

EURASIAN RESOURCES GROUP

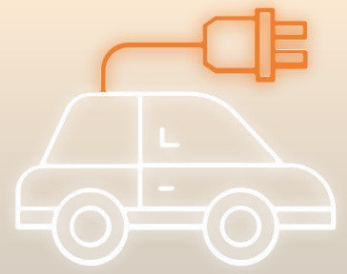


Our mission

- Be the best at what we do
- Navigate global change whilst holding true to our values
- Responsibly unlocking the potential of the Earth and its people, ensuring the prosperity of those who rely on us

- Ferroalloys
- Alumina and Aluminum
- Other Non-ferrous (copper and cobalt – core business)
- Iron ore
- Energy
- Logistics





Electric vehicles

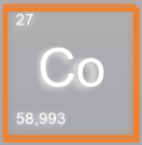


Clean sources of energy



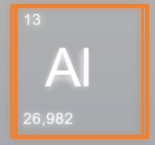
Infrastructure development

Metalkol: The world's second largest cobalt producer. Annual output enough to power 3.5 million electric vehicles



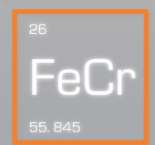
Cobalt

Kazakhstan Aluminium Smelter: The only supplier of high-grade primary aluminium in Kazakhstan and a major operator in the CIS region



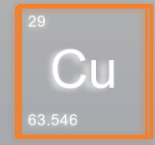
Aluminium

Kazchrome: The world's largest high-carbon ferrochrome producer by chrome content



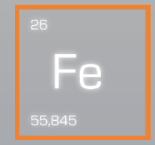
Ferrochrome

ERG Africa: An established and growing producer of copper



Copper

SSGPO: One of the largest suppliers of iron ore products in Eurasia
BAMIN: The supplier of high-grade low impurity iron ore from Brazil



Iron ore



> ERG: Driving the Clean Energy Transition



- **Global Battery Alliance:** ERG is a Founding Member of the Global Battery Alliance, the largest multi-stakeholder consortium in the energy storage space which has more than 150 members and the goal of promoting and enabling a sustainable and circular battery value chain. The GBA's flagship project is the development of a **Battery Passport**, a digital representation of a battery that conveys information about key ESG and other sustainability lifecycle requirements. The first ever **Battery Passport proof of concept** was presented at the WEF Annual Meeting in Davos in January 2023.
- The GBA has also developed **Child Labour and Human Rights Indices**, the first frameworks to measure and score the efforts of any company or product specific to the battery value chain towards supporting the elimination of child labour and respecting human rights. These indices work alongside the GBA's **Greenhouse Gas Rulebook** which calculates comparable GHG footprints of the batteries and the materials they contain.
- **Re|Source:** ERG has also launched Re|Source, a joint blockchain initiative with CMOC, Glencore, Tesla and other industry major, to help end-customers assess the ESG performance of the metals they use for batteries. As part of Re|Source, the partners are using blockchain technology to trace responsibly produced cobalt and other battery materials in real operating conditions from the mine to the EV.
- **Clean Copper & Cobalt Framework:** Cobalt and copper are both essential for electrification, used in lithium-ion batteries powering EVs, electronic devices and consumer goods, from laptops and mobile phones to electric cars and trucks. Recently, PwC published a report showing that ERG is continuing to adhere to its Clean Cobalt & Copper Framework, ensuring its operations go beyond the globally recognised supply chain guidance of the OECD.
- **Developing the renewable energy:** For example, ERG is investing 230 mln US\$ in building a major wind power plant in Kazakhstan. The renewable energy facility will have a capacity of 155 MW, making it the most powerful plant in the Aktobe region, and is expected to reduce CO2 emissions by ca. 520,000 tons annually. It will supply energy to ERG's Kazchrome Donskoy GOK plant as well as neighbouring facilities and Kazakhstan more widely, thereby reducing the country's usage of coal.

> Three Core Production Regions

In **Kazakhstan** ERG represents **one third of the country's metals and mining industry**. Through its assets in Kazakhstan, ERG is the world's largest high-carbon ferrochrome producer by chrome content. It is the country's only producer of aluminium. ERG is **one of the largest electricity producers in Kazakhstan (17% share of the country's market)**. ERG is also a **large railway operator in Central Asia** with capacity of over 13 k units of railroad park and transportation of 58 million tonnes per annum.



ERG is a strategic investor in **Africa** with copper and cobalt production facilities in the **Democratic Republic of the Congo**. This includes **Metalkol**, the world's largest standalone cobalt producer, which can produce more than 25 kt of cobalt per year, and **Frontier**, a large-scale producer of high-quality copper concentrate. ERG also holds a **portfolio of assets in other minerals** at different stages of development in **Mali, Mozambique, South Africa, Zambia, and Zimbabwe**.



In **Brazil**, ERG is developing an integrated mining and logistics project that comprises the **Pedra de Ferro high-grade iron ore mine with target capacity of 26mtpa**, the **Porto Sul multi-use deep water port**, and **Stage 1 of the FIOL¹ transcontinental railway**. Pedra de Ferro should make the State of Bahia the third largest iron ore producer in the country.



1. The West-East Integration Railway

> The Global Battery Alliance (GBA) where ERG is a Founding Member and its CEO is a Co-Chair



- ERG was **one of the first organisations to seek collaborative solutions for the supply chain of the global li-ion batteries sector**
- It **supported the World Economic Forum** to mobilise the Global Battery Alliance, a **public-private multi-stakeholder collaboration**
- The GBA was **officially launched in 2017 in New York**. Since then, it has grown to more than **150 international members**

Vision - Develop an inclusive, innovative and sustainable battery value chain to power the Fourth Industrial Revolution

- ✓ In 2019 the GBA published, jointly with **McKinsey**, a landmark **2030 Vision report** outlining a sustainable and circular battery value chain.
- ✓ At the **WEF jubilee 50th annual meeting in Davos in 2020**, 42 members of the **Alliance**, including **businesses representing annual revenue of close to a trillion US\$**, endorsed **10 guiding principles**.
- ✓ In January 2023, the **GBA** launched the **first ever Battery Passport proof of concept**
- ✓ The GBA also worked with international partners to launch its **Greenhouse Gas Rulebook and Human Rights and Child Labour Indices**. These world-first frameworks will serve as **key performance indicators** for the Battery Passport.



Examples of corporate members



Examples of governments, international organisations and NGOs which are members of the GBA





ReSource

The first industry-level blockchain consortium

- A solution to trace responsibly produced cobalt and other battery metals from the mine to the EV.
- A unique industry partnership between the supply chain majors.
- Founded by CMOC, ERG and Glencore; later joined by Tesla, Umicore and other partners



COBALT INDUSTRY RESPONSIBLE ASSESSMENT FRAMEWORK (CIRAF) STATEMENT OF COMMITMENT

JANUARY 2019

CIRAF

Cobalt industry responsible assessment framework

- A management tool designed for all companies.
- Consolidates due diligence actions being taken across the cobalt industry to demonstrate best practice and meet the expectations of civil society, the media and the cobalt market.

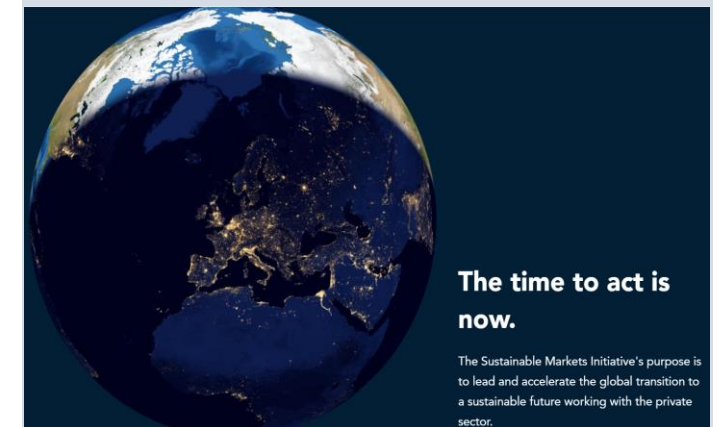


Sustainable Markets Initiative

‘Terra Carta’ under leadership of King Charles III and the Sustainable Markets Initiative

Provides a roadmap to 2030 moving towards a sustainable future

- Rooted in the transformative power of Nature and the energies, resources and innovation of the private sector.
- ERG was among the first 25 world-leading organisations to support the Initiative



ERG's Key Production Assets



Operational overview



TNC Kazchrome

The world's largest high-carbon ferrochrome producer by chrome content

In 2022, Kazchrome received Platinum sustainability award from EcoVadis, putting it in 1% of the best global iron and steel producers

- **Facility description:** Chrome mining and processing facilities in Khromtau, ferroalloy plants in the cities of Aktobe and Aksu, manganese mining and processing facilities in Karaganda region
- **Products:** High carbon ferrochrome and other ferroalloys, refined ferroalloys (medium and low carbon), ferrosilicochrome, ferrosilicomanganese, ferrosilicium
- **Capacities:**
 - Donskoy GOK – 5.64 mtpa of chrome ore
 - Aktobe ferroalloy plant – 0.63 mtpa of ferroalloys
 - Aksu ferroalloy plant – 1.12 mtpa of ferroalloys
 - Kazmarganets mining enterprise – 0.48 mtpa of manganese ore and 0.16 mtpa of manganese concentrat.
- **Key markets:** Japan, China, Korea and Europe
- **Key investment projects:** construction of the “10 years of Independence of Kazakhstan” underground mine, development of the Slimes 2 reprocessing facility.
- **Location:** four regions of Kazakhstan

ecovadis

TNC KAZCHROME JSC (GROUP)

has been awarded a

Platinum medal

as a recognition of their EcoVadis Rating

-JUNE 2022-



Operational overview



Metalkol

A cobalt and copper tailings reprocessing facility, second largest standalone cobalt producer globally in 2022

One of the largest suppliers of cobalt to China

Large producer of high-quality copper cathode (LME Grade A equivalent)

Facility description: a hydrometallurgical facility reprocessing historical cobalt and copper tailings deposited in the Kingamyambo Tailings Dam and Musonoi River. The two tailings deposits host resources of ~117mt at 0.31% cobalt and 1.40% copper.

Capacity:
more than 25ktpa cobalt in hydroxide and ~100 ktpa copper cathode

Ownership: 95% ERG

Sustainability: launched Clean Cobalt Framework in 2018 (extended to include copper in 2021 as the **Clean Cobalt & Copper Framework**), independently assured by PwC, underscoring commitment to the production and sourcing of clean cobalt and copper **in compliance with OECD Due Diligence Guidance and with zero tolerance for child labour in the supply chain.** Transparency and traceability of cobalt is also being achieved through the application of **blockchain technology**. In 2022, the **Responsible Minerals Initiative (RMI)** confirmed that Metalkol is conformant with the Assessment Standards for the critical raw materials that it produces.

Location: 20km west of Kolwezi, Lualaba province in the Democratic Republic of the Congo



CONFORMANT

Operational overview



Kazakhstan Aluminium Smelter (KAS)

The only producer of high-grade primary aluminium in Kazakhstan

- **Founded** in 2007
- **Facility description:** processing and smelting plant
- **Capacity:** more than 250 ktpa
- **Full integration** with 'Aluminium of Kazakhstan'
- **Key Markets:** Southern Europe, Turkey, Kazakhstan and CIS countries
- **Location:** Pavlodar

Aluminium of Kazakhstan (AoK)

The only producer of alumina in Kazakhstan

- **Capacity:** more than 1.5 mtpa
- **Key Markets:** Kazakhstan (KAS), China
- **Location:** Pavlodar plus open pit mining of bauxites in the Kostanai region (KBRU mines)

Operational overview



SSGPO

Operations comprise mining and processing to produce iron ore concentrate and pellets

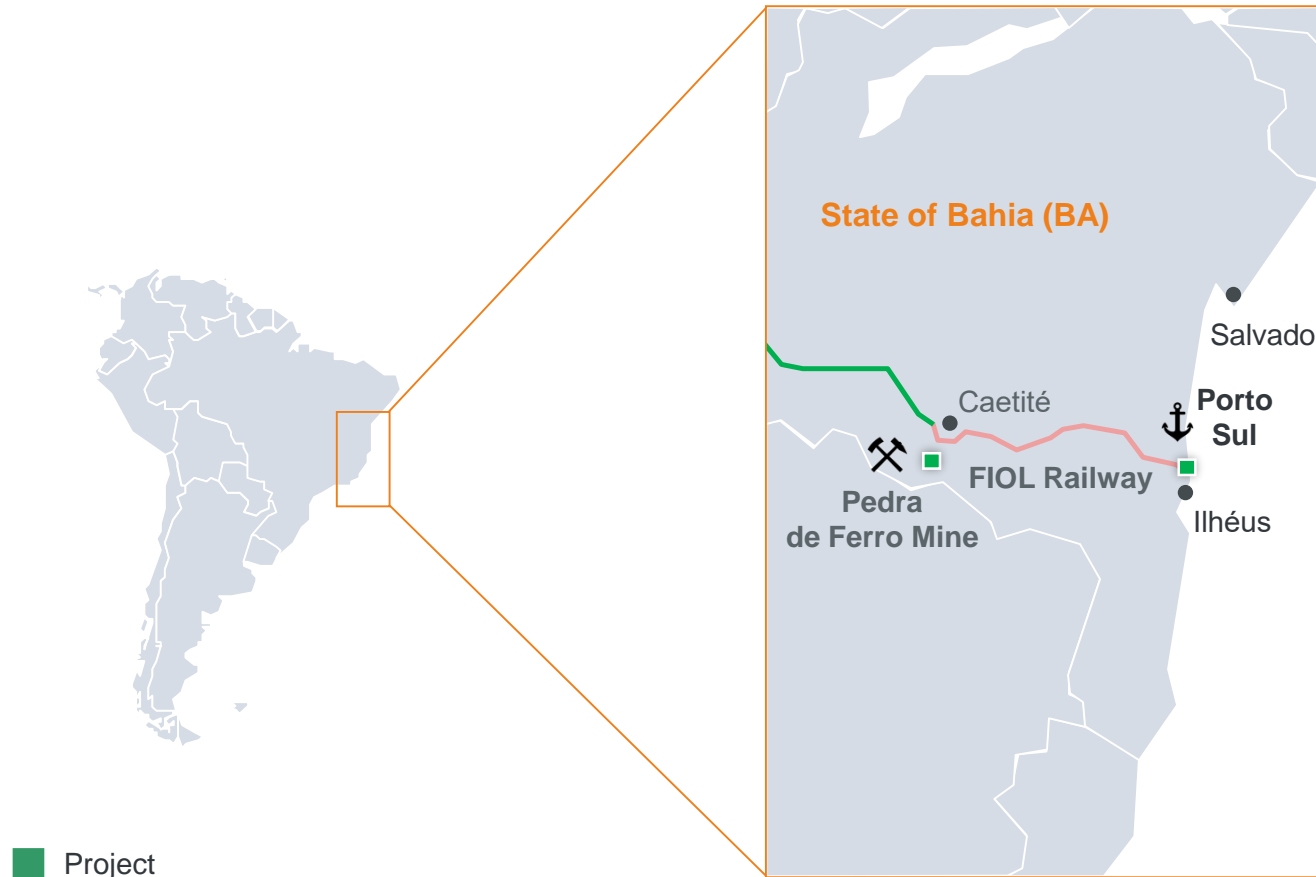
- **Founded in 1954**
- **Facility description:** Open pit mines – Sarbai, Kurzhunkol, underground mining in Sokolovski mine, processing plant
- **Products:** iron ore concentrate, pellets
- **Capacity:** 40 mtpa of iron ore, 8 mtpa of concentrate, 8 mtpa of pellets
- **Key markets:** Kazakhstan, China
- **Location:** Rudnyi, Kostanai region

Kachary Ruda

- **Founded in 2021**
- **Facility description:** Kacharsky open pit mine
- **The Smart Mine project** aimed at improving productivity has been successfully implemented and rolled out at Kachary Ruda
- **10 mln tons of iron ore** produced in 2021

> Iron Ore | BAMIN in Brazil

- **A large fully integrated mining and logistics project in Brazil; high quality iron ore mine, deep-water port and transcontinental railway**
- BAMIN is making the State of Bahia the third largest iron ore producing region in Brazil
- It has **some of highest-grade and lowest impurity iron ore in the world**, helping customers to very substantially **reduce carbon footprint**
- **An average 65.5-66% Fe DSO fines in 2022**



Pedra de Ferro Mine near Caetité

- **Commercial operations commenced in Jan 2021** and in 2021 BAMIN has already produced more than 1 mtpa of iron ore
- 535 Mt reserves at 42.4% Fe
- In December 2022, BAMIN reached 1 million tons exported
- **Target full capacity of 26 mtpa and total mine life of 30 years**
- High quality products: direct shipping ore (DSO) and direct reduction pellet feed (DRPF)
- Anchor shipper on the FIOIL railway and Porto Sul

Porto Sul

- **Multi-use deep-water port** near Ilhéus, capable of handling Capesize vessels up to 220,000 dwt
- Sole import/export point for the new West-East Integration (FIOIL) Railway)
- Initial use for dry bulks (iron ore, soy, grain and fertilizer)
- **Design capacity of 26 mtpa, expandable to >40 mtpa**

Stretch of the FIOIL railroad

- FIOIL railroad (between Caetité and Ilhéus) will be 537 km in length
- Following the project's route it will cross 20 municipalities and should handle up to **60 million tons per year** – with 60% of this capacity to be made available to other mining companies, in agribusiness and other sectors

Operational overview



Frontier

Frontier mine comprises an open pit copper mine and processing facilities to produce copper sulphide concentrate

Facility description: high-grade copper sulphide ore treated through a conventional flotation circuit to produce high-quality copper concentrate with high sulphur and iron content and low impurities. Frontier hosts mineral resources of 231 Mt at 1% copper, equivalent to 2.2 Mt copper contained.

Products: Copper sulphide concentrate

Capacity: ~100ktpa copper contained in concentrate

Key markets: domestic and export markets

Location: Kishiba in the territory of Sakania in the Haut-Katanga Province, Democratic Republic of the Congo. The mine is within 2km of the Zambian border.

Operational overview



Eurasian Energy Corporation (EEC)

One of the largest electricity producers in Kazakhstan

- **Founded in 1996**
- **Facility description:** production of electricity
- **Capacity:** 2,550 MW of installed electric power capacity
- **Key Markets:** Kazakhstan
- **Locations:** Aksu power plant, Pavlodar region

3-Energoortalyk

Electricity producer

- **Founded in 2000**
- **Facility description:** production of electricity
- **Capacity:** 750mkw/h
- **Key Markets:** Kazakhstan
- **Location:** Shymkent city, South-Kazakhstan region

Operational overview



Shubarkol Komir

Coal and semi-coke producer

- **Founded in 1985**
- **Facility description:** extraction of thermal coal, production of semi coking coal
- **Capacity:** 10,3 mtpa of coal, 240 ktpa of semi-coke
- **Key Markets:** Kazakhstan, Kyrgyzstan, Ukraine, Uzbekistan, Belarus, Poland
- **Location:** Shubarkol, Karaganda region

Vostochny coal mine

One of the largest coal mines in Kazakhstan

- **Founded in 1996**
- **Facility description:** extraction of thermal coal
- **Capacity:** 20 mtpa of coal
- **Key Markets:** Kazakhstan
- **Locations:** Vostochny open pit coal mine, Pavlodar region

Operational overview



Transportation group TransCom

One of the largest logistic operators in Kazakhstan

- **Founded in 1991**
- **Facility description:** transportation and logistics, freight forwarding services
- **Capacity:** 50 million tonnes of cargoes per annum
- **Locations:** TransCom (Almaty), Bereke 2004 (Pavlodar region), Transremvagon (Kostanai region)

SABOT

Logistics operator in Africa

- Leading cross-border road haulier operating throughout the SADC region owned by ERG Africa
- More than 40 years of industry experience
- 550 vehicle combinations comprising superlink and tridem flat-decks, tautliners and acid tankers

ERG Service

- **Founded in 2015**
- **Facility description:** carrying out strategic and operational regulation of production and repair works, quality control, timings and costs, manufacturing repair units for the needs of ERG's entities in Kazakhstan
- ERG Service LLP includes the Pavlodar Machinery Plant, the Production & Repair Division, and the Foundry and Mechanical Shop.



ERG Capital Projects

- **Founded in 2019**
- **Facility description:** preparing and implementation of the Group's investment projects in Kazakhstan; managing project risks, developing plans to reduce key uncertainties and improve safety, developing optimal technological business solutions for the Group's enterprises, as well as developing a strategy for the implementation of large capital projects.



ERG Exploration

- **Founded in 2020**
- **Facility description:** carrying out a full cycle of exploration works - from design, field and geophysical works, well drilling to field modeling and preparation of reports in accordance with international standards; searching and studying of mineral deposits, primarily bauxite, chromium, manganese and other priority metals



ERG Recycling

- **Founded in 2019**
- **Facility description:** mining and treatment of natural resources, waste, man-made mineral formations and secondary raw materials; disposal of industrial by-products and waste; commerce and agent activities as well as trade and procurement; production and sale of goods, performance of works and provision of services to enterprises, organizations and citizens





**Development of renewable energy
sources | Reduction of greenhouse
gas emission**



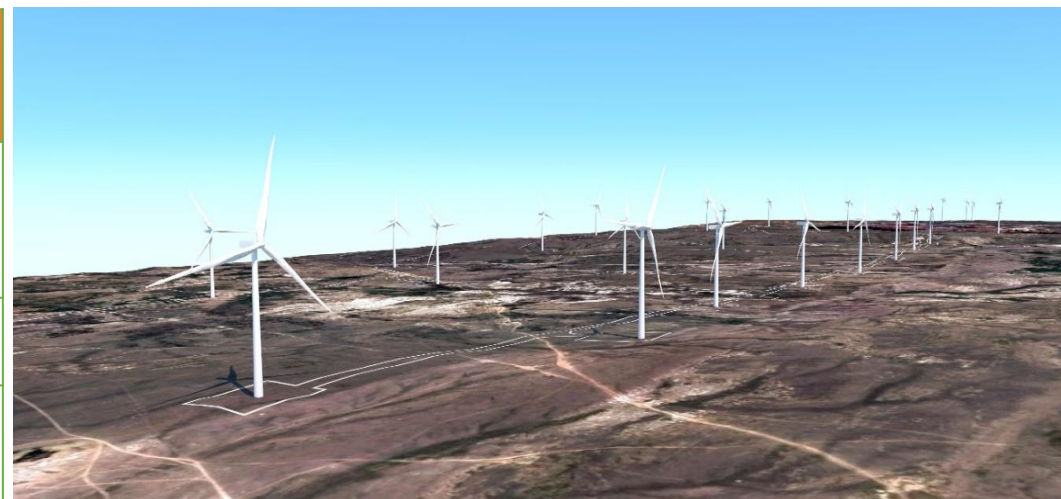
Full replacement of coal-fired generation with natural gas/secondary energy resource - ferroalloy gas.

CO2 emission reduction/avoidance ~ 1.5 million tons.
Planned investments **183 billion tenge**



Aksu Ferroalloys Plant **already uses secondary energy resource – ferroalloy gas** – to generate heating power for the enterprise in amount of **600 000 Gcal/year**

Project	Expect effect of reduced emission, thousand tons	Planned investments, billion tenge
Construction of a recovery power plant fed with ferroalloy gas from smelting shop No.4 of Aktobe Ferroalloys Plant, 80 MW	CO2 ~ 621	~79
Construction of a 150 MWt wind power plant in Aktobe region	CO2 ~ 880	~101
Conversion of Kachar TPP from coal to gas	CO2 ~ 20 SOx, NOx ~ 1,6 Ash(dust) ~ 1,3	~3
Beneficiation plant for treatment of slime from Donskoy GOK ERG Green	2,2 million tons of slime	~96



Implementation of RES projects will produce high-carbon ferrochrome with a **GREEN MARK**, and supply the carbon market with offsets



EcoSystemERG Fair & Trackathon

ERG's Sustainable Development Initiatives

> Sustainable Development | Key Success Stories (1)



Student Entrepreneurship Ecosystem

- Since 2017, together with regional universities, we have been **teaching students and teachers the basics of entrepreneurship**. They develop skills in personal and corporate finance management, design thinking and marketing.
- More than 10,000 students (2,100 in 2023)** have already studied and developed their business ideas. **The best ideas receive grants for business development.**
- This project contributes substantially to the economic development and social sustainability of the regions in line with **ESG principles**.



“ERG Mektepke” (“ERG for schools”) educational initiative

- An educational initiative aimed to **implement CSR social policy and prepare an engineering personnel for the needs of ERG’s entities in Kazakhstan**
- The initiative has been rolled out in three regions in Kazakhstan: **Aktobe, Kostanay and Pavlodar**
- The initiative covers **284 schools** and involves **over 300,000 pupils, 4,000 teachers and 250 experts and tutors**. It has international recognition and hosts **150 online courses** on various subjects and new technologies



“Native Town” Project

- Major CSR project, which is based on a **culture of participation** and the **principles of participatory (proactive) budgeting**.
- ERG’s corporate initiative became a **country-wide project** implemented across Kazakhstan. The project operators are the Ministry of Industry and Infrastructure Development and the Association of Urbanists of Kazakhstan.
- Citizens can offer their ideas, participate in the design of the appearance and functionality of the urban facilities in their hometowns.**



**GOOD SHEPHERD
INTERNATIONAL
FOUNDATION
ONLUS**

Partnership with the Good Shepherd International Foundation (GSIF) to support the Bon Pasteur Alternative Livelihood programme*

- A funding agreement to support the programme at **Kolwezi in Lualaba Province**.
- The programme is aiming to **help break the cycle of violence and abuse against children and women in artisanal mining communities** and improve their living conditions.
- **Agreement commenced in 2017 for three+ years and was then extended.**
- **More than 3,000 children** have already been **protected** from the worst forms of child labour.



Launch of an inaugural Bon Pasteur child protection centre in Kolwezi*

- **Launched in September 2019.**
- **Has capacity to take about 1000 children out of mining and provide free education, nutrition and other services.**
- **Part of ERG's partnership with the GSIF.**



Support for “Children out of Mining – Northern Kolwezi”, an initiative carried out by the international development organisation Pact

- The initiative is aimed to **raise awareness and strengthen child protection.**
- Implementation of a range of **tailored capacity-building interventions** focused on tackling the risks faced by children in artisanal and small-scale mining (ASM) in the DRC.

> ERG's Clean Cobalt & Copper Framework

We are committed to the responsible production of cobalt and have developed the ERG Clean Cobalt Framework, launched at Metalkol in 2018. In 2021, the Framework was extended to include copper.

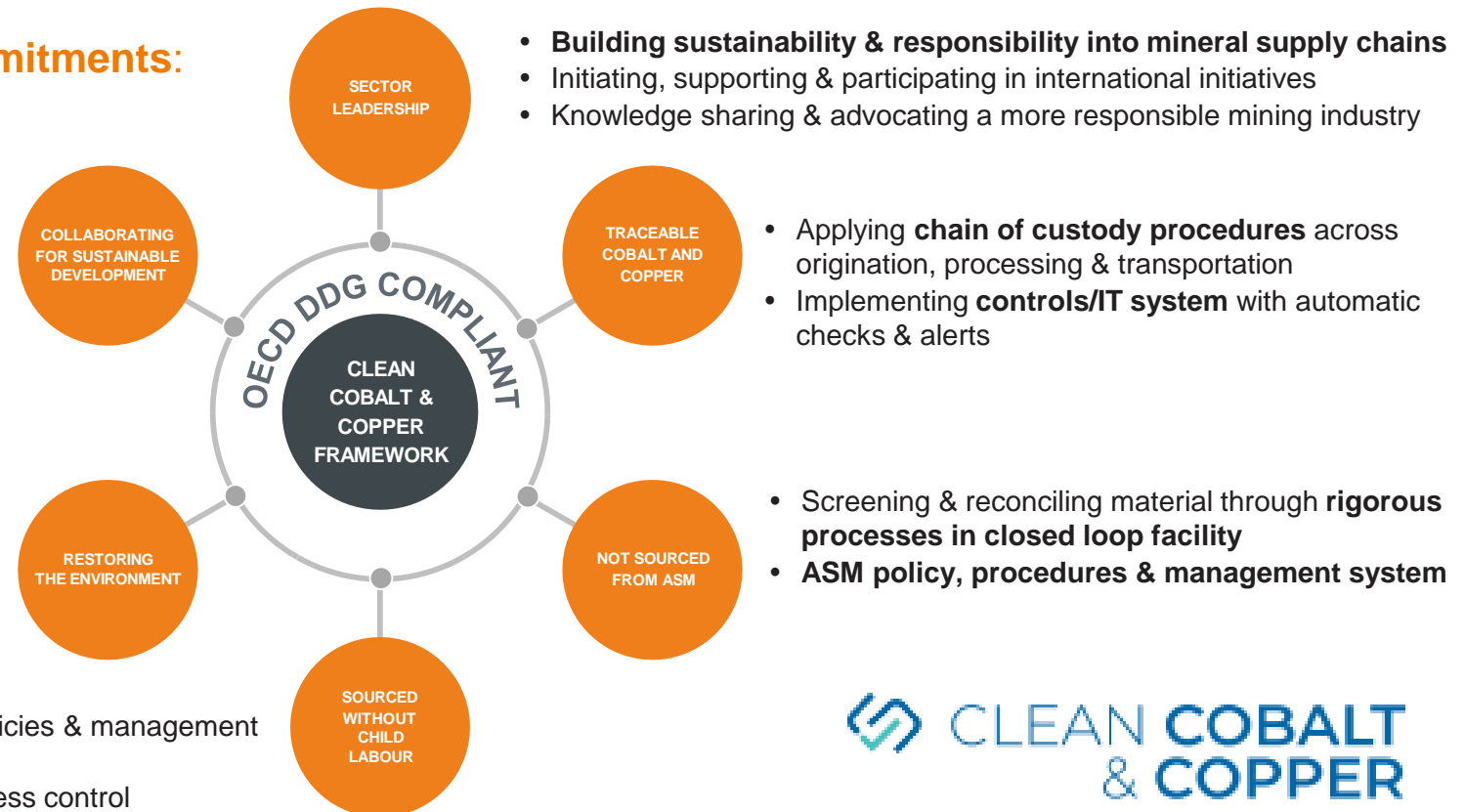
The Framework aims to drive positive outcomes for local communities in the DRC and is independently assured by PwC

The Framework comprises **seven commitments**:

- Supporting regional community development with **NGO partnerships & multi-stakeholder initiatives**
- Prioritising stakeholder relationships & collaborating with communities through **participatory approaches**

- ERG supports the protection of the environment and the importance of identifying and managing the potential environmental impacts of our activities. We are committed to environmental stewardship and as such have in place an **environmental management system** and set **performance indicators to ensure sustainable environmental practices**

- **Zero tolerance of child labour** embedded into all policies & management systems, including contractors
- Implementing strict controls during on-boarding & access control
- **No purchase of non-ERG material**



 **CLEAN COBALT & COPPER**

An ERG Initiative