smelter / refinery built and commissioned in Poland <b>on budget and within 11 months</b></li> <li>Black mass shredder and solar PV farm also <b>built on time and on budget</b></li> <li><b>Demonstrated knowledge</b> of Polish permitting and planning procedures</li> </ul>
<p><b>US\$400MM</b> Largest metals recycling raise ever</p>			<p><b>10ktpa</b> smelting <b>2MOZ</b> refining</p>

Source: Company Information  
Note: (1) Collaborated with Ascend Elements on battery recycling does not extend to Polimet, as it is a Ascend Elements licensee to pre-emptive right towards Polimet

## Elemental completed in 2023 CRM project - PGM smelter&refinery and first battery shredder in 2024

### Collection and processing of spent autocatalysts into PGM monolith – Strong track record demonstrated by Elemental's PGM smelter / refinery constructed on time and budget in 2024 and successfully ramped up

#### Elemental has built a state-of-the-art PGM smelter & refinery in Europe

- Grant funded in 2020 and financed with EBRD project debt;
- "Green" low emission smelting of monolith supplied by Elemental and other wastes containing PGM;
- Refining of PGM and extraction of green metals in the form of sponge and investment ingots;
- The facility powered by renewable energy from a PV farm on site as well as through renewable energy PPAs;
- Industrial wastewater treatment based on innovative reduced pressure distillation and electrochemical technologies;
- 100% of monolith feed procured internally by Elemental.



<b>EUR72m</b> EU grant	<b>Q4 2022</b> Start of construction	<b>Ramp-up</b> Status
<b>Location</b>	<ul style="list-style-type: none"> <li>• Situated in Zawiercie, Poland, within the Special Economic Zone, benefitting from existing infrastructure and utilities</li> </ul>	
<b>Status</b>	<ul style="list-style-type: none"> <li>• Construction commenced in Q4 2022 and completed on schedule in Q1 2024</li> <li>• Successful ramp up of smelter and refinery over the course of 2024</li> </ul>	
<b>Capacity</b>	<ul style="list-style-type: none"> <li>• Smelting 10 ktpa PGM monolith</li> <li>• Refining 2 Moz PGMs</li> </ul>	
<b>Development CAPEX</b>	<ul style="list-style-type: none"> <li>• ~US\$200m (including battery shredding and solar power)</li> </ul>	
<b>Funding Mix</b>	<ul style="list-style-type: none"> <li>• NCBR grant, EBRD loan and equity</li> </ul>	
<b>Key Partners</b>		

Source: Company information

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**SECTION 2**

# **Introduction to Project Polvolt**

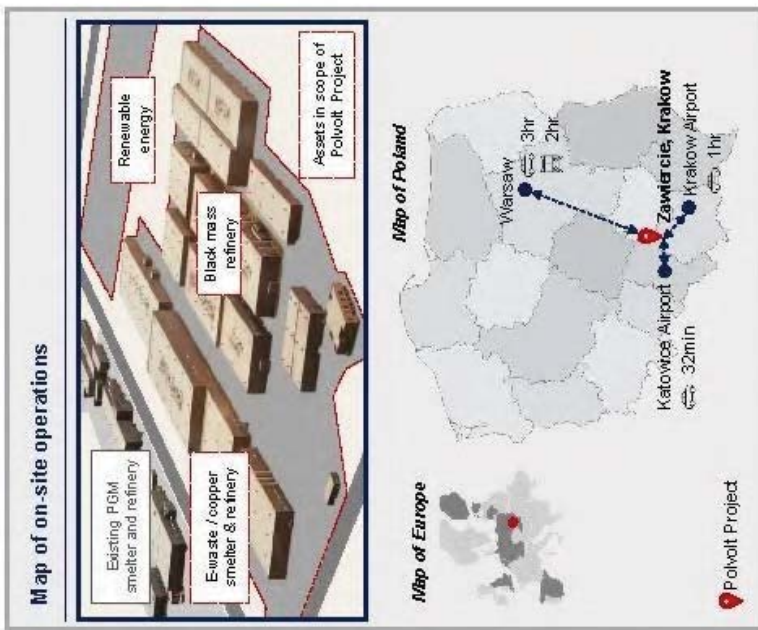
**A world-class e-waste and black mass recycling facility in Europe**

## Overview of Project Polvolt

**Polvolt Project combines a large-scale black mass refinery, and an integrated e-waste smelter with feedstock secured from Elemental subsidiaries**

- 1 of 47 EU strategic projects under the CRMA and one of only two in Poland
- ensuring local access to critical raw materials: battery metals, Ag, Pd, Cu
- recycling Eol batteries & battery scrap and e-waste as main feedstock
- investment value – approximately EUR 700 million
- strong grant support: TCTF Polish grant EUR M 238; EU Innovation Fund grant EUR M 150,6 M
- over 250 new jobs in an innovative, future-oriented industry in a region affected by the impact of economic transformation

Source: Company information



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## Overview of Project Polvolt

### Existing battery shredder & PGM smelter & refinery



Source: Company information

### Facility after realization of Polvolt



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**SECTION 3**

**Takeaways from developing industrial projects  
within CRM and recycling field**



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## High-Level: Industrial Policy Paradox

- European companies struggle to compete with Asian firms.
- European regulations (ETS, ESG, BAT, REACH, OELs) significantly raise operating costs compared to other regions.
- Absence of customs and market barriers means open competition with nations having lower costs and standards.
- **Consequence:** Even with 100% capital expenditure subsidies, investments remain unprofitable, resulting in a shortage of black mass and PCAM refineries in Europe.



## General Business: Cash Flow Challenges in CRM Sector

- CRM projects face long conversion cycles and require high working capital and inventory levels.
- Key issues:
  - Conversion cycles are longer due to CRM's specialized, non-commodity nature, impacting logistics and accumulation.
  - Geopolitical risks disrupt supply chains.
  - Market volatility risk is high due to limited hedging options.
- **Result:** Working capital requirements often exceed what developers can manage with banks.
- **Solution:** Implement public tools or guarantees to facilitate access to working capital for CRM projects.



## elemental **Industry-Specific Issue: Cross-Border Movement of EoL Batteries, Black Mass, and E-Waste**

- Strict export regulations (mainly targeting non-OECD countries) hinder intra-EU movement of CRM-containing materials, classified as hazardous.
- EU companies often wait 9–12 months for approval to import basic feedstock from another EU country.
- **Consequences:**
- Chemically active and fire-prone materials are stored for months awaiting clearance.
- Exporting black mass to Japan/Korea is easier than shipping within the EU.
- EU recyclers face capacity underutilization and financial losses due to prolonged stockpiling.
- **Solution:** Restrict CRM-containing waste exports and **streamline intra-EU** transfers among licensed operators—using mechanisms like the “green list” or equivalent.



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## Industry-Specific Issue feedstock leakage to Asia

- CRM-containing waste (black mass, e-waste, Cu/Al scrap) leaks to Asia, incentivized by lower processing costs abroad.
- **Recommended Action:** Enact export restrictions on CRM-containing waste and metal scraps to keep materials within Europe.



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## General Conclusion

- Europe's high regulatory costs and open competition undermine the profitability and sustainability of strategic investments in the CRM and battery materials sector.
- Without protective industrial policies, increased operational costs will cause project failures.
- **Key Requirements:**
- Release (ETS, ESG, BAT, REACH, OELs) related cost and/or adopt market protection tools against Asian low cost markets
- Adopt working capital support tools.
- Streamline procedures for intra-EU CRM waste transfers.
- Restrict exports of CRM-containing waste, scrap, and e-waste as part of broader industrial policy reforms.



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