

Eurasian Resources Group

Sustainable Development Review

2016



Contents

03 Overview

- 04 CEO statement
- 06 2016 summary
- 07 ERG at a glance
- 08 ERG in the world

09 Our approach to doing business

- 10 Developing our strategic objectives
- 13 Building on existing principles
- 13 Monitoring and reporting
- 14 Our stakeholders
- 14 Determining our material issues

15 Sustainable development review

- 16 Highlights of the year
- 17 Building resilience through business transformation
- 21 Investing in our people and their safety
- 28 Strengthening our communities
- 33 Providing environmental stewardship
- 37 Improving governance and ethics

Overview



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CEO statement



Benedikt Sobotka,
Chief Executive Officer

Sustainability is at the heart of our approach to doing business. We want the Eurasian Resources Group (ERG or the Group) to continue to develop a corporate culture that values trust, transparency and professionalism. We believe that a genuine commitment to sustainability and continuous improvement in everything we do is the most effective way to accelerate our progress in this area.

Over the past three years, we have embarked on a large-scale business transformation in a difficult market environment and established solid foundations for further growth. The ability to constantly evolve and make progress in a responsible way is at the heart of our approach and our achievements are very encouraging.

Key to this approach is prioritising our relationships with host communities, our own people and the governments

in the countries where we operate. For example, we build the closest possible ties to the communities we work in, and we aim to make every interaction ethical and beneficial to our stakeholders.

A vital part of this is our role at the centre of our communities, many of which have been built up around our mines. We have a central role to play in the sustainable development of these communities, particularly for the generations of people who have worked and will continue to work for us. We have seen four generations of individual families employed at a single ERG site, a truly inspiring situation that has led us to explore new ways of connecting to communities.

Our people continued to demonstrate remarkable energy in transforming ERG, and I am deeply grateful for their commitment and hard work. Our training and skills development programmes, both in-house and external, continued to create value for us during 2016. The young people who benefit will enable ERG to thrive not only today, but also in the long term. In 2016, we launched our Corporate University programme to bring a more structured and strategic approach to employee development through targeted capability-building programmes.

“ Sustainability is at the heart of our approach to doing business. We want the Eurasian Resources Group to continue to develop a corporate culture that values trust, transparency and professionalism. ”

One of the key responsibilities of a company is to keep its people safe, and our commitment to ‘Zero Harm’ is earning the trust of employees, contractors and other stakeholders. Sadly, despite these efforts we lost 15 colleagues in 2016 — a tragedy for all involved, and one we are determined to avoid in future. I extend my sincerest condolences to the families of those who passed away at work and I want to reassure all our people that we have no higher priority than addressing safety.

During the year, we worked to reduce the environmental impact of our operations and ensure the eco-efficient use of resources. While this work reflects regulatory requirements, we appreciate that we have some way to go to fully address the environmental challenges inherent in our industry. However, we believe that an ethical, responsible approach will help to deliver lasting benefits for the company.

In March 2016, we established the Sustainable Development Council (SDC) to advise the Board of Managers’ Mergers & Acquisitions Committee on issues regarding strategy and the sustainable development of the Group. This includes initiatives to strengthen and coordinate our approach to operations, and oversee our internal and external sustainable business development plans.

2016 has also been a year in which we have embraced international partnerships and seized new investment opportunities. As a partner working under China’s Belt and Road Initiative, one of the most important international infrastructure development programmes in recent history, we are in negotiations for considerable Chinese investment for our projects in Eurasia and Africa. The Belt and Road initiative is a development strategy framework proposed by China in 2013, which focuses on enhancing connectivity and cooperation between China and the countries of Eurasia.

As part of this initiative, we signed an Engineer, Procure and Construct (‘EPC’) contract with our Chinese partners (NFC) to enable us to start work at the Metalkol Project RTR (Roan Tailings Reclamation), our flagship development project to reprocess major copper and cobalt tailings in the Democratic Republic of the Congo (DRC) which will allow us to become a major low-cost copper and cobalt producer. We estimate our capital expenditure on this project will be around US\$ 700 million, while the planned construction period to full economic production is approximately 24 months.

Meanwhile, we continue to discuss investment with Chinese partners to help us construct the new module of the aluminium smelter in Kazakhstan. ERG is Kazakhstan's only producer of aluminium and we expect this new project to boost our aluminium capacity.

We continued to develop our wider stakeholder relationships. As a strategic associate partner of the World Economic Forum (WEF), we strengthened our relationship with WEF and initiated a cross industry dialogue on responsible supply chains of cobalt. In 2016, as part of this continued effort, we became the official sponsor of Kazakhstan's national team at the Olympic Games in Rio de Janeiro. We also worked to encourage higher international presence at the EXPO 2017 International Specialized Exhibition in Astana, including negotiations with the organising committee and the Grand Duchy of Luxembourg (where we have our head office) to become the Diamond Partner of the National Pavilion of the country at the EXPO. The EXPO's theme is "Future Energy", and aims to create a global debate between countries, non-governmental organisations, companies and the general public regarding innovative and practical energy solutions and their impacts.

Now in 2017, we are redoubling our efforts to achieve the best possible results for all our stakeholders in a sustainable and ethical way. We have successfully navigated the challenges of the market over the past few years, and restructured our organisation to reflect changes in the global business environment. We have achieved this by taking a long-term position that will help us build a dynamic, trustworthy and environmentally aware business that is ideally positioned to succeed for our people — both today and tomorrow.

Benedikt Sobotka,
Chief Executive Officer



Summary

Eurasian Resources Group is a leading diversified natural resources group with operations in Kazakhstan, Africa and development projects in Brazil. We employ around 70 000 people across four continents, with our mines playing an important part in the life of local communities.

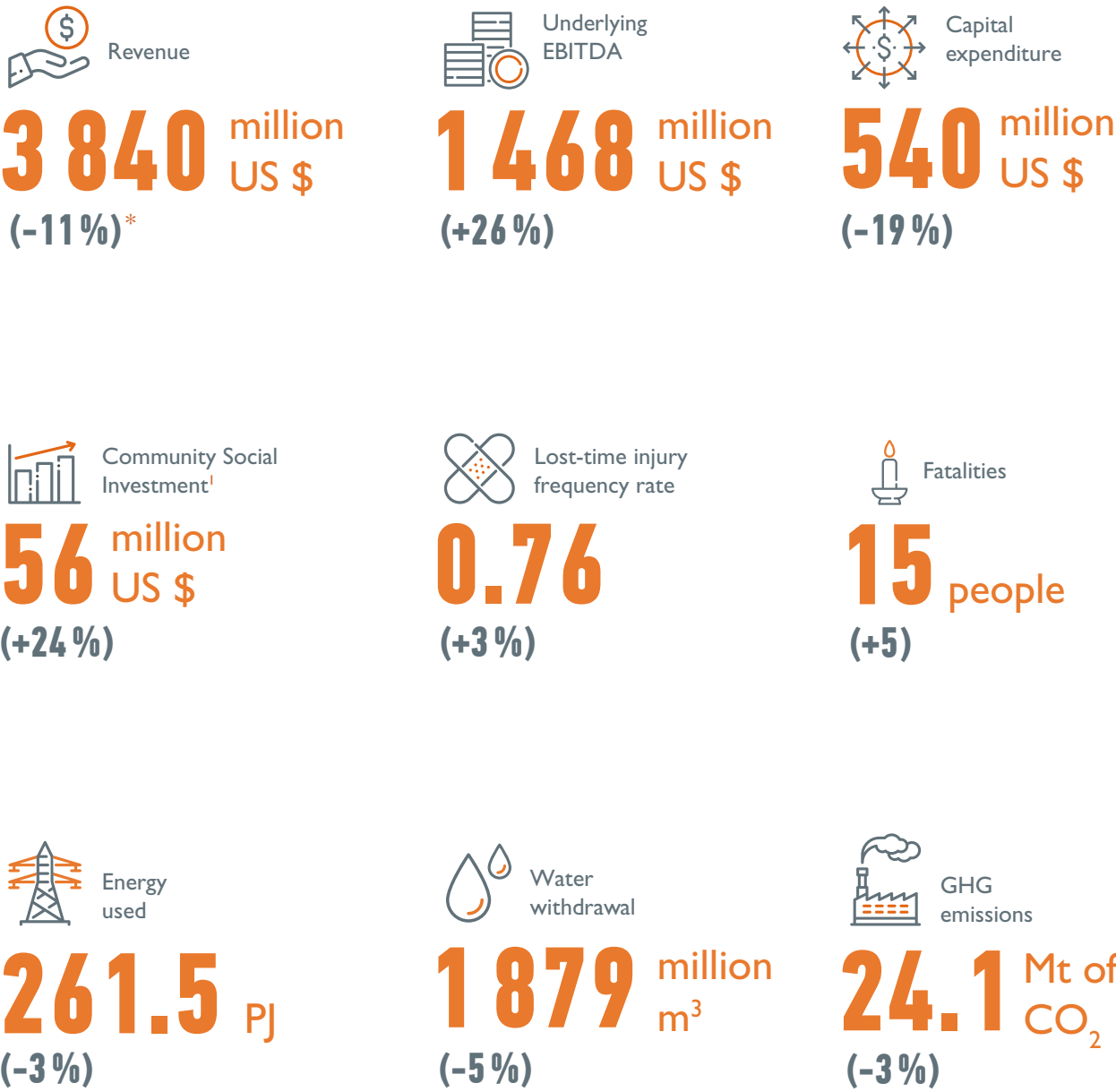
We operate in an industry strongly influenced by external factors (for example commodity prices) and in order to be a truly sustainable business, we need to be adequately equipped to successfully weather any adverse market changes. For us, sustainability goes far beyond the more traditional environmental and social measures. We aim to embed sustainability throughout all aspects of our business and incorporate this as a key focus into our business strategy, increasing value for our stakeholders.

2016 was an important year for sustainable development worldwide, with the recently affirmed UN Sustainable Development Goals and the Paris Agreement coming into force. We aim to be successful in the long term; that means it is in our interests to pursue sustainable policies, contribute to the social development

of local communities and reduce our environmental impact. This review describes our important work in these areas, it outlines our priorities and sustainable business values, and explains how they are embedded in our daily operations. Kazakhstan is the largest part of our business, followed by Africa and then by Brazil, which we have reflected in the examples we cover.

At the core of our success are our employees. Our Group has existed in different forms for more than 20 years and the operating businesses for more than 50 years. This means that we have employed many generations of families in our businesses. This connection to our employees and the mutual pride we have for our company is one of the key ongoing strengths of ERG. We have illustrated this relationship throughout this report.

2016 sustainable development in figures



* Hereinafter — year-on-year comparisons.

¹ Community Social investment (CSI) is amount of cash spent with the direct intention and purpose to contribute to social improvement. It includes, but is not limited to, projects, capacity building, donations and sponsorships

ERG at a glance

We have six main divisions supported by our central sales and marketing department. Five of our divisions are principally based in Kazakhstan (although we have some iron ore assets in Brazil) while the Other Non-ferrous Division is in Africa.



Alumina and Aluminium

The Alumina and Aluminium Division comprises extraction and processing of bauxite and limestone, and smelting of alumina and aluminium. We produce and sell alumina to aluminium producers, and also produce and sell our own aluminium. The primary operating entities are Kazakhstan Aluminium Smelter JSC (KAS) and Aluminium of Kazakhstan (AoK).



Iron Ore

The Iron Ore Division comprises exploration, extraction, processing and manufacturing of iron ore products. It consists of operating assets in Kazakhstan, and exploration and development assets in Brazil. In Kazakhstan, the Iron Ore Division produces and sells iron ore concentrate and pellets to steel producers, and it is a material exporter of iron ore. Ancillary products include limestone, dolomite and construction gravel. The primary operating entity is Sokolov Sarbai Mining Production Association (SSGPO).



Ferroalloys

TNC Kazchrome JSC ('Kazchrome'), the Group's Ferroalloys Division, produces and sells ferrochrome, as well as other ferroalloys, for use in the production of steel. Manganese and chrome ores are sold to third-party producers of ferroalloys and to the chemical industry. The Group is implementing major projects at the Aksu and Aktobe Ferroalloys Plants in Kazakhstan in order to further increase the production volumes and develop the respective mineral resource base. Kazakhstan is a very important country for the chrome industry and we aim to continue the path of sustainable development and exploitation at Kazchrome, which is one of the world's lowest-cost ferroalloys producers and the largest manufacturer of ferrochrome by chrome content globally. We have enough resources for around 60 years life of mine at the current exploitation rate.



Other Non-ferrous

The Other Non-ferrous Division comprises the exploration and extraction, processing and manufacturing of copper and cobalt products, and the exploration of other minerals in Africa. The Other Non-ferrous Division operates principally in the Democratic Republic of Congo (DRC), where it mines copper and cobalt and processes the ore, and in Zambia, where it has the Chambishi copper and cobalt refinery. It also includes road logistics and trucking operations throughout Central and Southern Africa. In addition, we have a number of exploration and development assets across Africa, including Mozambique (coal), Zimbabwe (platinum), South Africa (fluorspar) and Mali (bauxite). The primary operating entities are Frontier, Boss Mining, Comide and Chambishi Metals Plc.

The Metalkol Project Roan Tailings Reclamation (RTR) in DRC is a key driver of future growth of the Group. The project is a major tailings reprocessing operation in the DRC that will provide a long-term, stable supply of 'green', ethically mined cobalt and copper to the market.



Energy

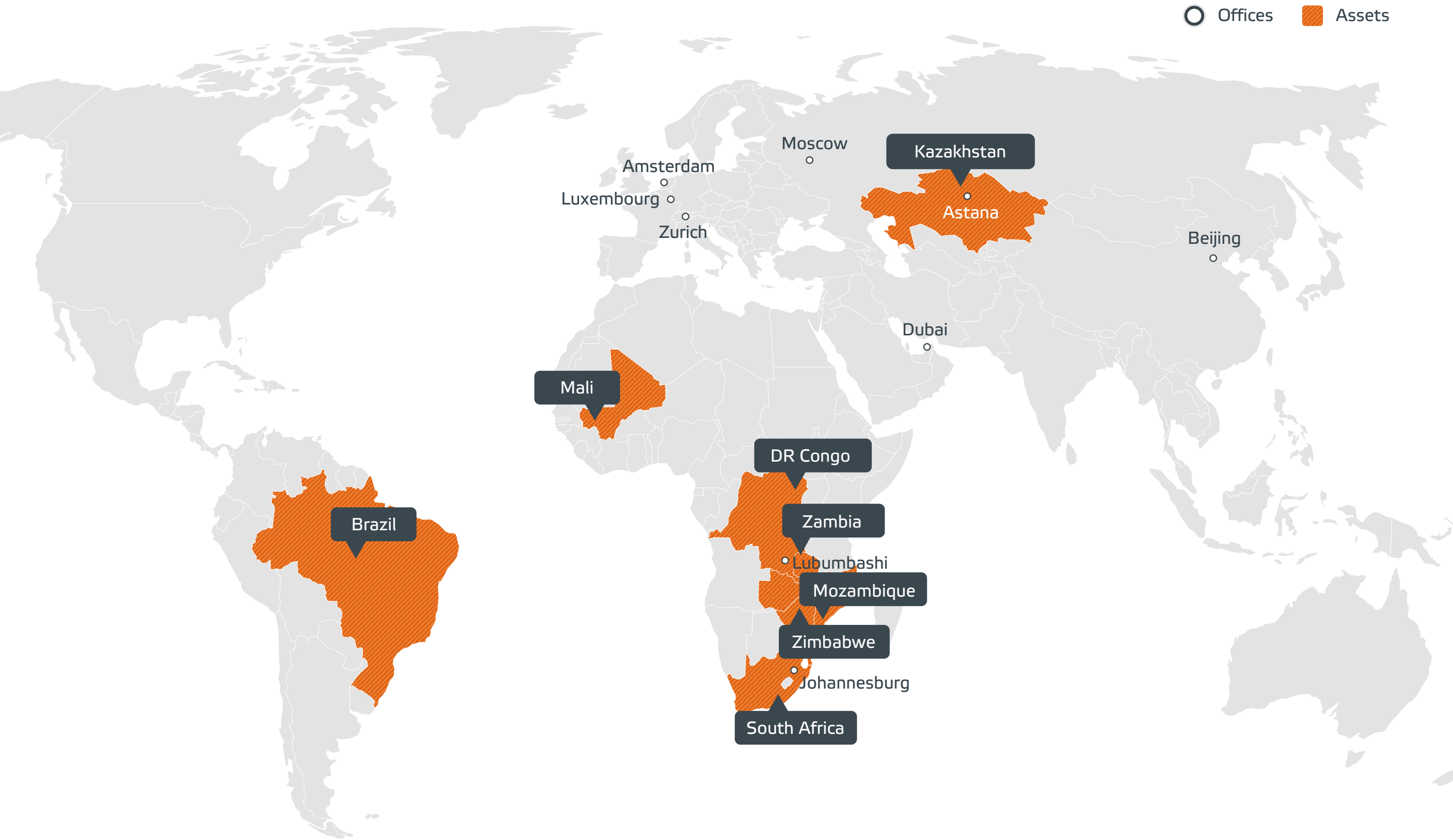
The Energy Division comprises steam coal mining, processing to produce coke and semi-coke products and power generation. In Kazakhstan, we are one of the largest electricity providers, and coal and semi-coke producers. The division provides secure energy to our principal operating divisions and third parties. The primary operating entities are Eurasian Energy Corporation JSC (EEC) and Shubarkol Komir JSC (Shubarkol).



Logistics

The Logistics Division provides transportation and logistics services to the Group's principal Kazakhstani operating divisions, as well as to third parties. Operations include freight forwarding, wagon repair services and railway construction and repair services, as well as a railway transfer and reloading terminal on the Kazakhstan-China border. ERG is a large freight forwarder and railroad operator in Central Asia, providing international logistics for all Eurasian-based Group operations and rail construction and repair services for the Kazakhstani state rail company. The primary operating entity is TransCom LLP (Transcom).

ERG in the world



**Our approach
to doing business**



Our approach to doing business

Over the past few years we have worked hard to put our company on a sound footing, and we are now in a position to focus on creating a long-term, sustainable growth.

Three guiding principles underpin everything we do



Metals and mining company

We are an innovative metals and mining company. We will constantly look to strengthen our position in the industry and actively exploit new processes and technologies to widen our presence across the supply chain. Key to our approach is our focus on innovation and achieving the maximum benefit through our existing products and facilities, such as our participation in the Cobalt Initiative which is beneficial for the whole industry and related sectors.



Long-term financial stability

We pursue long-term financial stability. This builds on our efforts over the past three years to restructure our debt and focus on operational efficiency in order to reduce costs. Working efficiently yields other benefits: it encourages us to produce less waste (and to make better use of the waste we do produce), as well as training our staff and raising their overall education levels and skills.



Sustainable company

We are a sustainable company dedicated to increasing both resource efficiency and contributing to the social development of the communities where we operate in an environmentally responsible way. Sustainability is a natural outcome of running a business properly — in a way that goes beyond simply complying with local laws and that supports our stakeholders across different generations.



Developing our strategic objectives

In 2016, we have focused on our strategic priorities and further developed our strategic objectives, while ensuring that sustainability is embedded within these. This strategy is supported by significant investment to give us a firm, long-term base. This investment includes maintaining our current levels of support in the regions we operate in, and we will continue to focus on ensuring sustainability issues are at the core of our strategy in 2017 and beyond.

We operate in highly competitive commodity markets, whose main driver is cost. Our operations must therefore be as efficient and cost-effective as possible. We are also looking at how we can differentiate ourselves by adding value to our product offering. Our business is affected by a number of global trends such as growing populations, rising economies, urbanisation, technological advancements and increased environmental awareness. All of which offer additional strategic opportunities to us.

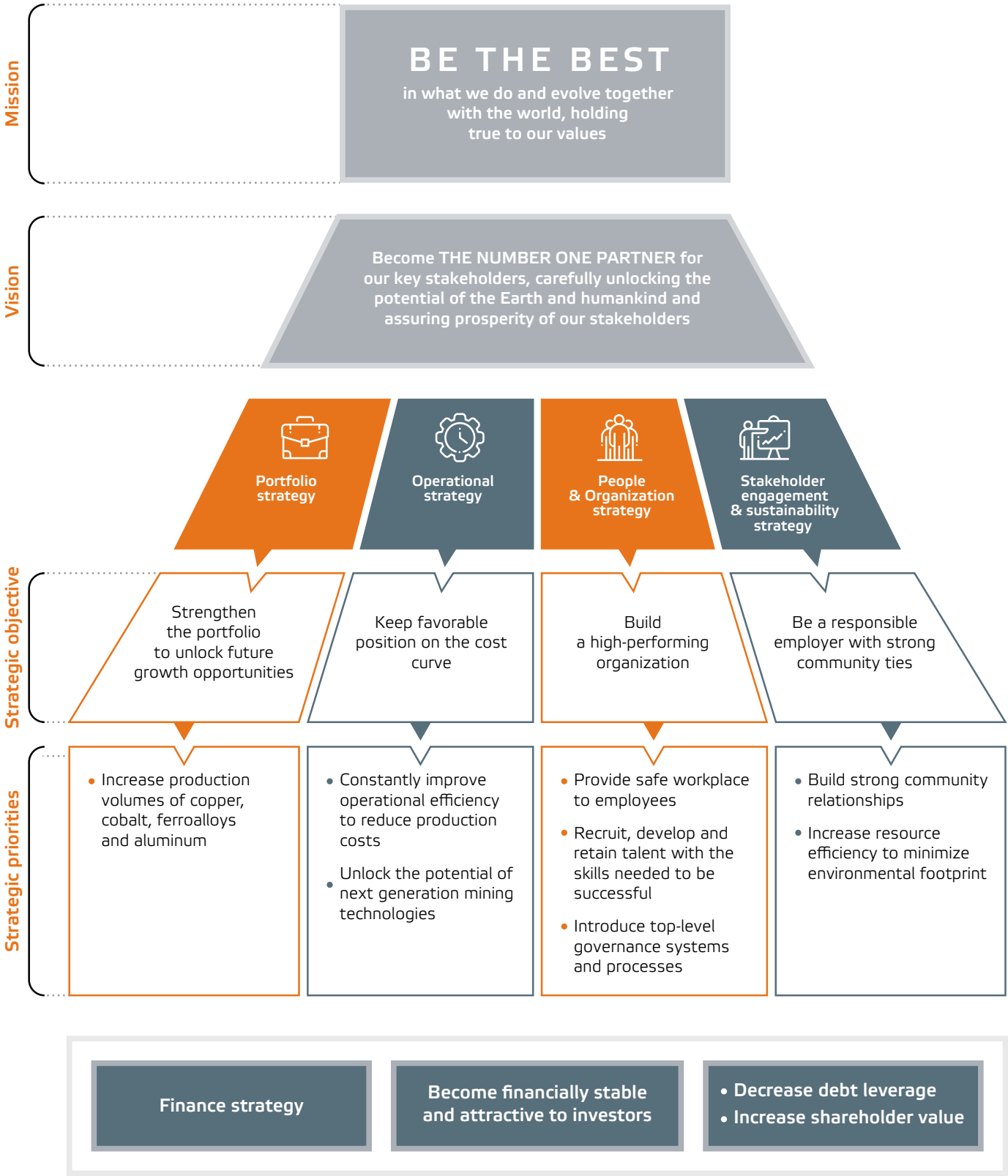
Technology and innovation

In recent years, cobalt has become a strategic metal, with a growing number of high-tech applications including compact batteries for mobile consumer electronics, and long-life batteries that power electric vehicles and store energy from renewable sources. With 60 per cent of the world's known cobalt contained in the primary copper deposits of DRC and Zambia, we are developing and operating major mining and refining assets in this region, and are transforming our business to prioritise cobalt production.

Demand for 'cleaner' products

As a resource-intensive business, we need to be mindful that today's consumers are increasingly sensitive to the world's environmental challenges. While we are looking into the development of renewable energy, we aim to ensure that the coal-fired power stations we continue to operate in Kazakhstan are state-of-the-art, generating electricity with a minimal carbon footprint.

The same goes for our mining operations — we aim to ensure that they do not release unacceptable waste products into the environment, either directly into the areas that are home to our host communities or into the larger global environment.



Responding to global trends: Metalkol Project RTR

The Metalkol Project RTR is our flagship development in Africa and a key driver of our international growth. The new plant will reprocess tailings at one of the world's largest tailings deposits in the DRC to produce copper cathode and cobalt concentrate. The tailings were deposited into the environment from copper and cobalt mining and processing activities conducted in the mid-20th century, causing ongoing pollution to the local water resources and surrounding communities.

This initiative aims to provide supplies of quality, ethically mined, cobalt and copper products to the market and

will allow us to become a major low-cost copper and cobalt producer. The Metalkol Project RTR is set to be a key contributor to implementing our strategy of capturing the increasing demand for electric vehicles and gadgets, because cobalt-containing battery technology is being widely discussed in the market as the material of choice and the best energy storage solution to produce these high-end applications.

The project will contribute significantly to the restoration of the local natural environment by reestablishing the Musonoi River.





Building on existing principles

In further developing our approach to embedding sustainability, we will build on and review the principles that have guided our sustainable development to date:



Zero Harm

we believe that all injuries are preventable and by taking the right measures we can minimize our long-term environmental impact



Leadership

we work in challenging emerging markets and aim to embed an ethos of sustainable development across the Group



Accountability

we are accountable for our decisions and in communicating our actions to our stakeholders



Balance

our decision-making process takes into consideration the long-term benefits of sustainable development, balancing and aligning the interests of our business and all our stakeholders



Integrity

we are committed to operating transparently and ethically, and we are working towards a culture of trust, openness and honesty

In addition to these principles, we will incorporate innovation. For us, innovation is about finding a better way to operate — increasing productivity and operational efficiency in a sustainable way.

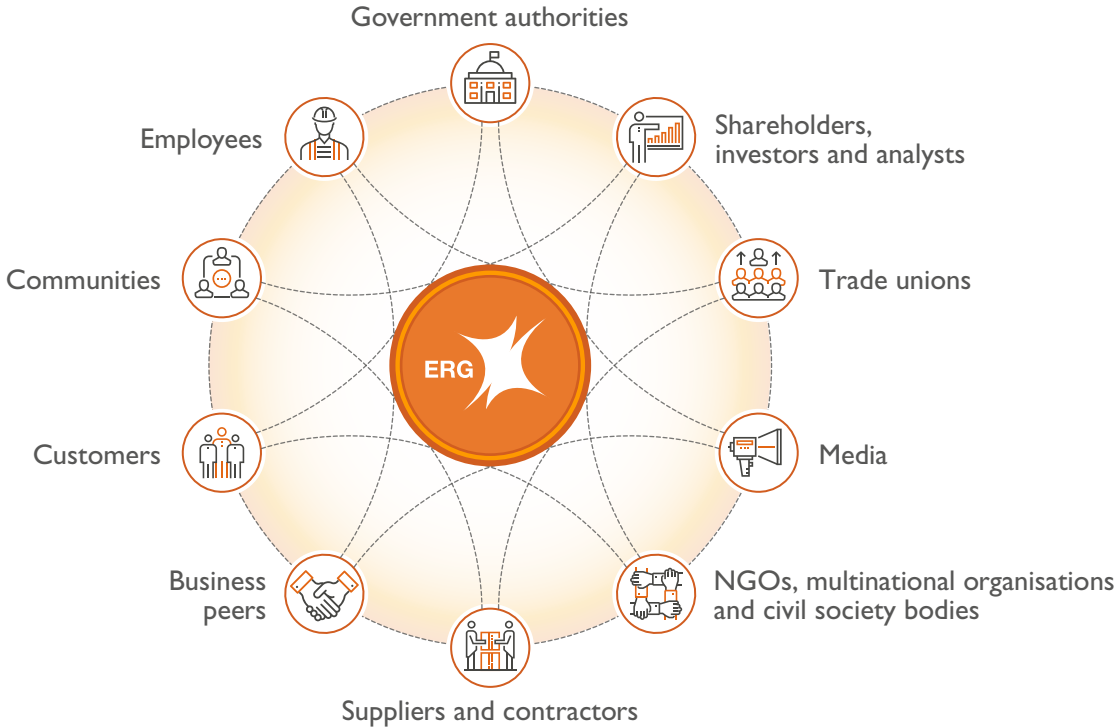
Monitoring and reporting

To ensure our objectives deliver the intended results, part of our work will be to determine what we need to measure and which KPIs we should adopt across the business to ensure we are managing our material issues effectively. Reporting is an essential component of this, and we are committed to improve our sustainability report in future years so that it properly reflects our progress.

Our stakeholders

Being a sustainable business is particularly important to ERG's stakeholders — including all those who are influenced or affected by our business activities. Key stakeholder groups range from employees and host communities, to governments, partners and more. Each group has its own expectations of ERG


and our operations, and we aim to address these through appropriate communication channels that will help us build strong community ties and stakeholder relationships. Understanding and prioritising our stakeholders' concerns will enable us to further develop our strategy in a way that addresses the right issues.




Determining our material issues

We aim to establish more frequent assessments of materiality and involve a wider group of stakeholders. This will help ensure our strategy remains focused on what matters and that we can report effectively on our progress in future years and develop our level of sophistication in this area


Communication channels

- 


Government authorities

 - Engagement regarding the issuing of permits, compliance with regulations and supervision of activities
 - Development of regulations and public policy
 - Development of business-government partnerships (e.g. Memoranda in Kazakhstan)
 - Implementation of projects for socio-economic development
- 


Shareholders, investors and analysts

 - Updates to website, posting news, statements, financial and operational reports
 - Investor meetings and road shows
 - Investor relations activities focusing on specific issues e.g. updates on corporate governance, changes to Board structure and commodities
- 


Employees

 - On-going dialogue between the management and teams
 - Internal communication channels (Intranet, publications, internal events etc.)
 - Suggestions for ideas to improve productivity
 - Surveys
- 


Trade unions

 - On-going dialogue through established industrial relations channels
 - Collective bargaining agreements
 - Accident investigations
 - Meetings and surveys
- 


Communities

 - Public hearings and meetings
 - Socio-economic surveys
 - CSI projects
 - Information in local media
- 


NGOs, multinational organisations and civil society bodies

 - Membership in industry sector initiatives
 - Multi-stakeholder initiatives and partnerships
 - Implementation of CSI projects
- 


Customers

 - Interaction relating to product development
 - Responding to customer surveys
- 

Media

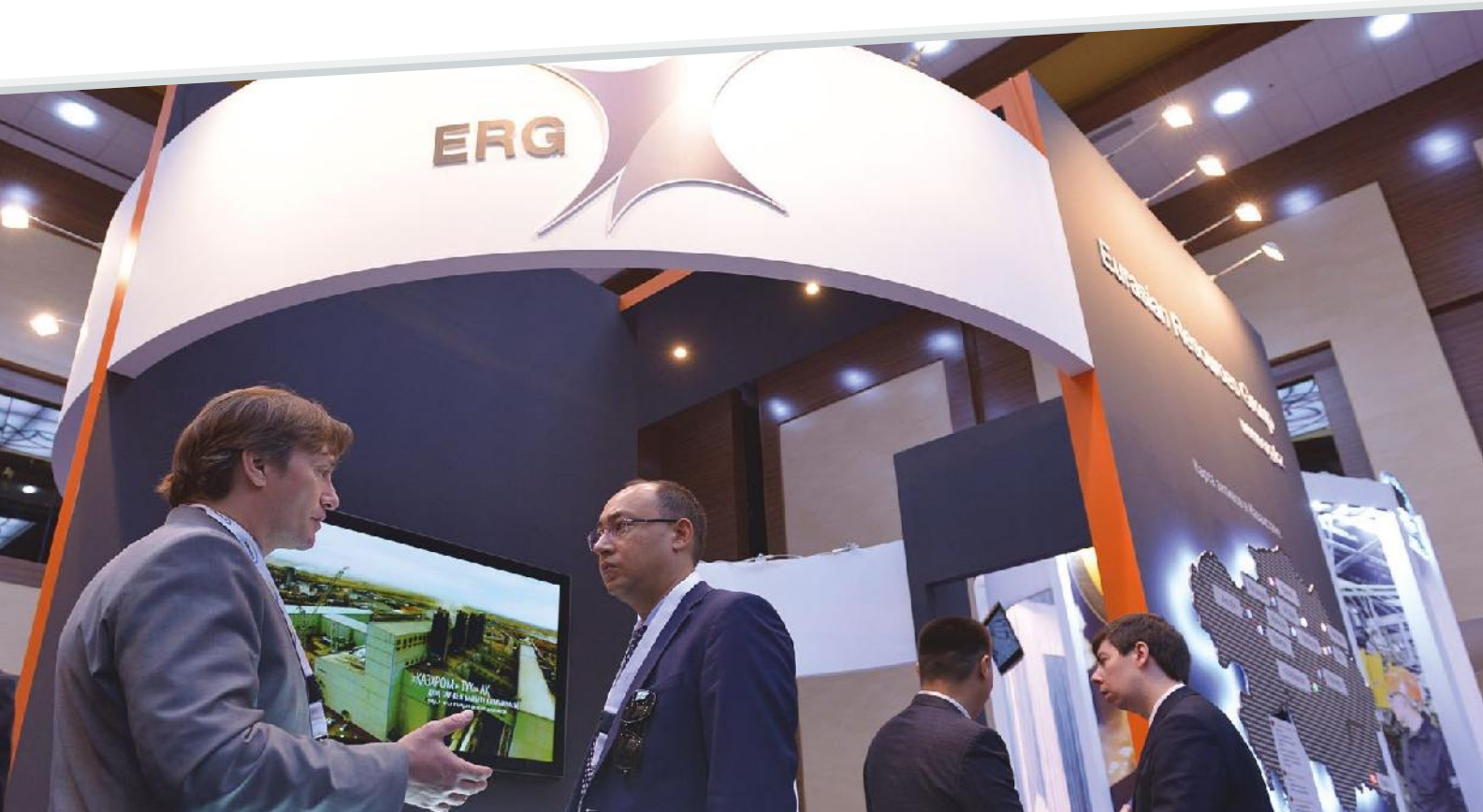
 - Press releases and other publications on CSI projects, financial information, information on projects development
- 

Business peers

 - Engagement through business bodies and initiatives
- 

Suppliers and contractors

 - On-going dialogue in relation to health and safety, training and auditing of performance



2016: sustainable development review



Sustainable development review

We continue to report this year on our key areas of performance to date. Within these, during 2017 we aim to develop a better understanding of our stakeholders’ expectations and the factors that are material to our business. We will report on how we are managing and measuring these factors in next year’s report.



Highlights of the year

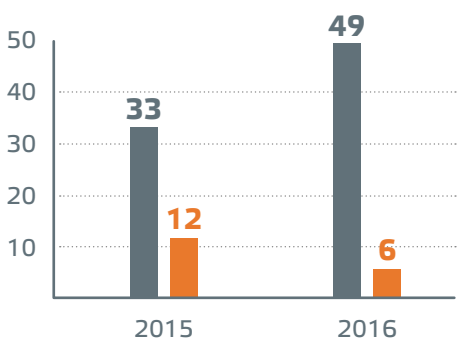
We made good progress in streamlining our procurement processes, helping us save over US\$ 320 million during 2015–2016 in Kazakhstan, and US\$120 million in Africa in 2016. We invested US\$ 4.6 million in research and development activities, and launched our first Innovators’ Forum in Kazakhstan.

We updated our Group HSE Policy Statement to reflect our vision of Zero Harm and to ensure all parts of our business understand the standards to which we expect them to operate. In addition, we reviewed and revised the Safety, Health, Environment and Community (SHEC) procedures in Africa to include additional CSR and environmental procedures. We started to work on our Corporate University programme to introduce a more structured and strategic approach to employee development. We supported our retired employees and veterans by providing free healthcare and municipal services. In Africa, we developed Project Baobab, which will focus on organisational culture and structure, enabling our employees to provide input into the ongoing organisational design of the company

We paid over US\$ 600 million to governments in taxes and duties, and invested around US\$ 56 million (2015: US\$ 45 million), of which US\$ 49 million was in Kazakhstan (2015: US\$ 33 million), US\$ 6 million in Africa (2015: US\$ 12 million) and around US\$ 400 thousand in Brazil.

Community Social Investments, million USD

■ Kazakhstan ■ Africa



We made sure all our entities in Kazakhstan have implemented energy management systems in line with ISO 50001/EN 16001 and have completed certification and verification audits. We delivered more than 190 initiatives as part of this programme, reducing energy consumption by 1,216 TJ and saving over US\$3 million in Kazakhstan. We continued to support the activities of Korgalzhyn State Nature Reserve in Kazakhstan to protect the endangered pink flamingos and their habitat, and have undertaken biodiversity work in Africa.

We have continued to develop the Group’s governance structure to best support our strategy of developing the business in a sustainable and ethical way. The Sustainable Development Council (SDC), which is responsible for developing our strategy in a way that embeds sustainability into our everyday business, was established in 2016. Included among the key initiatives of the SDC has been the continued evolution of our governance and management structure to best fit the needs of all our stakeholders, now and in the future. We adopted the ERG Human Rights Policy that formalises our commitment to human rights, as well as the Data Protection policy, developed in response to the changing business environment.

Building resilience through business transformation

Over the past year, our large-scale transformation programme, begun in 2014, continued to increase the resilience of the business and our ability to provide employment to a new generation through enhanced governance processes and strengthened controls. We have focused on business process standardisation, improved planning, disciplined capital allocation, cost reductions and productivity improvements, as well as strengthening our commitment to innovation and engagement in every part of the business. Our emphasis on business transformation has already improved our financial position, creating sustainable value for all stakeholders.



We continued to carry out cost and productivity improvements across the business, introducing cost-reduction initiatives and strengthening our approach to embedding innovations.



We recognise that ensuring sustainable returns for our investors also enables us to continue to support the communities we operate in and enhance investment in our people.



To drive the process at central level, we reinforced the management of operational effectiveness and innovations by establishing a dedicated operational excellence function and further improvements in R&D management.



We continued to build sound risk management practices across all business areas at central and operational level by embedding risk considerations into planning and decision-making.



At the same time we reinforced our management of innovations by strengthening end-to-end processes and employee competencies to support the search and development of ideas up to their implementation.



2016 highlights

01

Reinforced risk management by establishing a Group Risk and Compliance Management Committee and strengthening risk functions at central and regional level.

04

Materially advanced our debt restructuring with Russian banks and accessed new sources of funding, thereby improving our long-term financial stability.

07

Introduced an automated payment and procurement system supporting the timely identification of procurement planning and execution inefficiencies, as well as a centralised virtual warehouse to ensure control over intercompany allocation of goods, materials and equipment in Kazakhstan. The former enabled us to save US\$ 66 million in 2016.

10

Invested more than US\$ 4.6 million (2015: US\$ 4.7 million) **in research and development** activities, focusing on technology improvements, mitigation of sustainability risks, industrial recycling and increasing the added value of our products. The resulting increase in productivity and reduction in waste helps mitigate our environmental impact.

13

Delivered tangible results through our key 'Project Minus 10%' by focusing on three areas: reducing operational costs, increasing profitability and improving productivity. In relation to Project Minus 10%, we set up around 500 initiatives in Kazakhstan and reinvested most of the savings in high-priority projects, motivating our employees — many of whom are part of labour dynasties stretching back generations — and improving social conditions for workers.

02

Have taken the growth opportunities in our pipeline of projects in Africa and re-prioritised them to focus on our best resources where we get most leverage from cobalt, while producing more copper.

05

Improved our internal business planning processes to make them more resilient and dynamic.

08

Commissioned SAP at SSGPO and launched implementation stage at Aluminium of Kazakhstan (AoK), KAS and Shubarkol Komir.

11

Delivered over US\$ 10 million of cash flow improvements through operational efficiency initiatives including the Ichimwela programme at Chambishi Metals in Africa.

14

Launched our Innovators' Forum in Kazakhstan, a platform for sharing ideas with the potential to improve performance and mitigate risk, which was attended by over 200 employees from production sites and corporate offices. As part of the Forum, we ran a contest to identify the best innovative projects for implementation in the coming years. The winners have also been given the opportunity to improve their skills in innovation management at Nazarbayev University — the leading university in Kazakhstan.

03

Made good progress in **ensuring steady operations and cash flows** of major iron ore and aluminum assets of the Group. In Kazakhstan, this includes our four-year contract between Sokolov Sarbai Mining Production Association (SSGPO) and Magnitogorsk Iron & Steel Works (MMK) for iron ore sales, and agreement with VTB Bank to provide a six-year financing arrangement for aluminum supplies from Kazakhstan Aluminium Smelter (KAS).

06

Continued to streamline our procurement processes. In Kazakhstan, we introduced centralised procurement planning and rolled out category strategies of key goods, materials and equipment purchase. This enabled us to save US\$ 254 million during 2015-2016 in Kazakhstan. Our savings in Africa have amounted to US\$ 120 million during 2016 due to procurement improvement initiatives.

09

Strengthened and restructured our dedicated sales and marketing function into sales and operations planning (S&OP). Built on direct customer relationships and deeper orientation on market demands, S&OP drives appropriate commercial decisions across the value chain and informs our operations plans in short-, medium- and long-term perspectives to ensure full value of our products is obtained.

12

Introduced our 'Ideas Factory', an initiative designed to support and implement improvement proposals from workers at the operations level.

Innovation and operational efficiency in practice



In 2016, we began using drones at SSGPO

our operations in Kazakhstan, to improve safety. Drones are now carrying out surveys of the site in more dangerous areas. “The technology will help us to radically reduce the safety risk for people working in dangerous areas like railways or at height, while also making inspections more efficient”, explains Alexander Bondarenko, Head of Safety.

We are also exploring the use of drones’ application at our operations in Africa.

“ It’s an exciting time. Drones have proven their worth in mining both globally and in our own tests. Now they’re poised to help take ERG Africa into the future. ”

Edward Naphambo
Business Improvement Manager,
ERG Africa



Our water supply scheme at DGOK

(Kazchrome) was resulting in accumulation of sludge from ore processing in dumps bringing costs in environmental payments and negative impact on the environment.

To improve this, the Kazchrome production team developed a project to construct a semi-enclosed internal water supply system which would enable us to process and then use the sludge for chrome ore pellets production. The project won the Innovators’ Forum contest, and we expect to implement it in the next few years, delivering far more in benefits than it will cost to implement.

“ Implementing new ideas and projects is the result of a constant desire to do better, and to find opportunities for improvements. ”

Azamat Dzhumaliyev
Deputy Chief Engineer
at ore processing plant
(DGOK)



Our production teams at SSGPO

have developed a clear plan to improve costs and access additional ore reserves, thereby extending the life of the Sarbay mine and bringing significant benefits both to our business and our communities. Without this, the inevitable closure of the mine by 2020 would have led to loss of earnings for around 1,000 families, while the tax loss for the region would amount to more than US\$ 350,000.

“ I am well experienced in theory, and Evgenyi (project co-developer) has strong organisational skills. This helped us develop improvements at Sarbay. ”

Yerzhan Azimkaliyev
Head of Technical Unit
at Sarbay mine

We saved budget revenues

350 000 US \$

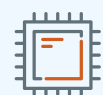
We saved earnings
for around

1000 families

2017 goals



Reinforce our innovations management process through improved governance, continuing research and alignment of our innovation initiatives with the strategic objectives of the Group.



Continue to integrate new technologies and advanced analytics to enhance the transparency of our operations and strengthen our ability to identify improvements and deliver sustainable productivity gains.



Ensure our transformation initiatives continue to deliver long-term, sustainable business value, enabling us to drive positive change and contribute to the societies we operate in.



Continue to introduce further improvements across our business to maintain and improve the resilience of our operations. We will place strong emphasis on promoting a performance-based culture, developing our capabilities and strengthening the engagement of our people around common goals.



Continue to strengthen our management of risks through enhanced processes, communications and training. We will embed best project risk management practices in our major capital projects in Africa and Kazakhstan to support risk-based decision-making.



Strengthen our management of production risks through data-driven predictive maintenance and reliability improvement initiatives.



Improve planning by integrating processes and mandating deeper management involvement in setting, testing and achieving our objectives.



Advance our sales and operations planning processes to fully align market demands with our operational plans.



Establish dedicated technical expertise to inform decision-making on capital projects.



Work on increasing the share of local procurement to create sustainable benefits for communities.



Continue standardising IT processes to further reduce costs, while improving the quality of IT services across all of our operations.



In Africa, exploration is being prioritised in the near term to further extend the current resource base, with the aim to sustain the business at the envisaged expanded levels of operation.

Frontier Mine

Frontier Mine, owned by ERG, delivered more than 107 kt contained copper in concentrate in 2016, an increase of 35 per cent on 2015 output.

Frontier is ERG's flagship mine in the Democratic Republic of the Congo (DRC) and is the cornerstone of the Group's copper business in Africa. In 2016 the plant improved its performance across many key indicators. A revised production plan was launched by ERG in late 2015 to increase long-term copper production at Frontier by improving the efficiency and effectiveness of its operating model. The growth was the outcome of considerable operational improvements and investment while the mine also changed the way it deployed contractors. Major benefits were realised from Q2 2016 onwards, resulting in a steady supply of copper ore, improved plant feed grades and plant throughput tonnages.

“ The production figures at our flagship Frontier Mine are very encouraging and I am proud of what the team has achieved. This is a major step forward for the Group and supports ERG Africa's strategy to become a regional copper and cobalt champion. Our people are ERG's greatest asset and their ability to plan, embrace change and deliver solid results is commendable. ”

John Robertson
Frontier Mine President



Investing in our people and their safety

Our people are the past, present and future of our business. To develop the business further and strengthen our position as a leading natural resources company, we need the right people with the right skills, working safely at all our operations. We aim to increase productivity and efficiency by ensuring all employees have the knowledge and skills they need to safely deliver the changes we seek.

KPI	2016	2015
Fatalities (employees, work-related)	10	9
Fatalities (employees, non-work related)	0	0
Fatalities (contractors)	5	1
Work-related lost-time injuries (including fatalities) — employees	94	95
Work-related lost-time injury frequency rate (including fatalities) per 1 million man hours worked — employees	0.76	0.74

Health and safety

Ensuring the health and safety of our people — employees as well as contractors — is a fundamental tenet of our business. We are developing standards and realising other measures to improve contractor safety (for example contractor assessment against our requirements, including further controls depending on assessment outcomes). We are committed to the continuous improvement of all our working environments, aiming to create a Zero Harm

workplace today and for future generations. To date, our production entities in Kazakhstan are certified against OHSAS 18001:2007. We have also ensured our SHEC management system in Africa is aligned with this standard.

At the heart of this ambition are our regional HSE Committees for Kazakhstan and Africa. The Committees define our safety and occupational health strategy, review OHS policies and procedures, set

the safety culture, and receive regular progress reports on the implementation of safety controls and improvements. The HSE Committee met throughout 2016, reviewing reports on risks and mitigation measures presented by senior management, as well as addressing issues related to motivation and contractor management.

We firmly believe that accidents are preventable and can be reduced through training and by learning from experience. In the event of an accident, the causes are always evaluated, and any lessons drawn from them are shared among all operations. We believe that the more skilled our people are, the better the contributions they can make to the safe operation of our facilities.

We currently do not report safety statistics for our contractors, with the exception of fatalities, as it is not a requirement for contractor companies in Kazakhstan to provide this information (although we do have this information for Africa). However, at the end of 2016, we made safety statistics a requirement in all our contracts, so we expect to be able to obtain and report reliable data in the future.

Safety performance

We were deeply saddened that we lost 15 colleagues — 10 employees and five contractors — this year. This is a sobering

increase on last year, and we have taken swift and resolute action to turn around our safety performance towards our goal of Zero Harm. In Kazakhstan, we immediately introduced additional workplace supervision by on-site production managers, while longer-term recommendations based on thorough investigation of each incident were being implemented.

In 2016, we saw 94 employee work-related lost-time injuries (LTIs), compared with 95 in 2015 (restated*). Our employee lost-time injury frequency rate was 0.76 compared with 0.74 in 2015 (restated*). These numbers include the deaths of our employees.

The main causes of the deterioration in our safety performance were gaps in process safety management, whereby there was insufficient training and planning for change in existing technologies or equipment. There were also instances of people acting unsafely and not following requirements as well as a lack of appropriate management of contractors. To address this, we are working to implement our Process Safety Management effectively, and carrying out training and behavioural audits as well as internal and external audits of health and safety management systems, including fatal risk protocols. We are also focusing on improvement of safety risks management with particular focus on all stages of our work with contractors. These measures are subject to thorough review and strict control by the management.

* Previously reported as 97 — this has been updated to reflect the exclusion of two LTIs which related to contractors. This has correspondingly affected the 2015 LTIFR number (previously reported as 0.75). In August 2017, Kazchrome received a notice from the regulatory agency requesting a further investigation of an injury sustained to an employee in 2016. The outcome of that investigation may alter the LTIFR for 2016.

2016 highlights

Occupational health

We have an occupational health programme for all employees and our collective bargaining agreements with trade unions include commitments to improve health and safety. In Kazakhstan, our programme also includes on-shift medical examinations, workplace health risk assessments, financial insurance in case of death, occupational diseases or incapacity, extra paid healthcare in addition to insurance, as well as treatment in hospitals and health resorts.

In 2016, we carried out cardio-screening for more than 13,000 employees in Kazakhstan, 36 of whom went on to receive specialised treatment. These activities helped us to identify cardiovascular diseases and provide treatment in a timely manner. In 2016, we have seen a reduction in non-work related fatalities from cardiovascular disease compared to previous years.

During the year, we have also trained more than 70 of our employees on how to use a defibrillator. We plan to purchase defibrillators for our entities in Kazakhstan in the coming year.

In Africa, we provide free medical support to employees and their families. We participate in government vaccination campaigns, HIV/AIDS and tuberculosis programmes. This year, we instituted weekly health days at all our operational sites in the DRC to encourage people to eat healthily and exercise.

In Brazil, we offered employees vaccination against H1N1, and carried out an internal informative and preventive campaign against the Zika virus. We also launched a monthly 'Safety Dialogue' to raise employees' awareness of health and safety issues.

We carried out cardio-screening for more than

13k employees

In Brazil, we offered employees vaccination against

H1N1

01

Updated our Group HSE Policy Statement to reflect our vision of Zero Harm

04

Conducted Leadership for Safety training for 28 top managers in Kazakhstan

02

Rolled out Kazchrome best practice employee warning notices at all entities in Kazakhstan

05

Refined our contractor management and Safety, Health, Environment and Community (SHEC) procedures in Kazakhstan and Africa

03

Revised our high-risk control standards and introduced additional requirements for equipment, workplace procedures and employee training programmes



Individual approach to manage human-related safety risks



Since 2015, we have been exploring how different aspects of psychological wellbeing affect unconscious hazardous behaviours. We have reviewed best practice approaches and consolidated our knowledge into an employee training programme. In 2016, we conducted training for more than 400 employees in our aluminium division.

“ The course helped me understand what I had done wrong in suffering an injury. I have started to think about what I am doing and I will not rely on luck ever again. ”

Rustam Abdalikov
Production worker at Pavlodar Aluminum smelter

Diversity and inclusion

We are committed to diversity and are proud of the wide range of cultures and backgrounds that make up our team. Indeed, diversity is one of ERG's main strengths: our decision-making is stronger because it benefits from a broad range of experience.

We foster a culture of mutual respect and understanding, with equal opportunities for all and a Code of Conduct and commitment to fair employment practices underlining how seriously we take our duty as a responsible global citizen.

The proportion of employees under 35 in Kazakhstan

40%

26% are women which is way above industry average of round 9%

26%

In Kazakhstan, around 40 per cent of our permanent employees are under 35. In some cases, these young people are members of families who have worked loyally for ERG for four generations or more.

At most of our operations, young employees are members of on-site Youth Boards, which serve as a platform for:



Developing young specialists at work and ensuring their adaptation and career growth



Improving vocational training for young employees



Ensuring the protection of socioeconomic rights



Organising scientific conferences, sporting initiatives and cultural events.

Equal opportunities

We are committed to respecting the rights of our employees today and in the future, ensuring equal opportunities and fair treatment for everyone.

We are committed to respecting the rights of our employees today and in the future, ensuring equal opportunities and fair treatment for everyone*. All employment decisions, such as hiring, training and promotion, are based on merit. We do not tolerate any form of discrimination or unfair treatment, and in 2016, we strengthened existing mechanisms and emphasised our commitment to respecting and promoting employee rights through our Code of Conduct and Human Rights policy.

Women are traditionally under-represented in our industry. In Kazakhstan, where women now make up 26 per cent of our workforce, we are encouraging them to join ERG by providing a variety of professional and personal benefits. Going forward, we aim to extend reporting on gender diversity with our operations in Africa and Brazil.

We are similarly committed to equal rights for the disabled and take all reasonable steps to support them and provide our employees who become disabled with jobs.

Developing talent

We need the right people with the right skills to grow ERG and strengthen our position as a leading natural resources business. A combination of increasing competition for young specialists, an ageing workforce across the mining sector and the isolated locations of many ERG sites mean that finding and retaining the best talent can be a significant challenge.

That is why we support and provide training and skills-development programmes, both in-house and externally. We are not only training for the present, but for future generations. These young people are key to our future sustainability and our continuing innovation and development, so we feel a real sense of responsibility toward them.

* We include more details on our approach to human rights in the governance and ethics section on page 76.

2016 highlights

01

Continued to **work with more than 60 educational institutions** in Kazakhstan

02

Continued to **provide professional development training for our workers** in our on-site training centres (around 30k workers in Kazakhstan each year)

03

Started work on our **Corporate University programme**

04

Enhanced our Capabilities Assessment Scheme for production and technical professionals, the key target group of our Leadership programme

05

Held extensive online training for managers in Kazakhstan covering various disciplines

06

Continued to promote a culture of mentorship including knowledge-sharing initiatives such as our School of Masters programme and development centres for new employees in Kazakhstan

07

Held our annual regional professional competition, the Altyn Kor (Kazakh for 'Golden Talent Pool') in Kazakhstan

08

Held our first sports competition in Kazakhstan known as Spartakiad

09

Launched the 'Baobab' project in Africa in order to facilitate effective and sustainable ways of working together

Proud of our 'labour dynasties'

We are a multi-generational employer at most of our operations. We are honoured that several generations from one family choose to work for us. We call them 'labour dynasties'.



For example, the Izbasov family has collectively spent more than 130 years working for ERG. In 1952, Aitkali Izbasov joined the Aktobe ferroalloy plant on the advice of his uncle, who worked there as a smelter. In time, his two sons worked at the same plant. Like their father, Kuanyshbai and Zhanilbek shared their knowledge and expertise with young generations of smelters. Today, the youngest member of the family, Serik, is keen to continue this tradition. As he puts it, "I grew up in a metallurgical family. I'm a metallurgist and proud of it."

The Izbasov family has been collectively working for ERG

130 years

Employee engagement

We encourage employee engagement through our systems of incentivisation, training, collective agreements and consultations. Over 90 per cent of ERG employees are trade union members, with collective bargaining agreements in place at the majority of our operational entities. This year, we introduced regular sessions at operational meetings to dis-

cuss work-related and social issues with regional CEOs, and began sessions with senior managers to ensure alignment of their personal and business objectives and targets with our strategy.

Percentage of union workers

90%



Investing in future generations

In an increasingly competitive market for skills, we are investing in Group-wide initiatives that support our graduates and apprentices.

Kazakhstan

We are supporting mine training institutions and vocational colleges through direct investments in infrastructure and facilities, as well as educational programmes for students. For example, we are providing training that combines part-time, classroom-based learning with time spent on site. Students receive a monthly allowance, with most joining ERG when their training ends. We are also investing in new educational programmes that address the increasing demand for new skills in our industry.

Africa

We provide talented students and new graduates with an internship or work experience position at either an ERG mine site or our HQ in Lubumbashi – experiences that can be transformational. For example, in 2009, Arielle Kadjat gained an internship position at Boss Mining SAS in Kakanda as she neared the end of her chemical engineering degree, and was soon hired full-time. Over the next few years, Arielle rose to become junior production manager, and aims to reach senior management levels.

Brazil

In accordance with local labour laws, in Brazil we employ young people aged between 14 and 24, known as Young Apprentices. The programme was developed together with SENAI — a not-for-profit organisation established to support different industries with education in technical and technological services. All our Young Apprentices come from the communities around our mine, Pedra de Ferro.



2017 goals

Health and safety



Continue to explore **new ways to improve safety at work**, with our psychological wellbeing programme due to roll out across all operations in Kazakhstan



Roll out **Industrial Hygiene programme in Africa**



Conduct **internal audits of high-risk procedures** (our fatal protocols) as well as external audit of the HSE system at our sites in Kazakhstan and Africa



Explore and respond to **stakeholders' health and safety expectations**, measuring our impact and incorporating what we find into new programmes

Developing talent



Launch a number of initiatives under our Corporate University programme, including a production school for on-site workers offered in collaboration with regional training centres



Focus on employee development across the business including identifying internal successors for key roles and putting together development plans to support internal succession and create talent pools



Address the findings of our comprehensive competencies assessment of our production and technical staff in Kazakhstan



Promote continuous **improvement and a culture of innovation** through training programmes and specific initiatives



Improve the skills of our HR leaders in Kazakhstan through strategic HR training programme



Work on **educational programmes for our most talented workers** in collaboration with Nazarbayev University in Kazakhstan



Encourage our workers through our Innovators' Forum and regional and on-site professional contests in Kazakhstan



Further implement Project Baobab in Africa to focus on organisational culture and structure, enabling our employees to provide input into the ongoing organisational design of the company



Strengthening our communities

Many of our mines are in remote areas, and are the hub of communities that have grown up around the mine. Our involvement goes far beyond simply offering work; we build houses, schools, and infrastructure, and provide energy. ERG plays a very important role in these developing economies, improving standards of living in the countries where we operate. As community partners, we seek meaningful long-term relationships that create lasting benefits. Where possible, we always employ local people, purchase local goods and services, and support broader regional and national economies by paying taxes and royalties.

Supporting education is one of the most important areas of our community social investment programme. It helps train the next generation of employees. We place a particular emphasis on supporting primary education in our communities, in particular for the children of our employees.

We are often at the heart of our communities. Everywhere we operate in Kazakhstan, we support the development of the social infrastructure such as clinics and therapy centres, sports centres, swimming pools, and cultural and recreation areas. These facilities are available for our employees, their

families and local communities including disadvantaged groups. To improve access, we provide discounts for our retired workers and for disadvantaged and large families.

In Africa we supported a diverse range of social programmes developed in conjunction with the communities we operate in, including education, health, agriculture, water, roads and power. We have staffed 17 schools and a medical facility, as well supported power generation in Kakanda town (DRC). In 2016, we completed road and drainage construction in Sakania town (DRC). We are investing in further projects and initiatives in 2017.

Our approach to tax

As a multinational corporation, ERG has an obligation and a responsibility to pay tax and comply with the laws and rules in force in all countries where we do business.

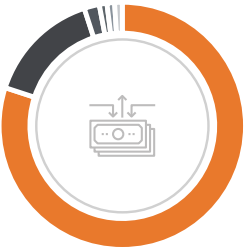
ERG is committed to ensuring full compliance with all statutory obligations, including that tax returns are filed and that tax is paid on time in each jurisdiction in accordance with governing tax laws and rules. Our tax department is involved in all relevant aspects of our business, partnering closely with management to provide guidance and to ensure our operations are compliant.

ERG makes a significant contribution to public finances in the countries we operate in, both directly through the payment of taxes and indirectly through payments to suppliers, employees and community social projects. During 2016, we paid more than US\$ 600 million to governments in taxes and duties.

We agree with the principles underlying the base erosion and profit shifting (BEPS) initiative to realign taxation with economic substance and value creation, and we therefore do not engage in aggressive tax reduction strategies. ERG's effective corporate income tax rate reflects the statutory corporate income tax rates in the countries where we have our mining and processing operations. We pay more than 95 per cent of our group taxes in these countries.

We are dedicated to providing transparency about any payments made to governments as part of our corporate commitment to sustainable development and sound corporate governance, and we believe this to be in the best interest of all our stakeholders. For over a decade, we have actively engaged with Extractive Industries Transparency Initiative processes in the countries where we have our main operations: Kazakhstan, DRC and Zambia.

TOTAL TAX PAYMENTS



Kazakhstan	80%
DRC	15%
Rest of Africa	2%
Brazil	1%
Luxembourg	1%
Netherlands	1%

TOTAL TAX PAYMENTS BY TYPE



Income taxes	41 %
WHT collected from suppliers	4 %
Mining taxes	17 %
Payroll taxes - borne by employer	10 %
Payroll taxes - collected from employees	17 %
Customs duties	3 %
Environmental taxes	3 %
Property taxes	3 %
Other taxes	2 %

Cobalt Initiative

In 2016, there was a significant increased focus on child labour in the artisanal mining sector of the DRC. As a major cobalt miner in that country, we have redoubled our efforts to address child labour issues arising from unregulated artisanal mining and to help the development of our local communities. Together, these efforts make up Cobalt Initiative.

Our Metalkol Project RTR, once production commences, will provide a reliable, sustainable and ethical source of cobalt units to a market that is growing rapidly due to developments in the rechargeable battery sector, particularly for the automotive industry. There is significant scrutiny on the battery supply chain, to ensure that raw materials are sourced in a sustainable and ethical way. With over 60 per cent of the world's cobalt coming from the DRC, cobalt is particularly in the limelight. We have begun working with customers, industry groups and the international community to fully understand our customers' requirements. Through this work, we aim to ensure that RTR production will help our downstream users comply with industry standards.

MULTI-STAKEHOLDER COLLABORATION

As a strategic associate partner of the World Economic Forum (the Forum), we collaborated with other Forum members and Forum contacts to coordinate a combined response to child-labour issues in the cobalt industry, including a multi-stakeholder workshop and meetings, stakeholder interviews, and desk research. Our shared goal was to develop a responsible, inclusive and sustainable battery supply chain including reform in cobalt, a critical raw material for batteries. A responsible battery alliance is expected to be launched in 2017.

PARTNERSHIPS

ERG has pursued a number of direct partnerships as part of our Cobalt programme. The first partnership to be formalised was support for the Bon Pasteur Alternative Livelihood Programme, designed to break the cycle of violence and abuse against children and girls in artisanal mining communities and improve their living conditions.

EXISTING PROGRAMMES

Underpinning these new programmes is a strong legacy of support for child welfare. ERG continues to support around 180 teachers and more than 8000 students. Other programmes, such as ERG's Farmer Assistance, further help communities to support themselves and their families.

PUBLIC AWARENESS AND EDUCATION CAMPAIGN

The last aspect of ERG's Cobalt programme is a public awareness and education campaign.

ERG continues to support around
180 teachers and more than

8000 students



2016 highlights

01

Invested around US\$ 56 million in communities connected to our operations, up from US\$ 45 million in 2015. Of this, we invested US\$ 49 million in Kazakhstan (2015: US\$ 33 million), including the ERG Corporate Foundation Komek funding, US\$ 6 million (2015: US\$ 12 million) in Africa and around US\$ 400 thousand in Brazil. A part of our social investments in Kazakhstan was realised through formal agreements (memoranda of understanding) signed annually between the Group and the regional governments

02

Increased our direct procurement of goods through local suppliers by almost 1.5 times in Kazakhstan. Today, over 80 per cent of our procurement strategies have been developed with local producers

03

Supported two farmer co-operatives and provided seeds and fertilizers to 350 families in DRC

04

Worked in partnership with educational institutions in Kazakhstan and Tel Aviv University to **launch our 'Ecosystem of Student Entrepreneurship' initiative**

05

Set up a microcredit scheme to support local competencies development and self-employment in the Kostanay region of Kazakhstan

06

Supported over 1 400 families as their children started the new school year in Kazakhstan

07

Sponsored around 180 teachers in Africa, who teach around 8000 students

08

Built three houses in Kazakhstan for more than 200 employees as part of our Affordable Housing programme

09

Repaired roads and bridges, provided power free of charge as well as access to water by drilling wells in DRC

10

Worked towards providing transparency regarding all payments made to governments as part of our corporate commitment to sustainable development and sound corporate governance.



Encouraging maximum involvement from local communities in Africa

Our mining operations in DCR affect several communities in the areas around our operations. In 2016, in collaboration with University of Lubumbashi Observatoire (Odu) and local NGO Interface Development, we conducted surveys to build socioeconomic profiles of our communities and identify their priorities and expectations. The findings will inform our community social investment programmes and help us measure their impact.

For our programmes to be effective, we need maximum involvement from local communities. To support this, during

2016 we conducted participatory rural appraisal sessions in 11 villages around our operations. These sessions build on the idea that true development means improving the quality of life for the majority of people in a community, regardless of their occupation or livelihood. The collaborative discussions resulted in the development of Community Action Plans that focused on key issues for each community, such as building wells, schools, and other basic infrastructure.

Delivering change in Kazakhstan

In 2017 we will start the development of a large-scale socio-economic programme in Kazakhstan known as 'The Home-towns' which aims to address the challenges and needs of the regions in which we operate and therefore improve the living conditions of our employees and their families. Through this programme we plan to deliver tailored development initiatives designed to ensure our communities are places where multiple generations of employees and their families wish to stay.

This programme is an example of our move from individual initiatives to strategic social investments that ensure sustainable outcomes for communities. Based on the principle of social partnership, we believe these strategic investments will deliver real change.



2017 goals



Continue to **support sustainable local economies** by paying taxes and increasing local procurement



Continue to **support regional capacity building** through our 'Ecosystem of Student Entrepreneurship' initiative in Kazakhstan.



Launch our strategic socio-economic development programme known as 'The Hometowns' in Kazakhstan



Enter into a **multi-year programme with the Good Shepherd Sisters in the DRC** to build capacity, develop livelihoods projects, provide education and divert children from dangerous labour environments



Support the development of new businesses that help our production processes in Kazakhstan



Continue to focus on areas where we can **deliver long-term socio-economic benefits**, as well as creating effective partnerships with local governments and expert organisations to deliver sustainable value for our communities



Restructure our SHEC functions in Africa to increase capacity and resources



Launch a responsible battery alliance in cooperation with WEF.



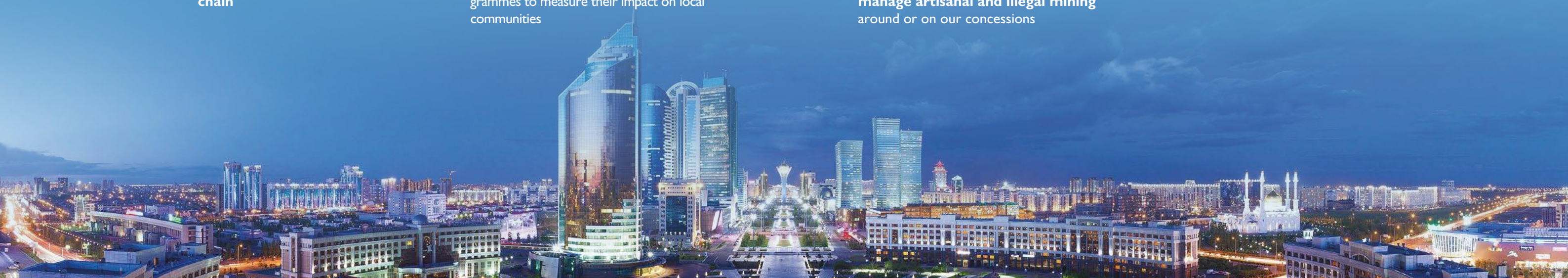
Pay special attention to **involving disadvantaged groups in our supply chain**



Further **refine the governance and reporting processes** around our programmes to measure their impact on local communities



Undertake further research into appropriate strategies and projects to **manage artisanal and illegal mining** around or on our concessions



Providing environmental stewardship

As a mining company, our activities have a direct impact on the environment. However, compliance is currently the predominant way of defining our environmental programme objectives: we aim to find effective ways to reduce our environmental impact and ensure the ecoefficient use of our resources beyond basic legislative requirements.

In 2016, we updated our HSE Policy Statement to reinforce our commitment to achieve better progress in embedding sustainable practices in the use and protection of natural resources and reducing our environmental impact. To achieve this, we are focusing on timely identification and treatment of environmental risks and incorporating risk assessments into planning and investment appraisals. We are monitoring and analysing our impact on the environment,

and developing improvement measures. We are also strengthening environmental management and control processes through the implementation of standards and systems, and by collaborating with external stakeholders. In 2016, we also explored possibilities for improving our impact through our operational excellence and innovation initiatives in Kazakhstan.

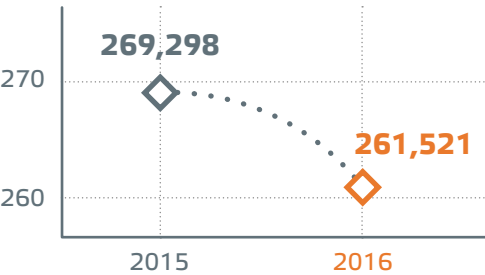
In 2016, we continued to work on the aspects and impacts register for our

operations in Kazakhstan. We have analysed potential causes of non-compliance with environmental requirements, and defined potential areas for improvement. These have been addressed in our mitigation plans.

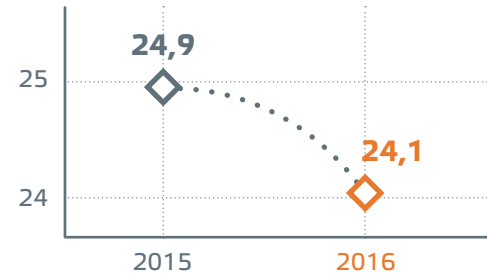
In 2016, we made our first submission to the National Pollutant Release and Transfer Register in Kazakhstan. The Register is a structured database that aims to support public participation in environmental decision-making, as well as contribute to the prevention and reduction of pollution of the environment.

Looking ahead, we will further invest in our projects to improve our impact on the environment and support alternative energy through our renewable energy production initiatives in Kazakhstan. And in Africa, we continue the production and expansionary development of cobalt for use in clean battery technologies.

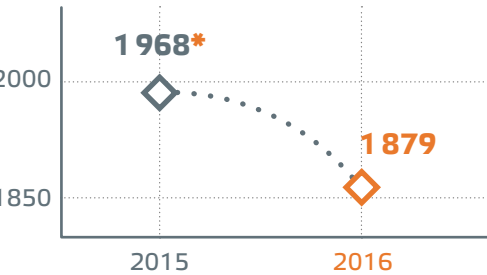
Energy consumed (production only), Terajoules



Greenhouse gas emissions, Million tonnes CO₂ eq



Water withdrawn, Million m³



* Restated from 2,068 million m³, due to amendments in water withdrawal data of EEC.



Energy and carbon emissions

We are one of the largest electricity producers in Kazakhstan, producing around 19 per cent of the country's energy. Around 87 per cent (2015: 87.6 per cent) is produced from coal, a key source of GHG emissions. We recognise that this makes a significant contribution to Kazakhstan's emissions and we are exploring ways to reduce this, supporting the Kazakhstani government's move toward a low-carbon economy.

In 2013, our Ferroalloys Division was the first mining business in Kazakhstan to obtain ISO 50001/EN 16001 certification. By the end of 2016, all Group entities in Kazakhstan had successfully implemented energy management systems in line with ISO 50001/EN 16001 and completed certification and verification audits. The energy audit findings informed our energy consumption improvement programme for 2016-2020. This initiative is expected to bring significant energy and fuel consumption optimisation. Over 190 initiatives have been implemented during 2016 as part of this programme, delivering energy consumption reduction by 1,216 TJ and savings of over US\$3 million in Kazakhstan.

In 2016, our overall energy consumption was 261,521 TJ (2015: 269,298 TJ). GHG emissions associated with direct and indirect energy consumption totalled 24.1 Mt of CO₂ equivalent (2015: 24.9 Mt). The decrease of 0.8 Mt of CO₂ equivalent was primarily due to lower electricity production in our Energy Division.

In 2016, the Government of Kazakhstan signed the Paris Agreement on Climate Change. Going forward, we will be collaboratively exploring the opportunities to achieve a 15 per cent reduction of GHG emissions by 2030. We will be adopting improvement programmes to achieve this in accordance with National Plan, which is expected to be rolled out by the end of 2017. This will inform our GHG emissions and climate change strategy going forward.

During 2016, we continued to assess the GHG emissions from our activities in Africa to predict potential risks. While our enterprises in the DRC are not obliged to comply with the GHG standard, we recognise that there is an opportunity to limit GHG emissions in our DRC operations – that is why we include GHG emissions in all our ESIA reviews. Any alternative energy sources will be assessed in the ESIA for viability.

We are one of the largest electricity producers in Kazakhstan

19% of the country's energy

*2015: 87.6%

Water

We are very conscious of global water concerns and many of our operations are in water-stressed areas. Our strategy is to manage our water demands to achieve a reasonable minimum consumption through good operational control and innovations.

More than 95 per cent of the water we use in Kazakhstan is extracted from the Irtysh River under licence, and is used for cooling equipment at EEC. This year, water consumption decreased by five per cent, mainly due to a decrease in power generation at EEC.

Our sites in Kazakhstan and Africa complied with all water regulations during the year. Our Chambishi plant in Zambia has abstraction and discharge permits, although currently neither abstraction nor discharge permits are required in the DRC.

Waste

In all our operations, we follow national legal requirements for waste management and minimisation. Our waste comes mostly from mining, beneficiation and smelting. Most of the remaining material is overburden, which is classified as waste in Kazakhstan and will ultimately be used in restoration work. In Africa, waste oils are picked up by a licensed contractor, typically the supplier of the oils.

Following our initiative 'Turning waste into profit', launched in 2015 in Kazakhstan, we continued to explore ways to

use our technogenic deposits and waste more effectively. In 2016, we revisited our waste governance in Kazakhstan and defined our waste management roadmap to ensure our approach is structured and systematic.

Within this initiative, more than 58 thousand tonnes was sold to third parties.

In 2016, we revisited and improved our waste inventory in Kazakhstan, and analysed the most important waste types to understand their potential for further use in production (both by us and third parties). Our R&D centre focused on recycling technologies of ferruginous sand, to be tested during 2017.

Land and biodiversity

In Kazakhstan, land restoration after mine closure is a requirement of subsoil use contracts. In 2016, one ERG mine was closed and land restoration was completed by the end of 2016 in line with all regulatory requirements.

None of our operations are located in, or adjacent to, officially protected areas, although sites at our Comide and Boss Mining operations in Africa have been identified as having high biodiversity value. We pay careful attention to conservation and the restoration of biodiversity, especially the conservation of rare and endangered species of wild flora and fauna.

Supporting biodiversity in Africa

During 2016, we sponsored biodiversity assessments at Comide and Boss Mining in the DRC, with all surveys conducted by independent biodiversity experts, Golder Associates. The sites are located in the copper belt of the DRC, a mineral-rich region where copper and cobalt-rich deposits may surface in the form of a 'copper hill'. These escarpments have a unique flora adapted to high copper and cobalt concentrations in the soil.

We will take account of the study's findings in our environmental management plans to minimise any negative impact on rare plant species.

“ Several plant species of conservation importance were recorded during our field visit, including endangered species. ”

Andrew Zinn
biodiversity expert at Golder Associates SA

2016 highlights

01

Updated and strengthened our procedures on **environmental compliance verification** in Kazakhstan

06

Took part in a **ferrochrome slag study** by the International Chromium Development Association

02

Ensured all Group operations in Kazakhstan passed **ISO 14001 certification and verification audits**

07

Commenced early construction works of our transformational Metalkol Project RTR

03

Ensured all Group entities in Kazakhstan **successfully implemented energy management systems in line with ISO 50001/EN 16001** and completed certification and verification audits

08

Sold over 58 thousand tonnes of our waste to third parties in Kazakhstan as part of the “Turning waste into profit” initiative

04

Delivered over 190 initiatives as part of this programme, reducing energy consumption by 1,216 TJ and savings over US\$ 3 million in Kazakhstan

09

Revisited our waste governance policy in Kazakhstan, and developed our waste management roadmap

05

Ensured all our sites in Kazakhstan and Africa met **all local water regulatory requirements**

10

Explored recycling technologies for ferruginous sand in Kazakhstan

2016 highlights continued

11

Developed **environmental management procedures** in Africa

12

Started the review of **DRC Environmental Social Impact Assessments** to ensure compliance with Equator Principles

13

Conducted **independent Tailings Storage Facilities audits** for DRC entities

14

Supported a **biodiversity study in Africa**

15

Supported **monitoring of the water fauna** near the Porto Sul in Brazil

16

Continued to support the activities of the Korgalzhyn State Nature Reserve in Kazakhstan to **protect pink flamingos** and their habitat, listed in the International Red Book of Endangered Species

17

Produced seeds of native trees and bushes as part of our **reforestation programme in Brazil**

2017 goals



Collaboratively explore opportunities in Kazakhstan to achieve a **15 per cent reduction of GHG emissions by 2030** in accordance with the Paris Agreement on Climate Change in Kazakhstan



Explore **new opportunities for recycling**



Explore ways to create and embed cost-effective innovative solutions that **minimise our impact on environments** with the help of our R&D Centre



Continue to **support our biodiversity projects** in Kazakhstan



Work with business associations to **contribute our expertise to the development of environmental codes** and other legislation on GHG emissions in Kazakhstan



Implement a major initiative in Kazakhstan aimed at stocking and **cleaning up coastal areas** of our regions



Conduct **external audit for compliance with Equator Principles ('EP')** in Africa and formalise commitment to EP in ERG Africa policy



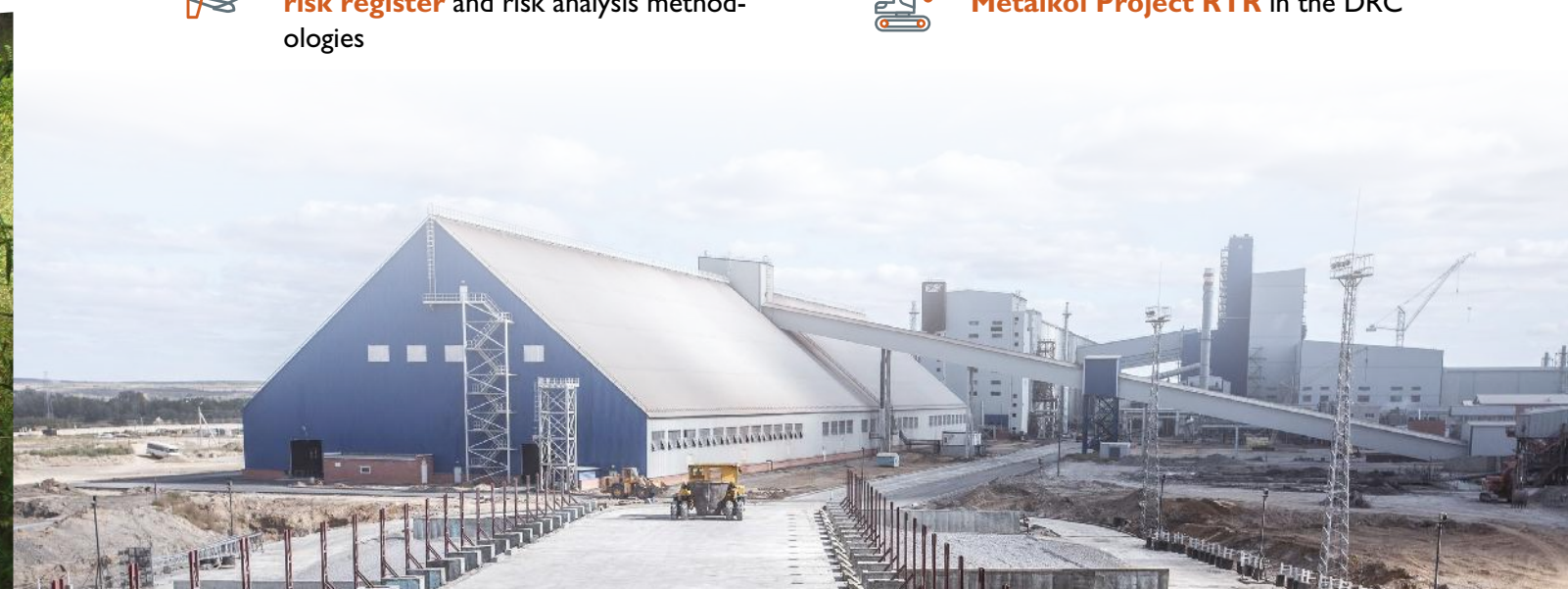
Focus on **enhancing our organisational structure** at both site and corporate level to strengthen environmental management across our operations in Africa



Further **improve our environmental risk register** and risk analysis methodologies



Continue the **development of our Metalkol Project RTR** in the DRC



Improving governance and ethics

Our approach to governance and ethics divides into four themes: trust, human rights, our governance structure, and our code of conduct and policies.

Trust

We believe trust is earned by delivering on our commitments year by year. One of our most fundamental commitments is to embed the highest standards of business integrity and professionalism in all our activities. We expect to be held accountable for our actions by our stakeholders, and we do everything possible to ensure we operate ethically at all times.

While we aim to hold ourselves to the highest standards, we know there is always more to do to build trust in a rapidly evolving market and meet the expectations of over four generations of stakeholders. We will continue to listen, review and adapt our compliance programmes to meet these challenges and ensure we are positioned for the future in an ethical and responsible manner.

Governance structure

The Group is guided by our Board of Managers, which comprises two representatives of the Government of Kazakhstan and three founding shareholders. The Board is committed to ensuring that the Group strives to meet the high-

est ethical and business standards, and complies with local and international laws wherever ERG operates.

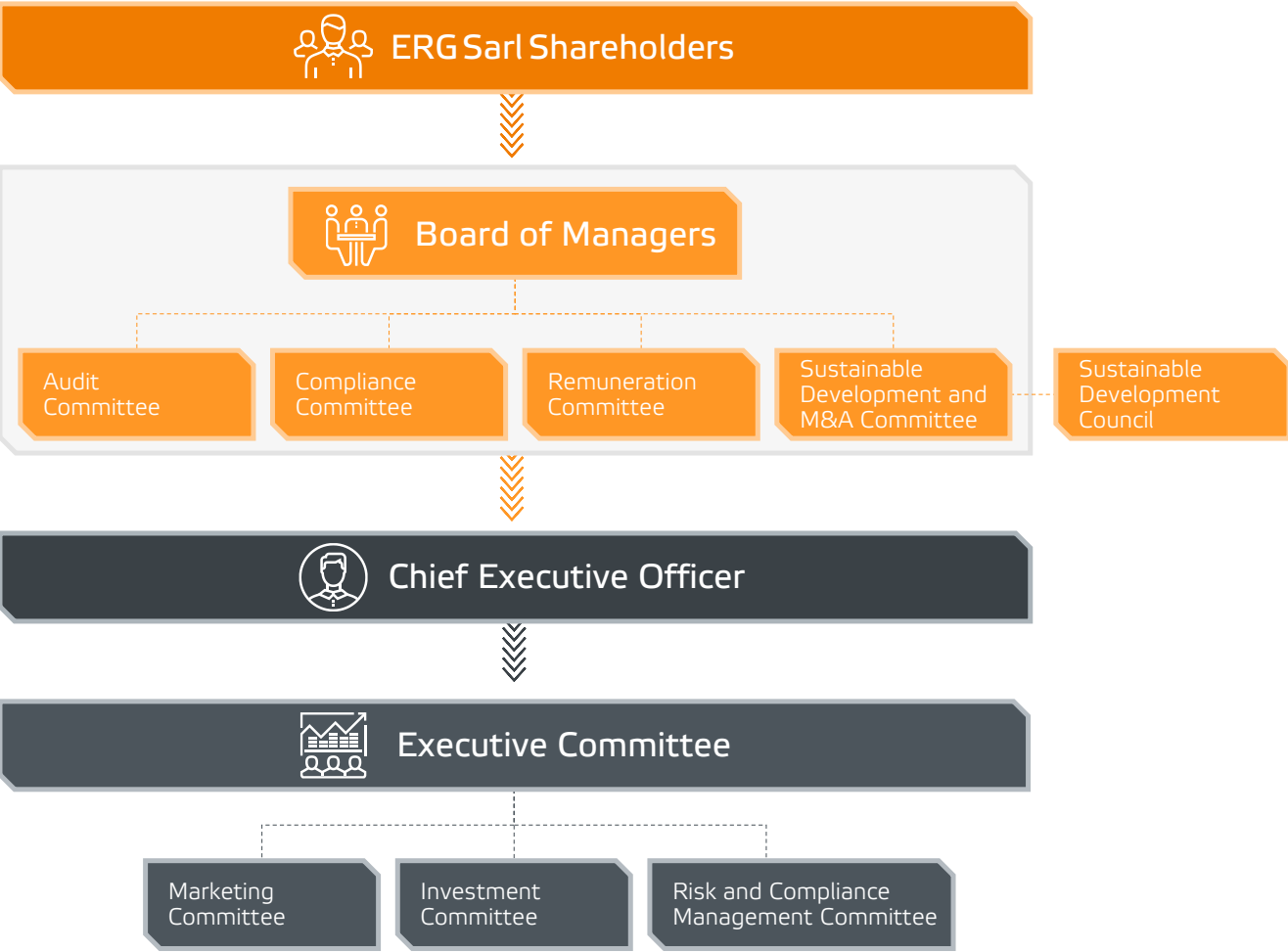
In 2016, the Group continued to consolidate different components of its organisational structure to improve working practices throughout the business. The Board ensures that all procedures have clear ownership and accountability.

The Board has established four committees to help it discharge its responsibilities in key governance areas. All Board committees have clearly defined terms of reference, which describe in detail their duties and the extent of their authority.

The Board's Compliance Committee comprises two managers and an independent chairperson, and reports to the Board of Managers. The Compliance Committee held four meetings in 2016 to ensure we meet our integrity and governance commitments.

In 2016, we established our Sustainable Development Council (SDC) as a single centre of responsibility for Group strategy with a strong focus on balanced and sustainable development throughout the organisation, including organisational architecture, corporate

CORPORATE GOVERNANCE STRUCTURE



governance, leadership programmes and employee motivation. In addition, the SDC launched project 'Integration' which is at the heart of how we manage the business and is aimed at establishing stronger accountability and business planning processes and metrics for all business drivers within our model of developing a business based on embedded sustainability.

In 2016, we established our Sustainable Development Council as a single centre of responsibility for Group strategy

SDC

Code and policies

We have put in place policies and procedures developed in response to specific risks that we review regularly. These include 12 compliance policies, a Counterparty Due Diligence (CPDD) procedure, and training sessions. The ERG Code of Conduct and our compliance policies underscore our commitment to corporate governance and business integrity, as well as our commitment to complying with all relevant laws, regulations and other international requirements.

Our internal policies reflect the regulatory environments we operate in, as well as embodying our ethics and values. We review our policies regularly against material risks for ERG, our rapidly changing regulatory environment, and the expectations of our global stakeholders. These policies cover anti-bribery and corruption, money laundering and terrorism financing, anti-competitive behaviour, compliance with international sanctions regimes, anti-fraud, data protection and protection from all forms of bullying, harassment and discrimination, and human rights abuses.

ERG operates in a number of countries where there is a perception of a high risk and tolerance of bribery. ERG is opposed to all forms of bribery and corruption, and does not engage in or tolerate their occurrence in any circumstances. It is against company policy to offer, solicit, give or accept bribes in any form, for any purpose.

Our employees, directors and officers are committed to complying with our Code of Conduct and policies, and we work together with our business partners, subcontractors, agents and suppliers to comply with applicable laws and regulations.





Human rights

Respect for human rights is fundamental to the sustainability of our business and the communities we operate in. To underline the importance, in 2016 our Board adopted the ERG Human Rights Policy which formalises the Group’s commitment to respecting human rights.

There is a global focus on how the extractives industries address human rights. Countries and international agencies like the IFC, ILO and OECD are putting new laws and standards in place to ensure large entities and their host governments understand their roles. Increasingly, our stakeholders expect us to have human rights policies and procedures embedded in our business, and for us to publicly report on our human rights performance. In short, we are measured not just in terms of the products that we produce, but in how we produce them.

Within this changing legal framework, ERG is working to systematically identify, prevent and mitigate adverse human rights impacts resulting from, caused by or linked to our work. Where ERG has unwittingly caused or contributed to adverse human rights impacts, we will contribute to their prevention, mitigation and remediation. We will work with host governments and civil-society organisations to promote respect for human rights, and we expect all employees — both today and tomorrow — to understand our Human Rights Policy and to report any potential human rights issues.

Monitoring and reporting

We are committed to transparency, and encourage our employees to speak up about issues and concerns using our hotline. In 2016, we responded to 78 reports from employees, contractors or third parties regarding potential breaches of Group policies. These reports focused on human resources (for example unequal treatment and abuse) and interactions with third parties (for example procurement irregularities). All reports were followed up and appropriate action taken.

We conducted 2,751 due diligence reviews on third parties, with recommendations made where appropriate. As a result, we rejected 1.60 per cent of potential third parties.

We also undertook a number of internal and external reviews designed to enhance our compliance function, framework and programme. The findings of these reviews have been incorporated into our Compliance Charter, strategy and 2017 plan.

Due diligence reviews

2751

The number of reports from employees, contractors or third parties to which we responded

78 reports



2016 highlights

01

Adopted the **ERG Human Rights Policy** that formalises the Group’s commitment to human rights

03

Conducted **internal research of Group-wide initiatives and developments** on our strategy, goals and mission

02

Strengthened our **focus on sustainable development** by expanding the responsibilities of the Board of Managers’ Mergers & Acquisitions Committee devoted to Sustainable Development and strategy, and by establishing a working body – the Sustainable Development Council (SDC) – to ensure balanced and sustainable development of the Group and its practices

04

Enhanced our compliance team in key management positions and in regional roles

2017 goals



Conduct further risk assessments and training sessions to **improve understanding of human rights**



Focus on identifying, preventing and mitigating human rights violations



Implement a **‘Train the Trainer’ programme in the DRC** to deliver training on the Voluntary Principles of Security and Human Rights and other international human rights norms to security personnel



Continue to **adapt our risk based compliance programmes** to ensure we develop in an ethical and responsible manner to meet our long term objectives



Enhance **our understanding of our business partners** including reviewing their record on social issues and human rights



Join the World Economic Forum’s Partnering Against Corruption Initiative to support collective action to eliminate corruption across global markets.



Reporting principles

Our approach to reporting to date has been guided by internal reporting objectives and processes, regulatory requirements, and voluntary guidance, such as the Global Reporting Initiative.

As we continue to develop our approach to embedding sustainability, we will be taking a fresh look at our approach to reporting, and the principles and guidelines on which it is based, to ensure that our reporting properly supports our commitment to progress.

Eurasian Resources Group Sustainable Development Review 2016

We would like to express our thanks to the Group's employees for their contribution.

Our key principles are to ensure that:

01

The reported information reflects our performance

02

The data is meaningful and is consistent with the stated definitions, scope and boundaries

03

Any specific exclusions are stated clearly and explained

04

We describe openly any material assumptions we make and our accounting and calculation methods

05

We aim for sufficient transparency to enable users to have confidence in the integrity of our reporting.