



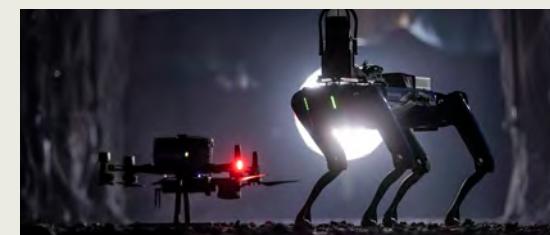
We are leading the transformation of our industry toward a sustainable future

Annual and Sustainability Report 2022

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Business overview

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Risks

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The Board of Directors and the President hereby submit the annual and sustainability report for 2022 for Luossavaara-Kiirunavaara AB (publ), corporate identity number 556001-5835, a limited liability company domiciled in Luleå that is wholly owned by the Swedish state.

The annual report is integrated, meaning that the description of operations – including our sustainability work and corporate governance – is reported together with the administration report and financial statements that make up the statutory part of the annual report. A statutory sustainability report has been prepared as part of the administration report, in accordance with Chapter 6 of the Swedish Annual Accounts Act, and can be found on pages 11–12, 16, 20, 30–40, 43–50 and 52–54. A corporate governance report has been prepared as part of the administration report. Sustainability efforts are reported according to Global Reporting Initiative (GRI) guidelines. The scope of the sustainability report is defined on pages 135–165.

Administration report, pages: 11–12, 16, 18–20, 30–70 and 130.

Sustainability report, pages: 11–12, 16, 20, 30–40, 43–50, 52–54 and 135–165.

The English version of this report is a translation of the Swedish original version. In case of discrepancies, the Swedish version shall prevail.

Europe's leading mining and minerals group

MSEK 46,543

MSEK 20,799

>90%

approx. 4,500

MSEK 4,944

Net sales

Operating profit/loss

Iron ore products account for over 90 percent of sales

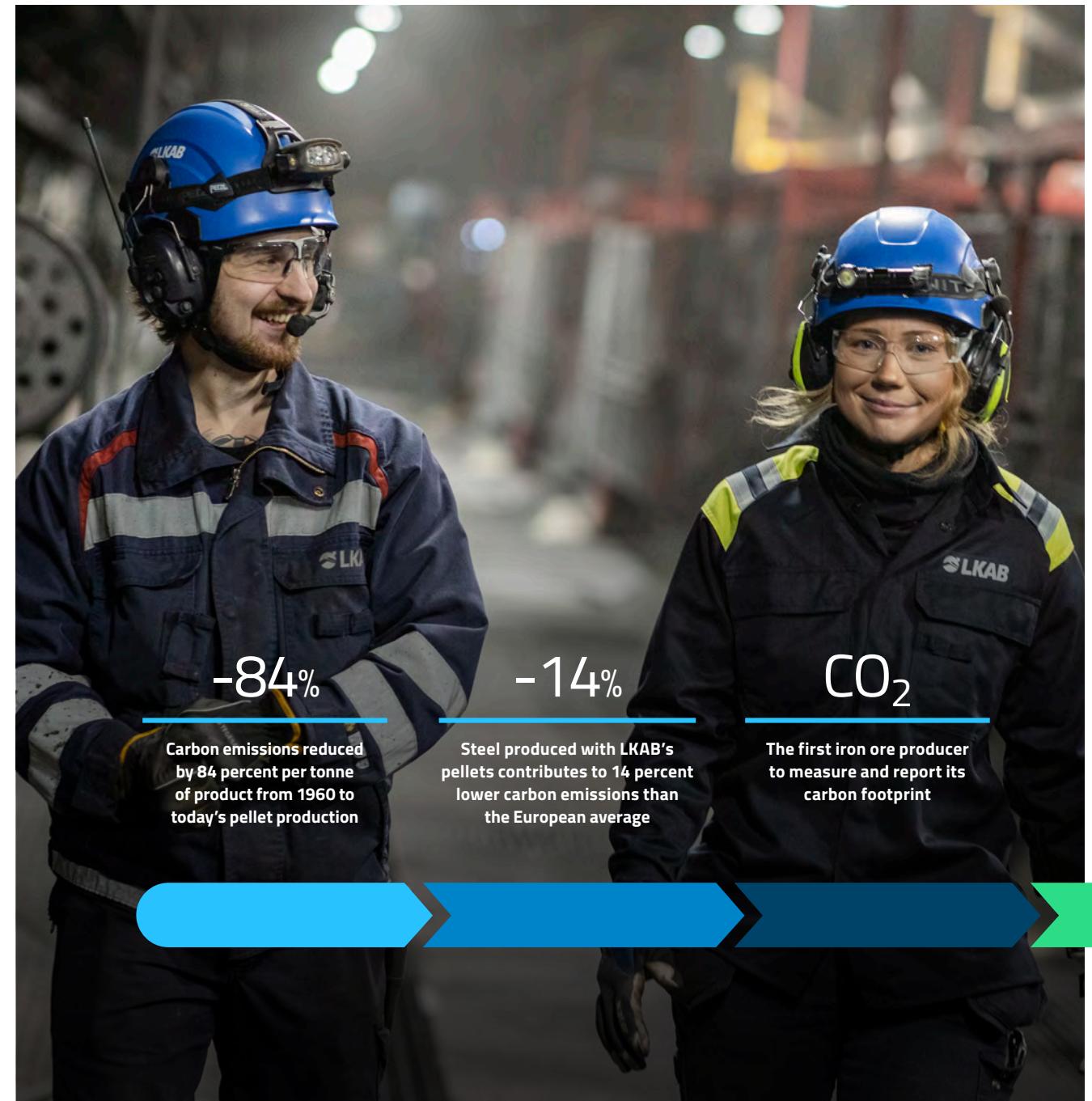
Average number of employees

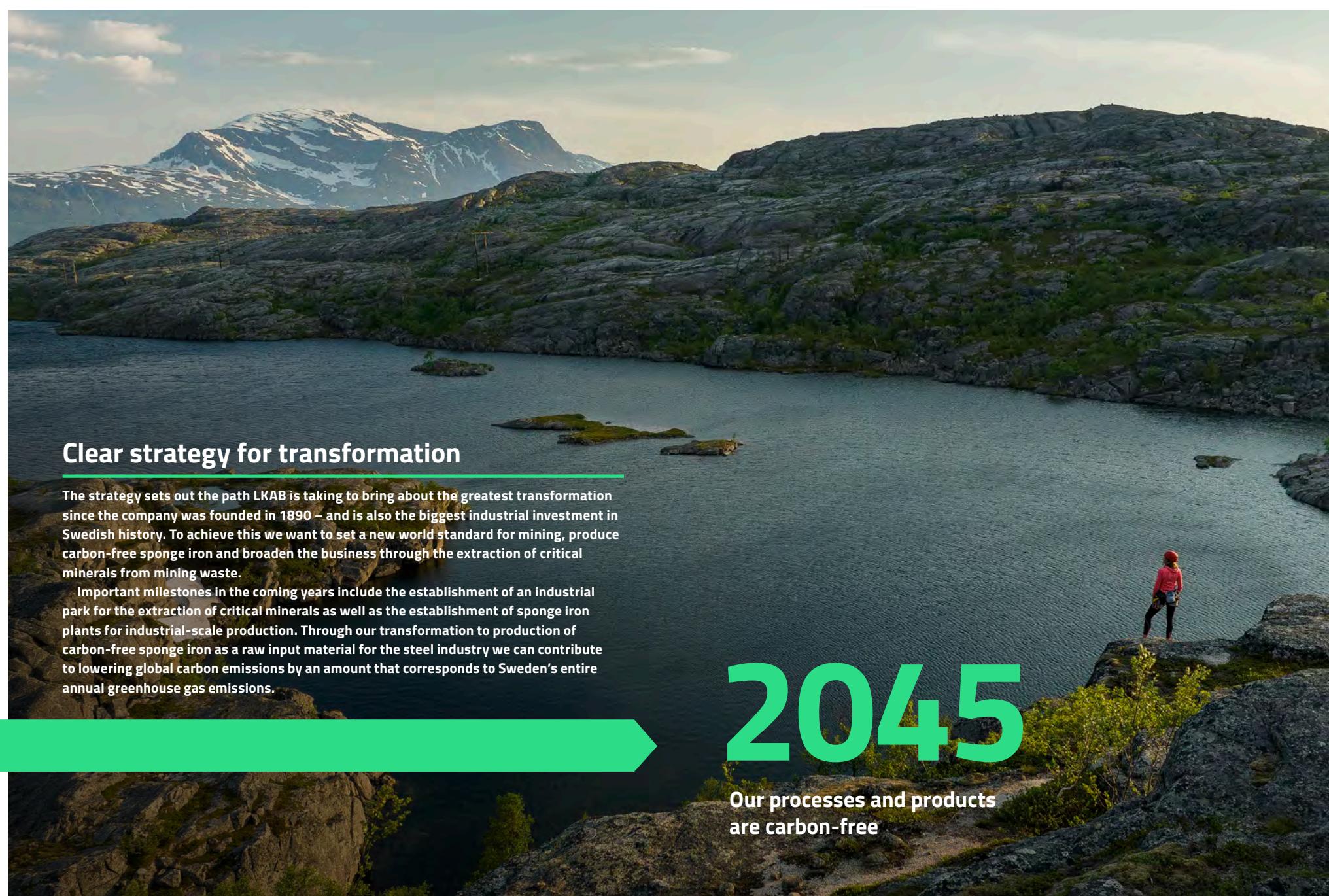
Investments in carbon-free processes and products



Towards a new iron age

The world is facing a great challenge caused by emissions that are impacting the climate. The global iron and steel industry currently accounts for as much as a quarter of total carbon emissions from industry.





Clear strategy for transformation

The strategy sets out the path LKAB is taking to bring about the greatest transformation since the company was founded in 1890 – and is also the biggest industrial investment in Swedish history. To achieve this we want to set a new world standard for mining, produce carbon-free sponge iron and broaden the business through the extraction of critical minerals from mining waste.

Important milestones in the coming years include the establishment of an industrial park for the extraction of critical minerals as well as the establishment of sponge iron plants for industrial-scale production. Through our transformation to production of carbon-free sponge iron as a raw input material for the steel industry we can contribute to lowering global carbon emissions by an amount that corresponds to Sweden's entire annual greenhouse gas emissions.

2045

Our processes and products
are carbon-free

Comments by the President and CEO



"We can and we want to
– but will we be allowed to?"

– Jan Moström, President and CEO

2022 has been one of LKAB's most successful years. We have made progress in various respects, but the hardest challenges still lie ahead of us – and in many cases are beyond our control.

Never has the future been so difficult to predict. The turbulence in the world around us, with the war in Ukraine, increased geopolitical tensions, the energy crisis and inflation, is affecting us all. Despite many uncertainties, however, we know that our strategy for the future remains firm. We will streamline production and broaden our business – while at the same time driving the transformation of the iron and steel industry.

Climate-impacting emissions are one of the greatest challenges of our time and despite good intentions, consumption of fossil fuels in the world remains high. With a fossil-free value chain from mine to steel we can make a noticeable difference for the climate. We are helping to lower global carbon emissions by 40–50 million tonnes, which is as much as today's annual greenhouse gas emissions for the whole of Sweden.

The transformation calls for cooperation on a broad front, and above all decisive action from politicians and other actors in society – with a particular focus on permit issues, energy supply and investments in infrastructure.



Strong year in an uncertain market

2022 has been a year edged with uncertainty, with LKAB nonetheless delivering strong results. Operating profit for the year amounted to nearly SEK 21 billion, which corresponds to an operating margin of 45 percent. This despite increased costs and lower revenues as a result of factors such as higher energy prices and disruptions in production.

The coronavirus pandemic continued to impact us some way into the year. Measures to prevent the spread of infection meant that maintenance work was not able to be carried out to the extent we would have liked, and we therefore have a maintenance deficit that impacted our production volumes. In addition, capacity on the Ore Railway remained one of our greatest challenges, affecting our ability to transport the volumes demanded by customers.

Our deliveries of iron ore products during the year amounted to 25.8 (27.0) Mt and production amounted to 25.0 (26.7) Mt. The lower production volume is associated with production disruptions and extended maintenance shutdowns, particularly in Kiruna.

Net sales and operating profit

(MSEK)



Operating cash flow

(MSEK)



25.0

Produced (Mt)

25.8

Delivered (Mt)

We are also seeing the inconsistent production at the pelletising plants causing problems as regards our energy targets. Each new start-up of our plants increases energy consumption.

The iron ore price was volatile during the year, a consequence of the uncertainty we are seeing in the world around us. The average global spot price for iron ore was USD 120 (160) per tonne, which despite the downturn was a historically high level. Quoted pellet premiums also remained at a historic high. A strong dollar during the year also contributed positively to our results. Looking ahead there are indications of continued good demand for iron ore products.

Mine production, technology shift and increased value added

It is essential for all our operations that we have the ability to develop our mine production and mining methods for large-scale mining of iron ore at great depths. During the year work was carried out in various areas, such as development of our mining methods and autonomous production systems.

A key part of our transformation involves increasing the value added to our products by processing. We will do this through a gradual transition over a couple of decades from producing iron ore pellets to carbon-free sponge iron, using hydrogen produced with electricity from Swedish fossil-free sources in the reduction process.

During the year we also received positive confirmation of the quality of the sponge iron. Research results within the framework of the HYBRIT initiative, which is being conducted in collaboration with SSAB and Vattenfall, show that direct reduction using hydrogen also results in a product that can lead to better processes and products among the customers. The pilot facility for storing fossil-free hydrogen in Luleå, which was taken into operation in the

autumn, is the first of its type in the world and is also an important milestone.

In parallel we are making progress in the development of methods and standards for next-generation mining at great depths, which will be digitalised, autonomous and carbon-free. We are continuing to gradually introduce more battery-powered vehicles and to increase the degree of automation in the operations.

Critical minerals in LKAB's deposits

At present China and Russia account for by far the majority of production and exports of critical minerals. By utilising residual products from the iron ore mining we can extract rare earth elements, phosphorus and fluorine. This makes the most of resources and reduces Europe's import dependency for critical minerals, while at the same time broadening our business so that we become less sensitive to price fluctuations in the iron ore market.

The development of our circular industrial park in Luleå is an important step in this direction. We also have great hopes for the exploration results from the Per Geijer deposit to the north of Kiruna. This is estimated to be Europe's largest known deposit of its type and to contain seven times as much phosphorus as the orebodies we are currently mining in Kiruna. As well as the possibility of making us free from imports of phosphorus ore from Russia, it is a significant building block for obtaining the critical raw materials needed for wind turbines and electric cars. This is of great importance for the competitiveness of European industry and for managing climate change in Europe.

To meet the needs that exist and increase Europe's processing capacity LKAB has partnered with Norwegian company REEtec,



"With a fossil-free value chain from mine to finished steel we can make a noticeable difference for the climate. By 2045 we can help to lower global carbon emissions by 40–50 million tonnes – which is as much as today's annual greenhouse gas emissions for the whole of Sweden."

LKAB's initiatives for the future contribute to Agenda 2030 and the UN Sustainable Development Goals. To read about this in more depth see pages 39–40.

Overview and key financial ratios

	2022	2021
Net sales, MSEK	46,543	48,812
Operating profit, MSEK	20,799	26,898
Costs for urban transformation provisions, MSEK	-545	-372
Net financial income/expense, MSEK	-2,119	1,484
Profit/loss before tax, MSEK	18,680	28,382
Profit/loss for the year, MSEK	15,080	22,604
Capital expenditure on property, plant and equipment, MSEK	4,944	3,359
Operating cash flow, MSEK	10,156	19,988
Return on equity, %	21.7	39.0
Net debt/equity ratio, %	-17.1	-24.5
Dividend to owner ¹⁾ , MSEK	7,540	12,430

1) The dividend proposed by the Board of Directors is subject to approval by the Annual General Meeting on 27 April 2023.

Non-financial key ratios

	2022	2021
Carbon emissions, kt	661	713
Energy use, kWh per tonne of product	176	171
Accident rate	6.5	8.2
Number of permanent employees at year-end	4,952	4,825
Percentage of women among permanent employees, %	26	25

90%

The Iron Ore business area's share of Group sales

10%

The Special Products business area's share of Group sales

and as of November has also become its new principal shareholder. REEtec has developed an innovative and sustainable process for separating rare earth elements in order to compete with the dominant Chinese production, with 90 percent lower carbon emissions. Processing is the next step in the value chain for the concentrates of rare earth elements that the industrial park in Luleå will extract.

Complex, protracted and unpredictable permitting processes are hampering efforts

Permitting processes are still one of our greatest challenges, and we cannot overemphasise the importance of making these more predictable and efficient.

The Land and Environment Court's rejection of our appeal against the earlier ruling on a permit for the operations in Kiruna is a clear example of a lack of alignment between what is needed, the will to provide it and resource efficiency. LKAB's appeal for



the matter to be reviewed was subsequently rejected by the Supreme Court. In these types of permitting processes we need clearer directives in order to be able to live up to and steer towards society's shared goals for the environment and climate. Otherwise it will entail an enormous waste of resources for us and for society in general.

In Malmberget in Gällivare the permitting issue will be crucial. For both the mine and the processing operations to be able to deliver planned volumes, the necessary permits must be in place. The ongoing process includes an application relating to both augmented production in existing plants and production in the world's first facility for hydrogen-produced sponge iron on an industrial scale.

It needs to be underlined that we are entirely dependent on permits in order to maintain our current production and realise the climate transition of the iron and steel industry. This is not a new issue, and constructive dialogue is no longer enough; words must now be put into action.

Society's need for energy is increasing

As one of Europe's leading industrial companies there is a high expectation on us to reduce emissions of carbon dioxide. These are expectations that also apply to other industries within the EU, and that will increase as and when the EU introduces its forthcoming taxes on carbon emissions. The energy needs of society and of LKAB will not reduce in the future; rather the contrary. We expect our energy requirement for future production to be just over 70 TWh per year, which represents almost half of Sweden's total electricity production today. To be able to deliver in accordance with expectations and with both financial and climate targets, a major and broad initiative in respect of fossil-free energy is therefore needed.

At present Sweden's energy policy does not support the transformation that is essential for Swedish industry. Against the background of the geopolitical security situation in Europe the costs of natural gas and fossil fuels have soared – making it even more important to focus on energy sources that are fossil-free. Here we see wind power as the best option by far in the short term.

In Sweden we have the advantage of being one of the countries in the world with the very best conditions for producing fossil-free energy. However, the political will is needed and society needs to take responsibility to make this possible. We are in continual discussions with authorities and are evaluating options for LKAB's future energy supply with several actors, including Vattenfall.

Key events in 2022

- Operating profit for the year amounted to nearly SEK 21 billion, which corresponds to an operating margin of 45 percent. This despite increased costs from factors such as higher energy prices and disruptions in production.
- Although lower than last year, the average global spot price for iron ore products remained at a high level and averaged USD 120 (160) per tonne for the year.
- Production volumes amounted to 25.0 Mt compared with 26.7 Mt in the previous year and were affected mainly by extended planned maintenance shutdowns, start-up problems following maintenance shutdowns and production disruptions at the processing plants in Kiruna.
- Lower production volumes affected delivery volumes, which amounted to 25.8 Mt compared with 27.0 Mt in 2021.
- Preparatory groundworks for the first demo plant for hydrogen-based production of sponge iron on an industrial scale began in the industrial area in Malmberget.
- Exploration results indicate significant quantities of rare earth elements and phosphorus in the Per Geijer deposit in Kiruna. The deposit is estimated to be one of the largest sources of rare earth elements discovered in Europe.
- LKAB became principal shareholder in Norwegian company REEtec, which has developed technology for separation of rare earth elements. This puts the conditions in place for building a Nordic value chain for rare earth elements.
- The Supreme Court did not grant leave to appeal the ruling by the Land and Environment Court of Appeal in the environmental assessment of the operations in Kiruna. LKAB has begun a new permit application.

For more information about our goals and progress during the year see pages 13–16.

Infrastructure – a key issue

Every year we transport millions of tonnes of iron ore products by rail to the ports in Narvik and Luleå on Sweden's most heavily trafficked railway. As mentioned previously, capacity on the Ore Railway is a major challenge for LKAB. Both we and other industrial actors depend on having a functioning infrastructure in order to be able to transport products to the outside world within the scope of the demand and needs that exist globally. The quality of the Ore Railway is suboptimal, however, after multiple years of maintenance being neglected. What is needed is continued maintenance and preventive maintenance of the existing track while at the same time expanding the railway's capacity. We need to introduce double tracks, for example, if it is to cope with the increased volumes brought about by our own initiatives and those of other industrial actors.

Continued initiatives for skills supply

A supply of skilled workers is critical to manage the future we see for LKAB. We are implementing extensive initiatives to develop and retain existing employees, but also to attract new talent. Making LKAB attractive among the competition that exists in the region is key to being able to deliver on our ambitious strategy and achieve our transformation to carbon-free products and processes by 2045.

It is also crucial that our operating locations are attractive communities where more people want to live and work. The extensive urban transformations in Kiruna and Gällivare, which are a consequence of the physical extent of the mining, also provide us with great opportunities in this respect. During the year we achieved a milestone with the grand opening of Kiruna's new city centre. We have been a major participant in the development of Kiruna's new central area and we are continuing to work in partnership with the municipality and local businesses to make the region even more attractive.

LKAB – a safer workplace

For a long time we have been making targeted efforts to ensure that LKAB is a healthy and safe workplace. Safety efforts have the highest priority and the key is to have a culture in which people take responsibility for their own safety and that of their colleagues. Leadership and collaboration are important elements in maintaining such a culture.

During the year the number of accidents amounted to 6.5 per million hours worked. This is a clear improvement on the previous year when the figure was 8.2, but is still a long way from our long-term goal. We can see that our systematic proactive efforts are having an effect and we will continue with these. "Safety first" is our shared framework, and the golden rules set out in this framework reflect how we work together. Read more about this on page 36.

The future is bright – if we are given the opportunity

We are one of Sweden's biggest and oldest industries and we are taking the lead in the biggest industrial investment in Swedish history. By setting a new world standard for mining, transitioning to producing carbon-free sponge iron and extracting critical minerals from mining waste we are doing the biggest thing Sweden can do for the climate. To achieve this we are highly dependent on external factors and decisions that are beyond our control. Our most exciting years are ahead of us, but it needs many of us to work together. I look forward to a 2023 in which more of us put words into action.

Luleå, 28 March 2023

Jan Moström, President and CEO

Our strategy enables reduced emissions and increased sales

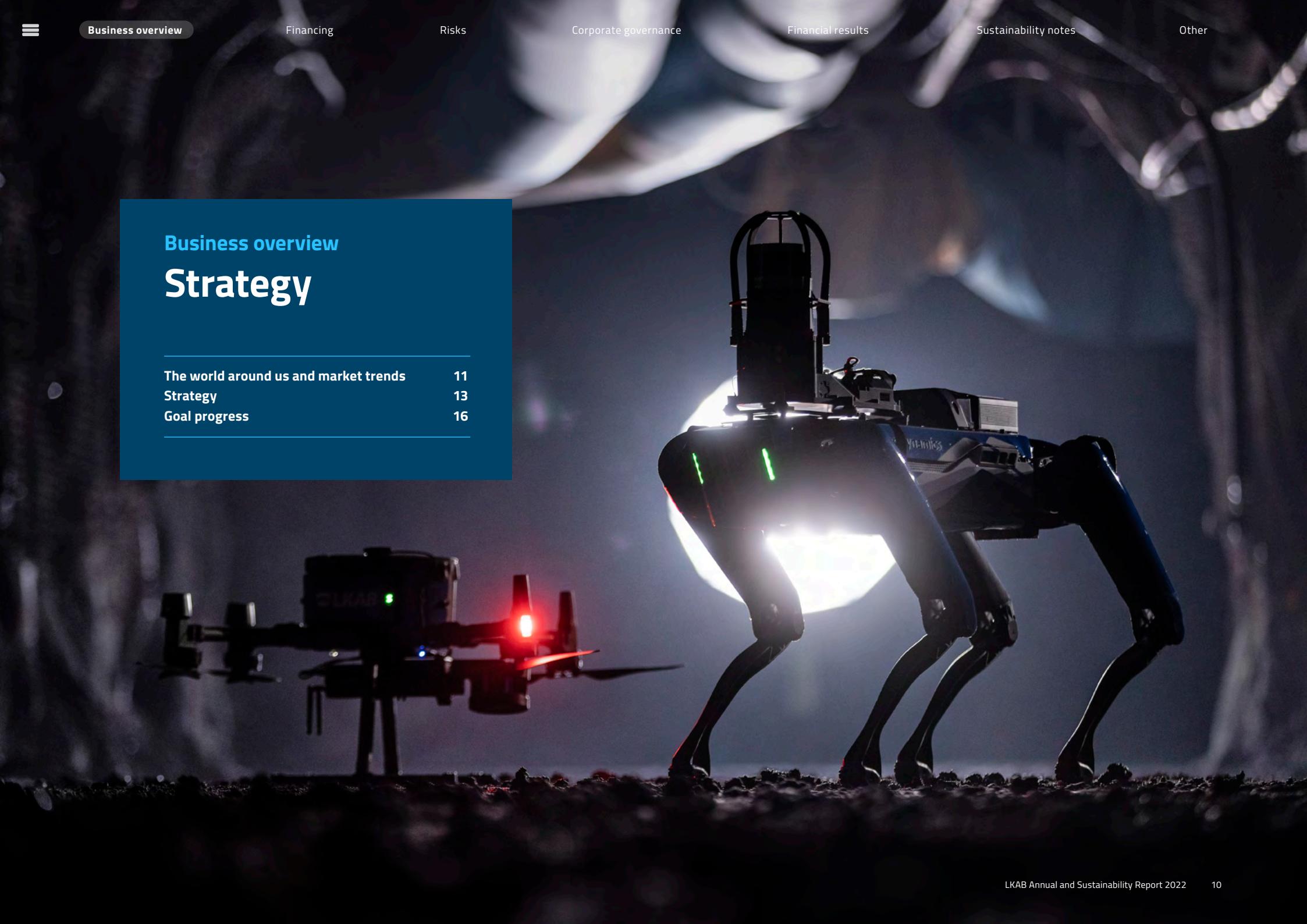
A crucial part of our strategy is to increase the value added by processing. Once fully implemented, our transformation will mean we have carbon-free processes and products while at the same time lowering total carbon emissions from our customers' steelmaking by 40–50 Mt per year. This is approximately equal to Sweden's entire annual emissions of greenhouse gases.



Business overview

Strategy

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The world around us and market trends

Global greenhouse gas emissions need to decrease substantially, and within a short period of time. The transformation required is affecting external conditions for all actors in society, including the iron and steel industry.

Iron and steel remain important basic materials for the construction of infrastructure and buildings as well as for the transport sector and industry. Greater prosperity leads to consumption of steel both in developing countries and for reinvestments in industrialised countries. Steelmaking consumes large quantities of carbon, however, resulting in significant carbon emissions.

To achieve climate neutrality entire value chains need to transform, and account needs to be taken of the relationship of mutual dependence between companies and stakeholders. In various countries manufacturing industry is working in partnership with the iron and steel industry and other industries to reduce its climate footprint and secure long-term competitiveness. In the Nordic region such collaboration has been ongoing for a number of years. The transformation demands collaboration and decisions throughout society, and it calls for decisive political action and broad social

acceptance. Raw materials are needed from the mining industry along with an expansion of energy systems and of infrastructure in order to reduce greenhouse gas emissions. With the right conditions in place and if implemented in the right way, competitiveness will be enhanced.

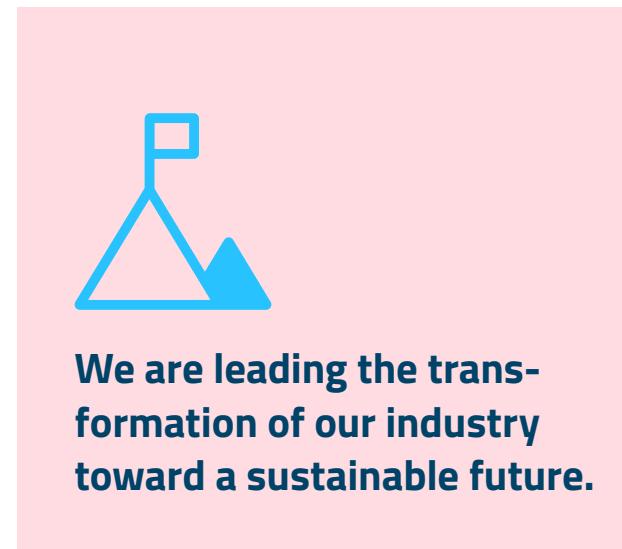
Increased costs for carbon emissions

It already costs to release carbon emissions in the EU and the cost is expected to increase when the free allocation of emission allowances reduces over the coming 10 years. Within the industries where there is a risk of competition being distorted or production being moved outside the EU, the allocation of emission allowances is expected to be replaced by a tax on the climate footprint of imported products. The steel industry is one of the industries affected. Various systems for taxing carbon emissions are expected to be introduced around

the world, but at a differing pace. Analysts¹⁾ predict that the cost of carbon emissions will increase but also that the cost of measures will come down over time. The EU currently has the most extensive programme in the world for taxing carbon dioxide and this is expected to remain the case for the coming 10–15 years.

Emissions from the global steel industry average around two tonnes of carbon dioxide per tonne of steel. This is the level of emissions from blast furnace-based steel production, with variation between companies and plants. Steelmakers in the EU receive a free allocation of emission allowances, but as this system is phased out the costs will increase – becoming significant unless the steel companies reduce emissions substantially.

¹⁾ Analysts: companies engaged in analysis of the value chain for iron and steel and which sell these analysis services. LKAB buys analysis services from several such companies.



Increased costs for energy

Steelmakers in the EU have long been planning to replace coal with natural gas as a first step until new systems with no climate footprint can be built up. The transition from coal to natural gas will reduce emissions, which may enable the targets that the companies have set for 2030 to be achieved. Known paths to achieving climate-neutral production include hydrogen-based systems using fossil-free power and solutions for storing carbon dioxide.

Plans by the iron and steel industry and other industries within the EU for reducing carbon emissions did not fundamentally change in 2022. However, the changed situation as regards political security resulted in increased costs for industries that are using natural gas and other fossil fuels as a first step towards reducing emissions and for industries that are electricity-intensive. The higher cost level for natural gas and electricity in Europe is expected to remain for several years and this may result in the companies changing their investment schedules. This could in turn lead to decisions on state assistance for investments and on investments in electric power being brought forward.

The iron ore market is changing

Analysts are predicting lower steel consumption in China over the coming 10–15 years, which will result in low growth in global demand for steel. Lower demand in China is expected to be followed by lower domestic steel production and lower iron ore production. Since the global steel industry is transforming step by step from blast furnaces to electrified steelmaking and new production processes, the mix of raw materials will change. Scrap iron is expected to make up a higher proportion of the raw material used and demand for sponge iron will increase. The input material for the production of sponge iron using conventional technology is iron ore pellets.

Lower demand for steel in China and an increased proportion of scrap as an input material are likely to lead to a reduction in demand for standard-grade iron ore fines and for iron ore with a lower iron content, with a simultaneous expected increase in demand for iron ore pellets and for the high-grade ore that LKAB produces.

Gradual phase-out of carbon-based steelmaking

The shift from carbon-based to electrified processes will increase demand for electricity. The pace of the transition, and the time when the demand for electricity arises, will depend on the conditions for establishing electrical power, the level of technological maturity of the new processes and financial developments for managing the significant investments required. The steel compa-

nies can be expected to gradually reduce or shut down production capacity with carbon emissions from the time that their blast furnaces have to undergo extensive renovation, which will take place over a period of 15–20 years.

Sustainable value chains

Securing both environmental and social sustainability through global value chains is a challenge. Geopolitical developments have also highlighted the issues surrounding the risks of import dependency.

Extracting rare earth elements (REEs) and phosphorus from apatite found in residual waste from the Swedish iron ore operations meets the need in the EU for what are classed as critical minerals.

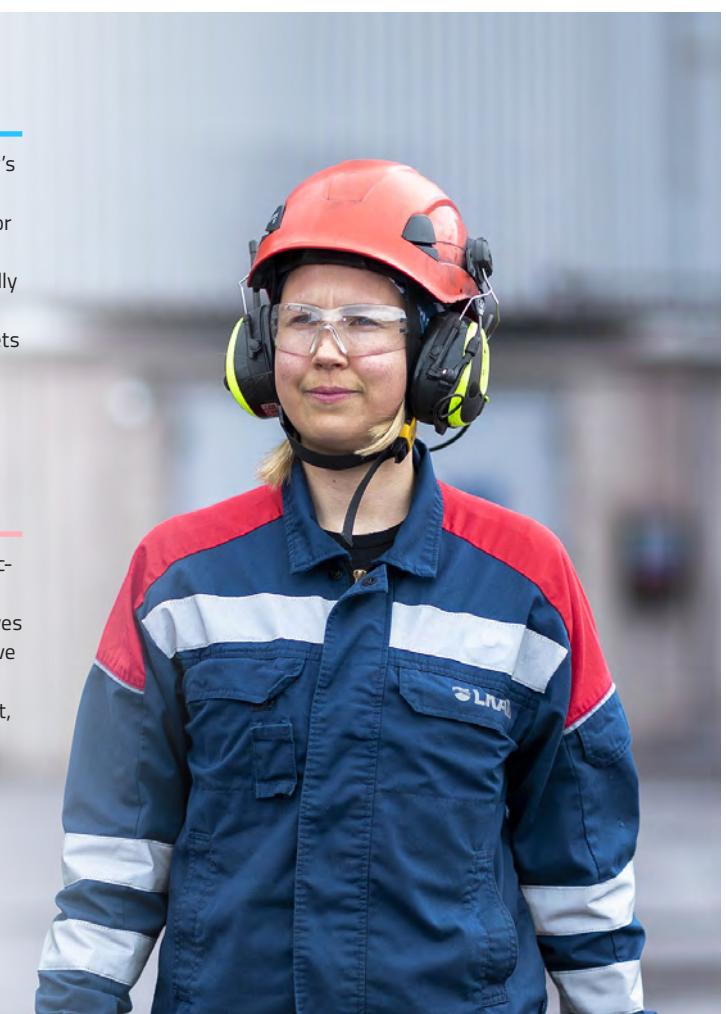
Demand for REEs is driven by future areas such as electrification, the transition to fossil-free energy generation and the storage of energy. Access to effective fertiliser products based on phosphorus is also a priority within the EU. Flows of phosphorus and REEs to Europe from existing countries of supply such as Russia and China are expected to be uncertain in the long term.

Well positioned

LKAB has a strong position as an enabler in the steel industry's step-by-step transformation. This is a shift that is taking place gradually and that is also expected to impact demand for various raw material inputs over the coming 20 years. As the steelmakers' production processes change, LKAB will gradually build up its capacity to produce sponge iron using fossil-free power. The need for sponge iron and high-grade iron ore pellets produced without fossil energy will increase, both in LKAB's existing markets and globally.

Highly competitive

Analysts consider LKAB to be highly competitive when production costs are weighed together with the companies' differences in revenue per tonne of ore. Mining under ground involves higher costs compared with large iron ore companies that have open-pit mines, but LKAB's ore largely consists of magnetite – which has a higher yield and a consistently high iron content, making it a good starting point for pellet production. LKAB receives a premium for iron ore pellets and can utilise the energy present in the magnetite ore when producing pellets.



Strategy

By 2045 LKAB's processes and products will be carbon-free. We are increasing the value of our products, streamlining production and broadening our business – while at the same time making a real difference for the climate. Our goals and progress made towards them are presented on page 16.

Mission

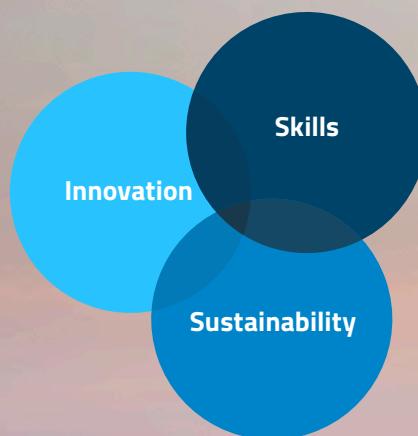
Innovative and competitive mining and processing of iron ore and minerals to produce climate-efficient quality products.

Vision

We are leading the transformation of our industry toward a sustainable future.

Our focus areas

Innovation, skills and sustainability are our key focus areas for success.



Strategic goals for 2030

Our strategic goals for sustainable value creation for the period 2022–2030 aim to support our vision of leading our industry toward a sustainable future.

Stable and efficient operations

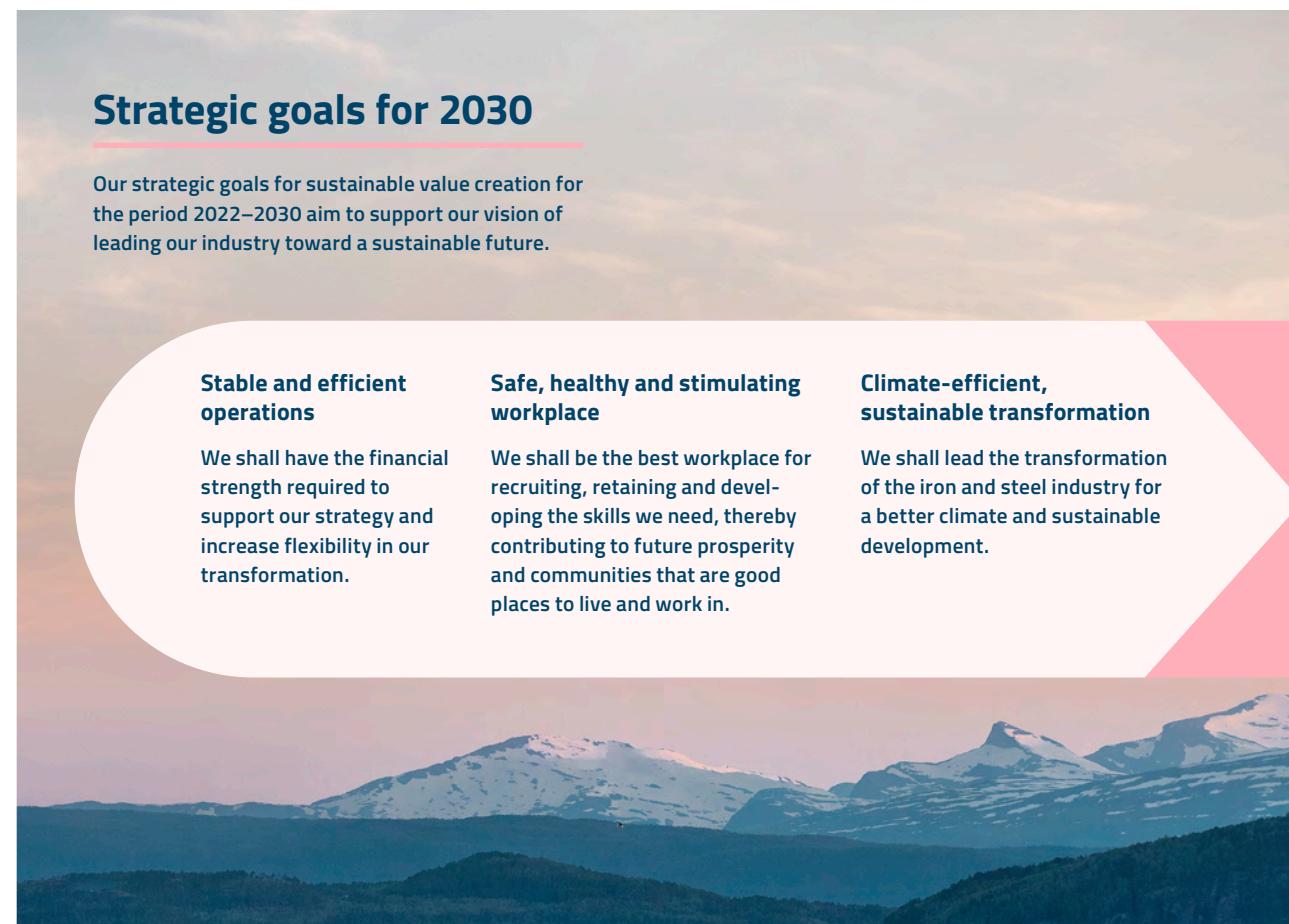
We shall have the financial strength required to support our strategy and increase flexibility in our transformation.

Safe, healthy and stimulating workplace

We shall be the best workplace for recruiting, retaining and developing the skills we need, thereby contributing to future prosperity and communities that are good places to live and work in.

Climate-efficient, sustainable transformation

We shall lead the transformation of the iron and steel industry for a better climate and sustainable development.





Our strategy sets out the path we are taking to achieve carbon-free processes and products, and secures our competitiveness in the long term. As we move forward in the value chain and create increased growth, we are at the same time building Norrbotten into an innovation cluster for the mining and minerals industry of the future. Three important areas will enable the transformation.

2045

New world standard for mining operations

Mining iron ore profitably and safely at great depths, and moreover by carbon-free processes, demands a high level of expertise in mining design, methods and planning. Ongoing work is therefore taking place at LKAB to develop a new world standard for mining through digitalisation, automation, electrification and new ways of working. In so doing we are laying the foundation for a new value chain including further processing into sponge iron.

Milestones in 2022

- Work to develop a new main design, to adapt mining methods to great depths and to ensure optimal planning of the mining is progressing and will form a foundation for future mine surveys.
- The electrification of vehicles and machinery is an important piece in the puzzle for carbon-free mining production. In 2022 a battery-powered loader and battery-powered underground truck were evaluated in Kiruna and an electric goods vehicle was delivered to Gällivare. The results indicated greater flexibility, decreased emissions and a better work environment. In the Kiruna mine half of all loading is now carried out by remote-controlled autonomous machinery.

Future supplier of carbon-free sponge iron

Production capacity for sponge iron is being built up in stages based on technology that uses hydrogen produced with fossil-free electricity. We are strengthening our position in the value chain, increasing the value of our products and enabling carbon emissions to be reduced significantly throughout the value chain.

Milestones in 2022

- Research shows that iron ore from LKAB that has been direct-reduced with hydrogen yields a product of very high quality. This is confirmation that fossil-free production, in addition to climate benefits, can also lead to better industrial processes and products.
- The pilot facility for storage of fossil-free hydrogen in Luleå was taken into operation. The rock cavern facility is the first of its type in the world for the storage of fossil-free hydrogen. The test period runs until 2024.
- Preparatory groundworks for the first demo plant for hydrogen-based production of sponge iron on an industrial scale began in the industrial area in Malmberget.

Broadening the business with extraction of critical minerals

Strategically valuable earth elements and phosphorus are to be extracted from our raw materials flows, enabling us to move into new markets for minerals use. The earth elements are used within technologically advanced applications such as permanent magnets, while phosphorus is needed in mineral fertilisers for agriculture.

Milestones in 2022

- Exploration results indicate significant quantities of rare earth elements and phosphorus in the Per Geijer deposit in Kiruna. The deposit is estimated to be one of the largest known sources of rare earth elements in Europe to date.
- The land allocation agreement for LKAB's new industrial park for rare earth elements and phosphorus in Luleå was completed, enabling consultation to begin. The establishment is expected to bring in extensive investment and jobs.
- LKAB became principal shareholder in Norwegian company REEtec, which has developed unique technology for separation of rare earth elements with higher environmental performance. This puts the conditions in place for building a Nordic value chain for rare earth elements.

Our greatest challenges

Beating the clock is the greatest challenge to our transformation. We are also dependent on a number of external factors that are beyond our control. Working in partnership with authorities and other actors within industry and the region is key.

Permit issues

Permitting processes are currently unpredictable and not transparent. There is inherent inefficiency and a failure to consider the bigger picture, resulting in environmental and climate performance being overshadowed by the administrative process. This makes it difficult for the industry to plan and transform operations to reduce climate impact in time.

Supply of fossil-free energy

Producing hydrogen by electrolysis is energy-intensive. The electrification of society will require substantial and continual expansion of power transmission and electricity production from fossil-free sources. The energy requirement in 2050 for LKAB's future production is just over 70 TWh per year, which represents almost half of Sweden's total electricity production today.

Insufficient capacity on the Ore Railway

With passenger trains, freight trains and ore trains from LKAB, the 500-kilometre long section between Luleå and Riksgränsen and on to Narvik is Sweden's most heavily trafficked railway. Maintenance deficits result in frequent disruption and at the same time its capacity needs to be expanded to cope with increased volumes that will result from our own initiatives in the region and those of other industrial actors.

Skills availability

The extensive initiatives that LKAB is undertaking depend on our being successful in developing and retaining existing employees but also in attracting and recruiting new talent. With multiple major industrial initiatives going on in the region, this also increases competition for skilled workers.

We are in active dialogue with the authorities concerned at all levels, along with other actors including the industry organisation Svemin.

We are evaluating future power supply options jointly with actors such as Vattenfall, focusing mainly on an expansion of wind power although there may be alternatives in the longer term. We are also deeply engaged in dialogue with the authorities concerned.

During the year a national infrastructure plan was adopted which includes measures for prioritised maintenance and increased capacity. LKAB is in continuous dialogue with the Swedish Transport Administration and is calling for better coordination of measures. LKAB also still considers it essential that further capacity is secured on the Ore Railway, for example by making it double-track.

We are working in partnership with universities and colleges and are participating in cross-industry initiatives aimed at attracting more people to move to Norrbotten. We are working to ensure that our operating locations are attractive and are making active efforts to make clear the opportunities that LKAB has to offer.

Goal progress

Our strategic goals for sustainable value creation for the period 2022–2030 support our vision of leading the transformation of our industry. LKAB manages and monitors the business based on these goals.



Stable and resource-efficient operations¹⁾

	2022	2021	Goal for 2026	Goal for 2030
Net debt/equity ratio, %	-17.1	-24.5	<60%	<60%
Return on equity, %	21.7	39.0	>9%	>9%
Dividend, %	50% ²⁾	55%	40–60%	40–60%

Comments: Strong earnings and cash flow result in a negative net debt/equity ratio and a high return on capital. The net debt/equity ratio increased during the year as a result of the dividend to the owner of SEK 12.4 billion.

Safe, healthy and stimulating workplace

	2022	2021	Goal for 2026	Goal for 2030
Lost time accidents per million hours worked	6.5	8.2	4	2
Long-term sick leave (%)	0.7	0.6	0.8	0.8
Women in the workforce (%)	26	25	30	– ³⁾
Women managers (%)	28	27	30	– ³⁾

Comments: LKAB is able to report an improvement in the lost time accident rate and in serious incidents during the year. Group-wide efforts focusing on the safety culture are in progress to prevent serious incidents and ensure safe and healthy workplaces. During the year there was an increase in both the percentage of women in the workforce and the percentage of women managers.

Climate-efficient sustainable transition

	2022	2021	Goal for 2026	Goal for 2030
Energy use (kWh per tonne of finished product)	176	171	162	154
Carbon emissions (kt)	661	713	608	536
Biodiversity	– ⁴⁾	– ⁴⁾	– ⁴⁾	– ⁴⁾

Comments: Energy use has increased compared with 2021 due to a greater number of unplanned stoppages combined with lower availability in the pelletising plants. This is a consequence of the maintenance deficit built up during the pandemic years when planned maintenance was reduced to maintain a safe work environment.

Carbon emissions have decreased compared with the previous year, mainly through lower production and use of an increased percentage of tall oil pitch.

Biodiversity

LKAB is following Svermin's biodiversity roadmap, with the aim that by 2030 the Group will contribute to a biodiversity net gain in the regions where we operate. The interim goal for 2026 is for LKAB to have established a systematic approach to working for increased biodiversity. Work is in progress to put the conditions in place and plan for actions involving biodiversity. Guidelines have been produced describing the goal and approach, with workshops being held during the year – read more on page 149.

1) The relevant financial targets were established by the Board in October 2021.

2) The dividend proposed by the Board of Directors is subject to approval by the Annual General Meeting on 27 April 2023.

3) The goal for 2030 is to achieve a 60/40 gender balance in management teams.

4) For a description of the goals and status see the section Biodiversity above and on pages 35 and 149.



Business overview Operations

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Our value chain

Our operations form the basis of many value chains, which can be long, and by taking responsibility and transforming we have great opportunities to influence these in a sustainable direction. More than 95 percent of the emissions in our value chain are attributable to suppliers and customers. It is therefore important that we create the conditions for them to lower their emissions at the same time as making efforts to reduce our own. We also put great emphasis on resource efficiency and greater utilisation of residual products, as well as on social responsibility – locally, nationally and globally.

We impact

- the industries that use our products
- local, national and global climate transition
- our local community and the reindeer herding in the region
- the local environment and biodiversity
- corporate social responsibility in the industry as a whole by setting high standards for safety, human rights and ethics

We are impacted by

- our suppliers
- our customers' ambitions
- interaction with local communities
- environmental permits and access to land
- decision-makers at international, national and local level





Suppliers

LKAB works in partnership with strategic suppliers to increase sustainability, productivity and cost efficiency. As a significant purchaser, we have influence and the opportunity to make an impact. In total we have around 5,400 suppliers around the world.

Exploration

Exploration secures the supply of iron ore and other minerals in the long term. As well as geological expertise, we need access to land areas that potentially contain ore. In return we need to respect the surrounding area, take responsibility for the environment and cooperate with local livelihoods.

Mining

Every day around 135,000 tonnes of crude ore is mined in our underground mines and open-pit mines in Kiruna, Malmberget in Gällivare and Svappavaara. The mining impacts the landscape and it is essential that we cooperate with authorities and local communities.

Processing

The iron ore we mine is processed in our plants. The process is highly energy-intensive and LKAB is one of Sweden's biggest consumers of energy. Increased resource efficiency and decreased environmental impact have a high priority. Among other things, we are working to phase out fossil fuels and on measures to ensure that over time we are a net contributor to biodiversity.

Transport

Millions of tonnes of iron ore products are transported annually by rail to the ports of Narvik and Luleå for shipment to customers around the world. LKAB is one of Sweden's biggest freight companies and accounts for around 40 percent of the freight on Swedish railways – which demands a logistics system that is world-class in terms of capacity and sustainability.

Customers

The iron ore products we supply are used as inputs by steelmakers with high requirements as regards reliable deliveries, consistent quality and sustainability. Steel made with LKAB's pellets results in 14 percent lower carbon emissions compared with steel produced at an average sinter-based European steelworks.

Metals and minerals in society

The steel products are sold and processed by manufacturing industry into end products such as machinery, tools, cars, mobile phone masts, wind turbines, railways, bridges and buildings. As a supplier of the raw materials for these products we have great opportunities to positively impact this part of the value chain.

Our core business is supplemented by a growing industrial minerals portfolio, where the focus is on extracting critical minerals from mine waste. In today's society some form of mineral is used in most products and industrial processes.

Resource recycling

Steel is society's most recycled construction material. There are also opportunities for resource recycling and increased circularity earlier in the value chain: we use waste rock from the mines to produce ballast materials for the construction industry, while waste heat from the plants is reused for district heating.

LKAB is also running development projects to extract mineral fertiliser (phosphorus) and rare earth elements from mine waste. Slag from steelmaking is used to produce ground granulated blast-furnace slag (GGBS), a more sustainable alternative to cement.

Value creation

Our mission is to innovatively and competitively mine and process iron ore and minerals to produce climate-efficient quality products. LKAB has a strong tradition of taking responsibility and being a positive force for development – as a supplier to a global industry, but also as an employer, a collaborative partner and as a part of the community.

For more information about how we create value for our stakeholders see pages 140–141.

Iron Ore

Operations within the Iron Ore business area take place mainly in Norrbotten, Sweden's northernmost county, where we have mines and processing as well as logistics for transport by rail and sea. Already today our products offer a cleaner value chain for steelmaking. Steel made only with LKAB's pellets results in 14 percent lower carbon emissions compared with steel produced at an average sinter-based European steelworks.

90 %

The Iron Ore business area's share of Group sales

Special Products

10 %

The Special Products business area's share of the Group's external sales

approx. 4,500

MSEK 5,085

Average number of employees

5,400

Paid in wages, salaries and employee benefits

Suppliers

MSEK 17,336

Payments to suppliers

MSEK 4,564

Taxes

MSEK 7,540

Proposed dividend to owner, the Swedish state

Iron ore for a global steel industry



25.0 Mt

Iron ore products produced

2022	25.0
2021	26.7
2020	27.1

25.8 Mt

Iron ore products delivered

2022	25.8
2021	27.0
2020	28.5

LKAB's future market is carbon-free sponge iron, but the existing market for iron ore pellets will continue to provide the framework for our profitability for a long time to come. The transformation of the steel industry is expected to take place successively, with a transition to processes that utilise climate-efficient iron ore pellets as a step along the way.

Market and position

LKAB is an important supplier of iron ore products to Western Europe and accounted for around 85 percent of iron ore production within the EU in 2022. Globally we are a leading supplier of seaborne iron ore pellets. Our leading position is built on a long-term reliable supply of iron ore with a consistently high iron content that we upgrade into iron ore products for steelmakers with high requirements of delivery reliability, quality and climate-efficiency. Europe is our largest market, followed by the Middle East, North Africa, the USA and Asia.

Market developments in 2022

The year began with increasing demand for seaborne iron ore. China – which has a significant role in global pricing – increased its steel production, resulting in higher prices for iron ore during the first quarter. China's economic growth in 2022 was largely impacted by the country's strict Covid-19 restrictions. Combined with lower than expected growth and lower demand for steel, this led to the country cutting back on steel production in the second half of the year, resulting in a slowdown in demand for iron ore and lower prices in the seaborne iron ore market. Steel production decreased by 2.1 percent in China and total production of steel in the world decreased by 4.2 percent over the year as a whole.¹

The outbreak of war in Ukraine in February was a gamechanger and had a major impact, particularly in Europe. Both Russia and Ukraine have traditionally been major suppliers of both steel and other important input materials for steel production. After war broke out, the prices of these inputs initially increased. Prices were subsequently curbed by rising energy prices, increased inflation and higher interest rates. However, price premiums for iron ore pellets were buoyed up by a shortage of seaborne pellets following a decrease in deliveries from Eastern Europe and temporary export duties on pellets from India.

1 World Steel Association.

The average global spot price for iron ore products over the year was USD 120 per tonne, which was USD 40 lower than in the previous year. At the end of the year the price level was USD 117 per tonne. Quoted pellet premiums have generally been high, reaching a historic peak during the year as a result of the shortage that arose on the seaborne pellet market.

There is significant uncertainty in the world around us and the market outlook is difficult to judge. Demand for LKAB's iron ore products continued to be good during the year, however, with the need for iron ore pellets remaining stable.

Deliveries and production

LKAB delivered 25.8 (27.0) Mt of iron ore products in 2022, of which pellets represented 83 (83) percent. Volumes were affected by lower production volumes, mainly as a result of production disruptions at the processing plants in Kiruna and also to a certain extent in Svappavaara. In Malmberget, on the other hand, production remained stable at a high level. In total, production amounted to 25.0 (26.7) Mt. The production of crushed ore continued to be affected by the substantial seismic event in the Kiruna mine in spring 2020, but the provision of crushed ore between the operating locations helped supply the processing plants.

Production stability and continuous improvement are key for the business; read more about our efforts in this area on page 27.

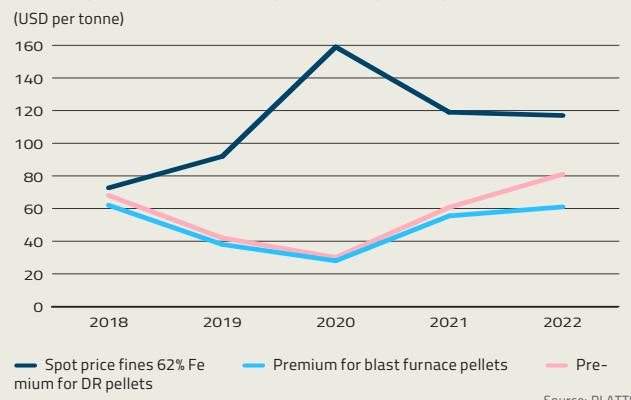
Operating locations and iron ore production

The extensive changes in the communities of Kiruna and Gällivare as a result of the mining are taking place gradually, with the majority of residents affected in some way. The proximity of the communities to the mining operations means that the urban transformation is being planned meticulously and carried out carefully. The grand opening of Kiruna's new city centre was a much appreciated milestone for residents there during the year. Read more on page 155 and at lkab.com.

Operations summary

MSEK	2022	2021
Net sales	43,288	46,146
Operating profit/loss	21,322	27,625

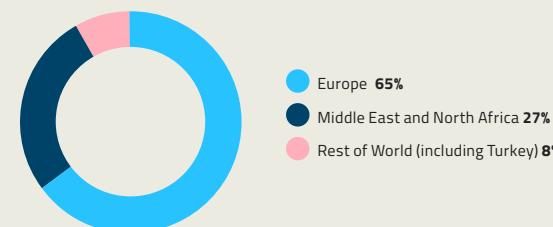
Development of iron ore price and pellet premium



Based on prevailing market conditions and demand for iron ore fines on the spot market, price indexes and estimates are published for iron ore products of different grades based on iron content, upgrading, freight costs and various premiums, as well as price deductions due to less favourable quality. For LKAB, which has a consistently high iron content and higher processing costs, it is essential that the products are sold at a premium.

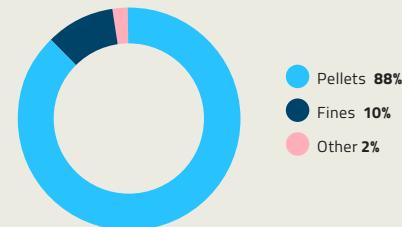
Sales by region

Percentage of sales (MSEK)



Sales by product area

Percentage of sales of iron ore products (MSEK)



Provisions for and costs of the urban transformations

LKAB's provisions during the year for the urban transformations in our operating locations amounted to MSEK 13,644 (14,423). The cost of provisions for the urban transformations in 2022 amounted to MSEK 545 (372); see also Note 32. Disbursements totalled MSEK 2,216 (2,681).

Facts about the Iron Ore business area

The operations include mines and processing plants in Kiruna, Svappavaara and Malmberget in Gällivare, as well as rail freight services and the ports in Luleå and Narvik.

Our iron ore

The iron ore we mine consists mainly of high-quality magnetite. This is naturally magnetic, which facilitates its concentration and means less external energy is required during pellet production. The iron content after concentration is over 70 percent. Its consistent quality over time makes it sought-after in the market.

Our products

LKAB primarily processes the iron ore into pellets. When customers use pellets instead of sinter in their processes the emissions from steel production are reduced.

- **Blast furnace pellets** are used to produce iron in blast furnaces, the iron ore being reduced and the pellets melted using coal. The liquid iron is then processed into steel in the neighbouring steelworks.

- **Direct reduction pellets**, or DR pellets, are used by customers that reduce the pellets in direct reduction plants using natural gas (or in the future hydrogen) to produce sponge iron (HBI/DRI) that is subsequently melted in an electric arc furnace and processed into steel.
- **Fines** means crushed, concentrated iron ore that our customers sinter together into lumps in a sinter plant before it can be reduced and melted during ironmaking in blast furnaces.

Malmberget is transforming first

In Malmberget in Gällivare the first sponge iron plant using HYBRIT technology is being planned next to LKAB's operations. During the year preparatory work for the plant began, while plans for what the industrial area may look like in the future are being firmed up.

LKAB's plan is carbon-free processes and products by 2045, and it is in Malmberget that the changes are taking place first. The HYBRIT method, in which iron ore pellets are reduced to sponge iron using hydrogen produced from fossil-free energy, will now be tested on an industrial scale. The plan is a first plant with annual production of 1.35 million tonnes of fossil-free sponge iron.

"The starting point is to synchronise with SSAB's transition to fossil-free steelmaking. This means that by the early 2030s we need to have transitioned from pellet production to sponge iron production equivalent to around 5.4 million tonnes," says Monika Sammelin, LKAB's area manager in Malmberget.

The first plant will already involve extensive investment and at the same time will create jobs. There are a number of challenges to consider ahead of future investment decisions. Permitting issues, energy supply and the situation in the outside world could also impact progress and implementation, as it is essential that our initiatives are carried out profitably.



Visible changes

During the year work began on preparing the ground for the first plant. As a first step we have already moved the mine entrance as well as stores and workshops.

"The work that is taking place and is going to take place means major changes will be needed in the area. That also gives us an opportunity to review and plan what we want the future industrial area to look like – both functionally and as a safe and attractive workplace," continues Monika.

Permit issues are crucial

The transformation depends on both the mine and the processing operations continuing to deliver planned volumes, but also on the necessary permits being in place.

"In the short term, this is essential for securing continued operation. In the longer term the permits are crucial for implementing the transformation and securing a fossil-free value chain for steelmaking," says Monika.

These are long processes and work on a new collective environmental permit for Malmberget has been in progress since 2018. In autumn 2021 consultations began with authorities, the public and other stakeholders. The application being prepared covers continued and enhanced production at existing plants, but must also include the new HYBRIT facility.

New mining design and vehicle fleet required

Full expansion in Malmberget, as at other production locations, requires us to go deeper in the mines while still mining on a large scale.

"There is no other iron ore mine in the world doing this at present. We need to show that it is possible to mine at a depth of nearly two kilometres, profitably and safely.

Mining at greater depths in the underground mines also increases the challenges. A more complex shape to the deposits, combined with challenges relating to rock mechanics, demands innovative solutions. At the same time it is key that our future processes are carbon-free, and one piece of the puzzle to put in place is the transition to battery-powered machinery. During the year a first battery-powered lorry was delivered and spring 2023 will see delivery of a first battery-powered loader.

"It's all related – we're working just as intensively on future mine production as on the planned sponge iron facilities. And matters such as power supply and logistics also come into it," concludes Monika Sammelin.

For more information about the drivers behind the transformation to production of sponge iron see pages 11–14.



1/3

4

More than a third of the value of industrial minerals sales comes from secondary materials that LKAB Minerals has developed into valuable products

LKAB has four critical raw materials in our mineralisations:¹

- REEs
- phosphorus
- fluorine
- vanadium

¹ The critical raw materials that LKAB plans to extract are REEs (rare earth elements) and phosphorus. A fluorine product will also be extracted – something that other producers are obtaining from the critical raw material fluorite (fluorspar). Phosphorus, REEs and fluorine are separated from the iron ore within LKAB's process and deposited. Vanadium currently remains in the iron ore products and is usually separated at the steelworks, as part of the slag.

Industrial minerals and strategic products and services

The Special Products business area supplements the iron ore business by developing and selling services and products for applications other than steelmaking. This is a growing area and includes various innovative development projects for extracting critical minerals from mine waste. These operations have an important part to play in our transformation.

Market and position

The Special Products business area accounts for 10 percent of the Group's external sales – a share that is growing through organic growth, acquisitions and the development of new businesses along the value chain. The operations are mainly conducted by wholly owned subsidiaries that work in partnership with and support the production chain for iron ore products, while at the same time broadening the business to include external markets.

Industrial minerals

Minerals are used in the production of everything from paints, cosmetics and water treatments to sound-insulating foams and polymers, high density concrete and products in the growth areas of green technology.

Our industrial minerals business is aimed primarily at the following market segments:

- **Agriculture:** mineral fertilisers, soil improvers and feedstuffs
- **Cleantech:** batteries, generators and renewable energy production
- **Construction and engineering:** cement, concrete, floor screed and roads
- **Manufacturing industry:** water treatment, sponge iron, plastics and coatings

Products and services for the mining and construction industries

In addition to industrial minerals, LKAB develops and sells services and products such as drilling systems, rockwork and concrete works, engineering services and explosives. We are one of the world's

biggest producers of sprayed concrete, for example, and carry out advanced structural work all over Sweden. We also sell water-powered drilling technology that we developed ourselves to customers globally – technology that is being used in the major redevelopment of Slussen in central Stockholm, among other places.

Market developments in 2022

It has been a strong year for more or less all parts of the business area's operations. The largest business is industrial minerals, where LKAB is active globally but has Europe as its main market. With our own supplies of raw material from the mines in Kiruna and Malmberget in Gällivare, magnetite is the largest product segment. Demand is driven by several industries including the production of iron powder, heavy concrete and water treatment. The war in Ukraine has brought the issue of energy supply sharply into focus and demand has increased during the year, including from the offshore industry which uses magnetite in the construction of oil and gas pipelines.

The rockwork and concrete work operations continue to grow. The acquisition of the company Bergteamet in 2021 enabled us to switch external sales up another gear while at the same time equipping us for the extensive work that awaits us as part of LKAB's future mining. Around 85 percent of sales in 2022 were to external customers.

We are also seeing continued good demand for the cement substitute GGBS, which is made from blast furnace slag from steel production and has a smaller carbon footprint than cement.

Growth and business development

Climate change and megatrends such as electrification are bringing increased demand for some new types of minerals and metals, which is expected to result in supply problems. There is also increased awareness of the risks of being largely import-dependent in a more geopolitically complex world. Recycling residual products from the iron ore mining is an important part of our development and a vital element of our focused sustainability efforts – allowing us to utilise resources for the sake of the climate while at the same

time broadening our business and becoming less sensitive to price fluctuations in the global iron ore market. In November LKAB became the principal shareholder in the Norwegian company REEtec, which has developed an innovative and sustainable process for separating rare earth elements. REEtec's first plant is scheduled for completion in the second half of 2024 in Herøya, Norway. A second plant is planned for 2026 and will be capable of processing material from LKAB's planned future extraction.

Increased self-sufficiency in Europe requires the entire value chain to be addressed – from mining to processing and the production of key components containing rare earth elements, such as permanent magnets. Since Europe has no extraction of its own and has only marginal processing capacity, the partnership between LKAB and REEtec marks the start of something new in Europe.

Operations summary

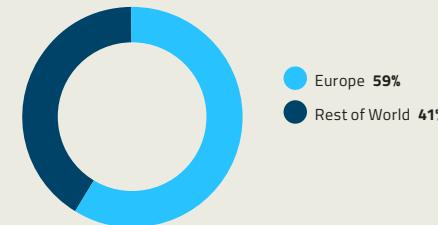
MSEK	2022	2021
Net sales	7,087	5,633
Operating profit/loss	541	380

MSEK 7,087

Net sales for the Special Products business area during the year, of which MSEK 4,620 (3,750) were external sales

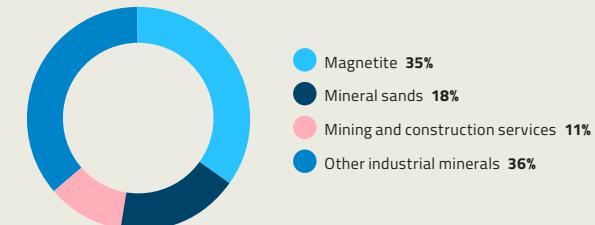
Sales by region

Percentage of external sales (MSEK)



Sales by product area and service area

Percentage of external sales (MSEK)



Facts about the Special Products business area

- **LKAB Minerals** – develops and sells our own minerals such as magnetite, recycled products from e.g. blast furnace slag and other industries, as well as traded and processed minerals. The business has sales offices and production units in Europe, the US and Asia.
- **LKAB Wassara** – develops and manufactures water-powered precision drilling systems for mining, construction and exploration drilling as well as dam building and geothermal energy to customers all over the world.

- **LKAB Berg & Betong and Bergteamet** – leaders within full service solutions for the mining and construction industries. Berg & Betong is the world's largest producer of sprayed concrete.
- **LKAB Kimit** – supplies explosives to the mining and construction industries.
- **LKAB Mekaniska** – provides engineering services for plant and machinery, from product development and design to servicing and maintenance.
- **LKAB Trading** – conducts purchasing operations in Asia and helps to secure a sustainable supplier base and value chain through audits and supplier development.

The emergence of a new industry in Norrbotten

Through its initiative for a circular industrial park LKAB can make Europe more self-sufficient in the critical raw materials needed for sustainable agriculture and the green transition.

More and more eyes are turning towards the northern Swedish county of Norrbotten and what is being described as the green industrial revolution, in which LKAB is a driving force. In Luleå there are plans for a circular industrial park for extraction of phosphorus and rare earth elements. Alongside extensive investments and new jobs, a new business is being created for LKAB as well as an entirely new chemical engineering industry for Norrbotten.

"The facility will be of great importance in making Sweden and the EU more self-sufficient in critical minerals – critical minerals that are absolutely crucial for achieving climate transition," says Leif Boström, Senior Vice President of the Special Products business area.

The sustainable mine – essential for climate transition

Demand for rare earth elements for electric cars and wind turbines is expected to increase more than fivefold by 2030 – but Europe is dependent on imports of these critical minerals and China dominates production. Phosphorus is one of

three nutrients in mineral fertiliser and is essential for our food production. Along with rare earth elements, it is on the EU's list of critical minerals. Self-sufficiency in critical minerals is high on the agenda throughout Europe, partly because of increasing geopolitical tensions in the world and partly because it is a prerequisite if we are to become the first climate-neutral continent.

The extraction and processing of phosphorus, earth elements and fluorine is part of LKAB's project. In this project LKAB is developing methods of extracting phosphorus and rare earth elements as by-products of today's iron ore production. Utilising residual products along the value chain and maximising how we use resources is central to LKAB's strategy for the future. By 2045 our processes and products are to be carbon-free, which means that we must base the industrial park's processes on fossil-free technology. The ambition is that important inputs – including hydrogen – will also be produced using fossil-free energy.

It starts in the mine

LKAB's iron ore contains apatite, and the apatite contains substances such as phosphorus, rare earth elements and fluorine. In the current production system these materials go to waste. We are going to change that.

"The first step in the plan is to extract apatite concentrate in Kiruna and Malmberget in Gällivare. This will then be taken to the industrial park in Luleå, where the apatite concentrate is dissolved and we separate out phosphorus, earth elements and fluorine – with gypsum as yet another by-product," says Leif Boström.

Back at the beginning of 2022 LKAB reported for the first time exploration results from what is known as the Per Geijer deposit north of Kiruna, showing that the ore in the deposit contains up to seven times more phosphorus than the orebodies that LKAB is mining in Kiruna today. Further studies during the year have shown that the deposit has more than a million tonnes of rare earth elements (REEs) in the form of the rare earth oxides (REOs) that are used to produce rare earth elements.

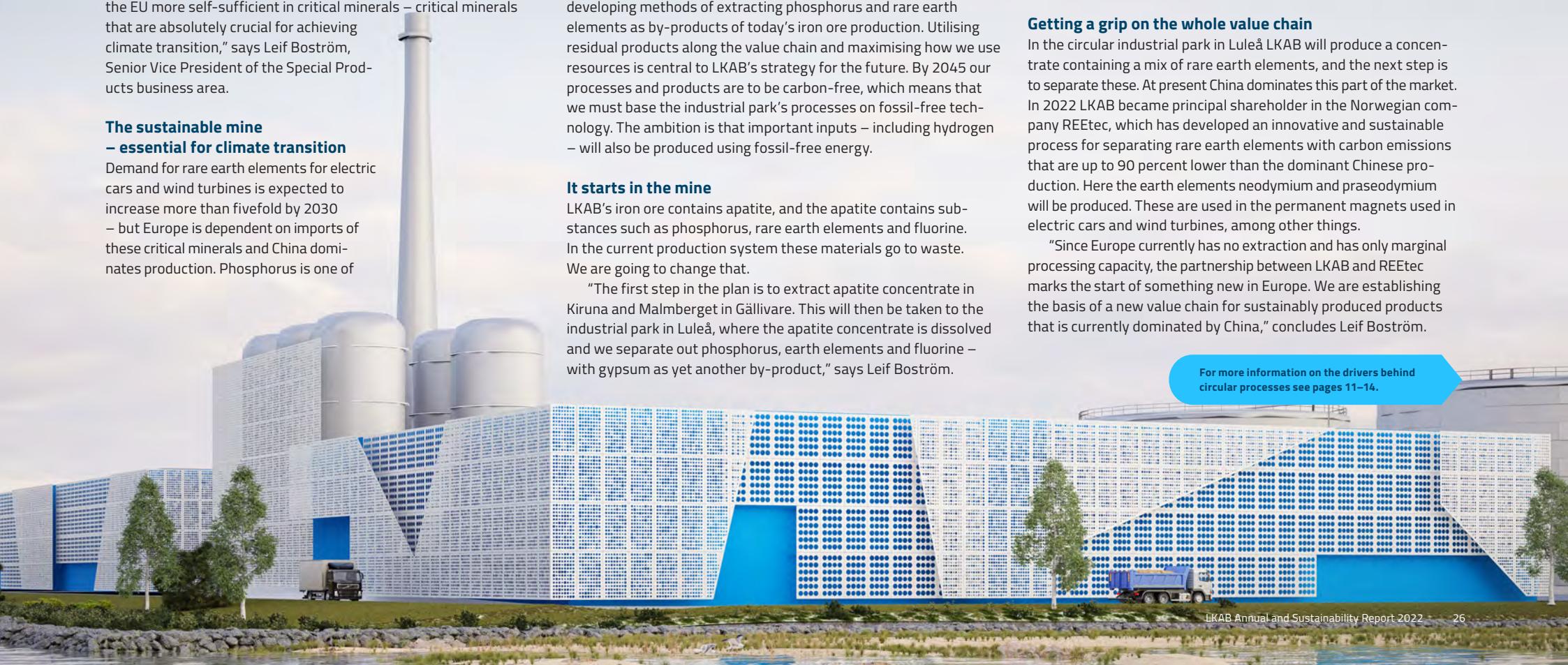
"With circular extraction of phosphorus and rare earth elements as by-products of the iron ore mining, future mining of the Per Geijer ore would give us the potential to replace imports of phosphorus ore into Europe from Russia," explains Leif Boström.

Getting a grip on the whole value chain

In the circular industrial park in Luleå LKAB will produce a concentrate containing a mix of rare earth elements, and the next step is to separate these. At present China dominates this part of the market. In 2022 LKAB became principal shareholder in the Norwegian company REEtec, which has developed an innovative and sustainable process for separating rare earth elements with carbon emissions that are up to 90 percent lower than the dominant Chinese production. Here the earth elements neodymium and praseodymium will be produced. These are used in the permanent magnets used in electric cars and wind turbines, among other things.

"Since Europe currently has no extraction and has only marginal processing capacity, the partnership between LKAB and REEtec marks the start of something new in Europe. We are establishing the basis of a new value chain for sustainably produced products that is currently dominated by China," concludes Leif Boström.

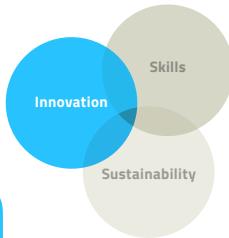
For more information on the drivers behind circular processes see pages 11–14.





Battery-powered mine loaders in Kiruna

To reach our goal of carbon-free processes and products it is essential that we phase out fossil fuel vehicles and machinery. We need to go from consuming 40 million litres of diesel annually to running entirely on electricity. As part of this, during the year the first battery-powered mine loader was tested out in live production in Kiruna. Development work for the autonomous, digital and sustainable mining of the future is taking place in partnership with Sandvik, Epiroc, ABB and Combitech.



Focus area Innovation

Our transformation requires efficiency and production stability in existing operations while at the same time we invest in technological advances and new business.

The mining industry works according to long-term plans known as Life of Mine Plans (LoMP), an economic assessment that takes into consideration circumstances from the present time until the mine is expected to close. LKAB works in parallel with a basic plan for the existing operations and a transformation plan for the mines and processing of the future. Here both our strategic partnerships with key suppliers and the products and services that our own subsidiaries within the Special Products business area supply and develop are significant.

In the primary operations there is a focus on operational excellence – in other words safe, efficient and stable production. Stoppages and disruptions do not just affect volumes, but also environmental performance such as our energy efficiency. We work to achieve continual improvements, focusing on production stability and on utilising the capacity in mines, processing plants and in our logistics system optimally.

At the same time, we are working intensively to develop and assess new technology and new working methods for the mining and processing of the future. These efforts are aimed at our goal of carbon-free processes and products in 2045 and safe, efficient and profitable mining at greater depths.

Priorities

- Constant improvements in the existing operations.
- Develop new technology, new working methods and autonomous solutions.
- Strategic partnerships with suppliers.

Exploration provides the foundation

One of the aims of the intensified exploration efforts in recent years has been to secure production of iron ore products after the current main haulage levels are expected to be mined out. This provides future cash flow while giving us time to develop our next-generation production system. Since 2018 LKAB has invested SEK 1.85 billion in exploration, and in 2022 alone we carried out 200 kilometres of exploratory drilling.

The exploration initiatives over the past year have led to mineral resources increasing further, along with the level of certainty. LKAB is also reporting for the first time a significant resource of rare earth elements in the Per Geijer deposit, expanding the mineral resources for rare earth elements in the deposits in Kiruna and Malmberget that were presented already in the previous year.

LKAB plans to extract apatite concentrate from a residual product of iron ore mining, which will then be processed into phosphorous mineral fertiliser. In the process critical minerals such as rare earth elements are also extracted; read more on page 26.

The results of the exploration work provide a basis for decisions on future investments in mining at even greater depths, as well as

for the development of the critical minerals business. See pages 167–174 for more information on the exploration results and our mineral resources and mineral reserves.

Mining

Our iron ore is mined both above and below ground. The mining takes place mainly at a depth of more than a kilometre, in the mines in Kiruna and Malmberget in Gällivare, which are the world's two largest underground mines for iron ore mining. In Svappavaara the ore is mined in the Leveäniemi open-pit mine.

The supply of crushed ore to the processing plants is crucial. Being able to redirect crushed ore between the production sites creates a flexibility in the operations that allows us to avoid bottlenecks. In the past two years the mine in Kiruna has been affected by an extensive seismic event that occurred in May 2020, when a relatively large area was affected by damage. The provision of crushed ore between the operating locations helped to supply the processing plants. The open-pit mine in Mertainen was temporarily taken into operation in autumn 2021, with a plan to produce a

stock of a million tonnes of crushed ore for use as needed. This was achieved already in March 2022.

Processing plants

To get to grips with production disruptions in the processing plants, which particularly affected the operations in Kiruna, a comprehensive analysis was carried out during the year. The focus is on working methods, organisation and leadership, but also on systematising maintenance work. The maintenance work continued to be affected this year by the consequences of the measures taken to limit the spread of infection during the pandemic, as work that was scheduled for 2021 was deferred in order to minimise the number of people on site.

Logistics

Our products are transported along the Ore Railway, known as Malmbanan in Sweden and Ofotbanen in Norway, to the ports of Luleå and Narvik. The 500-kilometre long rail line is trafficked by the world's most powerful electric locomotive, the IORE loco. We have 17 such locos and the 750-metre long train set is made up of

A mine with two separate areas

Comprehensive analysis has been taking place in parallel with restoration since a seismic event in May 2020 caused major damage in Block 22 of the Kiruna mine.

"We have considered two alternatives for the mining at depth – mining Block 22 by conventional sub-level caving or leaving a stable pillar. The pillar solution is by far the safest option," says Joel Kangas, mine manager at LKAB Kiruna.

A decision has therefore been made to leave a pillar around 700 metres wide, equivalent to around 90 million tonnes or approximately three years' production. Although this means that around 10 percent of production is lost, the gains are considerably greater. Safety must always come first. Nothing is more important than that.



68 ore cars. A total of 6,500 tonnes of iron ore products are transported on each journey. Freight carried on the return trip includes additives for the upgrading process. This makes LKAB's transport both large-scale and efficient.

The railway and the ports are the backbone of our logistics system and are the link between the mine and our customers. Well-functioning logistics are absolutely crucial for us. Capacity on the Ore Railway is one of our greatest challenges and the restrictions are making logistics an obstacle. Moreover, during the year the permitted axle load on part of the Ore Railway was reduced following the discovery of fatigue-related cracks. The consequence is that LKAB is losing load capacity and therefore has to run more trains on an already heavily used line. The problem is growing as volumes increase.

New technology and new working methods

Development work is constantly ongoing within LKAB but has been intensified significantly in recent years to enable our transformation. This work is closely linked to the operations, with working

methods and new technology from the development projects being successively introduced into regular operations.

During the year we continued to work on developing alternative mining methods for safe and efficient mining at great depths. The plan is to start testing the methods on a larger scale on the existing main haulage levels in 2023.

Another example is the work that is taking place in order to gradually replace machinery with electric-powered alternatives where this is possible. Among other things, the mine in Malmberget has introduced battery-powered loaders and expanded its charging infrastructure.

Since November 2020 one of the pelletising plants in Malmberget has been run on fossil-free tall oil pitch, a residual product from paper pulp production, which has had a positive effect. Emissions equivalent to around 54 Kt of fossil carbon dioxide have thereby been avoided. To further reduce emissions intensity in the current production system it is necessary to continue to replace coal in the upgrading process with other alternatives. The future sponge iron production, in contrast, is based on hydrogen.

Role of the subsidiaries

Through our subsidiaries in the Special Products business area – which provide rockwork and rock reinforcement services, engineering services, drilling technology and explosives – we secure expertise and resources in areas that are critical for the iron ore operations. The subsidiaries have a significant role both as regards improvements in the existing operations and in development work for the LKAB of the future. The Special Products business area is also tasked with evaluating and developing new businesses based on existing raw materials flows, such as the extraction of critical earth elements and phosphorus from mine waste; see page 26.

Strategic partnerships with suppliers

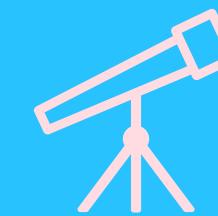
LKAB sees great advantages in working closely with strategically important suppliers, not least for our development projects. Our shared ambition is to identify innovative products and solutions that contribute to improved sustainability, productivity and cost efficiency. For example, we are collaborating with Sandvik, ABB, Epiroc and Combitech to develop the mine of the future.

Tests using new cement-free concrete

The chutes in the mines are always reinforced with concrete for safety reasons, requiring the use of around 80,000 cubic metres of concrete each year.

Since 2021 LKAB Berg & Betong has been using GGBS, a residual product from steelmaking, to replace some of the cement in the concrete mix – thereby halving the carbon load. During the year the first large-scale tests involving a new and completely cement-free concrete mix were started.

"As we're not using the concrete for construction, we're exempt from the standards that apply to custom concrete mixes for infrastructure. That allows us to carry out tests and influence our production so as to reduce emissions," says Benjamin Krutrok, team manager at LKAB Berg & Betong.



**Innovation.
Working on
the undiscovered.**



Recruiting and developing skills of the future

Our transformation and our development projects are leading to new ways of working, new roles and new job opportunities. Skills are a key strategic issue for us – so intensive efforts are made to recruit new talent and at the same time encourage professional development among our existing employees, giving them opportunity to develop in line with the transformation.

Focus area **Skills**

Ensuring access to the skills needed to lead the transformation and develop innovative solutions for the mining of the future is crucial for our success.

LKAB is embarking on an exciting transformation. We need to deliver here and now, while at the same time developing for the future and for coming generations. Our transformation will require investments in our development projects and in the facilities that are to be built and taken into operation. This creates new jobs, and skills availability is one of our most important strategic issues. We take a long-term approach involving efforts in multiple areas, and we work in partnership with universities as well as other companies and actors in the region.

New roles call for new skills

As we prepare for the production of the future, both the ways we work and the roles available are changing – which in turn calls for new skills. Alongside recruiting employees with new skills, it is equally important to fully utilise the potential that exists among our existing colleagues and to ensure that everyone is able to develop as the transformation takes place. This is why we need to create the conditions for lifelong learning and at the same time attract and recruit new employees with the skills that are assessed as being important for the future.

Priorities

- Develop innovative methods to attract, retain and develop talent.
- Clarify and increase awareness of what LKAB stands for as an employer.
- Contribute to attractive communities where more people want to live and work.

During the year a skills inventory was prepared in parts of the operations to identify the skills needed to implement the transformation. The skills inventory forms a basis for the initiatives required in order to attract, recruit and develop employees in an innovative way. It is also a starting point for identifying the areas where we can build new expertise through possible acquisitions.

Strategic skills development

Within LKAB we strive for a culture in which learning is seen as a natural part of working and where everyone is expected to take a large responsibility for their professional development. We take a systematic approach to skills and career development, whether updating and refining existing skillsets or building up completely new expertise. In 2022 a new digital app platform was implemented, making a wide range of training accessible using new methods of learning.

Attractive employer

The pace of change at LKAB is fast; our employees have a high degree of freedom and are trusted to be part of developing the business. The work environment suits employees who are driven by curiosity, who like challenges and who have a strong desire to develop.

To attract the right talent we are constantly working to make clear what LKAB stands for as an employer and what we offer our employees – for example, in the form of career and development opportunities. During the year career paths became a natural part of our development review process for employees. A clear employer offering is an important element in securing our long-term competitiveness and at the same time builds pride and ambassadorship among our employees.

Expectations of a modern workplace are changing, and flexibility has become an increasingly important factor for people when choosing where they want to work. The terms must also be attractive. To us, it goes without saying that everyone must be happy at work and feel that they can develop here. Read more about our diversity work on page 36.

Attractive operating locations

Our initiatives depend on more people being prepared to move to the Norrbotten region and to stay living here. Attractive and well-functioning communities are therefore an important component in securing the supply of skills and expertise.

The development in the region is not only creating jobs within the industry; people will also be needed to work in other areas, such as teachers and care workers. We invest in our operating locations and work in partnership with municipalities and other actors to achieve well-functioning infrastructure and social services, including good housing, schools, services and culture.

LKAB has built what is known as recruitment housing in the Swedish orefields, which people will move into during the year, and the construction of new housing continues. Another ambition is to offer students temporary accommodation in conjunction with summer jobs and internships.

Through the LKAB Academy foundation we help to support preschools, elementary schools and upper secondary schools in the Swedish orefields and in Narvik, with the aim of increasing interest in science and technology among children and young people.



Campaign to raise awareness of LKAB

To spark the interest of young people with the skills that LKAB is looking for, a campaign was launched at the end of the year. Through the campaign we hope to increase awareness of LKAB, Norrbotten and the green transition that has its epicentre in northern Sweden. Initially directed towards those studying at universities of technology in Sweden, it is also aimed at students in Spain, the UK, Finland, the Netherlands and Germany – countries that lead the field in technological expertise.

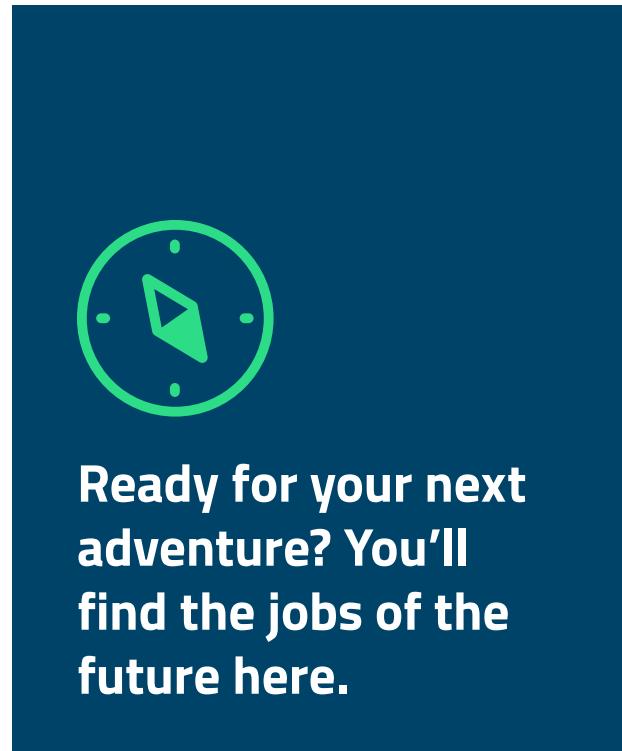
Working with academic institutions

To ensure that the engineers of the future have the right skills we work in partnership with various academic institutions.

LKAB has collaborated with Luleå University of Technology (LTU) and other partners to produce an international BSc in sustainable minerals extraction that will start in autumn 2023, and during the year a new course for health and safety technicians has been started.

Current course content for transforming skills is being reviewed jointly with LTU. The courses "Mechanic to Technician" and "Electrician to Instrumentation Technician" were held again in 2022.

We also participate in various research projects. During the year funding was granted for a continuation of the ViFi project, which aims to encourage interest in becoming a professional engineer among upper secondary school students.





Responsibility for our impact

A mine has a significant impact on the local area and the mining of Kiirunavaara that has been taking place for 120 years speaks loudly in the landscape. We are constantly working to restore nature, and the day the mine closes we will create new vegetation and the old open-pit mine will be transformed into a lake.

Focus area: Sustainability

As a mining company LKAB impacts the world around us, and that means we have a great responsibility. As we now transform our business we must do so in an exemplary manner that minimises impacts on people, climate and the environment.

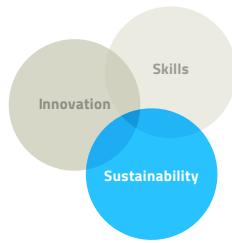
We have committed to leading the transformation of our industry – the single most important thing we at LKAB can do for the climate and thus for the world we live in. The transformation will take us from being part of the problem to becoming part of the solution, and we must do this in a sustainable way.

The work to fundamentally transform our business is long-term and requires major initiatives. It is also edged with challenges, and the groundwork is being laid here and now. In order to succeed there must be cooperation and acceptance from the community. We are also dependent on getting the permits necessary to enable the operations to develop.

For LKAB to be trusted and accepted we must act responsibly and sustainably. This includes managing and minimising our negative impacts throughout the value chain – from our local operating locations out into global supply chains – and cooperating closely with our customers.

This is how we will gain the trust of communities, customers and employees. It is also how we will secure our future and competitiveness, with consideration for the world around us and future generations.

Read more on page 138 about the priority topics in our sustainability approach – the areas where we see ourselves as having the most impact and facing the greatest challenges. These are also the areas that our stakeholders have shown they think we should focus our resources and efforts on.



Climate-efficient, sustainable transformation

LKAB aims to be one of the most resource-efficient and environmentally sustainable mining and minerals companies in the world. Our business has impacts on both people and the environment. We therefore work on a broad front to minimise our impact, both in our immediate surroundings as well as regionally and globally.

Our mining and processing are already among the most climate-efficient in the world, but we still cause substantial carbon emissions each year. In parallel with our long-term transition to carbon-free processes and products we are therefore working to gradually reduce emissions in our own operations.

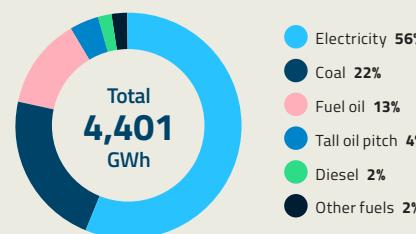
We also strive to ensure that our business is not run at the expense of biodiversity in the regions where we operate. During the year we produced a guideline on how we will work in this area and have begun charting our impact; read more on page 149.

Priorities

- Develop methodology for achieving biodiversity net gain.
- Develop circular business models.
- Continued initiatives and actions to improve climate efficiency.

Energy use

Percent



Energy intensity has increased compared with 2021 due to a higher number of unplanned stoppages combined with lower availability in the pelletising plants; a consequence of the maintenance deficit built up during the pandemic years, when scheduled maintenance was reduced in order to maintain a safe work environment.

For better utilisation of our shared resources we are developing circular business models in which resources are used, reused and recycled.

In our sustainability efforts we maintain a close dialogue with our stakeholders and work in partnership with them. All our employees will be involved and will complete mandatory training in environmental and energy topics that was launched in 2021. The training looks at LKAB's environmental and energy approach and also covers various environmental aspects over the lifecycle of the mine, as well as chemicals, waste and dam safety.

Resource use and environmental impact

We strive for resource-efficient water and energy use without emissions that impact our surroundings. We have set a goal to reduce our energy consumption by 10 percent per tonne of finished product by 2030 while at the same time decreasing carbon emissions from our own operations by 25 percent.

To decrease carbon emissions, we are working to gradually phase out fossil fuels as an energy source and replace these with wind power, hydroelectric power or nuclear power. At one of the pelletising plants in Malmberget in Gällivare heavy fuel oil has been replaced by tall oil pitch, which has had a positive effect – thereby

avoiding emissions equivalent to around 54 Kt of fossil carbon dioxide. For further reductions in emissions intensity in the current production system it is essential that we continue substituting coal in the upgrading process with other alternative fuels.

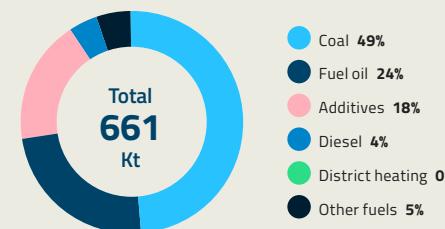
Large amounts of water are used in the mining and processing. The surplus water can impact ecosystems in neighbouring lakes and watercourses when it is discharged. Water treatment and water management are therefore focus areas, and we have adopted group-wide guidelines which state that water is a resource to be protected and managed. Such management is to optimise the utilisation of water resources and ensure that after it has been used the water is of sufficient quality to enable it to be returned to the natural cycle. We work in partnership with researchers to develop innovative methods within treatment technology. As an example, we are investigating bacteria and fungi in the Kiruna mine that have been shown to break down oil contamination – a process that it may be possible to utilise for treatment in the future.

Better resource use and increased circularity

Alongside efforts to reduce the volumes of waste and residual products that arise, we are working to increase circularity and to ensure that waste and residual products that arise are turned

Carbon emissions

Percent



Carbon emissions have decreased compared with 2021, mainly due to lower production and the use of an increased percentage of tall oil pitch.

176 kWh/tonne

Energy intensity per tonne of product (171 kWh/tonne)¹⁾

26.5 kg/tonne

Carbon emissions per tonne of products (26.7 kg/tonne)¹⁾

Carbon emissions by scope (1 and 2)

(Kt)	Scope 1	Scope 2	Total
Iron Ore business area	626.1	0.5	626.7
Special Products business area	21.6	13.1	34.7
Total	647.8	13.6	661.4

¹⁾ Refers to outcome for the LKAB Group. The Annual and Sustainability Report 2021 reported only the outcome for the Iron Ore business area, based on the system boundary that applied in the previous target period.

into useful products, reused and recycled. We have long used waste rock from the mines to produce ballast for the construction industry, for example, while waste heat from our plants is used for district heating. Work to enable circular and resource-efficient production as well as a circular and resource-efficient value chain is taking place in partnership with our customers and suppliers. Read more on page 26 and elsewhere.

Protracted and unpredictable permitting processes are a challenge

LKAB is dependent on permits to maintain production and make the necessary investments. An efficient and clear permitting process is also necessary to allow us to implement the climate transition and other actions to reduce our climate impact.

The permitting process has to decide whether an operation is being conducted in the best possible way from an environmental perspective and is thus permissible. Permit projects are becoming increasingly complex and time-consuming, while legal challenges are increasing at the same time. We are therefore making active efforts to streamline both internal and external processes in this area.

Permits

Our operations, including the impact that LKAB has on its surroundings, are regulated by Swedish and European legislation and by the permits in force for each part of the operations. In 2022 the following major permit events took place.

- In 2022 LKAB appealed the Land and Environment Court's decision to reject the company's application for a new permit for the operations in Kiruna. The Supreme Court did not grant leave to appeal. LKAB continues to conduct operations in accordance with the existing permit and is planning a new application. In 2022 an application was also submitted for measures to increase capacity at the tailings pond. This application is currently being supplemented.
 - In Malmberget, work on an application for a new permit for the entire operations continued. The application is for a new collective permit for existing operations and also for certain new operations, mainly iron ore production using the HYBRIT method and apatite extraction in an apatite plant – both of which are important steps in our transformation towards sustainability and improved resource management.
 - For the operations in Svappavaara the main negotiations took place in 2022 for a trial period of emissions to water. In its decision the Land and Environment Court extended the trial period for uranium by three years and decided the final conditions for other substances.
- In addition to these major cases, continuation of LKAB's operations is dependent on getting permission for minor changes such as changes relating to rock piles and the use of crushed ore.

Permitting processes are a major challenge for Swedish mining industry, and together with industry organisation Svermin we are working to draw attention to this issue. We are calling for clarity and predictability in the processes, and the ability to see the bigger picture by considering socioeconomic interests, environmental aspects and climate impacts in a broader perspective.

Biodiversity

The depletion of biodiversity is destroying the balance of the ecosystem and is a threat to our well-being. Our operations utilise land, sometimes in natural areas that are particularly worthy of protection, and the need for land will increase further to enable our transformation and development to take place. Biodiversity has therefore long been a priority issue for LKAB, and we have solid experience of developing methods and making innovations in this area.

When it comes to retaining and restoring natural values, and increasing biodiversity, we want to lead the field. We have therefore set a goal that by 2030 we will make a positive contribution to biodiversity in the regions where we operate – in other words, that we will achieve a biodiversity net gain.

During the year we began developing a methodology for how this goal will be achieved and we delivered training on LKAB's biodiversity objective and efforts to around 50 employees. We have also begun analysing the impact we currently have on biodiversity. By 2026 we will be able to quantify our impact and our contributions.

Various methods to conserve and create added ecological value are being tested in and around our operations. We are also working continually to increase knowledge of how our business impacts the nature around us. In 2022 we began working with affected Sámi communities on a project to investigate how LKAB's emissions to air are affecting lichen around the Kiruna mine, and thereby reindeer husbandry in the area. In Svappavaara and around the open-pit mine in Aitik in Gällivare we are working with Boliden and the Swedish University of Agricultural Sciences (Sveriges Lantbruksuniversitet, SLU) to investigate the effects of dust from the mining industry on biodiversity and ecosystem services. We are also participating in an external industry-wide project to develop methods of measuring biodiversity; read more on page 149.

New method to recreate natural landscapes

Remediation is an important process within mining operations and LKAB is successively developing new ways of working. Now a new, better method of recreating natural landscapes is being tried out in Svappavaara – geomorphic landscape design. The method is based on studying the surrounding landscape and the processes that create and reshape it. This information is then used when creating rockpiles and it is hoped that we can thereby recreate an environment that blends in with and functions in the same way as the surrounding landscape. The method has been successful in Australia and the USA and is now being tested out for the first time in Scandinavia.

To create the right flows, a drainage system is built that has been designed to replicate the water's natural movements and be capable of dealing with the precipitation in the area without risk of erosion. Once the barren rock pile has been reshaped the material is covered with moraine, soil and plant material. This forms a store that retains the water and provides good conditions for plants and a ground ecosystem to establish. The hope is that this method will result in various habitats being formed and that in the longer term we will get a fully functional ecosystem with a high level of biodiversity.



How we take responsibility

A high standard of business ethics and far-reaching responsibility for the impact of the operations on people form the starting point of our corporate social responsibility approach. Clear procedures for sustainability throughout the value chain, including respect for human rights, enhances our competitiveness.

The focus is on not just our own employees, but also our operations in high-risk countries and indigenous peoples in the areas where we operate. We maintain a proactive and inclusive dialogue with our stakeholders concerning our development and transformation.

Priorities

- Continued focus on a strong safety culture through the "Safety first" approach.
- Urban transformation – relocating the communities in a responsible way at the same pace as the mines.

Acting in consensus with and with respect for local stakeholders and livelihoods is central for acceptance of our operations.

In relation to our employees the focus is on offering good working conditions and putting safety first, and on ensuring a healthy, values-driven culture that promotes diversity and equal opportunity.

We will also continue to play an active part in developing attractive communities that offer a good environment in which to live, so that people want to move here and want to stay. Here we work in partnership with local and national actors to make the locations even more attractive.

A safe, healthy and stimulating work environment

LKAB offers an exciting, forward-looking environment where our employees are trusted and given the freedom to contribute to sustainable development. Safe and healthy work environments are crucial if LKAB is to be sustainable long term.

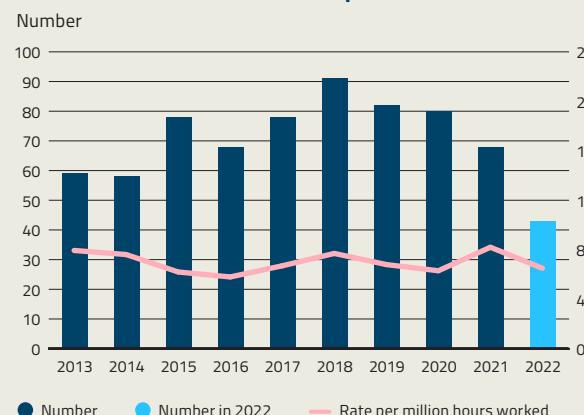
Safety work has the highest priority and we conduct long-term group-wide work to develop a culture characterised by participa-

tion in which everyone who works for us takes responsibility for the safety of both themselves and others. Leadership and collaboration form an important starting point, and our leaders have a key role in maintaining the culture and ensuring the right behaviours.

Since our "Safety first" approach was introduced in 2006 the accident rate has reduced considerably. Here we are raising our ambitions for 2030 with a goal of less than two lost time accidents per million hours worked. The interim goal for 2026 is less than four accidents per million hours worked.

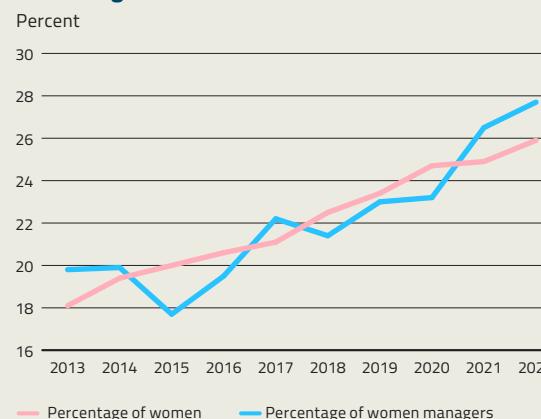
To enable the next steps in this area, in January 2022 the Group's executive management adopted an updated "Safety first" guideline. This was implemented during the year and at the start of 2023 a communication and dialogue campaign was launched, aimed at strengthening the shared culture and increasing engagement throughout LKAB. The new guideline covers four areas: safety, health, inclusion and well-being – areas that are also well established in the Swedish government's work environment

Lost time accidents, LKAB Group



LKAB is able to report an improvement in the lost-time accident rate and in serious incidents during the year. Work to remedy the lingering effects of the pandemic such as delayed maintenance and the ability to work together has made a positive contribution. Group-wide initiatives in respect of the safety culture, aimed at increasing awareness among managers, co-workers and suppliers, is taking place to avoid serious incidents and accidents and to ensure safe and healthy workplaces.

Percentage of women at LKAB



Women make up an increasing percentage of LKAB's employees. At the end of the year the number of permanent employees was 4,952 (4,825), of whom 26 (25) percent were women and 74 (75) percent men. The goal for 2030 is for 60/40 gender balance in management teams, with an interim goal that by 2026 women make up 30 percent of our workforce and managers.

Employees in 2022

The average number of employees in 2022 was 4,513 and the number of permanent employees was 4,952 at year-end.

- 1,926 were white-collar employees
- 3,024 were collectively employed

For more information on the number of employees and on remuneration see Note 7, pages 93–94 and pages 151–152.

Sick leave

Sick leave amounted to 4.8 (4.2) percent, with long-term sick leave accounting for only 0.7 (0.6) percent.

Safety first

"Safety first" describes how LKAB works to improve health, safety and the work environment. It sets clear frameworks for how we will work on safety and ensure that the guidelines are complied with, and how we will achieve our goals. "Safety first" was introduced in 2006 and has been updated based on LKAB's new strategy, organisation and approach.

The updated version contains a common approach known as the Golden Rules. These applied previously in some areas of the company and have now been adopted throughout LKAB. The rules show clearly which behaviours encourage a safe and healthy work environment.

THE GOLDEN RULES



Stop and think
– what could
go wrong?



Let's talk



Never bypass a
system designed
to prevent harm



Recognise and
praise good
behaviour



Always challenge
acts that could
cause harm



Lead by
example

strategy. Our internal goals for these areas are combined in an internal group-wide work environment index.

In 2022 the accident rate decreased to 6.5 (8.2) lost time accidents per million hours worked, aggregated for our own employees and suppliers. Accidents relate mainly to slipping/tripping and falls on the same level, with sprains and strains the most common consequences. We continue to take preventive measures to reduce the number of accidents, focusing on serious incidents.

Safety initiatives for the future

The current transformation of our operations brings with it great opportunities, with further focus on safety forming part of development work to achieve a new world standard for mining. Greater automation and digitalisation are changing how we work and communicate, making possible many activities to promote greater safety.

Accidents and serious incidents among our suppliers are included within group-wide monitoring since "Safety first" applies to everyone who works for us. Our strategy within supplier management and development is to work with the most competitive suppliers who set an example within sustainable enterprise. Having

long-term relationships with chosen suppliers puts the conditions in place for us to develop together. The overwhelming majority of our new or renegotiated contracts allow only two subcontractor levels, thereby enabling good dialogue on safety efforts to take place. Our focus here going forward is again on meeting the challenges within the large projects that are in progress within LKAB. The safety culture is also a focus area in our supplier audits.

Psychosocial work environment

To promote health and wellbeing it is important to have a culture that enables a feeling of participation and control over the work situation. The psychosocial work environment is just as important as the physical environment, and work is in progress to produce a clearer strategy for preventive work in this area. All managers complete training in the organisational and social work environment, which includes learning how to communicate effectively to bring about change in their team.

Repercussions of the pandemic

During the year the active restrictions and internal testing activities within LKAB in the efforts against Covid-19 were phased out. The



Code of Conduct guides

Our work is to take place in consensus with various stakeholder groups, and to ensure ethical action throughout the value chain we have an internal Code of Conduct for our employees and an external Supplier Code of Conduct. Knowledge concerning how our Code of Conduct is to be applied in daily work is key, and to increase awareness among our employees in 2022 we worked to produce new interactive training on the Code of Conduct that will be launched at the beginning of 2023.

The Codes of Conduct are based on recognised declarations and conventions such as the UN Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises, UNICEF's Children's Rights and Business Principles, and the Code to Prevent Corruption in Business (the Business Code). We also joined the UN Global Compact in 2019 and Transparency International in 2020.

year saw a return to more normal operations, although there were certain local restrictions. As in the rest of society, we have seen a somewhat higher level of sickness absence and working from home has been possible for some of our employees in order to keep the spread of infection at a low level.

Diversity and equal opportunity

To secure our innovative capacity and skills supply it is important that LKAB's workplaces are characterised by diversity and inclusion. We make active efforts to reinforce our values-driven culture and we take a zero tolerance approach to discrimination.

We want to recruit more women, more employees with an international background and more young people, and a diversity perspective is therefore integrated into each new recruitment. For example, LKAB partners with Female Tech Engineer – a programme that links up female engineering students with Swedish industry – with the aim of reaching more female engineers and attracting them to tech-heavy positions within LKAB.

During the year workshops and training on diversity were held for groups of managers. The operations in Kiruna held safety days for all employees in which diversity and inclusion was a focus area. During the year the percentage of permanent employees born abroad increased – see more on page 152.

The percentage of women in the workforce and the percentage of women managers both increased during the year, to 26 (25) percent and 28 (27) percent respectively. We have expanded our ambitions for 2030 to include a goal of 60/40 gender balance in management teams, with an interim goal that women make up 30 percent of our workforce and managers by 2026.

Respect for human rights

LKAB is to set an example and ensure that our employees and business partners respect human rights throughout the value chain. Our efforts are based on the Global Compact's Ten Principles for sustainable enterprise covering human rights, labour, the environment and anti-corruption. There is a focus on social impact, working conditions and safety, indigenous peoples, diversity and non-discrimination, and operations in high-risk countries.

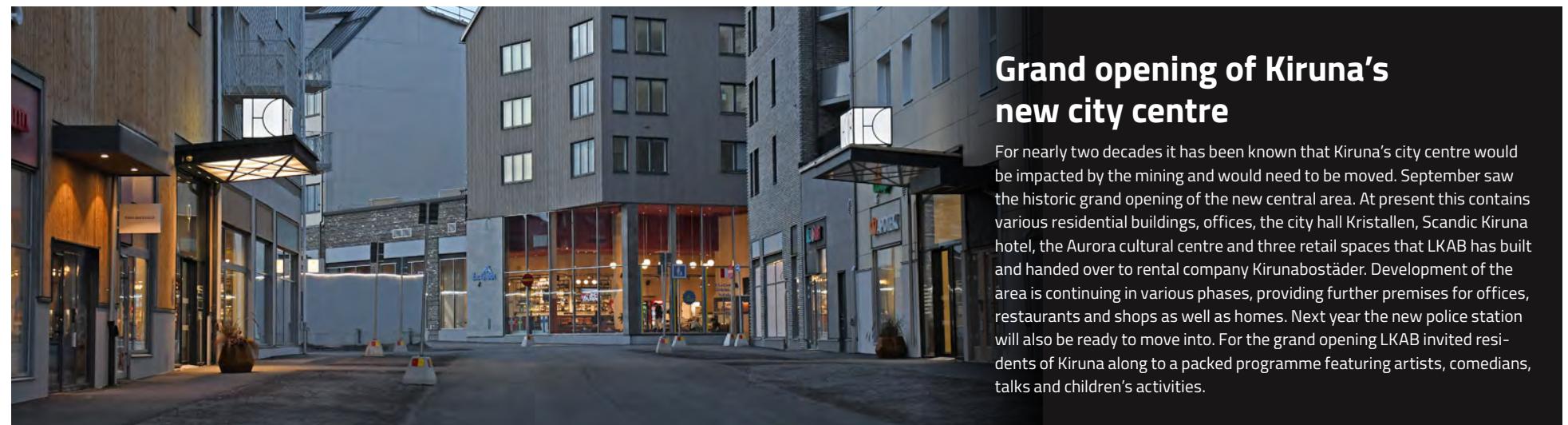
As a global purchaser we have a significant impact on the world around us. Our approach to sustainable purchasing practices is based on a risk perspective in which suppliers are classified based on factors such as geographic risk and industry/product risk. Special priority is given to suppliers' work on human rights, health and safety, the environment and business ethics/anti-corruption. We do not buy materials containing conflict minerals, the extraction of which supports armed conflicts and can result in serious violations of human rights. With the outbreak of Russia's war of aggression

against Ukraine we decided to stop deliveries to Russia and that we would no longer purchase any products or services from Russia.

In accordance with the requirements of the UK Modern Slavery Act 2015 for companies with operations in the UK and Åpenhetsloven (the Norwegian Transparency Act) for companies with operations in Norway, LKAB publishes a statement annually describing the steps we take to ensure due diligence and to ensure that no form of modern slavery, human trafficking, forced or compulsory labour occurs within our operations or supply chain. Read more about human rights, described mainly on pages 157 and 159–160.

Dialogue is central to cooperation

Acting in consensus with and with respect for local stakeholders and livelihoods is key for acceptance of the operations. In this the Sámi people and communities have a special position because of their status as indigenous peoples. To minimise our impact on the Sámi communities and reindeer herding, LKAB has established cooperation agreements with the three Sámi communities that have reindeer grazing pastures adjacent to the operations. The agreements provide a basis for the forums and ways of working that are required for sharing information, making decisions and ongoing consultation. They are based on the principle of Free Prior and Informed Consent (FPIC) as expressed in international law on the rights of indigenous peoples.



Grand opening of Kiruna's new city centre

For nearly two decades it has been known that Kiruna's city centre would be impacted by the mining and would need to be moved. September saw the historic grand opening of the new central area. At present this contains various residential buildings, offices, the city hall Kristallen, Scandic Kiruna hotel, the Aurora cultural centre and three retail spaces that LKAB has built and handed over to rental company Kirunabostäder. Development of the area is continuing in various phases, providing further premises for offices, restaurants and shops as well as homes. Next year the new police station will also be ready to move into. For the grand opening LKAB invited residents of Kiruna along to a packed programme featuring artists, comedians, talks and children's activities.

Our contribution to Agenda 2030

The UN Sustainable Development Goals make up the world's shared Agenda 2030. The goals are integrated and cover three dimensions of sustainable development: economic, social and environmental. As a supplier to global industries, but also as a business partner, purchaser, member of society and significant employer, LKAB has both an opportunity and a duty to exert its influence on all these dimensions – both locally and globally.





Gender Equality

To be an attractive employer and retain skills we must offer a secure and inclusive workplace. We have therefore formulated goals for safe and healthy workplaces

and for increasing the percentage of women and of women managers in our operations. We need to recruit more women, more employees with an international background and more young people. Our trainee programme is one opportunity for doing this. We also implement targeted efforts jointly with colleges and universities.

[► Read more on page 38.](#)



Affordable and Clean Energy

LKAB's magnetite ore involves lower energy consumption than our competitors' hematite ore. In the transition to the production of sponge iron the processes are based on renewable energy, for a fossil-free value chain for steelmaking. We are also working to phase out fossil fuels in our existing plants, for example by switching to biofuels. Using the surplus heat from pellet production for district heating in Kiruna, for example, has enabled the city's need for fossil fuels for heating to be reduced.

[► Read more on page 34.](#)



Decent Work and Economic Growth

Safety has the highest priority and we work to develop a culture characterised by participation, in which employees take responsibility for the safety of themselves as well as

others. As a global actor we encounter risks related to human rights, forced and indebted labour, health, safety and working conditions. We endeavour to set an example as regards ethical action, anti-corruption, respect for human rights and non-discrimination, and we also set high standards for our suppliers in this area.

[► Read more on page 36.](#)



Industry, Innovation and Infrastructure

Mining operations create employment and are a strong driver of economic growth and development. Our development projects provide examples of how we collaborate in

order to seize opportunities that promote the development of a sustainable industry. We are also a driving force in the expansion of an infrastructure for hydrogen production, which is essential for the industry's climate transition. The industrial initiatives also require investment in expanding and improving the Ore Railway.

[► Read more on page 27.](#)



Sustainable Cities and Communities

Efforts to enhance our local communities and to develop the region into an innovation hub for the global mining and minerals industry enhance our competitiveness.

"Development before phase-out" is a basic principle of our work on the urban transformations. To minimise the mining's negative impacts on the Sámi communities and reindeer herding, LKAB has established various forms of cooperation with the three Sámi communities that are directly affected.

[► Read more on page 36.](#)



Responsible Production and Consumption

Due to the number of suppliers that we have, our business provides opportunities for us to influence developments in the value chain. We encourage cooperation with suppliers on various sustainability initiatives, including a focus on developing the work environment and safety culture, reducing risks, reducing the climate footprint and increased circularity. Within the Special Products business area, we run development projects for extracting critical minerals from mine waste and endeavour to reduce waste volumes and to largely reuse the material extracted.

[► Read more on page 26.](#)



Climate Action

LKAB will deliver the carbon-free iron that is needed to build the cars, wind turbines and electric motors that will enable a global transition to a carbon-free future. The ambition is a fossil-free value chain for steelmaking in which hydrogen is used in the process instead of coal. Intensive development work is also in progress to establish a new world standard for mining that is autonomous, carbon-free and offers the highest conceivable level of safety.

[► Read more on page 10.](#)



Life on Land

Our operations utilise land, some of which is in areas specially designated for protection. Biodiversity has long been a priority and in recent years we have raised our ambition to create added ecological value and in the longer term make a positive contribution to biodiversity. Together with industry organisation Svemin we have produced a road map, with the aim that by 2030 the mining and minerals industry will contribute a biodiversity net gain where mining operations take place.

[► Read more on page 149.](#)



Partnerships for the Goals

Working in partnership with external competencies nationally and internationally creates synergies within sustainable development while also enhancing our own competitiveness. Among other things, we collaborate with other companies in our development projects as well as with Svemin on the road map for biodiversity net gain. We are also part of the UN's Leadership Group for Industry Transition and a member of the UN Global Compact, Transparency International, CSR Sweden and other organisations.

[► Read more on page 142.](#)

Financing

LKAB needs to be financially well prepared for the commitments and investments ahead of us.

Financing

Market conditions for iron ore products remained favourable during the year, resulting in strong cash flow which strengthens our position for leading the transformation of the iron and steel industry.

LKAB is sensitive to economic fluctuations and when cash flow slows in connection with changes in the global iron ore price or the dollar exchange rate, we need to be well prepared. We have significant commitments associated with the impact of the operations and secure these through buffer capital for urban transformation, pensions and remediation as well as for investments in the transition to a fossil-free value chain for steelmaking.

LKAB has financial instruments listed for trading on Nasdaq Stockholm. To secure access to financing, in addition to credit facilities we have various borrowing programmes – both Medium Term Note (MTN) programmes and commercial paper programmes. These make us well prepared for temporary fluctuations in financing needs in the short term while also securing long-term funding.

Financial risks and finance policy

LKAB's finance policy provides a framework for financing activities and the management of financial risk. During the year the Board adopted a revised finance policy that takes into account the transformation investments ahead of us. The policy defines financing needs in the form of operating capital and buffer capital, which are to cover requirements linked to fluctuations in cash flow as well as planned expenditure for commitments within urban transformation, pensions and remediation as well as our investments in the transformation.

The requirement to maintain buffer capital in accordance with the finance policy means that over time LKAB manages extensive financial assets. As a basic principle the contractual term of financial assets and the return on these assets must track changes in the commitments, and any future decrease in financial assets must match scheduled disbursements. The risk appetite for the management of financial assets is defined in the finance policy and set out more specifically in the investment guidelines.

Financing during the year

Net financial income/expense for 2022 was MSEK -2,119 (1,484). Significant Swedish and global stock market falls due to the war in Ukraine, geopolitical unrest and rising interest rates caused by high inflation affected the return on financial investments negatively. At year-end the net debt/equity ratio was -17.1 (-24.5) percent, mainly thanks to strong cash flow from operations, but increased compared with the previous year as a result of a dividend to the owner of SEK 12.4 billion.

The SEK 5 billion revolving credit facility signed in 2021 was extended in July 2022 and expires in July 2027, with the option of a further one-year extension for the same amount. In January a bond loan of SEK 1 billion matured and was not refinanced.

Net debt/equity ratio	31 Dec 2022	31 Dec 2021
Net financial indebtedness, MSEK	-12,178	-16,553
Equity, MSEK	71,320	67,565
Net debt/equity ratio, %	-17.1	-24.5

Management of financial assets

In 2022 financial assets were managed in three portfolios for liquidity, urban transformation, remediation and pensions. The liquidity portfolio contains fixed-income securities at banks or short-term liquid fixed-income securities in Swedish kronor. The portfolios for the urban transformation commitments and for the remediation and pension commitments have fixed-interest investments with a longer duration and include investments in unit trusts and UCIs.

Asset management takes place in accordance with investment guidelines approved by the Board's Audit Committee. The guidelines are issued per portfolio and asset class, with limit values for deviation from a standard portfolio. Credit exposure and foreign currency exposure are permitted within set frameworks. Management is evaluated against relevant reference indexes per asset class and management result. Any deviations are reported to the Board's Audit Committee on an ongoing basis. In 2022 there was no deviation from the finance policy.

Managed financial capital at the beginning of the year amounted to SEK 36.8 billion and at year-end to SEK 31.2 billion.

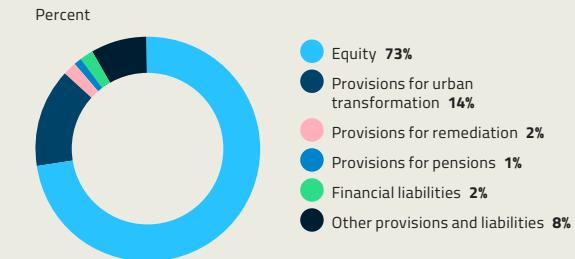
Cash flow



Net debt/equity ratio



LKAB's capital structure



Management of financial assets from 2023

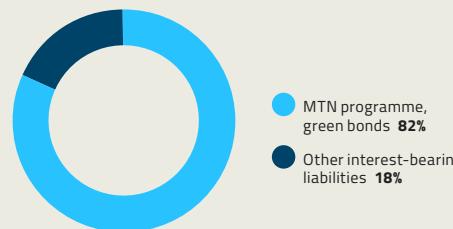
During the year asset management was analysed, resulting in updated investment guidelines effective from the beginning of 2023. Under the updated guidelines the financial assets are managed in two portfolios: a liquidity portfolio and a portfolio for the commitments within urban transformation, remediation, pensions and transformation investments.

Sources of financing as at 31 December 2022

MSEK	Loan framework	Utilised	Available
Commercial paper programme, maturing within one year	5,000	5,000	
Bond programmes	7,000	5,000	
- Maturing March 2025 (green bonds)		2,000	
Credit facility	5,000	5,000	

Breakdown of interest-bearing loan liabilities as at 31 December 2022

Percent



LKAB's green bonds

In November 2019 LKAB issued green bonds, raising SEK 2 billion in total. The bonds have a term of 5.25 years and allow investors to be part of the transformation of an industry that is of great significance for the sustainable development of society, including in a global perspective.

At the end of the year the entire amount financed had been allocated to a total of 11 projects that are expected to have a long-term positive impact on the environment. Around SEK 0.8 billion of the funding allocated has been invested in initiatives to reduce carbon emissions, including the development projects for the production of carbon-free sponge iron. The remainder has been used to increase resource efficiency and contribute to a more circular economy, clean transport, renewable energy and green buildings.

The bonds were issued under LKAB's MTN programme and the framework for green bonds, and are listed on Nasdaq Stockholm's Sustainable Bond List. For further information see LKAB's Green Bond Impact Report 2022 at lkab.com.

EU Taxonomy Regulation for sustainable investments

The financial market has an important role to play in movement towards a sustainable society. The European Commission has therefore been working for a number of years to produce rules for steering investments in a sustainable direction. The EU Taxonomy Regulation is a tool that, among other things, classifies investments as to whether or not they are environmentally sustainable, thereby providing common guidelines on which investments can be described as being "green". At present the Taxonomy's technical criteria cover a number of sectors, which do not yet include the mining industry. Work to produce criteria for the mining industry is in progress, but at present the iron ore operations are not Taxonomy-eligible and therefore CapEx and OpEx related to ongoing transformation projects are also not eligible. Only small elements such as activities within logistics, real estate and recycling of residual products are eligible. The proportion of the LKAB Group's economic activities in 2022 that are eligible under the EU Taxonomy Regulation can be found on pages 161–163.

MTN programme

LKAB has a programme for issuing corporate bonds, known as Medium Term Notes (MTN), up to a maximum amount of SEK 7 billion. Within the framework of the programme corporate bonds can be issued in Swedish kronor or euros with a minimum term of one year. Within the framework of the MTN programme LKAB has established a framework for green bonds.

Commercial paper programme

LKAB has a programme for issuing commercial paper up to a maximum amount of SEK 5 billion. Under this programme commercial paper can be issued in Swedish kronor or euros with a term of up to one year.



Risks and risk management

LKAB is exposed to various types of risk that could have a material impact on our ability to achieve our goals in both the short and long term. It is vital to identify and act on risks and opportunities that impact our competitiveness so that we can deliver on our strategic priorities and add value for our stakeholders.



Securing the future

LKAB operates in a capital-intensive industry with a planning horizon that extends across several decades. We have to consider risks and opportunities that have a bearing on the business as it is today and also as it will be a decade or more from now.

The world around us is changing and we need to equip ourselves for a transformation. Competitiveness is essential for our ability to invest in the future. The global climate threat means that the iron and steel industry will need to change fundamentally, which brings both opportunities and risks.

In view of this, and in line with State Ownership Policy, we have taken further steps towards reporting according to TCFD¹⁾ standards. In 2022 scenario analysis were performed in accordance with TCFD recommendations to increase understanding of the climate challenges – but also opportunities – that LKAB must deal with. The results of this analysis have had some impact on our strategic risk map and will be managed within the annual strategy and business planning process. Work to analyse, manage and report both risks and opportunities from a climate perspective is important for securing our resilience and our ability to adapt to ongoing climate change.

Actions taken in 2022

In the first quarter the Board of Directors approved a revised finance policy, which aims to manage the elevated financing risk that is assessed to exists during the transition to carbon-free processes and products. The revised policy strengthens forward planning for financing associated with special commitments in the business.

During the year there has also been focus on the implementation of the risk management policy. Feedback on critical risk management measures activities has been reported each quarter, both to the Board. Scenario analyses have also been performed in accordance with TCFD guidelines. The strategic climate risks identified in the analysis will be incorporated into the strategic risk management process.

Respecting human rights is also central to all risk prevention work, for example in the dialogue with different stakeholders such as indigenous people, in conjunction with new projects within the urban transformations, and in relationships with employees and suppliers.

An active Group-wide risk management process creates transparency and awareness of the biggest risks, which helps provide a better basis for prioritising and decisions – for making priorities and decisions. Our work to identify and manage risks is coordinated with the strategy and business planning process and is decentralised in accordance with how the Group is governed. The risks are broken down into market and external risks, business risks and financial risks.

On the following pages a summary of our main risk areas is presented, along with how these are managed at an overall level.

1) The Task Force on Climate-related Financial Disclosures (TCFD) initiative includes guidelines on climate-related financial risk reporting linked to the impact of climate change over time and of potential instruments to limit carbon emissions.

Planned actions in 2023

Work according to TCFD guidelines will continue in parallel with work to ensure the transition to the new Corporate Sustainability Reporting Directive (CSRD).

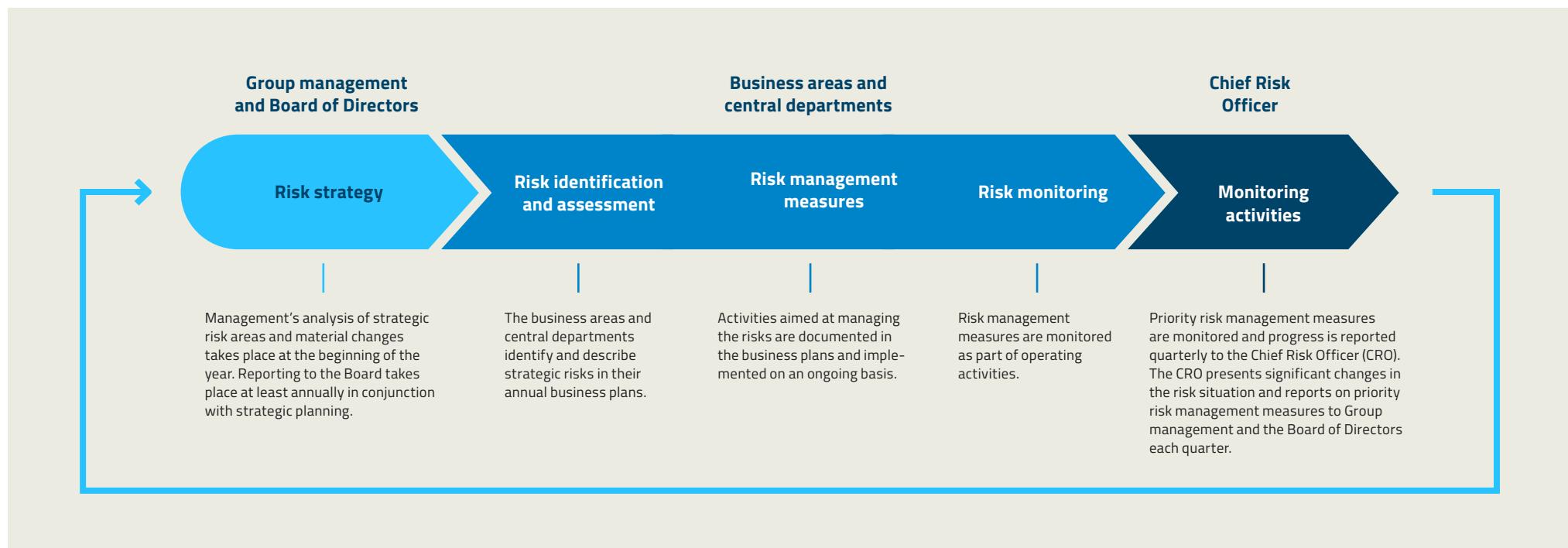
During the year the process for the risk management policy will be strengthened further and optimised to encourage the operations at various levels to set even clearer priorities from a strategic risk management perspective. One important objective is for the highest priority activities to be able to be clearly distinguished from those that are of lower priority from a strategic perspective.

[Read more about TCFD on page 52.](#)



Integrated risk management

Our risk management process is integrated with the strategy and business planning process. Risks are identified, assessed, managed and monitored as part of operating activities.



Market and external risks

LKAB's business is sensitive to economic fluctuations and is exposed to a number of external risks that are difficult to influence. We manage these through business intelligence and scenario analysis, by building long-term customer relationships and by having a flexible customer and product portfolio.

Market risks

One significant market risk consists of price fluctuation in the global iron ore market, which has a direct impact on LKAB's earnings and cash flow. LKAB's price is affected partly by the underlying market price of iron ore (IODEX 62% Fe CFR North China), but also by the quality premiums added on for high grade iron ore products. Future premiums for carbon-free products is a further significant risk associated with the financing of the planned transformation.

Significant changes in iron ore supply and demand that change the foundations of the industry are a strategic market risk. This situation could arise, for example, as a result of game changers in the iron ore and/or steel industry. The transformation ahead of both the iron and the steel industry as a result of the current climate challenges is an example. The changes required to create carbon-free processes and products must take place in a coordinated manner throughout the value chain. The global iron and steel market is also characterised by having a small number of actors, making mutual dependence even greater than in many other sectors. Understanding of the Chinese iron ore and steel market and how it will develop greatly affects the general market conditions and is another strategically important issue for LKAB.

The countries in which LKAB's customers operate have varying degrees of political and commercial stability. Political risk is the risk that turbulence in a country or region where customers operate becomes sufficient to force LKAB to stop working with these in view of guidelines governing us, for example as regards human rights and corruption.

Market risks also include risk associated with negative changes in the supply of or price of commodities, materials and equipment that are critical to production. There are climate-related risks within the area, not least associated with the supply of and price of fossil fuels, for example driven by cutbacks in the production of oil and coal. The supply of and price of so-called "green electricity" is a highly critical issue for enabling the vision of carbon-free processes and products. The risks associated with critical procurement are considered to have generally increased during 2022 as a result of the current situation in the world.

Risk of a lack of efficient, legally certain processes

LKAB's business depends in several ways on permits and other decisions by authorities. It is vital that processes for environmental permits, concessions and planning matters are efficient, predictable and legally certain in order to be able to plan and drive the business forward. This is particularly so at a time when extensive transformations need to take place within the near future in order to achieve climate goals set. Risk is a particularly important issue associated with the prerequisites for obtaining access to land, to enable both energy expansion in Sweden and expansion of the capacity on the Ore Railway, but also to expand and develop LKAB's own industrial areas and ensure efficient management of the urban transformation in the Swedish orefields.

Management of the risk area

By securing flexibility in the product portfolio, customer portfolio and in production and logistics systems, LKAB is better prepared for sudden economic fluctuations. LKAB always strives to offer consistently high product quality and reliable deliveries. In addition, the Group works in partnership with customers on technical matters, which adds value and strengthens its relationship with selected customers as well as its own long-term stability. The Special Products business area has a more diversified customer base that helps dampen economic fluctuations, since different geographical regions, segments and minerals have different economic cycles.

Under the Group's finance policy LKAB does not normally hedge price risk, except in exceptional cases such as for binding contracts. However, cash flow is analysed on an ongoing basis and in conjunction with this sensitivity analysis is also performed based on changes in external factors such as prices. In periods of high expected cash outflow longer hedging of the iron ore price may be considered.

To date it has proved to be unlikely that the need for iron ore will be replaced by any other material. Re-use of scrap for steelmaking may replace iron ore to some extent, but so long as the industrialisation of the world continues and the world's population continues to grow the need for iron ore will remain. LKAB actively monitors customers' technological development to ensure that the products produced also accord with customers' future needs. Within the development company HYBRIT Development AB important work is going on to develop the fossil-free steel of the future. The production of fossil-free steel is an example of how a climate risk can also be an opportunity, if managed well.

LKAB also actively monitors the outside world in order to analyse and manage political risk, and works in partnership with national and international industry organisations. Existing and potential customers are analysed based on political, geographical and commercial risk diversification. Potential customers that could be brought in should an existing customer be lost are continually monitored.

Vulnerability within the supply chain is continually analysed in order to ensure that deliveries of critical raw materials and equipment can be secured. There was increased focus on the risk of supply disruption in 2022 as a result of the current situation in the world. The objective of achieving carbon-free processes and products is by extension also an important risk-mitigating factor since it reduces dependence on fossil fuels, where both supply and price are becoming increasingly unstable. LKAB's indirect emissions (Scope 3) are greater than its direct emissions (Scope 1) and those for purchased electricity (Scope 2). LKAB has not joined the Science Based Targets initiative but monitors emissions in Scope 1 and 2 as well as Scope 3 emissions through clear requirements of suppliers linked to LKAB's own climate and sustainability goals.

Management of the risk area

Systematic ongoing stakeholder dialogue takes place with authorities and other stakeholders, focusing on the importance of what is required to secure the current operations and at the same time allow the transformation that is ahead of LKAB. Understanding among decision-makers – owners, national and local politicians and authorities and courts – is key for reducing the risks within this area, but also to ensure good practice as regards the interpretation and application of laws and regulations in permitting matters. Internal strategies and processes have been established and will be developed further with a view to optimising ways of working that allow forward planning in investigative work, self-monitoring and dialogue with authorities. The credibility of LKAB's sustainability approach is important in this context.

Business risks

Our business exposes us to risks relating to production facilities, environmental impact, employees etc.

Risks associated with the ability to ensure safe, stable and resource-efficient production need to be managed in parallel with those associated with long-term competitiveness and the transition to carbon-free processes and products.

Risk of insufficient mineral reserves/mineral resources

Securing LKAB's mineral reserves requires continued exploration, technical investigations and profitability studies including permits in order to have access to mineable iron ore with around 20 years of advance planning, either in existing mines or in new deposits. Insufficient advance planning in the exploration work would have serious consequences for the company's future. There are also risks associated with being able to convert the mineral resources into mineral reserves.

Management of the risk area

LKAB conducts an exploration programme that focuses on exploration close to the existing mines. The risk associated with an insufficient supply of mineral resources and mineral reserves has reduced considerably in both Kiruna and Malmberget.

In order to convert mineral resources into mineral reserves appropriate evaluations and studies need to have been completed showing that mining and processing can take place in accordance with LKAB's profitability requirements and taking account of so-called modifying factors such as metallurgy, market, environment and economy. Work is in progress on studies in different phases within all deposits at LKAB.

Risk of negative environmental impact

The risk of negative environmental impact includes potential negative effects on future environmental permits if existing limit values for emissions are exceeded. Exceeding the permitted limits also has a negative impact on public confidence in LKAB, which affects LKAB's "licence to operate". There is also a risk that environmental requirements will drive high transition costs, resulting in a competitive disadvantage.

Another important risk is the negative effects that arise from inefficient energy use. The energy issue – in terms of both the type of energy and energy efficiency – is strongly linked to the goal of carbon-free processes and products by the year 2045. Transformation of the business is an important strategic matter for the future, partly to reduce the risks of negative environmental impact but also to manage the climate risks arising from a continued dependence on fossil fuels (see also under market risks).

Linked to the issue of carbon is also a significant risk relating to the current system of trading in emission allowances. Carbon emissions are up to 10 times higher when European steelmakers sinter iron ore, i.e. lump together finely ground ore for their blast furnaces, compared with the use of LKAB's sintered iron ore pellets. The products' basic function in the blast furnaces is comparable, but the European Commission has nonetheless decided not to treat them equally. As a result, the steelmakers that currently have the highest carbon emissions are given more free emission allowances. LKAB, which has the lowest emissions, is instead penalised by being given a lower allocation. The lower allocation is also a competitive disadvantage as compared with competitors outside the EU Emissions Trading System.

As with other mining companies, there is a risk that LKAB could suffer a dam failure. LKAB has dams constructed according to what is known as an inward method, which has demonstrated an increased risk of breach. A dam failure would have major negative consequences not just for the company's operations and for the environment, but also for neighbouring communities. Moreover, it is important that remediation is carried out for all discontinued operations in an ecologically sustainable way.

Management of the risk area

Various types of emission levels are measured systematically both by LKAB and in external audits to ensure that environmental impacts are within authorised levels. Research and development are also carried out with a view to reducing emission levels further, which is also important as preparation for potentially more stringent requirements in the future.

The switch to non-fossil fuels and a gradual transition to carbon-free processes and products is largely bound up with the issue of energy, since energy consumption and the type of energy decide the levels of carbon emissions. A management structure for energy matters is being developed within the Iron Ore business area with a view to securing progress on the energy issue. An energy management team has also been appointed that works across the Group. In the longer term the goal is to achieve carbon-free processes and products.

During the year LKAB appealed the European Commission's decision to reject LKAB's application to be admitted to the same benchmark group as pellet and sinter production at steelworks for the allocation of emission allowances. The appeal was made to the European Court of Justice. Oral proceedings took place in the tribunal in January 2023.

LKAB works proactively and systematically on dam safety according to the industry's safety directive GruvRIDAS. LKAB also holds dam liability insurance for losses among third parties in the event of a dam failure. In 2020 a new international standard on dam safety was published: the Global Industry Standards on Tailings Management. In 2021 a review of dam safety was carried out by an independent panel of international experts (TAB). Some minor nonconformances with the global standard – mainly related to organisation and governance – were identified, but generally procedures and methods comply well with global dam safety requirements. A safety management system is being established. Future alternative depositing methods are also being investigated. For remediation of the industrial areas, an industry-wide road map has been produced focusing on biodiversity. Internal guidelines on land use have also been produced. In 2023 guidelines on waste and dam safety will be produced.

Risk of not being sufficiently competitive

LKAB's production consists largely of continuous processes where unplanned stoppages can quickly have a big impact on the company's deliveries. Unplanned stoppages can also impact product quality and emissions to air and water. Changed climate conditions, such as changes in water levels, heavy rain, avalanches or storms, could also have direct consequences for production.

Since 2021 the risks associated with restrictions on the Ore Railway have increased. There are high risks associated with the capacity of the Ore Railway and insufficient availability for existing flows, as well as with breakdowns and derailments, given its single-track nature combined with the status of the railway. Increased demand from other users of the Ore Railway could also have negative consequences. Overall, the capacity of the Ore Railway could become a limiting factor on the volume that LKAB can transport, with direct consequences for profitability.

Important future issues and risks are associated with the planned transition to entirely carbon-free processes and to more efficient and safe large-scale mining methods at increased depths. Within these areas LKAB is a "first mover" in its industry, which increases the risk of high costs associated with development and industrialisation of new technology. There is a risk that LKAB's competitiveness could deteriorate vis-à-vis other producers as a result of competitors in other parts of the world benefiting from support (such as financial state subsidies) linked to the green transition to a greater extent than LKAB.

Another critical challenge is that strategic development projects with external parties must run efficiently if LKAB is to be in a position to achieve its strategic goals. Since many competitors mine ore in open-pit mines, it is particularly important for LKAB's competitiveness that the company is at the forefront of innovative solutions associated with cost and increased revenue throughout the production chain.

Risk of accidents and poor health

LKAB's employees and contractors are sometimes exposed to risky situations which may involve an increased risk of accident and/or illness. There is also the risk of negative effects arising as a result of an unhealthy working climate between people in the workplace, known as the organisational and social work environment. That LKAB is an employer with safe and healthy workplaces where employees are happy and feel secure is an important strategic issue for the Group.

Risk of skills shortage

The ability to attract new employees, retain our existing employees and secure access to key skills and expertise is a very important prerequisite for long-term competitiveness, particularly at a time when the pace of change is fast. Creating the conditions for lifelong learning is a critical factor for success. Another important parameter for success is guaranteeing a work environment where employees feel secure and included and where diversity is seen as an asset. Attractive locations where we have good, stimulating partnerships with local actors and stakeholders and where the housing market and infrastructure are well developed are also necessities if we are to have access to the skills we need.

Achieving good results in the efforts to minimise the environmental and climate impact of the operations is also expected to be an important factor in attracting and retaining talent in the future.

Management of the risk area

Efficient, safe, uninterrupted production is based on being large-scale and on continuous efficiency improvements. Good maintenance planning and a clear division of responsibilities are important components in achieving this. Audits of the production facilities are carried out annually, but so-called interruption studies are also carried out to assess the risk of unplanned stoppages in production. Based on these processes, decisions are taken on how the risks are to be or should be managed. Preventive work within fire safety is given a high priority in view of previous events. In addition, there is insurance cover for the risks of damage to property and subsequent production losses.

Identifying potential efficiency improvements in the mining is an important issue for LKAB's future. Among other things, this important development work is being conducted as part of a development programme. The HYBRIT initiative is another example of strategic actions taken to respond to the climate challenges and at the same time increase the value added by processing.

There has been ever greater focus on rock mechanics in mine planning and production management. Prioritised risk management work is in progress regarding the process for planning and optimising mining in existing mines, but also more long-term to secure future mining. The focus is on creating geological models, mine design, mining plans and standardised ways of working as well as process control.

Management of the risk area

This risk is managed primarily through the Group's systematic work environment efforts, which include risk analysis as well as reporting and follow-up of risks, near-miss incidents and accidents. It also involves strengthening the safety culture through increased focus on health and safety as part of the management philosophy, but also by making sure that everybody feels included in the work environment efforts. Active work on standards and ground rules based on LKAB's values is continually ongoing. High priority is likewise given to continual assurance of the status of our facilities in order to minimise the accident risk.

Management of the risk area

LKAB has a long history of collaborating with universities and colleges and is involved with the local elementary schools and upper secondary schools in its operating locations. These efforts, but also broadening the recruitment base both geographically and from a diversity perspective, increase opportunities to recruit the necessary skills – both now and in the future. Since 2021 LKAB has been participating in the T25 project, which is a collaboration with other industrial companies in the counties of Norrbotten and Västerbotten aimed at securing skills for the future and making the region more attractive. Increased cooperation with the Swedish School of Mines, which provides new training courses across the company's value chain, is another initiative.

In addition, LKAB engages in initiatives to develop and transform the skills of existing employees; for example, in the form of clear career paths. A digital training platform was launched in 2022 to facilitate training initiatives for existing employees. An important part of the initiative for a new world standard for mining involves finding new ways of working as new technology is tested and developed.

Based on the management philosophy, Code of Conduct and diversity plan, active efforts are also being made to develop LKAB's culture, promote diversity and make the Group more attractive as an employer. In addition, a new research project called Gensafe has been started with partners including Luleå University of Technology (LTU) with a view to generating knowledge concerning which components are the most important for creating an attractive, inclusive and safe work environment within the mining industry.

Risk of insufficient social and legal acceptance

Acting ethically and taking a long-term approach is crucial for creating trust in LKAB. Acceptance of the operations depends on maintaining a close ongoing dialogue with stakeholders and actors in various areas. Achieving good results in the work to minimise the operations' environmental and climate impact is important for maintaining stakeholders' confidence. Clear regulations and uniform application of these is crucial for achieving mutual trust between the company, authorities and other stakeholders.

Risk of break-in/damage by external parties

Digitalisation means that an ever increasing proportion of the activities in the Group, and also its contacts with various stakeholders, are dependent on networks and information systems. As a result of this, data security and cybersecurity risks are increasing. Threats and risks in the area of information technology range from less extensive risk at an individual level to well-planned and precisely targeted attacks on critical parts of the company's functions.

In view of the situation in the world around us, the risk that a targeted attack – whether a cyberattack or a physical attack – could knock out an industrial company's production system, involving significant costs for loss of production, is a reality that LKAB must address by taking various measures to prevent it from happening.

The risks in this area are considered to have increased over the past year as a result in changes in world around us.

Financial risks

The financial risks are mainly associated with fluctuations in global iron ore prices and in the USD/SEK exchange rate. Together these factors could have a major impact on the company's income statement, balance sheet and cash flow.

Financial risks

LKAB is exposed to various types of currency risk. The main exposure stems from sales of iron ore where market pricing is in USD, known as transaction exposure.

Financing risk is the risk that the LKAB Group cannot meet its commitments due to lack of liquidity or the inability to raise external loans for operating activities. This is a particularly important matter at a time such as now, when the Group is embarking on a transformation that requires extensive investments to be made. The Group's ability to manage its transformation to more sustainable operations and climate-smart products is an important factor in securing access to external financing in a financing market that is focusing more and more on sustainability and climate issues.

Financial risks also include credit risks associated with accounts receivable, derivatives and short-term investments.

Management of the risk area

Good credibility is ensured by, among other things, the Group's Code of Conduct and sustainability policy, where noncompliance could have consequences under labour law. The Code of Conduct covers not just employees, but also partners such as suppliers and consultants. Compliance is ensured partly by internal and external audits, and partly by an effective management system and a whistleblower function.

There is also ongoing dialogue with our stakeholders in order to identify needs and expectations and, based on this, to design actions and coordinate messages that meet these needs and expectations.

Management of the risk area

Systematic data protection and cybersecurity work is conducted with a view to ensuring data security within the Group. In addition, there are activities to increase the awareness and capabilities of individual users of LKAB's IT systems in order to reduce the risk associated with the "human factor". Cybersecurity work is an area that is continually reviewed, developed and revised as methods of attack change.

Security efforts in connection with the risks of cyberattack as well as physical break-in and damage have intensified in 2022.

Management of the risk area

A new finance policy was approved by LKAB's Board of Directors in February 2022. Due to the sensitivity of LKAB's operations to economic fluctuations and the specific circumstances of the business, the Board of Directors has defined a new buffer capital requirement involving a specific liquidity ratio. The buffer capital has been established with a view to managing the increased financing risk that is considered to exist during the journey of transformation in order to ensure good forward planning of liquidity associated with special commitments in the business.

Under the Group's finance policy LKAB normally only hedges currency risk in accounts receivable. However, cash flow is analysed on an ongoing basis and, in conjunction with this, sensitivity analysis is performed based on changes in external factors such as exchange rates. In periods where there are expected to be high outflows, longer currency hedging may be considered. The foreign companies within the Group mainly operate in their local currencies in order to reduce currency exposure. Translation exposure is not normally hedged.

The finance policy also contains rules on rating new and existing customers as well as rules for other credit risks. Monitoring of compliance with the finance policy and analysis of external factors take place continuously, including in the ongoing reporting to the Audit Committee.

Sensitivity analysis

The sensitivity analysis below summarises LKAB's earnings sensitivity to a hypothetical change in volumes, prices and currencies. Changes in the SEK/USD exchange rate, market prices and delivery volumes have the greatest impact on earnings. In this analysis the delivery and price analysis refers to the Parent Company, and the remaining factors to the entire Group.



Group	Change %	Exposure, 2022	Effect on operating profit, 2022 (MSEK)		Exposure, 2021	Unit	Effect on operating profit, 2021 (MSEK)
			Unit				
Iron ore price	10	42,203	MSEK	4,208	45,520	MSEK	4,532
Dollar rate	10	4,195	MUSD	4,208	5,295	MUSD	4,533
Delivery volume	10	25.8	Mt	3,851	27.0	Mt	4,160
Costs	10	25,199	MSEK	2,520	21,542	MSEK	2,154





Climate-related financial risks and opportunities (TCFD)

In 2022 LKAB continued implementing the framework established by the Task Force on Climate-related Financial Disclosures (TCFD) initiative. TCFD is a market-driven initiative that has developed a framework of recommendations for voluntary and consistent reporting of climate-related financial risks and opportunities.

Governance, strategy and risk management

Efforts to prevent climate change and reduce the world's carbon emissions through industrial transformation are the basis of LKAB's long-term strategy. The risks and opportunities that climate change presents to the operations are therefore already to a large extent integrated into our business processes. By developing our reporting in accordance with TCFD recommendations, however, LKAB sees an opportunity to strengthen our position as a driving force for the transformation of our industry while also increasing transparency to our stakeholders.

During the year analysis was undertaken to investigate and assess climate risks and opportunities for two different climate scenarios, with LKAB's strategy being evaluated in a low-emissions and a high-emissions scenario. Scenario analysis aims to assess future risks and opportunities in order to identify and assess the potential consequences of future events under conditions of uncertainty. The scenarios are intended to shed light on key changes

within the chosen future period and draw attention to key factors driving developments within the selected scenario. The analysis helps to future-proof the business and build resilience in the wake of ever increasing climate change.

The climate scenarios used are based on, among other things, the scenarios produced by the UN's Intergovernmental Panel on Climate Change (IPCC). One scenario describes a future in which we succeed in limiting global temperature rise to 1.5–2°C above pre-industrial levels, in line with the Paris Agreement, and involves large-scale and immediate transition. The second scenario describes a situation in which transition has stalled and global temperature rise is limited to 3.5–5°C above pre-industrial levels, and represents a more "business as usual" scenario. The risks analysed were physical risks, both acute and chronic; transition risks in the form of regulatory, market, technological and brand risks; and liability risks. The opportunities from a resource, energy, product and market perspective were also analysed.

The next step is to manage the risks and opportunities identified during the scenario analysis, some of which have already been escalated to the strategic risk management process. Quantification of the effect on our financial key ratios for the different scenarios is also a possible next step.

Climate scenarios

Large-scale and rapid transition (RCP 2.6)

Scenario that leads to low emissions in line with the temperature goal of the Paris Agreement (+1.5–2 °C)

- Major and ongoing investments in products and businesses that contribute to reducing greenhouse gas emissions.
- Strong regulatory pressure in the form of, among other things, emission reduction requirements and higher carbon price.
- Extensive electrification, with fossil-free electricity production that meets increased needs.
- Regulations that enable/encourage transition to climate-efficient products and technologies.
- Increased demand for climate-efficient products and services.
- Moderate physical effects of climate changes.

Stalled transition (RCP 8.5)

Scenario that leads to high emissions not in line with the temperature goal of the Paris Agreement (+3.5–5 °C)

- Regulatory pressure on a par with that at present, with few or no further decisions/goals/actions to reduce emissions put in place.
- The price of carbon emissions rises marginally.
- Fossil energy remains the dominant type of energy.
- The need for electricity grows, but mainly within industry.
- The willingness to invest in climate-efficient technology, and the products produced, increase only to a limited extent.
- Severe climate effects and extreme weather are common.

The climate scenarios that LKAB takes as a starting point are based on data from, among others, the International Panel on Climate Change (IPCC), the Swedish Meteorological and Hydrological Institute (SMHI) and the International Energy Agency (IEA).

Large-scale and rapid transition

Risks

- Increased exposure to the electricity price and price volatility as a consequence of a rapid transition and increasing need for electricity.
- Authorities apply the regulations in a way that is not consistent.
- Disproportionate incentives/support structures for technological transition in which other actors/technologies are rewarded more than LKAB.
- That LKAB does not contribute sufficiently to transition in the eyes of stakeholders.

Opportunities

- Fossil-free processing of transition-critical raw materials and resource efficiency through a circular approach.
- Transparent and efficient permitting processes.
- Rapid technological development of fossil-free hydrogen.
- Attractive employer.

Impact on LKAB

- Processing of transition-critical raw materials such as iron ore, but also waste from the mine into rare earth elements and mineral fertiliser, promotes a circular business model and LKAB is able to contribute to Europe's growing need for transition-critical raw materials.
- Transparent and efficient permitting processes enable large-scale and efficient transformation, also positively impacting the necessary expansion of transmission grids and electricity production.
- Having a business centred on climate-efficient and fossil-free products that are deemed to be critical for society and for transition secures resilience.
- Disproportionate incentives/support structures for technological transition which risk impacting LKAB's competitiveness negatively if other choices of technology are rewarded.
- Should LKAB fail and not contribute sufficiently to transition in the eyes of stakeholders, this negatively impacts social acceptance, access to green capital and the ability to attract new talent.

Stalled transition

Risks

- Insufficient electricity production combined with high and volatile electricity prices in its wake as a result of fossil-free electricity production not being expanded at the rate demanded.
- Chronic climate effects and extreme weather that negatively impact customers and suppliers.
- Technological transition does not take place in a coordinated manner throughout the value chain.
- Unpredictable and inefficient permitting processes remain.
- Insufficient political and market steering towards products with lower emissions.

Opportunities

- LKAB's business centres on raw materials, other materials and products that are important to society but also critical for transition.
- Green companies attract more skills and talent, LKAB leads the transition of its industry and stands out among employers.

Impact on LKAB

- Operating a business centred on raw materials and products that are in demand and are judged to be critical to society strengthens resilience and the opportunity to continue to run stable operations.
- By developing in a green direction LKAB can attract the skills needed to drive the transition efforts, both new and existing.
- Slow and unpredictable permitting processes that slow the pace of the transition.
- Rising electricity prices and price volatility in the wake of insufficient expansion of fossil-free power production.
- Uncertain level of return for fossil-free technology if there is not a wider transition in society.
- Physical climate risks in the form of extreme weather could have very great consequences to the extent that critical logistics chains and materials flows are impacted, for example electricity production and electricity supply, if these have not been adapted to reduce vulnerability to extreme weather.

Summary

It will be important for LKAB to monitor closely the political response to climate change, particularly in Sweden and the EU, regardless of which climate scenario becomes reality; to actively monitor our position and adapt the pace of development to changes in the key variables in order to maximise the financial benefit and limit the financial risks going forward. At an overall level a low-emissions scenario is assessed to be more favourable for LKAB's transformation and future business.

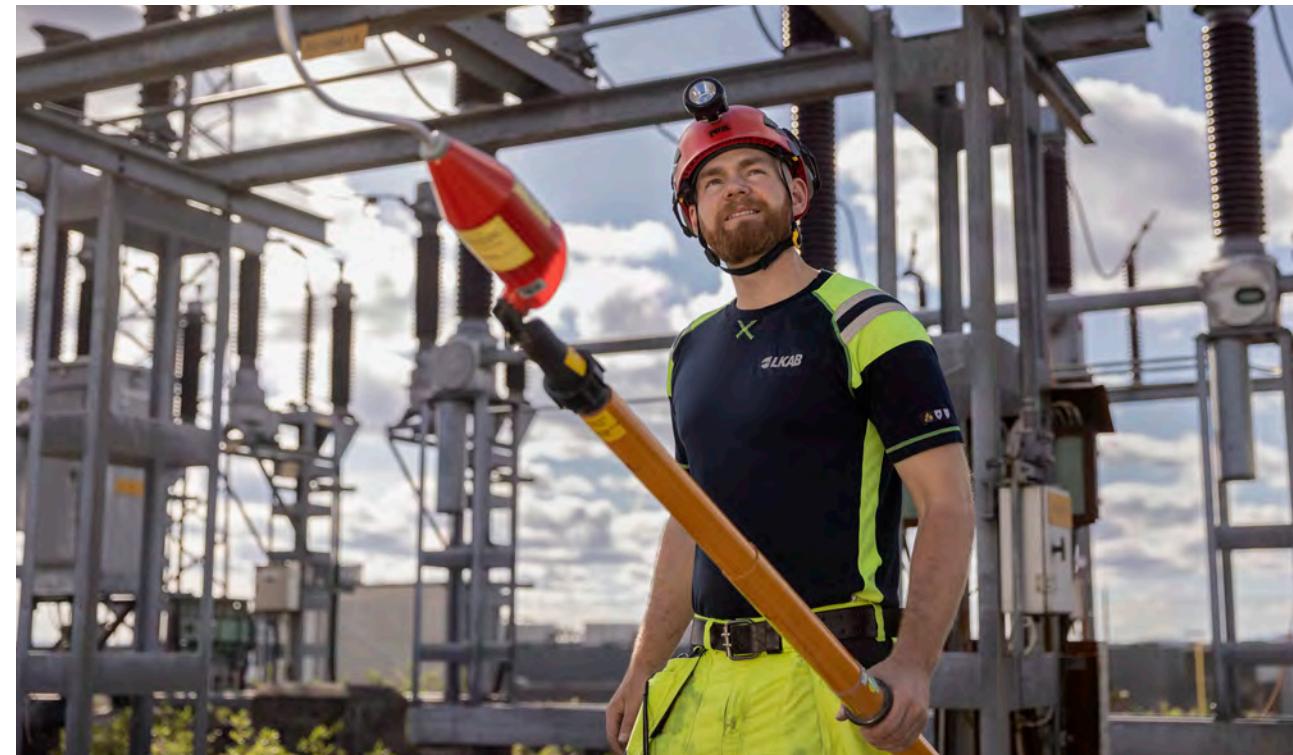
A high-emissions scenario, which is characterised by high electricity prices and a slower pace of expansion of fossil-free power production, may limit the plans for electrified hydrogen production and jeopardise the profitability of carbon-free sponge iron. High variation in electricity prices is at the same time an opportunity that LKAB can exploit by adapting to the electricity price and exploiting the time arbitrage in the price volatility. The important thing, however, is that the electricity price pressure over time is low and that the rate of expansion is high.

The majority of the risks and opportunities identified arise in both the scenarios analysed. LKAB will continue to produce materials and products that are critical for society but also for transition – something that is an opportunity in both scenarios, albeit a somewhat greater opportunity in the low-emissions scenario since demand for transition-critical materials and products is expected to increase. The ambition to lead the transformation of our industry remains in both scenarios, something that is expected to be a decisive factor in attracting and retaining the right talent. Risks associated with the management of environmental permits, the electricity price level and expansion of new electricity production exist in both scenarios but are assessed to be more likely in a high-emissions scenario.

The transition requires the environmental permitting processes to function more smoothly and faster than at present because LKAB's pace of change will be high.

Exactly when each risk and opportunity comes into effect varies between the different scenarios. Some are expected to need to be managed on an ongoing basis going forward, while others will become relevant in 20–30 years' time.

At the same time, the enormous task that lies ahead of LKAB in driving the climate transition of the steel industry must not be diminished. It is likely that many new risks and opportunities will present themselves along the way, and an agile and analytical approach will be a factor in success.



TCFD index

Governance	Strategy	Risk management	Indicators and goals
The Board's oversight of climate-related risks and opportunities, pages 59–63.	Climate-related risks and opportunities the organisation has identified, pages 11–12 and 44–54.	The organisation's processes for identifying climate-related risks, pages 11–12 and 44–54.	The organisation's indicators for evaluating climate-related risks and opportunities, page 16.
Management's role in assessing and managing climate-related risks and opportunities, page 46.	Impact of climate-related risks and opportunities on the organisation's business, strategy and financial planning, pages 44–54 and 41–43.	The organisation's processes for managing climate-related risks, pages 11–12 and 44–54.	Scope 1 and 2 emissions according to the Greenhouse Gas Protocol, page 34.
	Resilience of the organisation's strategy taking into consideration different climate-related scenarios, pages 10–16 and 44–54.	Integration of the above processes into the organisation's overall risk management, page 46.	Targets used by the organisation to manage climate-related risks and opportunities, page 16.



Corporate governance report

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Comments by the Chairman of the Board

Another turbulent year lies behind us – a year that we will remember mainly for Russia's invasion of Ukraine, which as well as causing human suffering also hit the global economy hard. Despite tough conditions it was a good year for LKAB as we made important progress in several areas and achieved strong financial results.

We began 2022 with cautious optimism and the hope that the pandemic would soon be behind us. But instead of the recovery we had hoped for, new challenges awaited us. We saw significant price rises for energy and raw materials, a historically high level of inflation and an uncertain economic situation. The combination of increased costs and lower iron ore prices is, of course, a strain. But despite this, demand for LKAB's highly upgraded iron ore products was good and we were able to report strong results for the full year.

The year has also underlined how important it is that we develop our mining operations. Nobody can have escaped hearing about the major industrial initiatives going on in the north of Sweden, where LKAB is an active driving force. It is important to remember that it is the mine that puts us in a position to take part in these projects. The mine is where we start from, and it is our foundation. To develop the mine we need to mine ore at greater depths. Following on from major successful exploration efforts, during the year we were able to present a deposit that gives us more mineable ore than we have ever had before.

Not only is this deposit essential for LKAB's long-term mining operations and our core business, we are also continuing preparations for increasing the value added by processing and for future production of carbon-free sponge iron. During the year LKAB's Board of Directors took the decision to begin preparations for the world's first hydrogen-produced sponge iron plant in Malmberget in Gällivare. The HYBRIT initiative is a major industrial breakthrough in which, together with Vattenfall and SSAB, we are developing the industrial processes required for a fossil-free value chain from mine to steel – in which sponge iron is key. By moving from blast furnaces to electric arc furnaces we leave behind the carbon footprint that steelmaking has until now caused. Another milestone in the project was reached with the commissioning of a pilot facility for storage of fossil-free hydrogen.

In transitioning to sponge iron LKAB is taking a major step forward for the climate, by continuing a long tradition of developing and processing the products we get from the iron ore in the mines. That is how we build competitiveness and it is how we have worked through the years – by continually increasing the value added by processing, from fines to pellets and for an ever-increasing iron content, to achieve an increasingly clean product. It is this development that has resulted in the sought-after high grade iron ore products that we supply to the market today.

Looking ahead, we will continue the transformation work that is so important for our business and for the climate. But the world is facing an uncertain situation with considerable challenges. The HYBRIT technology is based on having sufficient fossil-free electricity. If the high electricity prices are here to stay or even increase further, this would be a growing threat to the operations and would put our industrial transformation under pressure. Not only is more fossil-free electricity needed, but it must also be competitively priced. In addition, we need to recruit more people with the right skills needed to be involved in and contribute to our efforts. Skills supply is a challenge we share with other actors in the region.

We have long engaged with our operating locations, Kiruna and Gällivare, as part of the ongoing urban transformation, and our ambition is for these cities to continue to develop into attractive communities to be proud of – communities where people want to stay and where more people choose to move to. To anyone who has not yet been here and seen the new communities that are emerging, I would like to extend a warm welcome. This is where we are building the industry of the future.

"Looking ahead, we will continue the transformation work that is so important for our business and for the climate. But the world is facing an uncertain situation with considerable challenges."



Luleå, 28 March 2023

Göran Persson
Chairman of the Board

Corporate governance structure

LKAB's owner, the Swedish state, is ultimately responsible for making decisions on corporate governance. At the Annual General Meeting the owner (shareholder) appoints Board members, the Chairman of the Board and an auditor. The Board is responsible to the owner for the company's organisation and the administration of its affairs. The diagram below summarises how governance and control are organised at LKAB. The company functions are described in more detail on pages 57–64 of the corporate governance report.

1. Annual General Meeting

The AGM is LKAB's highest decision-making body and the forum at which the shareholder formally exercises its influence. Among other things, the AGM resolves on adoption of the income statement and balance sheet, discharge from liability of the Board, the election of Board members and the auditor, financial goals, the remuneration of Board members and the auditor, and guidelines for the remuneration of senior executives.

2. Board nominations

LKAB does not have a nomination committee. The preparation of decisions on the nomination of Board members instead takes place through a Board nomination process in accordance with the State Ownership Policy. The work is coordinated by the department for state-owned companies at the Swedish Ministry of Finance (previously, until the end of 2022, at the Ministry of Enterprise and Innovation). See deviations from Code rules on page 58.

3. Auditor

The auditor reports to the shareholder at the AGM and provides an audit report on the Annual Report and the Board's administration of the company. The auditors report regularly, verbally and in writing, to the Audit Committee on how the audit was conducted and on the auditor's assessment of order and control at the company. A summary of the annual audit is also submitted to the full Board.

4. Board of Directors

The Board of Directors is responsible for the company's organisation and manages the company's affairs on behalf of the owner. The work of the Board includes continuously monitoring the company's financial situation and ensuring that the company is organised so that its bookkeeping, asset management and other financial circumstances are controlled in a satisfactory manner. The Board also appoints the President.

5. Remuneration Committee

The Remuneration Committee is involved in preparing the Board's proposed guidelines for remuneration of senior executives and the company's remuneration report, prepares decisions on the President's terms of employment and supports the President's work on determining the salaries of senior executives. The committee also works on succession planning.

6. Strategy and Urban Transformations Committee

The committee prepares and follows up matters relating to the company's strategy and the long-term conditions for mining operations, and monitors that the company is managing the urban transformation efficiently and appropriately.

7. Audit Committee

The Audit Committee oversees financial reporting by reviewing all critical accounting matters and other factors that could affect the quality of financial reporting content. The committee monitors compliance with LKAB's finance policy, including the company's liquidity management, borrowing and hedging. The committee also establishes Investment Guidelines for asset management and monitors compliance with these.

8. President

The President is appointed by the Board of Directors. Besides instructions from the Board, the President is subject to the Swedish Companies Act and various other laws and regulations relating to the company's accounting, asset management and operational control.



Governing documents, guidelines and regulations

Basic regulations

The basis for corporate governance at LKAB is Swedish legislation, the Swedish Corporate Governance Code (the Code), the State Ownership Policy and principles for state-owned enterprises ("State Ownership Policy") and internal governing documents. In the State Ownership Policy and principles for state-owned enterprises, the government describes missions and objectives, applicable frameworks and its position on important matters of principle related to corporate governance in state-owned companies; see also www.government.se.

Code of Conduct

The Code of Conduct describes how we at LKAB are to conduct ourselves towards each other, towards our business partners and towards the community around us. It is based on LKAB's values – Committed, Innovative and Responsible (CIR) – and on international guidelines and our wish to set an example both in business and in the community. The Code of Conduct is to be complied with by all employees of LKAB and also by our business partners. We want our suppliers to also lead the field when it comes to ethics, the work environment, equality and diversity, and therefore we require that they comply with both our Basic Requirements and our Supplier Code of Conduct.

Policy documents

Sustainability Policy

LKAB's mission is to utilise iron ore and mineral resources in a responsible way and to secure lasting competitiveness and long-term value creation. Our goal is a business that is sustainable in the long term, in which diversity is an asset. We will get there through zero accidents and illness, by showing respect for human rights and by minimising negative impact and energy consumption.

Risk Management Policy

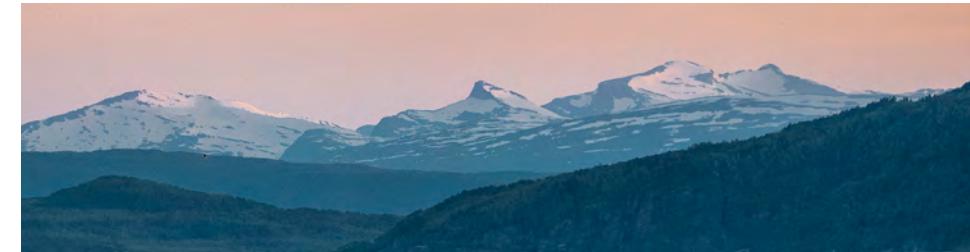
Through effective risk management work we create the best conditions for achieving our strategic goals. A systematic way of working creates understanding of and makes us equipped to identify, prioritise, manage and monitor our risks.

Finance Policy

The Finance Policy is to ensure that all the Group's financial risks are identified and managed according to risk appetite, and that financing activities support the business plan adopted. The policy sets out the overall framework for financing activities as well as how responsibility for the activity is allocated and how good internal control is ensured.

Insider Policy

The Insider Policy aims to ensure that LKAB manages inside information correctly and that insider trading does not occur.



Deviations from the Code

In accordance with the State Ownership Policy, LKAB applies the Swedish Corporate Governance Code (the Code). LKAB's governance for the 2022 financial year differs from the requirements stated in the Code on the following points.

Code rule	Deviation and explanation/comment
Item 1.1 Publication of information on shareholder's right of initiative.	The purpose of this rule is to give shareholders the opportunity to prepare for the AGM in a timely manner and to have a matter included in the notice of the AGM. At wholly state-owned companies there is no reason to apply this rule and therefore no information is published concerning the shareholder's right of initiative.
Item 2 The company shall have a nomination committee that represents the company's shareholders.	Due to its ownership structure, LKAB does not have a nomination committee. The board nomination process is carried out in accordance with the principles described in the State Ownership Policy and is coordinated by the Ministry of Finance (previously, until the end of 2022, by the Ministry of Enterprise and Innovation). Proposals for the election of the auditor and for auditor's fees are presented by the Board and adopted by the company, applying the EU Audit Regulation. Accordingly, the references to the nomination committee in items 1.2, 1.3, 4.6, 8.1 and 10.2 of the Code are also not applicable.
Item 10.2 The corporate governance report shall contain information that indicates whether Board members are independent of major shareholders.	This provision is aimed primarily at protecting minority shareholders in companies with dispersed ownership. At wholly state-owned companies there is no reason to apply this rule.

LKAB's values and policies are described in more detail on our website lkab.com.

Shareholders and Annual General Meeting

Shareholders

LKAB is wholly owned by the Swedish state. The Government Offices of Sweden administers companies through the special organisation for administration of state-owned companies that is part of the Government Offices of Sweden. Until the end of 2022 the department for state-owned enterprises fell under the Ministry of Enterprise and Innovation, after which it was transferred to the Ministry of Finance.

To achieve active and professional corporate administration the owner has developed a corporate governance model that includes a number of tools and processes. In the State Ownership Policy the government describes missions and objectives, applicable frameworks and important matters of principle related to corporate governance in state-owned companies. The State Ownership Policy also contains principles for external reporting as well as principles for remuneration and other terms of employment for senior executives.

Establishing and monitoring financial objectives is another important governance tool that the state has as owner. LKAB's financial goals were decided by the owner at an extraordinary general meeting held in 2021 and relate to profitability, capital structure and dividend; for the goals and how they are monitored see page 16.

Annual General Meeting 2022

LKAB's Annual General Meeting took place on 28 April 2022. Having been held digitally for the past two years because of the coronavirus pandemic, in 2022 the Annual General Meeting was held in the LKAB-salen conference hall at Luleå University of Technology. The owner was represented by Åsa Mitsell of the Ministry of Enterprise and Innovation. The meeting was chaired by Chairman of the Board Göran Persson. The Annual General Meeting was open to the public and directly after the meeting some short seminars were held for the public concerning the challenges and opportunities that LKAB's transformation involves.

Resolutions passed at the Annual General Meeting included the following:

- A dividend of SEK 17,757 per share, representing a total of SEK 12,430,000,000.
- Re-election of all the Board members: Göran Persson, Gunnar Axheim, Catrin Fransson, Eva Hamilton, Bjarne Moltke Hansen, Lotta Mellström, Ola Salmén, Gunilla Saltin and Per-Olof Wedin.

- Re-election of Göran Persson as Chairman of the Board.
- Remuneration of SEK 700,000 to the Chairman of the Board and SEK 315,000 to the other Board members elected at the AGM. Remuneration is not paid to Board members who are employed at the Government Offices, nor to employee representatives.
- Re-election of the registered accounting firm KPMG AB as auditor for a period of one year.
- Resolution on unchanged guidelines for remuneration and other terms of employment for senior executives.

The minutes of the 2022 AGM and of other recent years' general meetings are available on LKAB's website at lkab.com.

Board nominations

LKAB's Group management has adopted a Group HR guideline stating that diversity and equal opportunity are important factors in recruitment. The recruitment process is to be conducted systematically using transparent selection criteria, with a high level of integrity and free from any kind of discrimination. The guidelines are applied in the recruitment of senior executives and for all other recruitment across the Group. The owner follows the State Ownership Policy and applies this policy's board nomination process and principles for the composition of the board when nominating members. The work is coordinated by the department for state-owned companies at the Swedish Ministry of Finance (previously, until the end of 2022, at the Ministry of Enterprise and Innovation). LKAB's expertise requirements are analysed based on the company's operations, situation and future challenges. Diversity aspects such as ethnic and cultural background are among the factors considered. The government aims for gender balance both on individual company boards and at portfolio level. In order to be considered for a Board position, a person must have a high level of expertise relevant to current business operations, business development, industry expertise, financial matters, sustainable enterprise or in other relevant areas. They must also have a high level of integrity and the ability to act in the best interests of the company.

Auditor

On behalf of the owner, the auditor independently reviews the administration by the Board and President as well as the company's annual report and accounts. The auditor also performs a review of the company's interim report for the third quarter and of the company's sustainability report. The auditor is elected by the AGM. The work of the auditor is evaluated annually.

At the Annual General Meeting on 28 April 2022 KPMG AB was re-elected as auditor for a period of one year. Authorised public accountant Helena Arvidsson Älgne is the chief auditor. The remuneration paid to the auditor is specified in Note 8 on page 94 of the Annual Report.

Board of Directors

Composition and division of duties of the Board of Directors

LKAB's Articles of Association state that the company's Board of Directors shall consist of no fewer than six and no more than eleven AGM-elected members, excluding deputies. The Board consists of nine AGM-elected members: four women and five men. One of the AGM-elected members is employed at the Government Offices of Sweden. Employees are represented by three members and three deputies in accordance with the Board Representation (Private Sector Employees) Act. Board members have broad and extensive experience from trade and industry, and most maintain other duties as members of the boards of large companies. To avoid conflicts of interest the members of the Board report other assignments outside the company to the Chairman of the Board. The members of the Board are presented on pages 65–66. The Board annually establishes rules of procedure for the Board, instructions for the President and instructions for financial reporting. These documents define the basic divisions of responsibility and powers between the Board, Board committees, the Chairman and the President.

Chairman of the Board

The duties of the Chairman are set out in the Swedish Companies Act, the Code and the State Ownership Policy. They are further specified in the Board's rules of procedure. The Chairman's duties include organising and leading the work of the Board, ensuring that the Board fulfils its duties and that its decisions are implemented effectively, and ensuring that the Board evaluates its own work annually. The Chairman is not a member of Group management.

Coordination responsibility is a special task incumbent on those who chair state-owned companies. This responsibility means that, through the Chairman, the Board is to coordinate its views in writing with representatives of the owner when the company faces important decisions such as substantial strategic changes in the company's operations, major acquisitions, mergers or disposals, or decisions which involve significant changes to the company's risk profile or balance sheet.

The work of the Board of Directors in 2022

In 2022 the Board held 10 meetings, including one extra Board meeting and one constituent Board meeting. The meetings were held in Luleå and Stockholm, as well as digitally. The meetings follow a set agenda to ensure the Board's information needs are met. The first meeting of the year is usually an annual accounts session attended by the auditor. At this meeting, the Board deliberates with the company's auditors without the President or other members of Group management being present. At the second Board meeting the Annual and Sustainability Report is discussed. The third to eighth meetings tend to be devoted to operational, strategic and personnel matters, among other things, and to market development. At the last Board meeting of the year decisions are made on the business plan and budget for the coming year.

The Board's work in 2022 was marked by an unstable geopolitical situation and a volatile iron and steel market. Important agenda matters during the year were associated with LKAB's transformation for the future. The goal is that, together with Swedish industry, we will be at the forefront of the global transition to sustainable development and reduced climate impact. The intention is to move a step forward in the value chain and replace pellets with sponge iron (DRI/HBI) produced using carbon-free hydrogen. Research results achieved within the HYBRIT initiative – a collaboration between LKAB, SSAB and Vattenfall – indicate that sponge iron that has been direct-reduced with hydrogen using HYBRIT technology has very good metallurgical properties. Competitive mining at greater depths is also to be ensured through automation, digitalisation and new technology solutions, and the business is to be broadened by the extraction of valuable by-products such as rare earth elements and phosphorous.

Among other things, in 2022 the Board approved capital expenditure of NOK 400 million in REEtec AS, making LKAB the principal shareholder in this Norwegian company. LKAB plans to extract rare earth elements as a by-product of the iron ore mining and together with REEtec AS, which has developed innovative sustainable technology for separation of rare earth elements, the companies can create the basis for a strong and sustainable Nordic value chain for rare earth elements.

The urban transformation in Kiruna and Gällivare is in an intense phase, resulting in a number of matters relating to urban transformation being put on the Board's agenda. 1 September saw the grand opening of Kiruna's new city centre, a milestone in Kiruna's urban transformation.

Other pressing matters in 2022 included managing the company's investment affairs, good cost control, stable production and systematic maintenance, legally secure and efficient environmental permitting processes, as well as work to reinforce the safety culture and lower the accident rate throughout the LKAB Group. The annual review of LKAB's governing documents was performed. The Finance Policy underwent a major revision with a view to ensuring that all the Group's financial risks are identified and managed, and that financing activities support the business plan adopted. The Group's Sustainability Policy was also updated during the year. The company's auditors presented an overview during the year of forthcoming rules on sustainability reporting, focusing on the EU's new Corporate Sustainability Reporting Directive (CSRD).

Deputies to employee representatives also participate in Board meetings. The President is not a Board member, but participates in Board meetings. Board member attendance at 2022 Board and committee meetings is shown in the table on page 63.

Committees

According to the State Ownership Policy, it is the Board's responsibility to assess the need for establishing special committees. LKAB's Board has established an Audit Committee, a Strategy and Urban Transformations Committee, and a Remuneration Committee. Committee work is of a preparatory and advisory nature. However, in special cases the Board may delegate decision-making powers to the committees. Committee members and chairs are appointed at the constituent Board meeting that follows the AGM each year.

Audit Committee

The Audit Committee has five members: Ola Salmén (chair), Catrin Fransson, Lotta Mellström, Per-Olof Wedin and Dan Hallberg. The meetings are also attended by the head of accounting, the Chief Financial Officer and the company's auditor. The committee is tasked with quality assurance of LKAB's financial reporting and with ensuring that the company has appropriate risk management, complies with established principles for financial reporting and internal control, and that LKAB undergoes a qualified, effective and independent audit. The committee also establishes Investment Guidelines for asset management and monitors compliance with these. The Audit Committee is also responsible for purchases of audit services and prepares a reasoned proposal for the election of an auditor that is put to the Board of Directors for approval, and also prepares the Board's proposal for the appropriation of

earnings for the financial year. The committee's duties also include monitoring that the company's liquidity management, financing and hedging activities for currency (USD), iron ore prices and electricity prices comply with the Finance Policy passed by the Board, and otherwise preparing financial matters that require Board approval. In addition, the Audit Committee's activities in 2022 included a review of risks and controls in LKAB's asset management and a review of the company's principles and methods for evaluating and monitoring investments. In June the committee visited HYBRIT's pilot facility at Svartön in Luleå.

In the course of the year the Audit Committee held seven meetings.

Strategy and Urban Transformations Committee

The Strategy and Urban Transformations Committee has five members: Göran Persson (chair), Gunnar Axheim, Eva Hamilton, Bjarne Moltke Hansen and Anders Elenius. The meetings are also attended by the President and the Senior Vice President of Urban Transformation. The duties of the Strategy and Urban Transformations Committee include monitoring the company's strategy work and its progress on priority activities, discussing in greater depth the conditions for creating a company that is sustainable and competitive in the long term, monitoring the company's management of matters of particular strategic importance for mining, such as access to land and efficient and legally secure permit processes, as well as preparing matters relating to urban transformation and monitoring the company's management in this area. Other matters on the committee's agenda in 2022 included the preparation and follow-up of the update on the company's mineral reserves and mineral resources, progress within the HYBRIT initiative, future power supply and acquisition analysis, such as for the company's investment in the Norwegian company REEtec AS.

The committee held six meetings during the year.

Remuneration Committee

The Remuneration Committee has four members: Göran Persson (chair), Lotta Mellström, Gunilla Saltin and Tomas Larsson. The Senior Vice President of Human Resources also attends the meetings.

The Remuneration Committee's duties include preparing and evaluating the remuneration and other terms of employment for the President and other members of the Group management team, participating in the preparation of the Board's proposed guidelines for remuneration to senior executives and the company's remu-

eration report, monitoring the company's process for succession planning and talent management, and annually evaluating the company's employee incentive programme.

The Remuneration Committee held four meetings during the year.

Evaluation

Evaluation of the Board of Directors

The Board's work is evaluated once a year with questions on how the Board as a whole and the Board members individually fulfil their duties. This evaluation is used in the Board's internal work. The Chairman is responsible for following up the results so that they can form a basis for discussions and improvements. In 2022 the evaluation was carried out using an internal survey. The results and analysis of the evaluation were discussed by the full Board at its meeting in December 2022. The Chairman of the Board notifies the owner of relevant results of the evaluation ahead of work related to the election of new Board members.

Evaluation of the President

The evaluation of the President's performance is a fundamental task of the Board of Directors. The Board continually assesses the President's work and has regular deliberations at Board meetings where executive management are not present. In 2022 the evaluation was carried out using an internal survey. The results and analysis of the evaluation were discussed by the full Board at its meeting in December 2022.

Remuneration principles

Guidelines

The 2022 AGM approved remuneration levels for Board members and auditors, and also adopted guidelines for remuneration of senior executives which accord with the government's principles for compensation and other employment terms for senior executives at state-owned enterprise dated 27 February 2020. The total remuneration is based on fixed remuneration, benefits and pension. No variable remuneration is paid to senior executives in Group management. The guidelines passed by the AGM for 2022 and reporting on the remuneration paid to senior executives can be found in Note 7 on pages 93–94. LKAB has also published a separate remuneration report, which is available on its website at lkab.com.

The Board is proposing that the AGM on 27 April 2023 adopts unchanged guidelines for remuneration of senior executives, these being in accordance with the government's principles for compensation and other employment terms for senior executives

at state-owned enterprises dated 27 February 2020. The Board's proposal is designed to ensure that LKAB can offer senior executives remuneration that is competitive, capped, reasonable and appropriate. The total remuneration package is to be moderate and well-balanced, and must contribute to good ethics and a good corporate culture. The guidelines cover both LKAB and all its subsidiaries.

Remuneration to the Board of Directors

Total fees to the Board members elected by the AGM amounted to SEK 3,315,333 in 2022. See Note 7 on pages 93–94.

Incentive programme

LKAB's 2022 incentive programme is designed to stimulate involvement and reward important factors in the Group's success. It provides added motivation for fulfilling targets and implementing the LKAB Group's strategy, of which sustainability is an integral part. Input parameters include monitoring performance against targets for production and delivery volumes, a work environment index, costs and profitability.

The incentive programme is divided into two parts: a Group-wide component, and a component linked to each business area and group-wide departments. The maximum remuneration is SEK 60,000 per person and year. The remuneration is only paid if the LKAB Group reports a profit for the year. Senior executives are not included in the incentive programme.

LKAB's management

Group management and Group management structure

The President, who is also the Chief Executive Officer of the LKAB Group, is responsible for day-to-day management in accordance with the Swedish Companies Act. General responsibilities are stated in the President's instructions and the Board's rules of procedure.

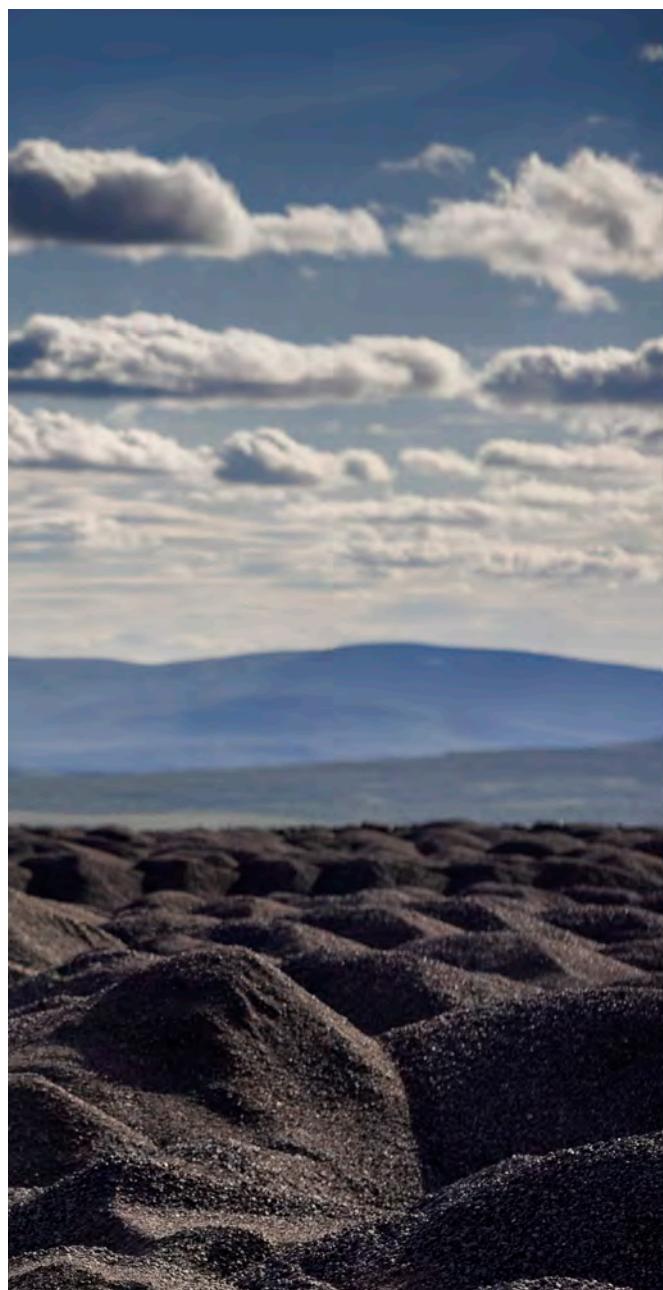
During 2022 the following changes were made to LKAB's Group management: the former HR and Sustainability department was split into an HR department and a department for Environment and Sustainability. To intensify the focus on the strategy and the road ahead, from March 2023 the department for Strategy and Business Development will be included in the Group management team. Exploration forms part of the Iron Ore business area with effect from 2022.

For overall management of the Group, the CEO has established a Group management team that focuses on the overall direction of the Group. Group management meets monthly to address matters



of importance to the Group and to prepare matters that are to be dealt with by the Board. The CEO also has monthly operational follow-up meetings with each business area and Group function to discuss matters such as results, forecasts, investments, progress towards targets set, significant events and current challenges. The CEO also has a more in-depth follow-up meeting with the management team of each business area three times a year.

Information on members of Group management can be found on page 67.



The work of the Board of Directors in 2022

Q4

December

Decisions on business plan and budget for 2023.
Review of evaluation of the Board of Directors and of the President for 2022.

November

LKAB becomes principal shareholder of REEtec AS, a Norwegian company that has developed innovative and sustainable technology for separation of rare earth elements.

October

Adoption of interim report for Q3. Investment decision on construction of homes in Kiruna's new city centre.

Q3

September

Grand opening of Kiruna's new city centre, a milestone in the city's urban transformation.

August

Adoption of interim report for Q2.

Q1

February

Adoption of the year-end report. Review of 2022 audit. Review of the Group's governing documents and decisions on new policy documents.

March

Approval of Annual and Sustainability Report.

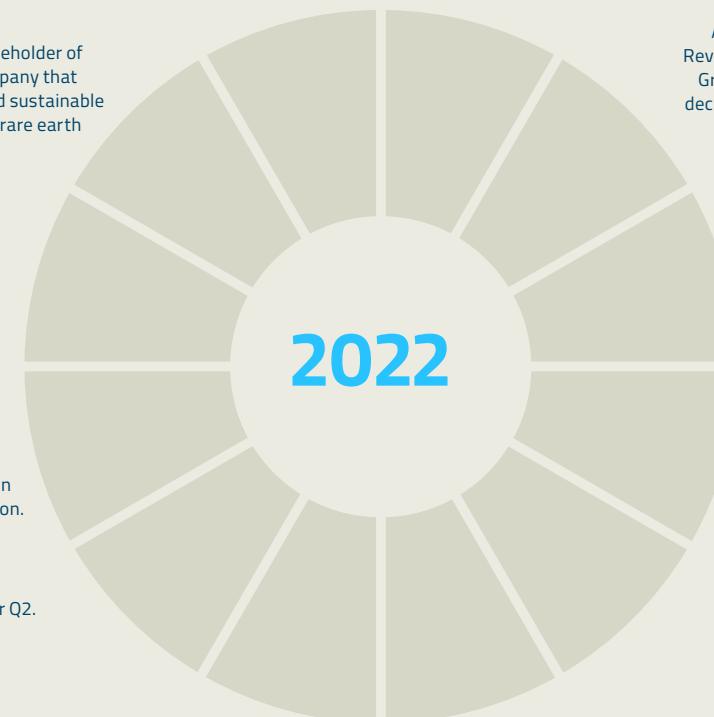
Q2

April

Adoption of interim report for Q1. Investment decision on replacement of and increase in ore cars. Annual General Meeting, including decision on dividend of SEK 12.43 billion. Constituent Board meeting.

June

Decisions on updated strategy.



Board meetings 2022

	14/2	25/3	28/4	Constituent	19/5	16/6	12/8	24/8	27/10	14/12
Göran Persson	■	■	■	■	■	■	■	■	■	■
Gunnar Axheim	■	■	■	■	■	■	■	■	■	■
Anders Elenius	■	■	■	■	■	■	■	■	■	■
Catrin Fransson	■	■	■	■	■	■	■	■	■	■
Eva Hamilton	■	■	■	■	■	■	■	■	■	■
Bjarne Moltke Hansen	■	■	■	■	■	■	■	■	■	■
Tomas Larsson	■	■	■	■	■	■	■	■	■	■
Lotta Mellström	■	■	■	■	■	■	■	■	■	■
Ola Salmén	■	■	■	■	■	■	■	■	■	—
Gunilla Saltin	■	■	■	■	■	■	■	■	■	■
Per-Olof Wedin	■	■	■	■	■	■	■	■	■	■
Björn Åström	■	■	■	■						
Peter Nordström	■	■	■	■	■	■	■	■	■	■
Emil Lantto	■	■	■	■	■	■	■	■	■	■
Stefan Tallfjärd	■	■	■	■	■	■	■	■	■	■
Dan Hallberg							■	■	■	■

Audit Committee 2022

	9/2	18/3	21/4	13/6	9/8	20/10	12/12
Ola Salmén	■	■	■	■	■	■	■
Catrin Fransson	■	■	■	■	■	■	■
Lotta Mellström	■	■	■	■	■	■	■
Per-Olof Wedin	■	■	■	■	■	■	■
Dan Hallberg					■	■	
Björn Åström	■	■	■				

Strategy and Urban Transformations Committee 2022

	31/1	4/4	3/6	10/8	14/10	2/12
Göran Persson	■	■	■	■	■	■
Gunnar Axheim	■	■	■	■	■	■
Eva Hamilton	■	■	■	■	■	■
Bjarne Moltke Hansen	■	■	■	■	■	■
Anders Elenius	■	■	■	■	■	■

Remuneration Committee 2022

	25/3	8/6	10/8	2/12
Göran Persson	■	■	■	■
Lotta Mellström	■	■	■	■
Gunilla Saltin	■	—	■	■
Tomas Larsson	■	■	■	■

■ Present — Absent □ Had left/not yet joined the Board

Internal control over financial reporting

The Board's responsibility for internal control over financial reporting is regulated by the Swedish Companies Act, Annual Accounts Act and Corporate Governance Code. The Board has overall responsibility for financial reporting, and its rules of procedure govern the internal division of duties of the Board and Audit Committee. Work on internal control over financial reporting within LKAB is based on the five internal control components below.

Control environment

LKAB's internal control structure is based on a defined division of responsibilities between the Board, Board committees and the President. The internal control structure is also based on the Group's organisation and the way business is conducted, including well-defined roles and responsibilities, delegation of powers, governing documents such as policies, guidelines and instructions, and clearly defined management processes. The Board and management review the Group's governing documents each year for the purpose of ensuring good internal governance and control and that the structure and content of the Group's governing documents are clear. In February 2022 a revised Finance Policy for the Group was adopted. The aim of the revision was to enhance management of financial risk associated with LKAB's planned transformation. The

most important elements of the control environment for financial reporting are dealt with in the Group's governing documents for accounting, financial transactions and regulation of the division of authority. Group instructions and systems for the presentation and consolidation of the Group's financial statements aim to ensure the accuracy of its financial reporting.

Risk assessment

Under LKAB's Risk Management Policy a comprehensive risk analysis is carried out annually for financial reporting at Group level and for each business area. Based on the comprehensive risk analysis, priority processes are identified and worked on in a structured way through process mapping, including documenting risks and controls. The purpose of this is to ensure ongoing management and monitoring of risks identified. In 2022 a number of priority areas were identified, including accounting matters associated with energy and raw materials, ore revenues and remediation.

Control activities

In addition to the Board and its Audit Committee, the management teams in the Group are also general control bodies. The business processes are designed to ensure that any deviations in the financial reporting are prevented or detected and rectified by controls built into the processes. Control activities include everything from review of performance outcomes at management team meetings to specific account reconciliation and analysis at various levels in the day-to-day processes for financial reporting.

Information and communication

Information on steering documents such as policies, guidelines and instructions is available on LKAB's intranet. Changes to instructions for financial reporting are updated regularly and communicated to the functions and operations concerned. The Group's central accounts function is tasked with ensuring the application of Group-wide instructions for financial reporting and with identifying and communicating on weaknesses and areas for improvement in financial reporting processes.

Monitoring activities

Business processes that are judged to have a material impact on financial reporting are monitored continually, for example by performing risk analysis or based on previously identified weaknesses or deviations. In 2022 ongoing audits of standardised controls were carried out according to plan. An extended audit of asset management was also carried out, with continued development of the procedures for internal governance and control planned in 2023. The results of reviews performed are fed back to the operations concerned and actions decided on are monitored on an ongoing basis.

LKAB has an internal control function that is responsible for the framework for internal control over financial reporting. The function reports to the Chief Financial Officer and presents matters relating to internal governance and control at the meetings of the Audit Committee.

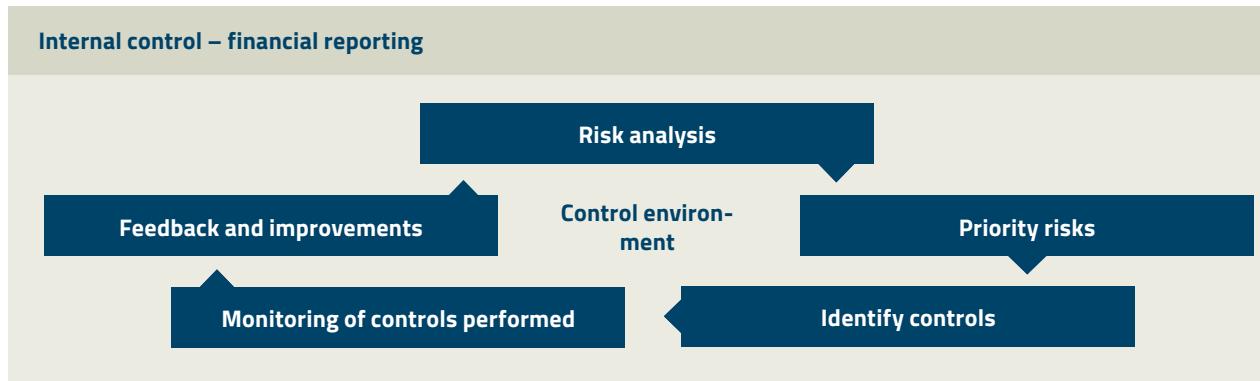
The structure for monitoring internal control that currently exists at LKAB is deemed generally to meet the Board's requirements. In 2023 an internal audit function will be introduced using a contracted internal audit service provider, which in 2023 will focus primarily on asset management. The decision on an internal audit function is reviewed annually by the Board.

Luleå, 28 March 2023

The Board of Directors, through the Chairman

Göran Persson

Internal control – financial reporting





Board of Directors

1. GÖRAN PERSSON

Chairman of the Board

Board member since: 2017

Education: Studied sociology and political science at Örebro University College 1969–1971

Background: Prime Minister of Sweden 1996–2006, chairman of the Council of the EU 2001, Swedish Finance Minister 1994–1996, Swedish Minister for Schools 1989–1991, leader of the Swedish Social Democratic Party 1996–2007, Chairman of the Board at Sveaskog AB 2008–2015, board member at Ålandsbanken 2015–2019.

Other directorships: Chairman of Swedbank AB and GreenGold Group AB.

2. GUNNAR AXHEIM

Board member since: 2017

Position: CEO Axheimconsult AB.

Education: MSc Engineering, Luleå University of Technology

Background: Head of BU Vattenfall Hydro and President Vattenfall Vattenkraft 2007–2013. Head of BU Vattenfall Tjänster 1998–2007. Managerial positions at Boliden 1989–1998, Holmen 1986–1989 and LKAB 1976–1986.

Other directorships: Chairman of the Board at Svenska Kraftnät Gasturbiner AB and GeoVista AB. Member of the board of Expanderå i Norrbotten AB.

3. CATRIN FRANSSON

Board member since: 2021

Education: MBA, Luleå University of Technology, Senior Executive Programme, London Business School

Background: CEO Svensk Exportkredit (Swedish Export Credit Corporation) 2014–2021. Swedbank 1997–2014, including in senior positions such as head of the Swedish Banking Division and Group Products Division.

Other directorships: Chairman of the Board at Swedfund International AB.

4. EVA HAMILTON

Board member since: 2015

Education: Dag Hammarskjöld College, Economics, University of Uppsala 1974, Bachelor's Programme in Journalism, Stockholm University 1976

Background: Chairman of the Board at Radiotjänst i Kiruna 2006–2015. Previous directorships at Fortum Oyj 2015–2021, Lindex 2015–2019 and Stockmann 2019–2021. CEO at SVT 2006–2014. Head of SVT Fiction 2004–2006. Head of SVT News and Sport 2000–2004. Journalist at Sydsvenska Dagbladet, Sundsvalls Tidning, Aftonbladet, SvD, Dagens Industri and Rapport/SVT. Brussels correspondent 1993–1996.

Other directorships: Chairman of the Board at Luleå University of Technology, the Swedish Film & TV Producers' Association and Nekiko Media AB. Board member at Bonnier News AB, Bonnier News Local AB, Expressen/Life Style AB and Yrkesnämnden för film och TV (Screen Skills Committee Sweden).

5. LOTTA MELLSTRÖM

Board member since: 2018

Position: Senior advisor and corporate administrator within the department for state-owned companies at the Ministry of Finance.

Education: MSc Business and Economics, Lund University

Background: At the Swedish Government Offices since 2001. Analyst within the department for state-owned companies at the Ministry of Enterprise and Innovation/Ministry of Finance (2001–2008), management consultant Resco AB (2000–2001), controller Sydkraft Försljning AB (1998–2000), management trainee and controller positions within the ABB group (1993–1998). Other directorships: Board member at Swedavia AB and Jernhusen AB.

6. BJARNE MOLTKE HANSEN

Board member since: 2016

Education: Engineer (BSc), Danish Academy of Engineering.

Background: Group Executive Vice President FLSmidth & Co. 2002–2017, President Aalborg Portland Holding A/S 2000–2002, President Cembit Holding A/S 1995–2000, various managerial positions at Unicon A/S 1984–1995.

Other directorships: Chairman of the Board at Aalborg Portland Holding A/S, Bladt Industries A/S, RMIG A/S, Pindstrup Mosebrug A/S, Randers Tegl A/S and Aasted ApS. Board member at PPC Ltd and Danish SGD Investment Fund, Investment Committee.

7. OLA SALMÉN

Board member since: 2016

Education: MBA, Stockholm University

Background: CFO Sandvik AB, Vin & Sprit AB and Adcore AB. Finance Director Handelsbanken Markets. Senior positions in finance and controlling within the groups Swedish Match and Stora.

Other directorships: Board member at Arla Plast AB.

8. GUNILLA SALTIN

Board member since: 2017

Position: CEO Uncoated Fine Paper, Mondi Group

Education: MSc in Chemical Engineering KTH Royal Institute of Technology, Stockholm, PhD Chemical Engineering University of Idaho, MBA Stockholm School of Economics

Background: Södra Group 2000–2019, including as Executive Vice President Södra Cell and Site Manager Södra Cell Värö. Research engineer and process engineer MoDo 1994–2000.

Other directorships: –

9. PER-OLOF WEDIN

Board member since: 2018

Education: MSc in Engineering, KTH Royal Institute of Technology, Stockholm

Background: President and CEO Sveaskog AB 2011–2019, CEO Svevia 2008–2011, head of Stora Enso's Uncoated Magazine Papers and Pulp division and its Transport and Distribution department 2001–2008, CEO Stora Enso Grycksbo AB 1998–2001. Senior positions within SCA and Modo 1982–1998.

Other directorships: Chairman of the Board at Skogssällskapet and Envigas AB. Board member at Inlandsbanan AB and High Coast Distillery AB.



Board of Directors cont.

EMPLOYEE REPRESENTATIVES

10. ANDERS ELENIUS

Position: Production driller
Board member since: 2018
Education: Upper secondary school
Background: Employed by LKAB since 1990.
Other directorships: Chair of the local trade union association Gruv 12:an, IF Metall Malmfälten.

11. DAN HALLBERG

Position: Project Manager
Board member since: 2022
Education: BSc Chemical Technology, Luleå University of Technology
Background: Employed by LKAB since 1990.
Other directorships: Board member at the local trade union association of Unionen för Luleå & Malmberget.

12. TOMAS LARSSON

Position: Scaler
Board member since: 2018
Education: Upper secondary school
Background: Employed by LKAB since 2003.
Other directorships: Chair of Gruv 4:an, the local trade union association for IF Metall Malmfälten.

13. EMIL LANTTO

Position: Operating mechanic
Deputy board member since: 2020
Education: Upper secondary school
Background: Employed by LKAB since 2011.
Other directorships: Chair of the local trade union association IF Metall Klubb Svartöstaden, board member at the Mine Workers' Industry Forum and at the foundation Stiftelsen Ellen och Harald Björnlunds Hem för Gamla i Luleå.

14. PETER NORDSTRÖM

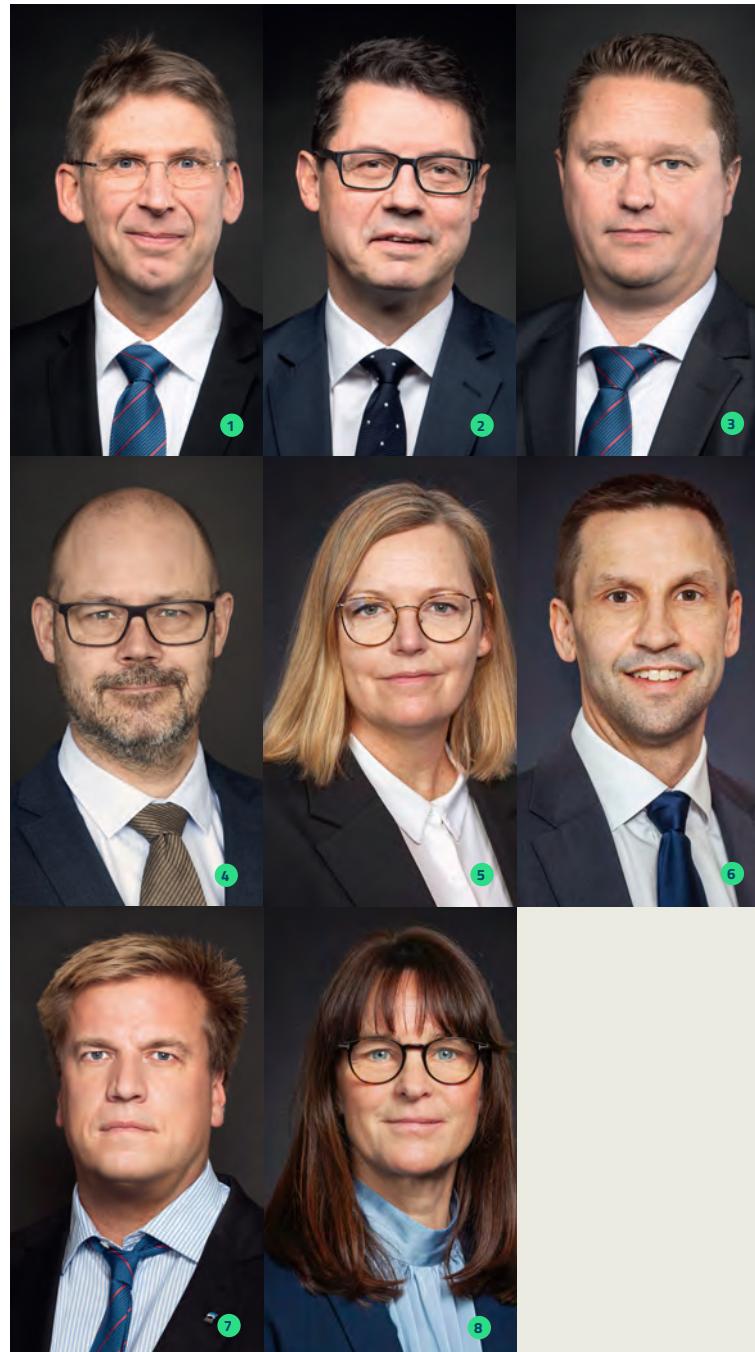
Position: Rock worker
Deputy board member since: 2020
Education: Upper secondary school, trade union training
Background: Employed by LKAB since 2010.
Other directorships: Chair of Klubb 135:an, the local trade union association for IF Metall Malmfälten; Chairman of the Board at Vittangi Alltjänst AB.

15. STEFAN TALLFJÄRD

Position: Section leader
Deputy board member since: 2020
Education: Within building and construction
Background: Employed at LKAB since 1998 in various departments, all underground in Malmberget.
Other directorships: Board member at Ledarna Malmberget/Luleå/Stockholm, board member at Ledarna Process Industry, representative at GRAMKO.

AUDITOR AND SECRETARY

Auditor
 KPMG
 Helena Arvidsson Ågne
 Authorised Public Accountant
Secretary
 Malin Sundvall
 General Counsel, LKAB
 Secretary of the Board since 2008



Group management¹

1. JAN MOSTRÖM²

President and CEO of LKAB

Education: Mining Engineer, Bergsskolan Filipstad 1983

Year employed: 2015

Born: 1959

Other engagements: Chairman of GAF (the Association of Mining Employers), Deputy Chairman at SveMin (industry association of mining, mineral and metal producers), board member at Industriarbetsgivarna (Swedish Association of Industrial Employers) and at the Royal Swedish Academy of Engineering Sciences (IVA).

Background: Boliden 2000–2015, Skellefteå Municipality 1998–2000, Boliden 1979–1998.

2. LEIF BOSTRÖM

Senior Vice President,
Special Products business area

Education: MSc Business Economics,
Luleå University of Technology, 1990.

Year employed: 1992

Born: 1959

Background: NCC 1980–1992.

3. PETER HANSSON

Senior Vice President,
Strategy and Business Development

Education: MBA, Luleå University of Technology 2000

Year employed: 2016

Born: 1970

Background: Boliden 2002–2015, Riksskatteverket (National Tax Board) 2000–2002, Skatteverket (Swedish Tax Agency) 1991–2000.

4. NIKLAS JOHANSSON

Senior Vice President,
Communication and Climate

Education: MBA, Stockholm School of Economics 1998

Year employed: 2020

Born: 1970

Background: Ministry for Foreign Affairs 2019, Ministry of Enterprise and Innovation 2016–2019, Opcor AB 2007–2016, Prime Minister's Office 2003–2006, Government Offices 1996 and 1997–2003, European Parliament 1994–1995.

5. PIA LINDSTRÖM

Senior Vice President,
Environment and Sustainability

Education: Bachelor's degree in Environmental and Health Protection, Umeå University 1994, Executive Programme in Industrial Management, KTH Royal Institute of Technology, Stockholm 2017–2018 and supplementary studies in, among other things, inorganic chemistry

Year employed: 2022

Born: 1970

Background: Boliden 1998–2022,
Norsjö Municipality 1996–1998.

6. STEFAN LORÉHN

Chief Financial Officer

Education: MBA, Umeå University 2002

Year employed: 2023

Born: 1978

Background: Holmen 2010–2023, KPMG 2008–2010,
Holmen 2003–2008, EY 2002–2003.

7. MICHAEL PALO

Senior Vice President,
Iron Ore business area

Education: MSc in Engineering, Luleå University of Technology, 2004

Year employed: 2018

Born: 1977

Background: Boliden 2011–2018,
Pon Equipment 2010–2011, LKAB 2005–2010.

8. MARIA REINHOLDSSON

Senior Vice President,
HR

Education: Master of Business Administration (MBA), Edinburgh Business School 2016; bachelor's degree in Human Resources, Umeå University 1994

Year employed: 2022

Born: 1968

Background: Telenor 2017–2022, Infinera 2016–2017,
Telenor 2011–2016, Vattenfall 1997–2011.

CHANGES TO GROUP MANAGEMENT

Stefan Loréhn took up the position of Chief Financial Officer after the end of the financial year, replacing Peter Hansson who moved to the role of SVP Strategy and Business Development.

¹ For remuneration to Group Management in 2022 see Note 7 on pages 93–94.

² Neither the President and CEO nor any natural person or legal entity related to him has any significant shareholdings or partnerships in companies with which LKAB has significant business relationships.

Group overview

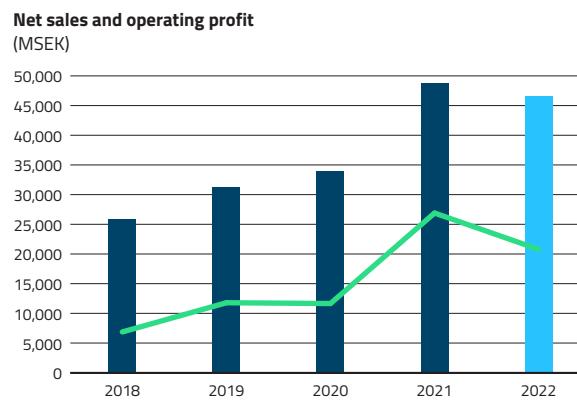
Group

For management and follow-up, the operations are split into two business areas: the Iron Ore business area and the Special Products business area. Group-wide functions are monitored under Other Segments, which includes departments such as HR, communications, accounts, and strategic research and development.

The Group's earnings and the breakdown of earnings between operating segments are described below as well as in Note 2 and Note 3 on pages 88–91.

Financial overview

The Group in summary		
MSEK	2022	2021
Net sales	46,543	48,812
Operating profit/loss	20,799	26,898
Net financial income/expense	-2,119	1,484
Profit/loss before tax	18,680	28,382
Profit/loss for the year	15,080	22,604



Analysis of change in operating profit MSEK

Operating profit 2021	26,898
Iron ore prices incl. hedging	-7,492
Currency effect, iron ore incl. hedging of accounts receivable	6,431
Volume and mix, iron ore	-2,578
Volume, price and currency, industrial minerals	117
Costs for urban transformation provisions	-173
Depreciation	-7
Other income and expenses	-2,397
Operating profit 2022	20,799

Sales for the full year were lower than in the same period last year and totalled MSEK 46,543 (48,812). Lower prices for highly upgraded iron ore products and lower delivery volumes were offset by a higher dollar exchange rate. The average global spot price¹⁾ for iron ore for full-year 2022 was USD 120 (160) per tonne. However, premiums for highly upgraded products were higher than in the same period last year.

Operating profit for the year was also affected by the costs of maintenance actions postponed from the pandemic year of 2021, by production disruptions at the pelletising plants in Kiruna and by general price rises for energy and inputs. An increase in the workforce in connection with continued initiatives for stable production processes and the transition to carbon-free processes and products also had an impact on costs for the period. Operating profit for the year amounted to MSEK 20,799 (26,898).

Net financial income/expense for 2022 was MSEK -2,119 (1,484). Significant Swedish and global stock market falls due to the war in Ukraine, geopolitical unrest and rising interest rates caused by high inflation affected the return on financial investments negatively.

The net debt/equity ratio was -17.1 (-24.5) percent.

Financial position

Net financial indebtedness	2022	2021
MSEK		
Loans payable	2,473	2,684
Provisions for pensions	992	1,396
Provisions, urban transformation	13,644	14,423
Provisions, remediation	1,727	1,775
Less:		
Cash and cash equivalents	-3,191	-6,289
Current investments	-27,393	-30,141
Financial investments	-430	-400
Net financial indebtedness	-12,178	-16,553

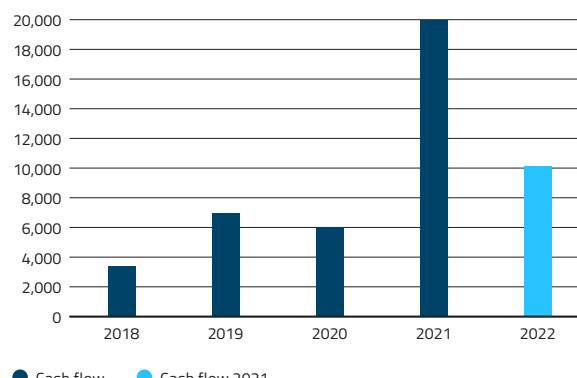
Net debt/equity ratio

Net debt/equity ratio	2022	2021
MSEK		
Net financial indebtedness	-12,178	-16,553
Equity	71,320	67,565
Net debt/equity ratio, %	-17.1	-24.5

Group

Operating cash flow and investments

Operating cash flow (MSEK)



Operating cash flow MSEK

	2022	2021
Cash flow from operating activities before expenditure on urban transformation and changes in working capital	20,831	25,207
Expenditure on urban transformation	-2,216	-2,681
Cash flow from operating activities before changes in working capital	18,615	22,526
Change in working capital	-2,708	959
Capital expenditures (net)	-4,904	-3,217
Acquisition of subsidiaries	-373	-150
Acquisition/divestment of financial assets	-474	-130
Operating cash flow	10,156	19,988

Operating cash flow for the year amounted to MSEK 10,156 (19,988), with lower operating profit, increased capital tied up in accounts receivable and increased capital expenditure having a negative effect when compared year on year. Cash flow was also affected by a corporate acquisition relating to Centrumhotelllet in Kiruna during the first quarter as well as the acquisition of an interest in the associated company REEtec in the fourth quarter.

Capital expenditure, total and by business area

MSEK	2022	2021
Group	4,944	3,359
Iron Ore business area	4,687	3,154
Special Products business area	165	147
Other Segments	92	58

Capital expenditure for the year amounted to MSEK 4,944 (3,359), the majority of which relates to investments to secure future production capacity. The year's capital expenditure on environmental protection and dam facilities amounted to just under MSEK 1,000 (650). Capital expenditure for own properties in connection with the urban transformation amounted to MSEK 652 (599).

The Parent Company LKAB consists of the majority of the Iron Ore business area and the group-wide functions reported under

Outlook for 2023

After a low in November 2022 the iron ore price rose at the end of 2022 and has continued this upward trend at the start of 2023. Demand for LKAB's highly upgraded iron ore products remains good, but there is considerable uncertainty concerning global economic development and its impact on the iron ore industry. Current geopolitical unrest, with rising interest rates and high inflation as a result of the war in Ukraine, causes LKAB to expect the cost level to increase for energy, some inputs and materials. The long-term consequences for energy, commodities markets and other supply chains remains difficult to assess.

LKAB is continuing its transformational journey towards becoming a future supplier of sponge iron, with the aim of being able to provide our customers with the raw materials for fossil-free steel. However, this transition brings with it various challenges in respect of permitting issues, energy supply and prevailing external conditions.

Urban transformation work has entered an intensive phase, and consequently expenditure will remain high throughout 2023. Gällivare municipality has still not approved the necessary zoning plan amendment for eastern Malmberget, which risks delaying the schedule for the phase-out area and thus limiting future production.

Parent Company

Other Segments.

The Parent Company includes most of LKAB's operating activities as well as the Group's financial activities.

Parent Company in summary

MSEK	2022	2021
Net sales	43,202	46,103
Operating profit/loss	20,223	26,431
Costs for urban transformation provisions	-545	-372
Capital expenditure on property, plant and equipment	4,491	3,068
Depreciation	-2,387	-2,464
Deliveries of iron ore, Mt	25.8	27.0
Production of iron ore, Mt	25.0	26.7

Business areas

Iron Ore business area

The Iron Ore business area mines and processes iron ore products in Kiruna, Svappavaara and Malmberget. The business area produces blast furnace pellets and pellets for steelmaking via direct reduction (DR pellets), as well as fines. The upgraded iron ore products are transported via the Ore Railway to the ports of Narvik and Luleå for shipment to steelworks customers around the world.

MSEK	2022	2021
Net sales ¹⁾	43,288	46,146
Operating profit¹	21,322	27,625
Costs for urban transformation provisions	-545	-372
Capital expenditure on property, plant and equipment	4,687	3,154
Depreciation ¹	-2,792	-2,843
Deliveries of iron ore products, Mt	25.8	27.0
Proportion of pellets, %	83	83
Production of iron ore products, Mt	25.0	26.7

1) In the second quarter of 2022 exploration activities and parts of the Group function for technology were moved from Other Segments into the Iron Ore business area. Comparative figures have been adjusted to reflect the organisational change.

Sales for the year were six percent lower than in the previous year. Lower deliveries and lower prices for highly upgraded iron ore products were mitigated by a higher dollar exchange rate. Cumulative operating profit for the year to December amounted to MSEK 21,322 (27,625). Higher costs for urban transformation provisions, increased rock reinforcement and maintenance actions, production disruptions and inflation increased costs for the period. Higher capital expenditure relates mainly to measures to reduce risk and stabilise production, replacement properties in the urban transformation programme, and preparatory works associated with the transition to carbon-free processes and products.

Special Products business area

The Special Products business area encompasses LKAB Minerals AB, which sells minerals for industrial use, LKAB Wassara AB, which sells drilling technology systems for the mining and construction industries, as well as LKAB Berg & Betong AB, Bergteamet AB, LKAB Kimit AB and LKAB Mekaniska AB, which provide contracting and rockwork services, concrete, explosives and engineering services.

MSEK	2022	2021
Net sales	7,087	5,633
Operating profit/loss	541	380
Capital expenditure on property, plant and equipment	165	147
Depreciation	-257	-216

Net sales for the year increased by 26 percent when compared year on year and amounted to MSEK 7,087 (5,633). The higher sales figure is primarily driven by an increase in the volume of magnetite sales, higher average prices for sales of all industrial minerals, a positive currency effect and the acquisition of Bergteamet AB in August 2021. Operating profit for the year amounted to MSEK 541 (380), which is an increase of 42 percent compared with the previous year. The main reasons for the improvement in earnings are the higher magnetite sales volume, improved margins on sales of mineral sands in Asia and the acquisition of Bergteamet AB. Overall, net sales and profit for the year are the highest ever for this business area. Capital expenditure and depreciation have increased during 2022, mainly as a result of increased capital expenditure associated with the mining operations in the orefields and the acquisition of Bergteamet AB.

Other Segments

Other Segments covers supporting operations such as group-wide functions and certain operations that take place in subsidiaries. Other segments also covers financial operations, including transactions and gains or losses relating to financial hedging for iron ore prices, currencies and the purchase of electricity.

MSEK	2022	2021
Net sales excl. hedging ¹⁾	93	86
Net sales hedging	-193	-126
Total net sales	-100	-40
Operating profit¹	-941	-951
Capital expenditure on property, plant and equipment	92	58
Depreciation ¹⁾	-95	-71

1) In the second quarter of 2022 exploration activities and parts of the Group function for technology were moved from Other Segments into the Iron Ore business area. Comparative figures have been adjusted to reflect the organisational change.

The operating result for the year for Other Segments was at the same level as in the previous year, amounting to MSEK -941 (-951).

Under LKAB's hedging strategy, price and currency risk in the Group's forecast sales are not normally hedged. Currency effects on outstanding accounts receivable are hedged, however.

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Consolidated income statement

1 January – 31 December

MSEK	Note	2022	2021
	1		
Net sales	2, 3	46,543	48,812
Cost of goods sold	14, 15, 16, 32	-23,376	-19,996
Gross profit/loss		23,167	28,816
Selling expenses		-191	-157
Administrative expenses		-800	-704
Research and development expenses		-1,300	-1,175
Other operating income	5	395	537
Other operating expenses	6	-400	-286
Share of profit of joint ventures		-72	-133
Operating profit/loss	2, 7, 8, 9	20,799	26,898
Financial income		1,081	1,892
Financial expense		-3,200	-408
Net financial income/expense	10	-2,119	1,484
Profit/loss before tax		18,680	28,382
Tax	12	-3,600	-5,778
Profit/loss for the year		15,080	22,604
Profit for the year attributable to:			
Parent company shareholders	13	15,073	22,603
Non-controlling interests	13	7	1
Earnings per share before and after dilution (SEK)	13	21,532	32,291
Number of shares		700,000	700,000

Consolidated statement of comprehensive income

1 January – 31 December

MSEK	Note	2022	2021
Profit/loss for the year		15,080	22,604
Other comprehensive income			
Items that will not be reclassified to profit/loss for the year			
Remeasurement of defined-benefit pension plans		336	273
Tax attributable to actuarial gains and losses		-69	-56
Changes for the year in the fair value of equity instruments measured at fair value through other comprehensive income	27	704	2,019
		971	2,236
Items that have been or may be reclassified subsequently to profit/loss for the year			
Exchange differences arising on translation of foreign operations for the year	27	139	186
Changes in fair value of cash flow hedges for the year	27	-5	1
Changes in fair value of cash flow hedges transferred to profit/loss for the year	27	0	0
Tax attributable to components of cash flow hedges	27	1	0
Total items reclassified to profit or loss		135	187
Other comprehensive income for the year		1,106	2,423
Comprehensive income for the year		16,186	25,027
Comprehensive income for the year attributable to:			
Parent company shareholders		16,179	25,026
Non-controlling interests	7	1	1

Consolidated statement of financial position

MSEK	Note	31 Dec 2022	31 Dec 2021	MSEK	Note	31 Dec 2022	31 Dec 2021
Assets		1, 18, 34, 35, 36, 37, 39		Equity and liabilities			
Non-current assets				Equity	27, 45		
Intangible assets	14	2,130	1,738	Share capital		700	700
Property, plant and equipment for operations	15	33,558	31,047	Reserves		2,787	1,947
Property, plant and equipment for urban transformation	16	11,306	10,419	Profit brought forward including profit for the year		67,793	64,885
Interests in associates and joint ventures	17	732	287	Equity attributable to Parent Company shareholders		71,280	67,532
Financial investments	21	6,448	5,726	Non-controlling interests		40	33
Non-current receivables		2	102	Total equity		71,320	67,565
Deferred tax assets	12	7	10	Non-current liabilities			
Total non-current assets		54,183	49,329	Non-current interest-bearing liabilities	28	2,387	2,366
Current assets				Other non-current liabilities		56	56
Inventories	24	6,205	4,924	Provisions for pensions and similar commitments	30	992	1,396
Accounts receivable	3, 25	3,785	2,074	Provisions, urban transformation	31, 32	10,615	11,444
Prepaid expenses and accrued income	26	375	192	Other provisions	31	1,650	1,560
Other current receivables	3, 23	2,492	1,696	Deferred tax liabilities	12	1,395	1,636
Current investments	21, 42	27,393	30,141	Total non-current liabilities		17,095	18,458
Cash and cash equivalents	42	3,191	6,289	Current liabilities			
Total current assets		43,441	45,316	Current interest-bearing liabilities	28	86	318
Total assets		97,624	94,645	Trade payables		2,583	1,794
				Tax liabilities		101	657
				Other current liabilities	3	464	689
				Accrued expenses and deferred income	33	2,420	1,662
				Provisions, urban transformation	31, 32	3,029	2,979
				Other provisions	31	526	523
				Total current liabilities		9,209	8,622
				Total liabilities		26,304	27,080
				Total equity and liabilities		97,624	94,645

Consolidated statement of changes in equity

2021 MSEK	Equity attributable to Parent Company shareholders						Non-controlling interests	Total equity
	Share capital	Translation reserve	Fair value reserve	Hedging reserve incl. hedging cost reserve	Retained earnings incl. profit/loss for the year	Total		
Opening equity 1 Jan 2021	700	-327	68	0	47,971	48,412	-	48,412
Profit/loss for the year	-	-	-	-	22,604	22,604	-1	22,603
Other comprehensive income for the year	-	186	2,019	1	217	2,423	-	2,423
Comprehensive income for the year	-	186	2,019	1	22,821	25,027	-1	25,026
Dividend	-	-	-	-	-5,850	-5,850	-	-5,850
Call option	-	-	-	-	-56	-56	-	-56
Acquisition of part-owned subsidiary, non-controlling interest	-	-	-	-	-	0	33	33
Closing equity 31 Dec 2021	700	-141	2,087	1	64,886	67,533	32	67,565

See Note 27.

2022 MSEK	Equity attributable to Parent Company shareholders						Non-controlling interests	Total equity
	Share capital	Translation reserve	Fair value reserve	Hedging reserve incl. hedging cost reserve	Retained earnings incl. profit/loss for the year	Total		
Opening equity 1 Jan 2022	700	-141	2,087	1	64,886	67,533	32	67,565
Profit/loss for the year	-	-	-	-	15,072	15,072	7	15,079
Other comprehensive income for the year	-	139	704	-4	267	1,106	-	1,106
Comprehensive income for the year	-	139	704	-4	15,339	16,178	7	16,185
Dividend	-	-	-	-	-12,432	-12,432	-	-12,432
Closing equity 31 Dec 2022	700	-2	2,792	-3	67,793	71,279	40	71,320

See Note 27.

Consolidated statement of cash flows

1 January – 31 December

MSEK	Note	2022	2021
Operating activities	1, 42		
Profit/loss before tax		18,680	28,382
Adjustment for items not included in cash flow		6,683	2,182
Income tax paid		-4,473	-5,339
Expenditures, urban transformation	31, 32	-2,216	-2,681
Expenditures, other provisions	31	-59	-18
Cash flow from operating activities before changes in working capital		18,615	22,526
 Cash flow from changes in working capital			
Increase (+)/Decrease (-) in inventories		-1,281	-698
Increase (+)/Decrease (-) in operating receivables		-2,315	1,000
Increase (+)/Decrease (-) in operating liabilities		888	657
Change in working capital		-2,708	959
Cash flow from operating activities		15,907	23,485
 Investing activities			
Acquisition of property, plant and equipment	15	-4,944	-3,359
Government investment grants		37	137
Disposal of property, plant and equipment		3	5
Acquisition of subsidiaries		-373	-150
Acquisition of other financial assets – operating		-485	-132
Disposal of other financial assets – operating		11	2
Acquisition of other financial assets – non-operating		–	-358
Disposals/acquisitions (net) in current investments		-504	-9,960
Cash flow from investing activities		-6,255	-13,815

1 January – 31 December

MSEK	Note	2022	2021
Financing activities			
Repayments/borrowing, repurchase agreements			
Borrowing			-258
Repayments			7
Repayment of lease liabilities			-16
Dividends paid to Parent Company shareholders			-85
Cash flow from financing activities	27	-12,432	-5,850
Cash flow from financing activities		-12,784	-6,836
 Cash flow for the year		-3,132	2,834
 Cash and cash equivalents at start of year		6,289	3,406
Exchange difference in cash and cash equivalents		34	49
Cash and cash equivalents at end of year		3,191	6,289
 Consolidated operating cash flow			
Cash flow from operating activities		15,907	23,485
Acquisition of property, plant and equipment		-4,944	-3,359
Government investment grants		37	137
Disposal of property, plant and equipment		3	5
Acquisition of subsidiaries		-373	-150
Acquisition of other financial assets – operating		-474	-130
Disposal of other financial assets – operating		–	-358
Acquisition of other financial assets – non-operating		-504	-9,960
Operating cash flow (excluding current investments)		10,156	19,988
Acquisition of other financial assets – non-operating		–	-358
Disposals/acquisitions (net) in current investments		-504	-9,960
Cash flow after investing activities		9,652	9,670
Cash flow from financing activities		-12,784	-6,836
Cash flow for the year		-3,132	2,834

Income statement – Parent Company

1 January – 31 December

MSEK	Note	2022	2021
		1,39	
Net sales	2, 3	43,202	46,103
Cost of goods sold	15, 16, 32	-21,178	-18,113
Gross profit/loss		22,024	27,990
Selling expenses		-55	-39
Administrative expenses		-515	-434
Research and development expenses		-1,262	-1,129
Other operating income	5	90	61
Other operating expenses	6	-59	-18
Operating profit/loss	7, 8, 9	20,223	26,431
Earnings from financial items:			
Income from interests in Group companies		-135	-
Income from other securities and receivables held as non-current assets		668	384
Other interest income and similar profit/loss items		498	393
Interest expense and similar profit/loss items		-1,655	-102
Profit/loss after financial items	10	19,599	27,106
Appropriations	11	828	943
Profit/loss before tax		20,427	28,049
Tax	12	-3,981	-5,679
Comprehensive income for the year¹⁾		16,446	22,370

1) Profit/loss for the period corresponds to comprehensive income for the period.

Balance sheet – Parent Company

MSEK	Note	31 Dec 2022	31 Dec 2021	MSEK	Note	31 Dec 2022	31 Dec 2021
Assets				Equity and liabilities			
Non-current assets				Equity			
Intangible assets	14	866	451	Restricted equity			
Property, plant and equipment for operations	15	27,803	25,778	Share capital (700,000 shares)		700	700
Property, plant and equipment for urban transformation	16	11,306	10,419	Statutory reserve		697	697
Financial assets				Non-restricted equity	41		
Interests in subsidiaries	40	2,917	1,832	Profit/loss brought forward		39,777	29,838
Interests in associates and jointly controlled entities	19	1,023	498	Profit/loss for the year		16,446	22,370
Receivables from subsidiaries	20, 39	2,586	3,202	Total equity		57,620	53,605
Other non-current securities	22	3,227	3,238	Untaxed reserves	41	11,202	11,577
Other non-current receivables	23	93	196	Provisions			
Deferred tax asset	12	1,370	1,467	Provisions, urban transformation	31, 32	10,615	11,444
Total financial assets		11,216	10,433	Other provisions	30, 31	1,664	1,525
Total non-current assets		51,191	47,081	Total provisions		12,279	12,969
Current assets				Non-current liabilities			
Inventories	24	5,287	4,167	Bond loans	29	1,996	1,995
Current receivables				Other non-current liabilities	24	–	–
Accounts receivable	3, 25	3,063	1,558	Total non-current liabilities		2,020	1,995
Receivables from subsidiaries	39	644	419	Current liabilities			
Other current receivables	3, 25	2,370	1,617	Bonds and commercial papers	29	–	260
Prepaid expenses and accrued income	26	313	137	Trade payables		1,937	1,374
Total current receivables		6,390	3,731	Liabilities to Group companies	39	721	587
Current investments	42	26,758	27,645	Current tax liabilities		88	630
Cash and bank balances	42	2,081	5,522	Other current liabilities		324	501
Total current assets		40,516	41,065	Accrued expenses and deferred income	33	1,961	1,158
Total assets		91,707	88,146	Provisions for urban transformation	31, 32	3,029	2,979
				Other provisions	31	526	511
				Total current liabilities		8,586	8,000
				Total equity and liabilities		91,707	88,146

Statement of changes in equity – Parent Company

2021 MSEK	Restricted equity		Non-restricted equity			Total equity
	Share capital	Statutory reserve	Profit/loss brought forward	Profit/loss for the year		
Opening equity 1 Jan 2021	700	697	35,687	–	–	37,084
Profit/loss for the year	–	–	–	22,370	–	22,370
Dividend	–	–	-5,850	–	–	-5,850
Closing equity 31 Dec 2021	700	697	29,837	22,370	–	53,604

See Note 27.

2022 MSEK	Restricted equity		Non-restricted equity			Total equity
	Share capital	Statutory reserve	Profit/loss brought forward	Profit/loss for the year		
Opening equity 1 Jan 2022	700	697	52,207	–	–	53,604
Profit/loss for the year	–	–	–	16,446	–	16,446
Dividend	–	–	-12,430	–	–	-12,430
Closing equity 31 Dec 2022	700	697	39,777	16,446	–	57,620

See Note 27.

Cash flow statement – Parent Company

1 January – 31 December

MSEK	Note	2022	2021
Operating activities	1, 42		
Profit/loss after financial items		19,599	27,106
Adjustment for items not included in cash flow		4,541	2,547
Income tax paid		-4,428	-5,308
Expenditures, urban transformation	31, 32	-2,216	-2,681
Expenditures, other provisions	31	-59	-18
Cash flow from operating activities before changes in working capital		17,437	21,646
 Cash flow from changes in working capital			
Increase (+)/Decrease (-) in inventories		-1,120	-696
Increase (+)/Decrease (-) in operating receivables		-2,332	1,224
Increase (+)/Decrease (-) in operating liabilities		1,104	343
Change in working capital		-2,348	871
Cash flow from operating activities		15,089	22,517
 Investing activities			
Acquisition of property, plant and equipment		-4,491	-3,068
Government investment grants		37	81
Disposal of property, plant and equipment		32	17
Change in financial assets		-838	-554
Disposals/acquisitions (net) in current investments		-504	-9,960
Cash flow from investing activities		-5,764	-13,484

1 January – 31 December

MSEK	Note	2022	2021
Financing activities			
Repayments/borrowing, repurchase agreements		-259	-986
Borrowing, other interest-bearing liabilities		-	-10
Group contributions received		318	488
Dividends paid to Parent Company shareholders		-12,430	-5,850
Cash flow from financing activities		-12,371	-6,358
 Cash flow for the year		-3,046	2,675
 Cash and cash equivalents at start of year		5,897	3,173
Exchange difference in cash and cash equivalents		34	49
Cash and cash equivalents at end of year		2,885	5,897

Note 1**Significant accounting policies****1 Compliance with standards and laws**

The consolidated financial statements were prepared in accordance with the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) as adopted by the EU. The Swedish Financial Reporting Board's Recommendation RFR 1 Supplementary Rules for Consolidated Financial Statements was also applied.

The Parent Company applies the same accounting policies as the Group, except where stated below in the Parent Company's accounting policies section.

The Annual Report and consolidated financial statements were approved for issue by the Board of Directors and President on 28 March 2023. The consolidated income statement, consolidated statement of comprehensive income and statement of financial position and the Parent Company's income statement and balance sheet are subject to approval at the Annual General Meeting on 27 April 2023.

2 Measurement bases applied in preparing the financial statements

Assets and liabilities are recognised at historical cost, apart from certain financial assets and liabilities that are measured at fair value. Financial assets and liabilities measured at fair value consist of derivatives, financial instruments with mandatory measurement at fair value through profit or loss, as well as debt and equity instruments at fair value through other comprehensive income.

A defined-benefit pension liability/asset is recognised as the net of the fair value of plan assets and the present value of the defined-benefit liability, adjusted for any asset restrictions.

3 Functional currency and presentation currency

The functional currency of the Parent Company is the Swedish krona (SEK), which is also the presentation currency for both the Parent Company and the Group. This means that the financial statements are presented in SEK. Unless otherwise stated, all amounts are rounded off to the nearest million SEK.

4 Assessments and estimates in the financial statements

Preparing the financial statements in accordance with IFRS requires company management to make assessments, estimates and assumptions that affect the application of accounting policies and the recognised amounts of assets, liabilities, income and expenses. Actual outcomes may diverge from these estimates and assessments. These estimates and assumptions are reviewed regularly. Changes in estimates are recognised in the period in which the change is made if the change only affects that period, or the period in which the change is made and future periods if the change affects both current and future periods.

Assessments made by company management when applying IFRS that have a significant effect on the financial statements and estimates made that may lead to significant adjustments in the following year's financial statements are described in more detail in section 28, Significant estimates and assessments.

5 Significant accounting policies applied

The following consolidated accounting policies were applied consistently to all periods that are presented in the consolidated financial statements, unless otherwise stated. The consolidated accounting policies were applied consistently in the presentation and consolidation of the Parent Company, subsidiaries and joint ventures.

6 Changes for 2022**6.1 New or amended IFRS**

Amendments effective as of 1 January 2022 to IFRS 3 Business Combinations in respect of the treatment of contingent assets and contingent liabilities, among other things, amendments to IAS 16 Property, Plant and Equipment in respect of proceeds earned prior to a property, plant or equipment item produced being available for its intended use, and amendments to IAS 37 Provisions, Contingent Liabilities and Contingent Assets in respect of which costs a company should include as the cost of fulfilling a contract when assessing whether a contract is onerous have had no material effect on the consolidated financial statements.

7 New standards and interpretations effective from or after calendar year 2023

New and amended standards and interpretations that enter into force for financial years starting on or after 1 January 2023 are not expected to have any material impact on the consolidated financial statements.

8 Classification etc.

Non-current assets and liabilities consist essentially of amounts that are expected to be recovered or paid more than 12 months after the end of the reporting period. Current assets and liabilities essentially consist of amounts that are expected to be recovered or paid within 12 months of the end of the reporting period.

9 Operating segment reporting

An operating segment is a part of the Group that engages in business operations from which it may generate income and incur expenses and for which independent financial information is available. An operating segment's earnings are also monitored by the company's chief operating decision-maker, which is Group management, to assess its performance and to allocate resources to the operating segment. See Note 2 for a more detailed description of the classification and presentation of operating segments.

10 Principles of consolidation and business combinations**10.1 Subsidiaries**

Subsidiaries are companies that operate under the control of the Parent Company. Control exists if the Parent Company has influence over the object of investment, is exposed to or has rights to variable returns from its involvement and can use its influence over the investment to affect returns. In assessing controlling interest, de facto control and potential voting rights are taken into account.

Subsidiaries are recognised according to the acquisition method. With the acquisition method, a subsidiary is regarded as a transaction through which the Group indirectly acquires the subsidiary's assets and assumes its liabilities. The purchase price allocation determines the fair value on the date of acquisition of acquired identifiable assets and assumed liabilities and of any non-controlling interests. Transaction costs incurred are recognised in profit or loss for the year.

Upon acquisition the Group chooses either to recognise non-controlling interests in the acquired company at fair value – in other words, goodwill is included in non-controlling interests – or as a proportion of the identifiable net assets.

In the case of business combinations where the transferred consideration, any non-controlling interest and the fair value of a previously owned participating interest (in the case of step acquisitions) exceed the fair value of the assets acquired and liabilities assumed, the difference is recognised as goodwill. When the difference is negative – a so-called low-cost acquisition – this is recognised directly in profit or loss for the year.

10.2 Associates

Associates are companies in which the Group has a significant but not controlling influence over operating and financial governance, normally by means of a shareholding of between 20 and 50 percent of votes. Interests in associates are accounted for using the equity method, which means that the carrying amount of the Group's interests in associates corresponds to the Group's share of the associates' equity. The Group's share of associates' profit or loss after the acquisition is recognised in operating profit.

10.3 Joint ventures

Joint ventures are companies where the Group has a shared controlling interest through cooperation agreements with one or more parties and where the Group has rights to the net assets, rather than having direct rights to assets and obligations for liabilities. Interests in joint ventures are recognised according to the equity method; see above regarding associates.

10.4 Joint operations

Joint operations are cooperation arrangements where the Group and one or more partners have rights to all the economic benefits related to the operations' assets. The settlement of the operations' liabilities depends on the parties' purchase of output from the operations or capital contributions to the operations. Joint operations are accounted for using the proportionate consolidation method, which means that each party in the joint operations reports their share of assets, liabilities, revenues and expenses.

Note 1 continued

10.5 Transactions that are eliminated on consolidation

Intra-group receivables and liabilities, income or expenses, and unrealised gains or losses arising from intra-group transactions between Group companies are eliminated entirely when preparing the consolidated financial statements.

11 Foreign currency

11.1 Foreign currency transactions

Foreign currency transactions are translated into the functional currency at the exchange rate in effect on the transaction date. The functional currency is the currency of the primary economic environment where the companies conduct their operations. Monetary assets and liabilities in foreign currencies are translated into the functional currency at the exchange rate in effect at the end of the reporting period. Exchange rate differences that arise on translation are recognised in profit or loss for the year. Non-monetary assets and liabilities that are recognised at historical cost are translated at the exchange rate in effect on the transaction date. Non-monetary assets and liabilities recognised at fair value are translated to the functional currency at the rate in effect on the date of fair value measurement.

11.2 Financial statements of foreign entities

Assets and liabilities in foreign operations, including goodwill and other group-related surpluses and deficits, are translated from the foreign operations' functional currencies to SEK, the Group's presentation currency, at the exchange rate in effect at the end of the reporting period. Income and costs in a foreign entity are converted to Swedish kronor at an average exchange rate that constitutes an approximation of the exchange rates prevailing on the date of each transaction. Translation differences arising from currency translation of foreign entities are recognised in other comprehensive income and accumulated in a separate component in equity called the translation reserve.

When control of a foreign entity ceases, the accumulated translation differences attributable to the entity are realised, at which point they are reclassified from the translation reserve in equity to profit or loss for the year.

11.3 Net investment in foreign operations

Monetary non-current receivables from and liabilities to a foreign operation for which settlement is not planned or is unlikely to take place within the foreseeable future are in practice part of the company's net investment in the foreign operation. An exchange rate difference that arises for the monetary non-current receivable or liability is recognised in other comprehensive income and accumulated in a separate component in equity called the translation reserve.

12 Revenue

12.1 Performance obligations and revenue recognition policies

Revenue is measured based on the compensation specified in the contract with the customer. The Group recognises revenue when control over goods or services transfers to the customer. Information on how and when performance obligations in contracts with customers are fulfilled and the associated policies for revenue recognition are summarised below.

12.1.1 Sales of iron ore

Iron ore trading is conducted in US dollars. LKAB prices iron ore mainly according to a variable pricing model, with an index-linked price based on the spot price.

The variable pricing model mainly uses quarterly prices, which means that the price is determined subsequently after the end of the quarter. The price is substantially affected by the current quarter's average for 62%/65% sinter fines CFR in China. During the quarter, revenue is based on a preliminary price. At the end of the quarter a price adjustment is recognised based on the established quarterly prices. There are also other pricing models with the same structure where the final price is determined and adjusted subsequently. The variable pricing model also uses monthly prices, determined as the previous month's price.

In the case of fixed price sales, negotiated prices apply.

The customer gains control over the goods when the goods have been delivered in accordance with the terms of sale. Invoices are issued and recognised on this date. Translation is at the current exchange rate. If sales are hedged by forward exchange contracts translation is at the hedged rate. Ongoing reservations are made for discounts granted and these decrease net sales.

Costs relating to delayed loading of vessels, known as demurrage, also affect the transaction price and are recognised within net sales.

12.1.2 Sales of industrial minerals

The Minerals group trades in a number of different minerals, both minerals in its own possession such as magnetite, huntite and mica, and external minerals that are either further processed within the Group or sold on in unchanged form to the end customer. Trade in industrial minerals occurs either in the country's local currency or in a major currency such as USD or EUR.

The customer gains control over the goods when the goods have been delivered in accordance with the agreed terms of sale. Invoicing usually takes place upon delivery and the revenue is recognised on this date. Where applicable, ongoing reservations are made for discounts granted and these decrease net sales.

12.2 Government grants

Government grants are recognised in the statement of financial position as deferred income when there is reasonable assurance that the grant will be received and the Group will comply with the terms associated with the grant. Grants are accrued systematically in profit for the year in the same way and over the same periods as the costs for which the grants are intended to compensate. Government grants related to assets are recognised as a reduction in the asset's carrying amount. For government grants see Note 5.

13 Leases

When an agreement is entered into the Group assesses whether the agreement is, or includes, a lease. An agreement is, or includes, a lease if the agreement conveys a right to use an identified asset for a period of time in exchange for consideration.

At the start of the lease or on reassessment of a lease containing various components – lease and non-lease components – the Group allocates the consideration set out in the agreement to each component based on the standalone price. In the case of leases for buildings and land, fixed amounts paid are mainly reported as a single lease component.

Leases where the Group is the lessee

The Group reports a lease liability and a right-of-use asset when the lease begins.

The lease liability is initially measured at the present value of remaining lease payments during the assessed term of the lease. The term of the lease is the non-cancellable period plus additional periods in the lease if, at the time the lease commences, it is considered reasonably certain that such options will be exercised.

The lease payments are discounted using the Group's incremental borrowing rate, which refers to the Group's borrowing cost based on a reference interest rate for interest rate swaps. In addition to the Group's credit risk, the rate reflects the term of each lease and the currency of the underlying asset.

The lease liability includes fixed payments, variable lease payments that depend on an index or a rate, and amounts expected to be paid in accordance with residual value guarantees. Variable lease payments that do not depend on an index or a rate are expensed in the period to which they relate.

The value of the liability is increased by the interest expense for the period concerned and reduced by the lease payments made. The interest expense is calculated as the value of the liability multiplied by the discount rate.

The right-of-use asset is measured initially at cost, consisting of the initial value of the lease liability plus lease payments that were made on or before the start date as well as any initial direct expenses. The right-of-use asset is depreciated on a straight-line basis from the start date to the end of the lease term.

If rent for premises is index-linked, the liability is adjusted by a corresponding adjustment of the carrying amount of the right-of-use asset. Similarly, the values of the liability and asset are adjusted in conjunction with reassessment of the lease term. The Group includes right-of-use assets in property, plant and equipment for operations in the statement of financial position, which is the same line in which the assets would have been recognised had they been owned. Lease liabilities are included in interest-bearing liabilities in the statement of financial position.

No right-of-use asset or lease liability is recognised for leases with a term of 12 months or less, or where the underlying asset is of low value. Lease payments for these leases are expensed on a straight line basis over the term of the lease.

Leases where the Group is the lessor

Where the Group is the lessor, it is established at the start date of each lease whether the lease is to be classified as a finance lease or an operating lease. The leases where the Group is the lessor are recognised as operating leases.

The Group recognises lease payments from operating leases as revenue on a straight-line basis over the term of the lease on the line for Other operating income.

Note 1 continued

14 Financial income and expense

Financial income includes interest income on invested funds, dividends, gains on financial assets measured at fair value through profit or loss, the return on plan assets and gains on hedging instruments that are recognised in net financial income/expense.

Financial expense includes interest expense on borrowings, provisions, lease liabilities and defined-benefit pension obligations, losses on financial assets measured at fair value through profit or loss, impairment of financial assets and losses on hedging instruments that are recognised in net financial income/expense.

Exchange gains/losses on financial assets and financial liabilities including currency derivatives are recognised net.

Interest income and interest expense are recognised using the effective interest method. Dividends are recognised when the right to payment is established.

The effective interest rate is the rate that discounts estimated future cash flows over the expected fixed interest term to the carrying amount of the financial asset or amortised cost of the financial liability. The calculation includes all fees paid or received by the contracting parties that are part of the effective interest rate, transaction costs and all other premiums or discounts.

15 Taxes

Income tax consists of current tax and deferred tax. Income tax is recognised in profit or loss for the year except when the underlying transaction is recognised in other comprehensive income or equity, in which case the associated tax effect is recognised in other comprehensive income or equity.

Current tax is tax to be paid or received for the current year, applying the tax rates that were set or for all practical purposes were set at the end of the reporting period, as well as adjustment of current tax attributable to prior periods.

Deferred tax is calculated according to the balance sheet method, based on temporary differences arising between the carrying amount of assets and liabilities and their value for tax purposes. Temporary differences are not taken into consideration in Group goodwill. Temporary differences attributable to interests in subsidiaries and associates that are not expected to be reversed in the foreseeable future are also not taken into consideration.

The measurement of deferred tax is based on how the carrying amount of assets or liabilities is expected to be realised or settled. Deferred tax is calculated by applying the tax rates and tax regulations enacted or substantively enacted at the end of the reporting period.

Deferred tax assets relating to deductible temporary differences and loss carryforwards are only recognised to the extent that it is probable they will be utilised. The value of deferred tax assets is reduced when it is no longer deemed probable that they can be utilised.

16 Financial instruments

16.1 Financial assets

Financial assets include financial investments, current investments, cash and cash equivalents, loans receivable, accounts receivable and derivatives.

Accounts receivable and debt instruments issued are recognised upon being issued. Other financial assets are recognised when the Group becomes a party to the contractual terms of the instrument.

On initial recognition a financial asset is measured at fair value. In the case of financial instruments not measured at fair value through profit or loss, transaction costs directly attributable to the acquisition or issue are included. Receivables are measured at the transaction price. How they are reported subsequently depends on how the asset is classified.

A financial asset is derecognised in the statement of financial position when the contractual rights to the cash flows from the financial asset cease.

On initial recognition a financial asset is classified as measured at fair value through profit or loss, at amortised cost or at fair value through other comprehensive income – equity investment.

Financial assets are not reclassified after initial recognition unless the Group changes its business model for managing financial assets, in which case all the financial assets affected are reclassified as at the first day of the first reporting period after the change in business model.

For debt instruments the classification is based on two criteria: the company's business model for managing the financial asset and the instrument's contractual cash flows.

16.1.1 Financial assets measured at fair value through profit or loss

Holdings in this category are current investments and derivatives.

Debt instruments held for trading or managed and where the result will be assessed based on fair value are measured at fair value through profit or loss. This is determined at portfolio level, since this best reflects how such business is managed

and how information is given to management. The information taken into consideration includes established policies and objectives of the portfolio, and how the business model's results are assessed and reported to Group management.

In the case of equity instruments (shares) the general rule is that these are measured at fair value through profit or loss. This category is used for all holdings except for holdings where the Group has irrevocably elected to present changes in value through other comprehensive income; see section 16.1.3 below. This decision is made on an investment-by-investment basis.

Net gains and losses, including interest and dividend income, are recognised in profit or loss. Derivatives contracted for operating items are recognised in operating profit, while derivatives of a financial nature are recognised in net financial income/expense.

16.1.2 Financial assets measured at amortised cost

Holdings in this category are accounts receivable, loans receivable, and cash and cash equivalents.

A financial asset is measured at amortised cost if it fulfils both of the following conditions and has not been identified as measured at fair value through profit or loss:

- it is held within a business model whose objective is to hold assets in order to collect contractual cash flows, and
- the agreed terms of the financial asset give rise to cash flows on specified dates that consist only of payments of principal and interest on the outstanding principal.

Amortised cost is determined using the effective interest rate calculated on the date of acquisition. The amortised cost is reduced by impairment losses. Interest income, exchange gains and losses, impairment losses and gains or losses on derecognition are recognised in profit or loss.

16.1.3 Equity instruments measured at fair value through other comprehensive income

Holdings in this category are equity instruments (shares) classified in this category on initial recognition.

The Group may irrevocably elect to recognise subsequent changes in the fair value of an investment in an equity instrument that is not held for trading through other comprehensive income. This decision is made on an investment-by-investment basis.

Changes in value, both realised and unrealised, are recognised in other comprehensive income and accumulated in the fair value reserve, and are never reclassified to profit or loss. Dividends are recognised as income in profit or loss.

16.2 Financial liabilities

Financial liabilities include loan liabilities, accounts payable and derivatives. Financial liabilities are reported when the Group becomes a party to the contractual terms of the instrument.

On initial recognition a financial liability is measured at fair value. In the case of financial instruments not measured at fair value through profit or loss, transaction costs directly attributable to the acquisition or issue are included. How they are reported subsequently depends on how the liability is classified.

When the obligations stated in the contract are satisfied, cancelled or expire, the financial liability is derecognised in the statement of financial position.

On initial recognition a financial liability is measured at fair value through profit or loss or at amortised cost.

16.2.1 Financial liabilities measured at fair value via profit or loss

A financial liability is classified at fair value through profit or loss if it is held for trading purposes, is a derivative or was identified as such on initial recognition.

Financial liabilities in this category are derivatives. Net gains and losses, including interest expense, are recognised in profit or loss. However, see also Note 35 regarding derivatives identified as hedging instruments.

16.2.2 Financial liabilities measured at amortised cost

Financial liabilities measured at amortised cost are loan liabilities and accounts payable.

Loan liabilities are measured initially at fair value, net after transaction costs, and subsequently at amortised cost.

Amortised cost is determined using the effective interest rate calculated on the date the liability was assumed. This means that surpluses and deficits, as well as direct issue costs, are allocated across the term of the liability.

Accounts payable are measured initially at fair value and subsequently at amortised cost.

Interest expense and exchange gains and losses are recognised in profit or loss. Gains or losses on derecognition are also recognised in profit or loss.

Note 1 continued

16.3 Offsetting

Financial assets and financial liabilities are offset and recognised as a net amount in the statement of financial position only when the Group has a legally enforceable right to offset the recognised amounts and intends to settle the items on a net basis or to realise the asset and settle the liability at the same time.

17 Derivatives and hedge accounting

The Group holds financial derivatives in order to financially hedge a portion of the cash flow risks to which the Group is exposed: exchange rate exposure and changes in energy prices.

Derivatives are measured at fair value on initial recognition. Thereafter they are measured at fair value and changes in value are recognised as described below.

When the Group initially identifies hedging relationships, the risk management objectives and the strategy are documented with the hedge. The Group also documents the economic relationship between the hedged item and the hedging instrument, including whether changes in the cash flow of the hedged item and the hedging instrument are expected to cancel each other out.

17.1 Receivables and liabilities in foreign currency

Hedge accounting is not applied to hedging of foreign currency risk since financial hedging is reflected in the accounts by the fact that both the underlying receivable or liability and the hedging instrument are recognised at the exchange rate on the closing date and the translation differences are recognised in profit for the year.

Exchange rate changes related to operating receivables and liabilities are recognised in operating profit, while exchange rate changes related to financial receivables and liabilities are recognised in net financial income/expense.

17.2 Cash flow hedging

When a derivative is identified as a cash flow hedging instrument, the effective portion of changes in the fair value of the derivative is recognised in other comprehensive income and accumulated in the hedging reserve.

In the case of forward foreign exchange contracts, the Group only identifies changes in fair value in the spot element as hedging instruments in the cash flow hedging relationship. Fair value changes in the forward component of the forward foreign exchange contract (forward points) are reported as a hedging cost reserve and recognised in the hedging reserve in equity.

When the hedged expected cash flow affects earnings, the hedging instrument's cumulative change in value in the hedging reserve and hedging cost reserve is reclassified to profit or loss. This means that gains and losses relating to hedges are recognised in profit or loss for the year at the same time as gains and losses for the items hedged.

18 Property, plant and equipment

18.1 Owned assets

Property, plant and equipment is carried at cost less accumulated depreciation and any impairment. Cost includes the purchase price plus expenses directly attributable to the asset in order to put it in the location and condition that allow it to be used as intended. The cost of self-constructed non-current assets includes expenditures for materials, expenditures for employee benefits, and other fabrication costs directly attributable to the asset where applicable.

Property, plant and equipment that consists of parts with different useful lives are treated as separate components.

The carrying amount of a property, plant and equipment item is derecognised from the statement of financial position when the asset is disposed of or retired. The gain or loss arising from the disposal or retirement of an asset is the difference between the selling price and the asset's carrying amount less direct selling expenses. Gains and losses are recognised as other operating income/expense.

18.2 Exploration and evaluation expenditures

Greater knowledge of the extent of the iron ore deposits is necessary to secure access to more ore and ensure the future development of operations. The orebody is surveyed and defined by means of exploration drilling, mainly via drifts adjacent to it. Ore deposit exploration in both existing and future mining areas is expensed. This principle is also applied in the exploration of areas outside existing mines.

18.3 Underground facilities

Underground facilities from which iron ore is extracted can be divided into waste rock mining (development phase) and iron ore mining (production phase).

Waste rock mining consists of work done to expose the orebody in conjunction with the construction of a new main haulage level, facilities pertaining to transport and maintenance functions such as railways, roads, drifts, shafts, inclined drifts (a system of access for vehicle traffic from surface level to the work site underground), and facilities for service and electrical and air supply. Expenditures for facilities intended for use over a period of more than one year are capitalised in the statement of financial position. Depreciation occurs systematically over the useful life of the main haulage level concerned.

Iron ore mining mainly consists of development, cave drilling and loading, haulage and hoisting of the ore. Expenditures for these activities have a useful life of at most one year, which is why they are expensed as they are incurred.

18.4 Open-pit mines

Iron ore mining above ground takes place in what are known as open-pit mines. Stripping is carried out to expose the orebody, and such things as moraine and barren rock are removed. This is called barren rock mining.

During the development phase expenditures are capitalised as part of the cost of the mine and depreciation occurs systematically over the useful life of the mine.

Expenditure on barren rock mining during the production phase that provides improved access to ore for future mining is recognised under assets and depreciated according to the production-based method.

18.5 Remediation

Future expenditure on dismantling and removing assets and restoring sites or areas where they are located (remediation costs) as relates to ongoing operations are capitalised. Capitalised amounts consist of the present value of estimated expenditures that are simultaneously recognised as provisions.

18.6 Subsequent expenditures

Subsequent expenditures are added to the cost only when it is probable that future economic benefits associated with the asset will flow to the company and the cost can be measured reliably. All other subsequent expenditures are recognised as expenses in the period in which they arise.

A subsequent expenditure is added to the cost if the expenditure relates to the replacement of identified components or parts thereof. In cases where a new component is created, the expenditure is also added to the cost. Any undepreciated carrying amounts for replaced components, or parts thereof, are retired and expensed in conjunction with the replacement. Repairs are expensed as incurred.

18.7 Amortisation principles

Depreciation is on a straight-line basis over the asset's estimated useful life; land is not depreciated. Leased assets are depreciated over their estimated useful life or, if shorter, over the contractually agreed lease term. The Group applies component depreciation, which means that the estimated useful life of the components is used as the basis for depreciation. Facilities and equipment used in open-pit mines are normally depreciated over the lesser of the expected useful life and the useful life of the mine to which they relate.

The following periods of use are applied to property, plant and equipment including future remediation costs:

Properties used in operations, rental properties	15–100 years
Plant and machinery, open-pit mining	Production-based
Other plant and machinery	5–20 years
Equipment, tools, fixtures and fittings	5–20 years
Underground installations	12–20 years
Surface mining facilities	As ore is extracted
Capitalised remediation costs	Estimated useful life of present production structure.

Note 1 continued

Properties used in operations are mainly classified as buildings, land improvements and land. Buildings and land improvements consist of several components that are classified on the basis of function, such as roads, surfacing, service facilities, processing plants etc.

Rental properties consist of several components with varying useful lives. The main classifications are buildings and land. Buildings are divided into several components whose useful lives vary.

The following main groups of components have been identified and form the basis for depreciation of rental properties.

Frames, foundations and interior walls	100 years
Water, sewage, electrical and heating systems	50 years
Exterior facades	40 years
Windows	30 years
Interior finishing and appliances	15 years

Depreciation methods, residual values and useful life are assessed annually and adjusted as necessary.

18.8 Urban transformation

18.8.1 Acquisition of properties

When property is acquired as part of urban transformation, the cost is divided into a building component and a mine component. The distinction is based on the assumption that the building can be used for temporary rental for a limited period from acquisition until evacuation. The building component is calculated as the present value of the net cash flows from the rental. The mine component is defined as the property's total cost less the building component.

The building component is expensed in the period in which the building is expected to be utilised.

The mine component is expensed using the production-based method, which means that the cost is calculated on the basis of ore extracted relative to the estimated total volume for the current main haulage level.

For a further description of urban transformation accounting policies, see policy 28.1.1.

18.8.2 Mine assets

For provisions that relate to commitments outside the existing impact boundary (the boundary of the impact of mining to date for which compensation is payable), a mine asset relating to future mining is recognised. The mine asset is expensed using the production-based method, which means that the cost is calculated on the basis of ore extracted relative to the estimated total volume for the current main haulage level.

Mine assets related to future mining are recognised for Kiruna.

For a further description of urban transformation accounting policies, see policy 28.1.1.

18.8.3 Replacement properties

Two compensation options are offered to owners of rental properties and small houses: a replacement property equivalent to the existing property or financial compensation. For those choosing the replacement property option, all the costs of building the replacement property are recognised under property, plant and equipment. When the property is handed over the amount is deducted from provisions for the commitment; see also Note 32. Where the option of financial compensation has been chosen, the compensation paid is deducted from provisions for the commitment.

19 Intangible assets

19.1 Goodwill

Goodwill is measured at cost less any accumulated impairment losses. Goodwill is allocated to cash-generating units and tested annually for impairment; see accounting policies in section 21.1.

19.2 Research and development

Expenditures on research aimed at gaining new scientific or technical knowledge are expensed as incurred.

Expenditures on development, where research findings or other knowledge are applied to produce new or improved products or processes, are recognised as an asset in the statement of financial position, provided that the product or process is technically and commercially feasible and the company has sufficient resources to complete development and then use or sell the intangible asset. The value includes directly attributable expenditures such as goods and services and employee benefits. If the above criteria are not met, the expenditures are reported as a cost. Because no such development expenditures have met these criteria thus far, LKAB expenses all expenditures for development as incurred.

19.3 Other intangible assets

Other intangible assets acquired by the Group consist mainly of mining rights, favourable purchasing contracts, customer relationships and software; see Note 14 for a more detailed breakdown. The assets are reported at cost less accumulated amortisation and any impairment losses.

Each arrangement is assessed in terms of whether software is to be regarded as an intangible asset, a lease or a service contract for the purposes of accounting for configuration and customisation costs. If the implementation costs do not meet the criteria for recognition as an intangible asset, the costs are recognised as an expense when the implementation services are performed in accordance with the contract. If the implementation services are judged to be distinct and separately identifiable from the actual access to the software, as is generally the case, the costs are expensed as they are incurred. If, however, they are judged to be inseparable from the customer's right to receive access to the supplier's application software, the costs are recognised as an expense when the supplier provides access to the application software over the contract term. Where LKAB pays in advance for a service, an asset is recognised in the form of a prepaid expense.

Also included are emission allowances, which are recognised as described below.

19.3.1 Emission allowances

LKAB participates in the EU's system for trade in emission allowances, which grants the right to emit carbon dioxide. Allowances are allocated across the European market. The emission allowances are recognised as intangible assets and deferred income on allocation, since the company has not qualified for any allowances at the time of issue. They are measured at cost, which in the case of allocated allowances corresponds to the market price on allocation.

Qualification is at the same rate as actual emissions, when a liability to surrender emission allowances also arises. A cost of emissions and a provision for emission allowances are recorded. At the same time, a corresponding amount is transferred from deferred income to income for emission allowances. Measurement is at the average cost of allocated emission allowances.

When emission allowances are reported the corresponding number of emission allowances must be surrendered. Thus the intangible non-current asset is exhausted and the provision for discharged emissions is settled. Where a liability to supply emission allowances exceeds the remaining allocation of emission allowances, the surplus amounts are carried as a liability measured at the current market value of the number of emission allowances necessary to settle the commitment. For information on amounts see Note 31.

19.4 Subsequent expenditures

Subsequent expenditures on capitalised intangible assets are recognised as assets in the statement of financial position only when they increase the future economic benefits of the specific asset to which they relate. All other expenditures are expensed as incurred.

19.5 Amortisation principles

Amortisation is recognised in profit or loss for the year on a straight-line basis over the estimated useful life of intangible assets. Useful life is reviewed annually. Intangible assets that can be amortised are amortised from the date they are available for use. The estimated useful lives are:

Mining rights	30–50 years
Purchasing contracts	10–15 years
Customer relationships	15 years
Software in own IT environment	5 years

20 Inventories

Inventories are measured at the lower of cost or net realisable value. The cost of inventories is calculated using the first-in, first-out (FIFO) principle and includes expenditures incurred in acquiring the inventory items and bringing them to their existing location and condition. For finished goods and work in progress, cost includes an appropriate share of overheads based on normal operating capacity.

Net realisable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and selling expenses.

Note 1 continued

21 Impairments

The Group's recognised assets are assessed at the end of each reporting period to determine whether there is any indication of impairment. IAS 36 is applied to the impairment of assets that are not dealt with by any other IFRS standard.

21.1 Impairment of property, plant and equipment, intangible assets and interests in associates and joint ventures

If impairment is indicated, the recoverable amount of the asset is calculated.

The recoverable amount for goodwill is also calculated annually. If it is not possible to ascertain essentially independent cash flows for an individual asset, the assets are grouped at the lowest level at which it is possible to identify essentially independent cash flows (a so-called cash-generating unit).

The recoverable amount is the higher of fair value less selling expenses or value in use. When calculating value in use, future cash flows are discounted using a discount factor that reflects risk-free interest and the risk associated with the specific asset.

An impairment loss is recognised when the carrying amount of an asset or cash-generating unit exceeds its recoverable amount. Impairment losses are charged to profit for the year. Once impairment has been identified for a cash-generating unit, the impairment loss is initially allocated to goodwill, after which other assets in the unit are proportionally impaired.

21.2 Reversal of impairment

An impairment of assets included in the scope of IAS 36 is reversed if there is an indication that the impairment no longer exists and there has been a change in the assumptions underlying the calculation of the recoverable value when the asset was impaired. However, impairment of goodwill is never reversed. Impairment is reversed only to the extent that the asset's carrying amount after reversal does not exceed the carrying amount that would have been recognised, less amortisation if appropriate, if no impairment had been recognised.

21.3 Impairment of financial assets

Impairment testing of financial assets largely relates to accounts receivable. A simplified method is applied in which the loss allowance is calculated based on lifetime expected credit losses.

When calculating expected credit losses consideration is given to historical, current and forward-looking factors. The loss allowance is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows.

Impairment of accounts receivable is recognised as a decrease in the asset's carrying amount and in operating costs.

22 Capital payments to shareholders

Dividends are recognised as liabilities once they have been approved at the Annual General Meeting.

23 Earnings per share

The calculation of earnings per share is based on consolidated profit for the year attributable to the Parent Company shareholders and on the weighted average number of shares outstanding during the year.

24 Employee benefits

24.1 Defined-contribution pension plans

Defined-contribution pension plans are those for which the company's obligation is limited to the amount that it agrees to pay. In such cases the size of the employee's pension depends on the contributions the company pays to the plan or to an insurance company and the return on capital generated by the contributions. Consequently it is the employee who bears the actuarial risk (that benefits will be lower than expected) and investment risk (that the invested assets will be insufficient to meet expected benefits). The company's obligations for defined-contribution plans are recognised as an expense in profit for the year as they are earned by the employees performing services for the company over a given period.

24.2 Defined-benefit pension plans

Defined-benefit plans are plans for post-employment benefits other than defined-contribution plans. The Group's net obligation in respect of defined-benefit pension plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned through their service in current and prior periods. This benefit is discounted to a present value. The discount rate is the rate at the end of the reporting period on a high-quality corporate bond, including

mortgage bonds, with a maturity corresponding to the Group's pension obligations. When there is no viable market for such corporate bonds, the market rate for government bonds with a similar maturity is used instead. The calculation is performed by a qualified actuary using the Projected Unit Credit Method. The fair value of any plan assets is also calculated at the reporting date.

The Group's net obligation is the present value of the obligation, less the fair value of plan assets adjusted for any asset restrictions.

Net interest expense/income on the defined-benefit obligation/asset is recognised in profit or loss for the year under net financial income/expense. Net interest income is based on the interest that arises when discounting the net obligation; that is, interest on the obligation, plan assets and the effect of any asset restrictions. Other components are recognised in operating profit.

Revaluation effects consist of actuarial gains and losses, the difference between the actual return on plan assets and the amount included in net interest income and any changes in the effects of asset restrictions (excluding interest included in net interest income). Actuarial gains and losses arise either because the actual outcome deviates from previous assumptions or the assumptions change. Revaluation effects are recognised in other comprehensive income.

When the calculation leads to an asset for the Group, the carrying amount of the asset is restricted to the lower of the surplus in the plan or the asset restriction calculated using the discount rate. The asset restriction is the present value of the future economic benefits in the form of reduced future contributions or a cash refund. In calculating the present value of future reimbursements or payments, any minimum funding requirement is taken into account.

Changes to or reductions in a defined-benefit plan are recognised on the earliest of the following dates: a) when the change in the plan or reduction occurs, or b) when the company recognises related restructuring costs and termination benefits. The changes/reductions are recognised directly in profit or loss for the year.

The special employer's contribution is part of the actuarial assumptions. Special employer's contributions related to the difference between how the pension obligation is determined in a legal entity and in the Group are recognised as part of the net obligation. Provisions and receivables are not calculated to present value. In a legal entity, the part of the special employer's contribution that is calculated based on the Pension Obligations Vesting Act is recognised for simplicity's sake as an accrued expense rather than as part of the net obligation/asset.

24.3 Short-term benefits

Short-term employee benefits are calculated without discounting and recognised as an expense when the related services are received.

A current liability is recognised for the expected cost of profit-sharing and bonus payments when the Group has a present legal or constructive obligation to make such payments as a result of services rendered by employees and the obligation can be reliably estimated.

24.4 Termination benefits

Benefits associated with the termination of employment are expensed at the earlier of the date that the company can no longer withdraw the offer to the employee or the date that the company recognises restructuring costs.

25 Provisions

A provision differs from other liabilities because there is uncertainty about the date of payment or the amount required to settle the provision. A provision is recognised in the statement of financial position when there is a present legal or constructive obligation as a result of a past event and it is probable that an outflow of economic resources will be required to settle the obligation and a reliable estimate of the amount can be made.

Provisions are made at the amount which is the best estimate of the expenditure required to settle the present obligation at the end of the reporting period. Where the effect of payment timing is important, provisions are determined by discounting the expected future cash flow at a pre-tax rate that reflects current market assessments of the time value of money and, if appropriate, the risks specific to the liability.

25.1 Provisions for urban transformation

See section 28.1.1 below.

25.2 Provisions for remediation

See section 28.1.2 below.

Note 1 continued

26 Contingent liabilities

A disclosure concerning a contingent liability is made when there is a possible commitment arising from past events whose existence is confirmed only by one or more uncertain future events beyond the company's control, or when there is a commitment that is not recognised as a liability or provision because it is not probable that an outflow of resources will be required or this cannot be measured with sufficient reliability.

27 Parent Company accounting policies

The Parent Company has prepared its annual report according to the Swedish Annual Accounts Act (1995:1554) and the Swedish Financial Reporting Board's recommendation RFR 2 Accounting for Legal Entities. The Swedish Financial Reporting Board's recommendations for listed companies are also applied. RFR 2 states that in the annual report for the legal entity, the Parent Company shall apply all IFRS and interpretations adopted by the EU as far as possible within the framework of the Annual Accounts Act, Pension Obligations Vesting Act and considering the relationship between accounting and taxation. The recommendation states the exceptions from and additions to IFRS that must be made.

27.1 Differences between Group and Parent Company accounting policies

The differences between Group and Parent Company accounting policies are detailed below. The specified accounting policies for the Parent Company were applied consistently to all periods presented in the Parent Company's financial statements.

27.2 Changed accounting policies in 2022

Unless otherwise stated below, the Parent Company's accounting policies in 2022 changed in accordance with what is stated above for the Group. The amendments have had no impact on the Parent Company's financial statements.

27.3 Upcoming changes in accounting policies

Upcoming changes to RFR 2 are expected to have no material impact on the Parent Company's financial statements on initial application.

27.4 Classification and presentation

The Parent Company uses the terms income statement, balance sheet and cash flow statement for the reports that in the Group are called consolidated income statement, statement of financial position and statement of cash flows respectively. The income statement and balance sheet for the Parent Company are presented in accordance with the Annual Accounts Act, while the corresponding Group reports are based on IAS 1 Presentation of Financial Statements and IAS 7 Statement of Cash Flows. The most significant differences from the consolidated statements relate primarily to recognition of financial income and expenses, financial assets and equity, and the fact that provisions are recognised under a separate heading in the balance sheet.

27.5 Subsidiaries and associates

Shares in subsidiaries, associates and jointly controlled entities are recognised in the Parent Company using the cost method. This means that transaction costs are included in the carrying amount of interests in subsidiaries, associates and jointly controlled entities.

27.6 Expanded investment

Exchange rate differences on monetary items that form part of the Parent Company's net investment in a foreign operation are recognised in profit or loss.

27.7 Financial instruments and hedge accounting

The Parent Company has chosen not to apply IFRS 9 to financial instruments. However, some of the principles of IFRS 9 are still applicable – such as those relating to impairment losses, recognition/derecognition, criteria for applying hedge accounting and the effective interest method for interest income and interest expense.

In the Parent Company non-current financial assets are measured at cost less any impairment losses.

Current financial assets are measured at the lower of cost or market. Interest-bearing securities, shares and alternative investments or commodity derivatives are measured at portfolio level. This means that for instruments in the same portfolio, unrealised gains are offset against unrealised losses. Excess losses are recognised as a reduction in interest income under other interest income and similar items. Excess gains are not recognised. Financial liabilities are measured at amortised cost.

Derivatives used for hedging forecast cash flows to which hedge accounting is applied are not carried in the balance sheet. Changes in the value of derivatives are recognised in the same period as the hedged cash flows.

Derivatives with a negative value that are not part of a securities portfolio or to which hedge accounting is not applied are recognised as financial liabilities (other current liabilities) and measured at the amount most favourable to the company upon settlement or transfer of the obligation at the end of the reporting period.

When currency-hedging receivables in foreign currency relating to iron ore sales using forward contracts, the forward exchange rate is used to measure the hedged receivable. The forward points in the forward foreign exchange contract are recognised in net sales.

27.8 Financial guarantees

The Parent Company's financial guarantees mainly consist of security provided for subsidiaries. Financial guarantees mean that the company is committed to reimbursing the holder of a debt instrument for losses it incurs because a specified debtor fails to make payment when due according to the contractual terms. The Parent Company applies one of the reliefs permitted by the Financial Reporting Board compared with the rules of IFRS 9 in its recognition of financial guarantee agreements issued on behalf of subsidiaries. The Parent Company recognises financial guarantees as provisions in the balance sheet when the company has a commitment for which payment will probably be required to settle the commitment.

27.9 Anticipated dividends

Anticipated dividends from subsidiaries are recognised in cases where the Parent Company is solely entitled to decide on the size of the dividend and has decided on the size of the dividend before publishing its financial statements.

27.10 Operating segments

The Parent Company does not report segments with the same breakdown and to the same extent as the Group, but instead discloses the breakdown of net sales by the Parent Company's business streams.

27.11 Property, plant and equipment

With reference to RFR 2, IAS 16 (4), estimated future expenditures for dismantling and removing assets and restoring sites or areas where they are located (remediation costs) in legal entities are not capitalised. Instead, the provision for these expenditures is made gradually over the useful life.

27.12 Leased assets

The Parent Company does not apply IFRS 16, in accordance with the exemption in RFR 2. As lessee, lease payments are expensed on a straight line basis over the term of the lease and therefore right-of-use assets and lease liabilities are not reported in the balance sheet. Leases where the Parent Company is the lessor are reported as operating leases.

27.13 Intangible non-current assets

27.13.1 Research and development

All research and development expenditures are recognised as expenses in the Parent Company income statement.

27.14 Employee benefits – defined-benefit pension plans

Where a pension premium is paid to an insurance company, the Parent Company recognises a defined-benefit plan as a defined-contribution plan.

The Parent Company applies policies other than those described in IAS 19 when estimating defined-benefit plans. The Parent Company complies with the provisions of Sweden's Pension Obligations Vesting Act and the regulations issued by Finansinspektionen, Sweden's financial supervisory authority, since this is a prerequisite for tax deductibility. The most significant differences from IAS 19 are how the discount rate is determined, that estimation of the defined-benefit obligation is based on current salary levels without consideration of future salary increases and that all actuarial gains and losses are recognised in the income statement.

Pension obligations secured by transfer of funds to a pension fund are recognised as a provision in the Parent Company only if the fair value of the fund assets is less than the amount of the obligations. No asset is recognised if the fund assets are greater than the obligations. The value of the company's obligations in respect of future pension payments is to be calculated in accordance with the second paragraph above.

Note 1 continued

27.15 Taxes

In the Parent Company balance sheet, untaxed reserves are recognised without dividing these into equity and deferred tax liabilities, in contrast to the Group. Similarly, the Parent Company does not allocate any part of appropriations to deferred tax in the income statement.

27.16 Group and shareholder contributions

Group contributions are recognised as appropriations.

Shareholder contributions paid are reported by the giver as an increase in Interests in Group companies and in Interests in associates and jointly controlled entities respectively.

28 Significant estimates and assessments

The preparation of financial statements requires management and the Board of Directors to make assessments and assumptions that affect recognised assets, liabilities, income and expenses and other information provided, such as contingent liabilities.

Listed below are the estimates and assessments that are considered most important for an understanding of the financial statements. Conditions for LKAB's operations change gradually, which means that these assessments also change.

28.1 Provisions resulting from mining operations

28.1.1 Provisions for urban transformation

The techniques used in ore mining in underground mines lead to deformations in the form of fissures in the ground where mining is conducted. The deformations are already or will become so extensive that it is necessary to gradually move parts of Kiruna and Malmberget.

Although there are many similarities between conditions in Kiruna and Malmberget, the geological conditions differ. In Kiruna there is a gradual spread of deformations with continuous fissuring, while in Malmberget there is widespread undermining of the ground in the city centre. The deformations are a direct result of mining operations.

LKAB has already had, and will continue to have, significant expenses related to these urban transformations. For instance, LKAB will incur expenses for the acquisition of properties and municipal infrastructure such as electricity, water and sewage systems in the affected areas. The expenditures arise from LKAB's mandatory obligation to compensate damage resulting from its mining activities.

Provisions for the damage caused by the deformations are made for damage already confirmed and damage not yet confirmed but that will occur a year or so later as a result of mining.

LKAB recognises a provision:

1. where there is an agreement or a clear constructive obligation to an external party that defines a commitment relating to future impact areas,
2. as a result of past events,
3. which is expected to result in an outflow of economic resources from the company at settlement, and
4. a reliable estimate of the amount can be made.

For those provisions that relate to commitments outside the existing impact boundary (the boundary of the impact of mining to date for which compensation is payable), a mine asset relating to future mining is recognised.

The amount of the provision is calculated on the basis of objective valuation methods for each type of asset (residential properties, land, infrastructure etc.) and a present value is assigned.

For Kiruna, provisions are recognised for all assessed commitments within the impact area of the current main haulage level according to the current deformation forecast.

Where Malmberget is concerned, environmental conditions were laid down in a ruling by the Land and Environment Court. The impact area from the mining of several different orebodies has essentially encircled central Malmberget, which means that it is no longer able to function as a normal city centre. Provisions have been made and costs expensed for the entire area that will be phased out, in accordance with the current deformation forecast.

All damage/compensation claims that are within the area impacted by mining to date are calculated and recognised as an expense in the income statement, in light of the fact that LKAB consumed the economic benefits that the mining generated.

The mine component and mine asset relating to future mining are expensed using a production-based method. This means that the cost is calculated on the basis of ore actually extracted relative to the estimated total volume for the current main haulage level. Expensing for the year is usually based on the mine asset/mine component at the start of the year. Significant events may result in the basis being adjusted during the current year.

The impact will continue for many years ahead and there will be uncertainty regarding geological consequences, assumptions about market values, demolition and waste disposal costs, etc. The uncertainty in the estimates made so far will decrease as the experience gained is taken into account in future estimates.

Provisions for urban transformation at year-end amounted to MSEK 13,644 (14,423).

28.1.2 Provisions for remediation

Obligations for remediation, dismantling and decontamination as a result of mining operations arise mainly as a result of legal environmental requirements. The Group recognises provisions for remediation costs for all legal and constructive obligations.

Future expenditures for remediation are those resulting from closed operations and ongoing operations. The company collaborates with regulatory authorities to devise long-term plans for remediation of the mining areas. Provisions for ongoing operations are based on these remediation plans.

The amount of the provision is calculated based on acreage and an assessment of future expenditures based on present day technology and other circumstances. The provision is assigned a present value. Future expenditures for ongoing operations are capitalised and depreciated over their useful life. For discontinued operations the costs have been expensed.

Provisions are reviewed and updated as needed when the mine assets' estimated useful life, costs, technical conditions, regulations or other conditions change.

The uncertainty in the estimates made so far will decrease as the experience gained is taken into account in future estimates.

Provisions for remediation at year-end amounted to MSEK 1,727 (1,775).

28.2 Impairment testing of property, plant and equipment

The Group reports significant values in the balance sheet in respect of property, plant and equipment. Property, plant and equipment are tested for impairment in accordance with the accounting policies described in section 21.1 above. The recoverable amounts of cash-generating units are established by calculating value in use. Value in use is based on estimates of expected future cash flows from the mining of the mineral reserves, and thus on assumptions concerning factors such as long-term iron ore prices, the USD/SEK exchange rate and levels of capital expenditure. The calculation of value in use is very sensitive to changes in the assumptions.

The Group has reported no impairment losses for 2022 or 2021.

28.3 Useful life and depreciation method for property, plant and equipment

Depreciation periods for main haulage levels, facilities and equipment in mines is dependent on future ore extraction and the mine's useful life. It is essential that changes in production and the ore base are reflected in the applied depreciation method and useful life, which is of particular importance when deciding on new main haulage levels. To achieve this, the useful lives and depreciation methods must be continuously reassessed. Changes in assessments could have a material impact on consolidated earnings and financial position.

The carrying amount of property, plant and equipment at year-end amounted to MSEK 33,558 (31,047). Depreciation for the year amounted to MSEK 2,973 (2,982).

28.4 Retirement benefits

Several assumptions are important components in the actuarial methods used to calculate pension provisions, which may have a significant impact on the recognised net obligation and annual pension cost. The discount rate and expected return on plan assets are two critical assumptions used in the calculation of pension cost for the year and the present value of pension obligations. These assumptions are assessed annually for each pension plan in each country.

The discount rate enables the measurement of future cash flows to present value on the measurement date. This rate must correspond to the yield on either high-quality corporate bonds including mortgage bonds or, if there is no viable market for such bonds, government bonds. A lower discount rate increases the present value of the pension provision and the annual cost.

To determine the expected return on plan assets, LKAB considers the current and anticipated categories of the assets as well as historical and expected returns on the various categories of assets.

Several factors do not change as often, such as personnel turnover and retirement age. For financial and other reasons, actual outcomes often differ from actuarial assumptions.

Provisions for pensions at year-end amounted to MSEK 992 (1,396).

Note 1 continued

28.5 Taxes

Significant assessments are made to determine current tax assets and liabilities as well as deferred tax assets and liabilities. LKAB must assess the likelihood that deferred tax assets will be utilised to offset future taxable profits. Actual outcomes may differ from the estimates, for instance due to changed tax legislation or the outcome of final reviews of tax returns by authorities and tax courts.

A deferred net tax liability of MSEK -1,388 (-1,626) was recognised at year-end. The corresponding amount for current tax was a net tax liability of MSEK -96 (-642).

28.6 Disputes

LKAB is occasionally involved in disputes and legal proceedings in the ordinary course of business. Management consults with legal counsel on matters related to litigation and other experts both within and outside the company on matters concerning the ordinary course of business. Management's considered opinion is that neither the Parent Company nor any subsidiaries is currently involved in any legal or arbitration proceedings that are expected to have a material effect on the business, its financial position or earnings.

Note 2

Segment reporting

Segment information

The Group's business is divided into operating segments based on the parts of the business monitored by the Group's chief operating decision maker. This is known as a management approach. Group management follows up on the results of the operations and decides how resources are to be allocated based on the products that the Group produces and sells, and these operations form the Group's operating segments. Each operating segment is headed by a person with day-to-day responsibility for the operations who reports regularly to Group management on the results of the operating segment's performance and the resources needed. The Group's internal reporting is structured so as to allow Group management to follow up on the operating segments' performance and results. An operating segment's results, assets and liabilities include items directly attributable to that segment and items which can be allocated to that segment in a reasonable and reliable way. Intra-group prices between segments are based on the arm's length principle; that is, between parties that are independent of each other, well-informed and with an interest in completing transactions. In the income statement, all items other than net financial income/expense and tax expense have been allocated to operating segments. Assets that have been allocated are property, plant and equipment; other assets have not been allocated. As regards liabilities, provisions for urban transformation and remediation and for lease liabilities have been allocated and other liabilities have not been allocated. All tangible investments are included in the segments' capital expenditures on property, plant and equipment.

The Group comprises the following operating segments:

Iron Ore business area

The Iron Ore business area mines and processes iron ore products in Kiruna, Malmberget and Svappavaara. The business area produces blast furnace pellets and pellets for steelmaking via direct reduction, known as DR pellets. The business area also produces fines. Included in the business area are logistics activities for the iron ore operations.

Special Products business area

The Special Products business area covers LKAB Minerals, LKAB Wassara, LKAB Berg & Betong, LKAB Kimit, LKAB Mekaniska and Bergteamet. The business area develops and markets industrial minerals, drilling technology and full service solutions for the mining and construction industries.

Other Segments

Other Segments covers group-wide functions such as HR, communication and finance, as well as strategic research and development. Other Segments also covers financial operations, including transactions and gains/losses relating to financial hedging of iron ore prices, foreign currency and purchases of electricity.

Note 2 continued

Operating segments

Group	Iron Ore business area		Special Products business area		Other Segments		Total		Group-related adjustments and eliminations ¹⁾		Group		
	MSEK	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	
External income ²⁾		42,098	45,346	4,620	3,570	-175	-104	46,543	48,823	-	-	46,543	48,812
Internal income		1,190	800	2,467	2,063	75	64	3,732	2,916	-3,732	-2,927	0	0
Total income	43,288	46,146	7,087	5,633	-100	-40	50,275	51,739	-3,732	-2,927	46,543	48,812	
Operating profit²⁾	21,322	27,625	541	380	-941	-951	20,922	27,054	-123	-156	20,799	26,898	
Net financial income/expense												-2,119	1,484
Profit/loss before tax												18,680	28,382
Tax												-3,600	-5,778
Profit/loss for the year												15,080	22,604
Significant non-cash items													
Depreciation of property, plant and equipment ²⁾		-2,792	-2,843	-257	-216	-95	-71	-3,144	-3,130	3	-2	-3,141	-3,132
Costs for urban transformation provisions		-545	-372	-	-	-	-	-545	-372	-	-	-545	-372
Assets		40,637	38,437	1,110	1,046	3,117	1,983	44,864	41,466	-	-	44,864	41,466
Unallocated assets												52,760	53,179
Total assets												97,624	94,645
Investments in property, plant and equipment		4,687	3,154	165	147	92	58	4,944	3,359	-	-	4,944	3,359
Liabilities		15,548	16,366	170	151	27	23	15,745	16,540	-	-	15,745	16,540
Unallocated liabilities												10,559	10,540
Total liabilities												26,304	27,080

1) Refers to intra-group transactions and group-related adjustments, for example adjustment of the consolidated pension liability under IAS 19 and internal gains.

2) In 2022 exploration activities and parts of the Group function for technology were moved from Other Segments into the Iron Ore business area. Comparative figures have been adjusted to reflect the organisational change.

Note 2 continued

Geographic areas

The vast majority of Group sales are made essentially from Sweden and in the Swedish companies. The Group's products are made almost exclusively in Sweden. Capital expenditures have mainly been made in Sweden. The carrying amount of assets by country/region is based on where the assets are located, and the income for the Group is recognised based on where the customers are located.

Group	Sweden		Rest of Europe		Middle East & North Africa		Rest of World		Group		
	MSEK	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021
External income		8,146	8,232	21,673	24,365	11,677	10,427	5,047	5,788	46,543	48,812
Property, plant and equipment		41,587	38,363	3,149	3,086	–	–	28	17	44,864	41,466

Information about major customers

Under IFRS 8, the company must disclose information about major customers. The LKAB Group has four large customers that each account for 10 percent or more of Group sales. Sales to these customers amounted to 26 (25) percent, 11 (12) percent, 10 (13) percent and 10 (10) percent of Group sales and are recognised in the Iron Ore business area.

Parent Company	Iron Ore business area				Other Segments		Parent Company total		
	MSEK	2022	2021	2022	2021	2022	2021	2022	2021
Net sales				43,251	46,095	-49	8	43,202	46,103

Parent Company	Europe				Middle East & North Africa		Rest of World		Parent Company		
	MSEK	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021
Net sales by geographic market		28,370	31,186	11,473	10,418	3,359	4,499	43,202	46,103		

Note 3 Revenue

Breakdown of revenue from contracts with customers

The breakdown of revenue from contracts with customers into major product and service areas and into main geographic markets is summarised below.

The table also includes a reconciliation between the revenue breakdown and the Group's total external income for operating segments according to Note 2.

Group	Iron Ore business area		Special Products business area		Other Segments		Group		
	MSEK	2022	2021 ¹⁾	2022	2021	2022	2021 ¹⁾	2022	2021
Product/service area									
Pellets		37,270	39,336	–	–	–	–	37,270	39,336
Fines		4,064	5,406	–	–	–	–	4,064	5,406
Magnetite		–	–	1,630	1,191	–	–	1,630	1,191
Mineral sands		–	–	849	670	–	–	849	670
Other industrial minerals		–	–	1,658	1,418	–	–	1,658	1,418
Mining and construction services		–	–	483	291	–	–	483	291
Other		764	604	–	–	19	22	783	626
Total		42,098	45,346	4,620	3,570	19	22	46,737	48,938
Region									
Europe		27,266	30,429	2,728	2,272	19	22	30,013	32,723
MENA		11,473	10,418	204	9	–	–	11,677	10,427
Rest of World		3,359	4,499	1,688	1,289	–	–	5,047	5,788
Total		42,098	45,346	4,620	3,570	19	22	46,737	48,938
Revenue from contracts with customers		42,098	45,346	4,620	3,570	19	22	46,737	48,938
Other income – financing activities		–	–	–	–	-194	-126	-194	-126
Total external income		42,098	45,346	4,620	3,570	-175	-104	46,543	48,812

1) In 2022 exploration activities and parts of the Group function for technology were moved from Other Segments into the Iron Ore business area. Comparative figures have been adjusted to reflect the organisational change.

Contract balances

Disclosures concerning contract liabilities from contracts with customers that are summarised below.

Group	31 Dec 2022	31 Dec 2021
MSEK		
Contract liabilities included in Other current liabilities	82	141

The contract liability balance of MSEK 141 that was reported at the beginning of the period was recognised as revenue in 2022.

Note 4**Business combinations****Acquisition of subsidiaries**

On 23 February 2022 the parent company acquired 100 percent of the shares in SMEBAB Agat AB, which has been included in the consolidated financial statements. The purchase consideration was MSEK 475 and was paid in cash. Following acquisition the name of the company was changed to LKAB Centrumhotellet AB. The company owns a hotel property in Kiruna that is leased to Scandic. Prior to the acquisition LKAB Centrumhotellet AB did not conduct any activities other than the construction of the hotel property. There are no external transaction expenses or acquisition-related costs attributable to the acquisition.

Purchase price allocation SMEBAB Agat AB

The acquired company's net assets at the acquisition date:

MSEK	2022
Property, plant and equipment	499
Financial assets	4
Trade and other receivables	3
Cash and cash equivalents	–
Accounts payable and other operating liabilities	-31
Deferred tax liability	-8
Net identifiable assets and liabilities	467
Consolidated goodwill	8
Consideration transferred	475

Acquisition of associated company

On 14 November 2022 LKAB acquired 33.7 percent of the shares in REEtec Holding AS of Norway (REEtec).

REEtec has developed an innovative and sustainable process for separating rare earth elements that combines high efficiency with up to 90 percent lower carbon emissions. Becoming a principal shareholder in REEtec is thus a natural extension of LKAB's value chain and fits in well with the company's strategy through its Special Products business area.

The purchase consideration was MSEK 458, of which MSEK 419 was paid in cash and MSEK 39 is linked to potential future financing of REEtec.

The company has had no operating activities other than developing technology for the separation of rare earth elements. The separation technology was developed in various steps, from lab scale to the existing pilot and demo plant. Industrialisation of a separation plant using the technology developed is in progress in Herøya, Norway.

Acquisition-related costs amount to around MSEK 7.6 and relate to consultants' fees. These costs are recognised under cost of goods sold in the income statement.

Purchase price allocation REEtec Holding AS

The acquired company's net assets at the acquisition date:

MSEK	100%	33.70%
Non-current assets	654	220
Current assets	849	286
Non-current liabilities	-106	-36
Current liabilities	-37	-12
Net identifiable assets and liabilities	1,360	458

Consideration transferred**Consideration associated with potential future financing****Other acquisitions**

Other minor acquisitions were also made within the LKAB Group during the period, but as these are not significant no detailed disclosures about the acquisitions are provided. Consideration transferred for these totals MSEK 9.

Note 5**Other operating income**

MSEK	Group		Parent Company	
	2022	2021	2022	2021
Rental income, properties	250	265	–	–
Gain on sale of non-current assets	3	5	1	1
Exchange gain on receivables/liabilities related to operations	68	29	30	7
Government grants	51	208	48	42
Damages	15	24	1	–
Other	8	6	10	11
Total	395	537	90	61

Note 6**Other operating expenses**

MSEK	Group		Parent Company	
	2022	2021	2022	2021
Property costs	288	251	3	6
Loss on sale of non-current assets	5	3	–	–
Exchange loss on receivables/liabilities related to operations	102	29	56	12
Other	5	3	–	–
Total	400	286	59	18

Note 7**Employees, employee benefit expenses and remuneration of senior executives****Average number of employees**

Parent Company	2022	Of which	Of which	2021	Of which	Of which
		women	men		women	men
Sweden	3,211	28%	72%	3,168	27%	73%
Total Parent Company	3,211	28%	72%	3,168	27%	73%
Subsidiaries						
Sweden	743	22%	78%	772	19%	81%
China	19	63%	37%	20	30%	70%
Netherlands	21	14%	86%	22	32%	68%
Norway	223	13%	87%	208	14%	86%
United Kingdom	247	20%	80%	232	24%	76%
Germany	12	42%	58%	11	45%	55%
Other countries	37	23%	77%	36	32%	68%
Total subsidiaries	1,302	21%	79%	1,301	23%	77%
Total Group	4,513	26%	74%	4,469	25%	75%

Gender distribution in company management as at 31 December

	31 Dec 2022		31 Dec 2021	
	Percentage women	Percentage men	Percentage women	Percentage men
Parent Company				
Board of Directors	33%	67%	33%	67%
Other senior executives	29%	71%	13%	87%

Salaries and other remuneration, and social security costs, of senior executives and other employees respectively in the Parent Company

	2022		2021			
	Senior executives (18 persons)	Other employees	Senior executives (19 persons)	Other employees		
Parent Company						
MSEK						
Salaries and other remuneration						
Sweden	30	2,440 ¹⁾	2,470	32	2,216	2,248
Total Parent Company	30	2,440	2,470	32	2,216	2,248
Social security costs			1,180		1,059	
<i>of which pension costs</i>			433		442	

1) In accordance with a decision by the Board of Directors, in June a bonus of SEK 20,000 per person was paid to all employees excluding senior executives.

Remuneration of senior executives

Senior executives refers to Board members, the President and the other members of Group management.

Guidelines for the remuneration of senior executives

The remuneration of the Chairman of the Board and Board members is decided at the AGM. The 2022 AGM approved remuneration of SEK 700,000 to the Chairman of the Board and SEK 315,000 to the other Board members elected by the AGM. Serving on the Audit Committee is remunerated with a fee of SEK 75,000 for the chair and SEK 50,000 for other committee members. Serving on the Strategy and Urban Transformations Committee is remunerated with a fee of SEK 71,500 for the chair and SEK 49,500 for other committee members. Serving on the Remuneration Committee is remunerated with a fee of SEK 30,000 for the chair and SEK 20,000 for other committee members. Remuneration is not paid to Board members who are employed at the Government Offices, nor to employee representatives.

The 2020 AGM adopted guidelines for remuneration and other terms of employment for senior executives. The guidelines were prepared in accordance with the government's principles for compensation and other employment terms for senior executives at state-owned companies dated 27 February 2020. The guidelines are applicable to contracts signed after the 2020 AGM.

Preparation and decision-making processes for determining the remuneration of senior executives

Remuneration and other employment terms for the President and salary-setting principles for Group management are prepared by a remuneration committee appointed by the Board of Directors. Four Board members make up the committee. The committee is chaired by the Chairman of the Board. The Board takes decisions based on committee proposals. The Chairman of the Board approves the annual salary reviews of other Group management executives.

Principles for the remuneration of senior executives

The President and other Group management executives are paid fixed salaries. The salaries are pensionable.

President Jan Moström's basic monthly salary in 2022 was SEK 764,500. Retirement age for the President is 65. The President's pension plan is a defined-contribution plan whereby LKAB makes a yearly provision of 30 percent of the President's current fixed annual salary for a pension plan chosen by the President, which may include the ITP plan. The portion of the premium allowance that is not used to cover premiums for the ITP plan can be used by the President for a complementary pension plan. The retirement age for other senior executives is 65. They have a defined-contribution pension plan to which LKAB allocates 30 percent of annual fixed salary.

The mutual notice period for termination of employment in the case of senior executives with contracts signed prior to the 2017 AGM is six months. Severance pay equivalent to 18 monthly salaries is paid when notice of termination is given by the company. For contracts signed since the 2017 AGM a mutual notice period of six months applies. Severance pay equivalent to 12 monthly salaries is paid when notice of termination is given by the company.

For further information, see the table Remuneration and other benefits to members of Group management in 2022.

Note 7 continued

Remuneration and other benefits to the Board, accrued

SEK thousand	2022	2021
	Board fees	Board fees
Chairman of the Board Göran Persson ^{1), 4)}	795	769
Board member Gunnar Axheim ¹⁾	361	347
Board member Catrin Fransson ³⁾	361	235
Board member Eva Hamilton ¹⁾	361	347
Board member Lotta Mellström ²⁾	–	–
Board member Bjarne Moltke Hansen ¹⁾	361	347
Board member Ola Salmén ³⁾	386	374
Board member Gunilla Saltin ⁴⁾	331	319
Board member Per-Olof Wedin ³⁾	361	349
Total	3,315	3,086

1) The fee also includes remuneration for work on the Strategy and Urban Transformations Committee.

2) No board fees are paid to representatives of the Ministry of Enterprise and Innovation.

3) The fee also includes remuneration for work on the Board's Audit Committee.

4) The fee also includes remuneration for work on the Board's Remuneration Committee.

Remuneration and other benefits to members of Group management in 2021

SEK thousand	Basic salary ¹⁾	Other benefits ²⁾	Pension cost	Total
President Jan Moström	9,233	176	2,544	11,953
SVP Leif Boström	2,891	102	849	3,842
SVP Peter Hansson	2,865	159	842	3,866
SVP Pierre Heeroma	2,754	150	801	3,705
SVP Niklas Johansson	2,652	88	850	3,590
SVP Michael Palo	3,382	177	990	4,549
SVP Markus Petäjäniemi ³⁾	2,962	105	808	3,875
SVP Grete Solvang Stoltz	2,454	99	717	3,270
Acting SVP Roger Hahne ⁴⁾	1,258	4	484	1,746
Total	30,451	1,060	8,885	40,396

1) Basic salary including holiday pay.

2) Other benefits include a company car, subsistence allowances, life insurance and medical insurance.

3) Markus Petäjäniemi was a member of the Group management team until 28 February 2021. During the period 1 March to 31 October he served as senior advisor. The remuneration covers the entire period.

4) Roger Hahne joined the Group management team as Acting SVP Market and Technology from 1 March 2021. Pension is payable in accordance with LKAB's pension rules for salaried employees.

Remuneration and other benefits to members of Group management in 2022

SEK thousand	Basic salary ¹⁾	Other benefits ²⁾	Pension cost	Total
President Jan Moström	9,479	179	2,798	12,456
SVP Leif Boström	2,957	99	855	3,911
SVP Peter Hansson	2,835	155	842	3,832
SVP Niklas Johansson	2,700	84	801	3,585
SVP Pia Lindström ³⁾	1,950	136	614	2,700
SVP Michael Palo	3,524	180	1,028	4,732
SVP Maria Reinholdsson ⁴⁾	1,572	114	476	2,162
Acting SVP Roger Hahne ⁵⁾	371	–	130	501
SVP Pierre Heeroma ⁶⁾	1,633	51	467	2,151
Acting SVP Åse Juhlin ⁷⁾	407	1	126	534
Acting SVP Anna Lidbom ⁸⁾	201	21	39	261
SVP Grete Solvang Stoltz ⁹⁾	1,001	7	62	1,071
Total	28,630	1,028	8,238	37,896

1) Basic salary including holiday pay.

2) Other benefits include accommodation, a company car, subsistence allowances, life insurance and medical insurance.

3) Pia Lindström from 16 February 2022.

4) Maria Reinholdsson from 4 May 2022.

5) Roger Hahne, Acting SVP Market and Technology, until 31 March 2022. Pension is payable in accordance with LKAB's pension rules for salaried employees.

6) Pierre Heeroma, SVP Exploration, Strategy and Business Development, until 31 July 2022.

7) Åse Juhlin, Acting SVP HR, until 30 April 2022. Pension is payable in accordance with LKAB's pension rules for salaried employees.

8) Anna Lidbom, Acting SVP Sustainability, until 28 February 2022. Pension is payable in accordance with LKAB's pension rules for salaried employees.

9) Grete Solvang Stoltz, SVP HR and Sustainability, until 31 January 2022. The remuneration includes final correction for accrued days.

Note 8 Auditors' fees and reimbursements

MSEK	Group		Parent Company	
	2022	2021	2022	2021
KPMG				
Audit engagements	9	7	4	4
Other auditing	1	1	1	1
Tax consulting	1	0	0	0
Other services	0	0	0	0
Other auditors				
Audit engagements	0	0	–	–

Audit engagements refers to statutory auditing of annual and consolidated financial statements and bookkeeping as well as the Board's and President's administration of the company, along with audits and other reviews performed as agreed upon or contracted.

This includes other tasks that are incumbent on the company's auditor to perform, as well as consultancy or other assistance occasioned by observations during such reviews or the performance of such other tasks.

Note 9**Operating expenses by type**

	Group		Parent Company		
	MSEK	2022	2021	2022	2021
Employee benefit expenses		5,088	4,478	3,792	3,425
Materials etc.		3,177	2,868	3,787	3,348
Energy		3,289	2,366	2,972	2,082
Transport		937	819	2,216	2,014
Provisions for urban transformation		545	372	545	372
Depreciation, amortisation and impairment		3,139	3,132	2,385	2,464
Other operating expenses		9,964	8,416	7,372	6,028
Total		26,139	22,451	23,069	19,733

Note 10**Net financial income/expense**

Group	MSEK	2022	2021
Financial income			
Assets at fair value through profit or loss			
- Interest-bearing securities – net gain		–	–
- Shares and alternative investments – net gain		–	1,339
- Commodities portfolio – net gain		–	0
Dividends on shares at fair value through other comprehensive income		568	–
Other interest income, financial assets at amortised cost		25	2
Return on plan assets		67	39
Gain/loss on sale of shares		0	280
Exchange rate fluctuations including foreign exchange derivatives (net)		419	232
Other financial income		2	0
Total financial income		1,081	1,892

Group

MSEK

	2022	2021
Financial expense		
Assets at fair value through profit or loss		
- Interest-bearing securities – net loss	-2,119	-225
- Shares and alternative investments – net loss	-871	–
Interest expense, financial liabilities at amortised cost		
- Interest-bearing liabilities	-22	-32
- Provision for remediation costs	-51	-50
- Other interest expense	-3	-2
Interest expense, defined-benefit pension obligations	-85	-56
Interest expense, lease liabilities	-14	-7
Fees for loan facility	-14	-13
Other financial expense	-21	-23
Impairment of interests in associates	–	–
Total financial expense	-3,200	-408
Net financial income/expense	-2,119	1,484

Exchange rate differences refer mainly to the remeasurement of receivables in foreign currency and to shares and alternative investments including related foreign exchange derivatives.

Other financial expense refers primarily to transaction costs for derivatives and to banking and administration expenses.

Parent Company	Income from interests in Group companies		Income from interests in associates		
	MSEK	2022	2021	2022	2021
Dividend		–	–	–	–
Income from divestment of interests		–	–	–	–
Impairment		-135	–	–	–
Total		-135	–	–	–

Note 10 continued

Parent Company	Income from other securities and receivables held as non-current assets		Other interest income and similar profit/loss items		
	MSEK	2022	2021	2022	2021
Dividend, shares		568	–	–	–
Gain/loss on disposal of shares		0	280	–	–
Interest income, Group companies		100	104	14	6
Interest income, other		–	–	21	1
Return on commodities portfolio		–	–	–	8
Exchange rate fluctuations including foreign exchange derivatives (net)		–	–	461	378
Other financial income		–	–	2	–
Total		668	384	498	393

Exchange rate differences refer mainly to the remeasurement of receivables in foreign currency and to shares and alternative investments including related foreign exchange derivatives.

Parent Company	Interest expense and similar profit/loss items		
	MSEK	2022	2021
Interest expense, Group companies		-6	-1
Interest expense, interest-bearing liabilities		-21	-32
Interest expense, remediation costs		-35	-32
Interest expense, other		-2	-1
Return on shares and alternative investments		-1,556	-1
Fees for loan facility		-14	-13
Other financial expense		-21	-22
Total		-1,655	-102

Return on shares and alternative investments includes a return on interest-bearing securities of MSEK -2,112 (-185).
Other financial expense refers primarily to transaction costs for derivatives and to banking and administration expenses.

Note 11 Appropriations

Parent Company

MSEK	2022	2021
Difference between recognised depreciation and depreciation according to plan:		
Land and buildings	–	–
Plant and equipment	375	625
Tax allocation reserve, reversal for the year	–	–
Group contributions received	453	318
Group contributions paid	–	–
Total	828	943

Note 12 Taxes

Recognised in the income statement

Group

MSEK	2022	2021
Current tax expense (-)		
Tax expense for the year	-4,068	-5,777
Adjustment of tax attributable to prior years	140	-1
	-3,928	-5,778
Deferred tax expense (-)/tax income (+)		
Deferred tax on temporary differences	328	0
	328	0
Total recognised Group tax	-3,600	-5,778

Parent Company

MSEK	2022	2021
Current tax expense (-)		
Tax expense for the year	-4,020	-5,753
Adjustment of tax attributable to prior years	135	2
	-3,885	-5,751
Deferred tax expense (-)		
Deferred tax on temporary differences	-96	72
	-96	72
Total recognised Parent Company tax	-3,981	-5,679

Reconciliation of effective tax

Group

MSEK	2022 (%)	2022	2021 (%)	2021
Profit/loss before tax		18,680		28,382
Tax as per effective tax rate for Parent Company	20.60%	-3,848	20.60%	-5,847
Non-deductible expenses	0.40%	-63	0.10%	-28
Non-taxable income	-0.60%	120	-0.20%	59
Tax attributable to prior years	-0.80%	140	0.00%	-1
Standard interest on tax allocation reserve and investment fund	-	-	0.10%	-4
Upward adjustment of tax allocation reserve	-	-	0.00%	0
Tax effect, reclassification of impairment losses	0.20%	-42	0.00%	-3
Other	-0.50%	93	-0.20%	46
Recognised effective tax	19.30%	-3,600	20.40%	-5,778

Parent Company

MSEK	2022 (%)	2022	2021 (%)	2021
Profit/loss before tax		20,427		28,049
Tax as per effective tax rate for Parent Company	20.60%	-4,208	20.60%	-5,778
Non-deductible expenses	0.30%	-61	0.20%	-45
Non-taxable income	-0.60%	117	-0.20%	58
Tax attributable to prior years	-0.70%	135	0.00%	2
Standard interest on tax allocation reserve and investment fund	-	-	0.00%	-4
Upward adjustment of tax allocation reserve	-	-	0.00%	0
Tax effect, reclassification of impairment losses	-	-	0.00%	-3
Other	-0.10%	36	-0.30%	91
Recognised effective tax	19.50%	-3,981	20.30%	-5,679

Tax attributable to other comprehensive income

Group

MSEK	2022	2021
Cash flow hedges incl. hedging cost reserve	1	0
Remeasurement of defined-benefit pension plans	-69	-56
Total	-68	-56

Note 12 continued

Recognised in the statement of financial position and balance sheet

Recognised deferred tax assets and liabilities. Deferred tax assets and liabilities are attributable to the following:

Group	MSEK	Deferred tax asset		Deferred tax liability		Net	
		31 Dec 2022	31 Dec 2021	31 Dec 2022	31 Dec 2021	31 Dec 2022	31 Dec 2021
Intangible assets		-	-	-113	-133	-113	-133
Property, plant and equipment		273	407	-2,376	-2,461	-2,103	-2,054
Current investments		-	-	-295	-590	-295	-590
Tax allocation reserve		-	-	-	-	-	-
Contingency reserve		-	-	-	-	-	-
Pension provisions		136	227	-	-	136	227
Provisions, urban transformation		957	923	-	-	957	923
Other provisions		30	0	-	-	30	0
Cash flow hedges		-	-	-	-	-	-
Loss carryforwards		-	1	-	-	-	1
Other		-	-	-	-	-	-
Tax assets/liabilities		1,396	1,558	-2,784	-3,184	-1,388	-1,626
Offset		-1,389	-1,548	1,389	1,548	0	-
Tax assets/liabilities, net		7	10	-1,395	-1,636	-1,388	-1,626

Parent Company	MSEK	Deferred tax asset		Deferred tax liability		Net	
		31 Dec 2022	31 Dec 2021	31 Dec 2022	31 Dec 2021	31 Dec 2022	31 Dec 2021
Property, plant and equipment		282	408	-	-	282	408
Pension provisions		105	108	-	-	105	108
Provisions, urban transformation		957	923	-	-	957	923
Other		26	28	-	-	26	28
Tax assets/liabilities		1,370	1,467	-	-	1,370	1,467

Change in deferred tax on temporary differences and loss carryforward.

Note 12 continued

Group MSEK	Opening balance 1 Jan 2021	Recognised			Other changes	Closing balance, 31 Dec 2021
		in profit or loss	in other comprehen- sive income	Business combi- na- tions		
Intangible assets	-103	-10	-	-20	-	-133
Property, plant and equipment	-2,345	291	-	-	-	-2,054
Current investments	-364	-226	-	-	-	-590
Tax allocation reserve	0	-	-	-	-	0
Contingency reserve	0	-	-	-	-	0
Pension provisions	320	-37	-56	-	-	227
Provisions, urban transformation	910	13	-	-	-	923
Other provisions	37	-37	-	-	-	0
Cash flow hedges	0	-	-	-	-	0
Loss carryforwards	1	-	-	-	-	1
Other	-5	5	-	-	-	0
Total	-1,549	-1	-56	-20	-	-1,626

Parent Company MSEK	Opening balance 1 Jan 2021	Recognised in income statement	Closing balance 31 Dec 2021
Property, plant and equipment	342	66	408
Pension provisions	111	-3	108
Provisions, urban transformation	911	12	923
Other	31	-3	28
Total	1,395	72	1,467

Parent Company MSEK	Opening balance 1 Jan 2022	Recognised in profit or loss	Closing balance 31 Dec 2022
Property, plant and equipment	408	-126	282
Pension provisions	108	-3	105
Provisions, urban transformation	923	34	957
Other	28	-2	26
Total	1,467	-97	1,370

Group MSEK	Opening balance 1 Jan 2022	Recognised			Other changes	Closing balance, 31 Dec 2022
		in profit or loss	in other comprehen- sive income	Business combi- na- tions		
Intangible assets	-133	20	-	-	-	-113
Property, plant and equipment	-2,054	-29	-	-	-20	-2,103
Current investments	-590	294	1	-	-	-295
Tax allocation reserve	0	-	-	-	-	0
Contingency reserve	0	-	-	-	-	0
Pension provisions	227	-22	-69	-	-	136
Provisions, urban transformation	923	34	-	-	-	957
Other provisions	0	-	-	-	-	0
Cash flow hedges	0	-	-	-	-	0
Loss carryforwards	1	-	-	-	-	1
Other	0	30	-	-	-	30
Total	-1,626	327	-68	0	-20	-1,388

Note 13 Earnings per share

The number of shares amounted to 700,000 in both 2022 and 2021. Earnings attributable to Parent Company shareholders are MSEK 15,072 (22,603) and earnings per share are thus SEK 21,532 (32,291). There are no options or potential ordinary shares, so there is no dilution.

Note 14 Intangible assets

All of the Group's intangible assets are acquired.

Group MSEK	Goodwill	Mining rights	Purchasing contracts	Customer relationships	Other	Total
Cost of acquisition						
Opening balance, 1 Jan 2021	557	281	383	415	201	1,837
Business combinations	53	–	–	28	10	91
Change in emission allowances	–	–	–	–	257	257
Disposals and retirements	–	–	–	–	–	0
Exchange rate differences	49	–	37	40	55	181
Closing balance, 31 Dec 2021	659	281	420	483	523	2,366
Opening balance, 1 Jan 2022	659	281	420	483	523	2,366
Business combinations ¹⁾	11	–	–	–	3	14
Change in emission allowances	–	–	–	–	414	414
Disposals and retirements	–	–	–	–	–	0
Exchange rate differences	24	–	14	-12	13	39
Closing balance, 31 Dec 2022	694	281	434	471	953	2,833
Depreciation						
Opening balance, 1 Jan 2021	-11	-183	-72	-58	-9	-333
Amortisation for the year	–	–	-37	-30	-1	-68
Exchange rate differences	-3	-2	-9	-6	-53	-73
Closing balance, 31 Dec 2021	-14	-185	-118	-94	-63	-474
Opening balance, 1 Jan 2022	-14	-185	-118	-94	-63	-474
Amortisation for the year	–	–	-39	-34	-3	-76
Exchange rate differences	-4	-1	-4	–	12	3
Closing balance, 31 Dec 2022	-18	-186	-161	-128	-54	-547
Impairment						
Opening balance, 1 Jan 2021	-62	-93	–	–	–	-155
Disposals and retirements	–	–	–	–	–	0
Exchange rate differences	1	–	–	–	–	1
Closing balance, 31 Dec 2021	-61	-93	–	–	–	-154
Opening balance, 1 Jan 2022	-61	-93	–	–	–	-154
Disposals and retirements	–	–	–	–	–	0
Exchange rate differences	-2	–	–	–	–	-2
Closing balance, 31 Dec 2022	-63	-93	–	–	–	-156
Carrying amount						
At 1 Jan 2021	484	5	311	357	192	1,349
At 31 Dec 2021	584	3	302	389	460	1,738
At 1 Jan 2022	584	3	302	389	460	1,738
At 31 Dec 2022	613	2	273	343	899	2,130

1) For further information see Note 4 Business combinations.

Note 14 continued

Amortisation is included in the following lines of the income statement

Group

MSEK		2022	2021
Cost of goods sold		-76	-68
Parent Company	Mining rights		
MSEK		Other	Total
Cost of acquisition			
Opening balance, 1 Jan 2021		161	203
Change in emission allowances		-	257
Closing balance, 31 Dec 2021		161	460
Opening balance, 1 Jan 2022		161	460
Change in emission allowances		-	414
Closing balance, 31 Dec 2022		161	874
Depreciation			
Opening balance, 1 Jan 2021		-161	-9
Closing balance, 31 Dec 2021		-161	-9
Opening balance, 1 Jan 2022		-161	-9
Closing balance, 31 Dec 2022		-161	-9
Carrying amount			
At 1 Jan 2021		-	194
At 31 Dec 2021		-	451
At 1 Jan 2022		-	451
At 31 Dec 2022		-	865

Goodwill specification

MSEK	31 Dec 2022	31 Dec 2021
LKAB Minerals Ltd	531	511
Bergteamet AB	53	53
Centrumhotellet	8	-
Units without significant goodwill value, combined	21	20
Total	613	584

Impairment testing of cash-generating units containing goodwill

Impairment testing is performed once a year, or on an ongoing basis during the year if there is any indication of impairment, and is based on estimated value in use.

This value is based on cash flow forecasts taking the annual budget and five-year strategic plan for each cash-generating unit as a starting point, as determined by the management of the Special Products business area. The cash flow forecasts beyond the planning horizon include the assumption of perpetual 1–2 percent growth. The expected cash flows were calculated to present value using an individual discount rate in line with the market (WACC). Important assumptions in the business plans are expected growth in the market and assessment of future margins.

The value in use of the LKAB Minerals Ltd cash-generating unit exceeds the carrying amount by MSEK 155 and consequently there is judged to be no impairment loss. The discount rate before tax is 8.74 percent.

The value in use of the cash-generating unit would equal the carrying amount if the perpetual growth rate were to change from 2 percent to 1.29 percent or the discount rate from 8.74 percent to 9.28 percent.

Note 15 Property, plant and equipment for operations

Group MSEK	Buildings and land	Underground installations	Plant and machinery	Equipment, tools, fixtures and fittings	Construction in progress	Total
Cost of acquisition						
Opening balance, 1 Jan 2021	13,081	8,322	45,568	7,635	6,350	80,956
Business combinations	1	-	251	7	-	259
Acquisitions	184	20	448	48	2,659	3,359
Capitalisation of remediation	13	-	-	-	-	13
Reclassifications	1,006	71	1,541	170	-2,788	0
Disposals and retirements	-338	-18	-207	-92	-151	-806
Exchange rate differences	205	-	160	10	9	384
Closing balance, 31 Dec 2021	14,152	8,395	47,761	7,778	6,079	84,165
Opening balance, 1 Jan 2022	14,152	8,395	47,761	7,778	6,079	84,165
Business combinations ¹⁾	369	-	-	131	-	500
Acquisitions	170	14	241	105	4,414	4,944
Remeasurement of asset, remediation	-30	-	-	-	-	-30
Reclassifications	356	58	878	107	-1,399	0
Disposals and retirements	-59	-2	-583	-229	-113	-986
Exchange rate differences	95	-	78	6	3	181
Closing balance, 31 Dec 2022	15,054	8,465	48,375	7,897	8,984	88,774
Depreciation						
Opening balance, 1 Jan 2021	-5,445	-5,369	-25,559	-5,447		-41,820
Business combinations	-	-	-129	-6		-135
Depreciation for the year	-519	-268	-1,905	-290		-2,982
Disposals and retirements	282	18	205	93		598
Exchange rate differences	-71	-	-100	-8		-179
Closing balance, 31 Dec 2021	-5,753	-5,619	-27,488	-5,658		-44,518
Opening balance, 1 Jan 2022	-5,753	-5,619	-27,488	-5,658		-44,518
Depreciation for the year	-521	-259	-1,891	-302		-2,973
Reclassifications	-162	-36	-189	-15		-402
Disposals and retirements	37	2	588	227		854
Exchange rate differences	-36	-	-52	-5		-93
Closing balance, 31 Dec 2022	-6,435	-5,912	-29,032	-5,753		-47,132

1) For further information see Note 4 Business combinations.

Note 15 continued

Group MSEK	Buildings and land	Underground installations	Plant and machinery	Equipment, tools, fixtures and fittings	Construction in progress	Total
Impairment						
Opening balance, 1 Jan 2021	-1,676	-864	-4,478	-578	-1,361	-8,957
Reclassifications	-81	-	-36	-4	121	0
Disposals and retirements	27	-	-	-	1	28
Closing balance, 31 Dec 2021	-1,730	-864	-4,514	-582	-1,239	-8,929
Opening balance, 1 Jan 2022	-1,730	-864	-4,514	-582	-1,239	-8,929
Reclassifications	160	36	188	15	3	402
Disposals and retirements	2	-	2	-	81	85
Closing balance, 31 Dec 2022	-1,568	-828	-4,324	-567	-1,155	-8,442
Carrying amount						
At 1 Jan 2021	5,960	2,089	15,531	1,610	4,989	30,179
At 31 Dec 2021	6,669	1,912	15,759	1,538	4,840	30,718
At 1 Jan 2022	6,669	1,912	15,759	1,538	4,840	30,718
At 31 Dec 2022	7,051	1,725	15,019	1,577	7,829	33,200

Group MSEK	2022	2021
Owned assets including favourable leases from business combinations	33,200	30,718
Leased assets	358	329
Total	33,558	31,047

Capitalised remediation costs amount to MSEK 1,171 (1,202), while cumulative depreciation and impairment losses amount to MSEK -915 (-820).

Of the net amount of MSEK 256 (382), MSEK 153 (270) is reported as buildings and land while MSEK 103 (112) is reported as plant and machinery.

Depreciation and impairment are included in the following lines of the income statement:

Group MSEK	2022	2021
Cost of goods sold	-2,935	-2,959
Selling expenses	-5	-2
Administrative expenses	-4	-4
Research and development	-6	-8
Other operating expenses	-23	-9
Total	-2,973	-2,982

Disclosures concerning government grants in the Group

During the year government grants amounting to MSEK 37 (137) were received, which reduced the cost of acquisition of the assets.

Note 15 continued

Parent Company MSEK	Buildings and land	Underground installations	Plant and machinery	Equipment, tools, fixtures and fittings	Construction in progress	Total
Cost of acquisition						
Opening balance, 1 Jan 2021	8,605	8,322	42,839	1,551	6,073	67,390
Acquisitions	149	20	410	32	2,457	3,068
Reclassifications	988	71	1,442	70	-2,571	0
Disposals and retirements	-240	-18	-207	-34	-133	-632
Closing balance, 31 Dec 2021	9,502	8,395	44,484	1,619	5,826	69,826
Opening balance, 1 Jan 2022	9,502	8,395	44,484	1,619	5,826	69,826
Acquisitions	147	14	203	25	4,102	4,491
Reclassifications	299	58	801	72	-1,230	0
Disposals and retirements	-59	-2	-583	-137	-141	-922
Closing balance, 31 Dec 2022	9,889	8,465	44,905	1,579	8,557	73,395
Depreciation						
Opening balance, 1 Jan 2021	-3,618	-5,369	-23,961	-1,200		-34,148
Depreciation for the year	-357	-269	-1,741	-97		-2,464
Disposals and retirements	190	19	199	33		441
Closing balance, 31 Dec 2021	-3,785	-5,619	-25,503	-1,264		-36,171
Opening balance, 1 Jan 2022	-3,785	-5,619	-25,503	-1,264		-36,171
Depreciation for the year	-334	-259	-1,709	-85		-2,387
Reclassifications	-161	-36	-189	-16		-402
Disposals and retirements	41	2	579	136		758
Closing balance, 31 Dec 2022	-4,239	-5,912	-26,822	-1,229		-38,202
Impairment						
Opening balance, 1 Jan 2021	-1,243	-864	-4,342	-92	-1,360	-7,901
Reclassifications	-81	-	-36	-4	121	0
Disposals and retirements	24	-	-	-	-	24
Closing balance, 31 Dec 2021	-1,300	-864	-4,378	-96	-1,239	-7,877
Opening balance, 1 Jan 2022	-1,300	-864	-4,378	-96	-1,239	-7,877
Impairment for the year	-	-	-	-	-	0
Reclassifications	160	36	188	15	3	402
Disposals and retirements	2	-	2	0	81	85
Closing balance, 31 Dec 2022	-1,138	-828	-4,188	-81	-1,155	-7,390
Carrying amount						
At 1 Jan 2021	3,744	2,089	14,536	259	4,713	25,341
At 31 Dec 2021	4,417	1,912	14,603	259	4,587	25,778
At 1 Jan 2022	4,417	1,912	14,603	259	4,587	25,778
At 31 Dec 2022	4,512	1,725	13,895	269	7,402	27,803

Note 15 continued

Disclosures concerning government grants in the Parent Company

During the year government grants amounting to MSEK 37 (81) were received, which reduced the cost of acquisition of the assets.

Depreciation and impairment are included in the following lines of the income statement:

Parent Company

MSEK	2022	2021
Cost of goods sold	-2,380	-2,454
Administrative expenses	-2	-2
Research and development	-6	-8
Total	-2,387	-2,464

Note 16 Property, plant and equipment for urban transformation

Group and Parent Company

MSEK	Buildings and land	Construction in progress	Total
Opening balance, 1 Jan 2021	9,945	1,422	11,367
Capitalisation	1,696	1,222	2,918
Acquisitions	-	-	-
Effect of changed estimates and assumptions	-7	-	-7
Sales	-	-	-
Retirements	-12	-	-12
Investment grants	-	-	-
Adjustments, replacement properties	-	-136	-136
Closing balance, 31 Dec 2021	11,622	2,508	14,130
Opening balance, 1 Jan 2022	11,622	2,508	14,130
Capitalisation	329	1,262	1,591
Acquisitions	-	-	-
Effect of changed estimates and assumptions	-471	-	-471
Sales	-	-	-
Retirements	-	-	-
Investment grants	-	-5	-5
Adjustments, replacement properties	-	-33	-33
Closing balance, 31 Dec 2022	11,480	3,732	15,212

Group and Parent Company MSEK	Buildings and land	Construction in progress	Total
Expensing			
Opening balance, 1 Jan 2021	-3,030	-	-3,030
Expensing of mine asset and mine component	-297	-	-297
Closing balance, 31 Dec 2021	-3,327	-	-3,327
Opening balance, 1 Jan 2022	-3,327	-	-3,327
Expensing of mine asset and mine component	-195	-	-195
Closing balance, 31 Dec 2022	-3,522	-	-3,522
Impairment			
Opening balance, 1 Jan 2021	-384	-	-384
Closing balance, 31 Dec 2021	-384	-	-384
Opening balance, 1 Jan 2022	-384	-	-384
Closing balance, 31 Dec 2022	-384	-	-384
Carrying amount			
At 1 Jan 2021	6,531	1,422	7,954
At 31 Dec 2021	7,911	2,508	10,419
At 1 Jan 2022	7,911	2,508	10,419
At 31 Dec 2022	7,574	3,732	11,306
Expensing is included in the following lines of the income statement:			
Group and Parent Company			
MSEK	2022	2021	
Cost of goods sold	-195	-297	
Total	-195	-297	
The balance sheet item includes the following assets:			
Group and Parent Company			
MSEK	31 Dec 2022	31 Dec 2021	
Mine asset	7,337	7,658	
Replacement properties	3,733	2,508	
Other property acquisitions	236	253	
Total	11,306	10,419	

Regarding reporting of replacement properties refer to Note 1 section 18.8.3. See also Note 32 for an overall picture of items associated with urban transformation.

Note 17 Interests in associates and joint ventures

Group

Joint ventures

Summary financial information for holdings in joint ventures is detailed below. The Group has a stake in the Swedish unlisted joint venture Hybrit Development AB, which is mainly engaged in research and development of methods for making iron and steel. The Group has rights to the net assets of the company and reports its holding according to the equity method.

MSEK	31 Dec 2022	31 Dec 2021
Share of assets	275	302
Share of liabilities	-25	-40
Carrying amount (share of net assets)	250	262
Group's share of profit/loss after tax	-71	-133
Total comprehensive income	-71	-133

Associates

Summary financial information for holdings in associates is detailed below, reported according to the equity method. On 14 November 2022 LKAB acquired 33.7 percent of the shares in REEtec Holding AS of Norway (REEtec).

REEtec has developed an innovative and sustainable process for separating rare earth elements that combines high efficiency with up to 90 percent lower carbon emissions. For further information about the acquisition see Note 4.

MSEK	31 Dec 2022	31 Dec 2021
Share of assets	505	-
Share of liabilities	-48	-
Carrying amount (share of net assets)	457	-
Group's share of profit/loss after tax	-1	-
Total comprehensive income	-1	-

The Group has holdings in the companies Norrskenet AB and Hsafety AB¹⁾. The holdings are reported according to the cost method.

MSEK	31 Dec 2022	31 Dec 2021
Carrying amount	25	25
Group's share of profit/loss after tax	-	-
Total comprehensive income	-	-

1) Hsafety AB is 25 percent owned by the subsidiary Bergteamet AB.

Note 18 Holdings in joint operations

Group

The Group has a 50 percent co-ownership in the company Likya Minerals and its subsidiary Likya Minerals Export, whose main products are minerals with flame retardant properties (UltraCarb). Likya operates out of Turkey.

Likya is a separate company but co-ownership is still considered to be a joint operation. The assessment is based on the fact that the co-owners have a commitment to buy all services that Likya provides and consequently finances Likya's entire operation in order to settle its liabilities.

61 percent of Likya's sales relate to companies within the LKAB Group.

Note 19 Parent Company's interests in associates and jointly controlled entities

Parent Company	Associates		Jointly controlled entities	
	31 Dec 2022	31 Dec 2021	31 Dec 2022	31 Dec 2021
Accumulated acquisition value				
Opening balance	45	45	478	360
Acquisitions	466	-	-	-
Capital contributions	-	-	59	118
Closing balance	511	45	537	478
Accumulated impairment				
Opening balance	-25	-25	-	-
Closing balance	-25	-25	-	-
Carrying amount	486	20	537	478

Specification of Parent Company's directly owned interests in associates and jointly controlled entities

Company / reg. no. / domicile	Number of shares	% of votes and capital	Carrying amount
2022			
Associates			
Norriskenet AB / 556537-7065 / Gällivare	2,500	33.3%	20
REEtec Holding AS / 928177157 / Oslo	9,037,506	33.7%	466
Jointly controlled entities			
Hybrit Development AB / 559121-9760 / Stockholm	500,000	33.3%	537
Total			1,023
2021			
Associates			
Norriskenet AB / 556537-7065 / Gällivare	2,500	33.3%	20
Jointly controlled entities			
Hybrit Development AB / 559121-9760 / Stockholm	500,000	33.3%	478
Total			498

Note 20 Receivables from Group companies and associates

Parent Company

MSEK	31 Dec 2022	31 Dec 2021
Accumulated acquisition value		
Opening balance	3,202	3,043
Lending	655	24
Repayments	-1,371	-108
Exchange rate fluctuation	100	244
Closing balance	2,586	3,202

Note 21 Financial investments

Group

MSEK	31 Dec 2022	31 Dec 2021
Financial investments held as non-current assets		
Shares and interests at fair value through other comprehensive income	6,011	5,307
Shares and interests at fair value through profit or loss	7	19
Financial assets for funded pension obligations	430	400
Total	6,448	5,726
Financial investments held as current assets		
Interest-bearing securities at fair value through profit or loss – held for trading	17,668	20,421
Shares and alternative investments at fair value through profit or loss	9,761	9,707
Other derivatives	-36	13
Total	27,393	30,141

Note 22 Other non-current securities

Parent Company

MSEK	31 Dec 2022	31 Dec 2021
Accumulated acquisition value		
Opening balance	3,238	2,869
Acquisitions	–	1,016
Disposal	-11	-647
Closing balance	3,227	3,238

Parent Company

MSEK	31 Dec 2022	31 Dec 2021		
	Fair value	Carrying amount	Fair value	Carrying amount
Specification of other non-current securities				
SSAB	6,011	3,220	5,307	3,219
Other holdings	7	7	19	19
Total	6,018	3,227	5,326	3,238

Note 23 Non-current receivables and other receivables

Group		31 Dec 2022	31 Dec 2021
MSEK			
Non-current receivables that are non-current assets			
Advance payments	–	100	
Other	2	2	
Total	2	102	
Other receivables that are current assets			
Receivables, credit institutions	1,234	940	
Recoverable VAT	497	293	
Tax assets	5	15	
Derivatives	17	16	
PRI balance	25	23	
Receivables from clients	10	10	
Tax account	582	325	
Receivables, collateral for derivatives	23	15	
Advance payments to suppliers	–	26	
Other	99	33	
Total	2,492	1,696	
Parent Company			
MSEK		31 Dec 2022	31 Dec 2021
Non-current receivables			
Company-owned endowment insurance	91	94	
Advance payments	–	100	
Other	2	2	
Total	93	196	
Other current receivables			
Receivables, credit institutions	1,234	940	
Recoverable VAT	469	286	
PRI balance	25	22	
Tax assets	3	3	
Tax account	570	321	
Receivables, collateral for derivatives	23	15	
Other	46	30	
Total	2,370	1,617	

Parent Company

MSEK	31 Dec 2022	31 Dec 2021
Non-current receivables		
Accumulated acquisition value		
Opening balance	196	206
Advance payments	-100	–
Other	-3	-10
Closing balance	93	196

Note 24 Inventories

Group		31 Dec 2022	31 Dec 2021
MSEK			
Raw materials and consumables			
Work in progress	9	5	
Finished goods and goods for resale	1,083	1,172	
Total	6,205	4,924	

Parent Company

MSEK	31 Dec 2022	31 Dec 2021
Raw materials and consumables	4,359	3,135
Finished goods	928	1,032
Total	5,287	4,167

Note 25 Accounts receivable

Accounts receivable are recognised after taking into consideration expected credit losses. Credit losses that have arisen in the Group amount to MSEK 10 (6). Regarding credit risks in accounts receivable see Note 35 Financial risks and risk management.

Note 26 Prepaid expenses and accrued income

MSEK	Group		Parent Company	
	31 Dec 2022	31 Dec 2021	31 Dec 2022	31 Dec 2021
Prepaid insurance premiums	50	34	30	28
Prepaid expenses, fair value of derivatives	–	–	–	–
Accrued income, iron ore derivatives	–	–	–	–
Other prepaid expenses	218	101	190	87
Other accrued income	106	57	94	22
Total	375	192	313	137

Note 27 Equity

Specification of equity reserves

MSEK	31 Dec 2022	31 Dec 2021
Translation reserve		
Opening balance	–141	–327
Translations differences for the year	139	186
Closing balance	–2	–141
Fair value reserve		
Opening balance	2,087	68
Available-for-sale financial assets:		
Changes in fair value	705	2,019
Closing balance	2,792	2,087
Hedging reserve including hedging cost reserve		
Opening balance	1	0
Cash flow hedges and hedging costs		
Changes in fair value	–4	1
Changes in fair value, transferred to profit for the year	0	0
Tax attributable to revaluations for the year	0	0
Closing balance	–3	1

MSEK

	31 Dec 2022	31 Dec 2021
Total reserves		
Opening balance	1,947	–259
Change in reserves for the year:		
Translation reserve	139	186
Fair value reserve	705	2,019
Hedging reserve	–4	1
Closing balance	2,787	1,947

Share capital

As at 31 December 2022, the registered share capital comprised 700,000 (700,000) ordinary shares. The share capital consists of only one type of share and all shares have equal rights. The shares are 100 percent owned by the Swedish state. The shareholder is entitled to a dividend in accordance with the Group's dividend policy. Each share entitles the holder to one vote at general meetings of shareholders. The quota value is SEK 1,000 per share.

Translation reserve

The translation reserve covers all exchange rate differences that arise in translating the financial statements of foreign entities whose financial statements were prepared in currencies other than the Group's reporting currency. The Parent Company and Group present their financial statements in SEK.

Also included in the translation reserve are exchange rate differences that arise when translating monetary non-current receivables and liabilities of foreign operations for which settlement is not planned. These form part of the company's net investment in the foreign operation.

Fair value reserve

The fair value reserve includes the accumulated net change in the fair value of equity instruments measured at fair value through other comprehensive income until such time as the assets are derecognised from the statement of financial position.

Hedging reserve

The hedge reserve includes the effective portion of the accumulated net change in the fair value of cash flow hedging instruments attributable to hedging transactions that have not yet occurred.

Hedging cost reserve

The hedging cost reserve reflects gains or losses attributable to the forward element of forward contracts. It is recognised initially in other comprehensive income and is reported in the same way as gains or losses in the hedging reserve.

Dividend

The Board proposes to the AGM that a dividend is paid to the owner as shown below. The AGM will be held on 27 April 2023.

MSEK	2022	2021
Ordinary dividend, SEK 10,771 per share	7,540	12,430
Closing balance	7,540	12,430

The dividend proposed by the Board has been approved by the AGM in each of the past two years.

PARENT COMPANY

Restricted equity

Statutory reserve

The purpose of the statutory reserve is to save a portion of net profit that is not used to cover losses brought forward.

Non-restricted equity

Profit/loss brought forward

Profit/loss brought forward comprises retained earnings and profit/loss after deducting any dividend paid during the year.

Note 28 Interest-bearing liabilities

Group		31 Dec 2022	31 Dec 2021
MSEK			
Non-current liabilities			
Issued corporate bonds		1,996	1,995
Other liabilities		24	–
Bank loans		78	87
Lease liabilities		289	284
Total		2,387	2,366
Current liabilities			
Issued corporate bonds		–	250
Bank loans		–	10
Current portion of lease liabilities		86	58
Total		86	318

Terms and payback periods

MSEK	Maturity	Interest rate %	31 Dec 2022		31 Dec 2021	
			Nominal value	Carrying amount	Nominal value	Carrying amount
Bonds – fixed interest	2022	1.4525	–	–	250	250
Bonds – fixed interest	2025	0.8750	1,450	1,446	1,450	1,445
Bonds – variable interest	2025	3m STIBOR +0.65	550	550	550	550
Bank loans	2022	3m STIBOR +0.91	–	–	10	10
Bank loans	2027	1m STIBOR +1.75	78	78	87	87
Other liabilities	2025		24	24	–	–
Lease liabilities	2027		375	375	341	341
Total interest-bearing liabilities			2,477	2,473	2,688	2,683

For more information about the company's exposure to interest rate risk see Note 35. The note also contains information on the maturity profile of lease liabilities.

Note 29 Non-current liabilities

Parent Company

MSEK	31 Dec 2022	31 Dec 2021
Non-current liabilities		
Issued corporate bonds		1,996
Other non-current liabilities		24
Bank loans		–
Total	2,020	1,995
Current liabilities		
Issued corporate bonds		–
Commercial paper issued		–
Bank loans		10
Liability, repurchase agreements		–
Total	–	260

No commercial paper issued matures later than five years after the end of the reporting period.

Note 30 Pensions

Defined-benefit pension plans

Group	31 Dec 2022	31 Dec 2021
MSEK		
Present value of unfunded obligations	559	626
Present value of wholly or partially funded obligations	3,045	3,701
Total present value of commitments	3,604	4,327
Fair value of plan assets	-3,042	-3,331
Net amount in statement of financial position	562	996
The net amount is recognised in the following items in the statement of financial position:		
Financial investments	-430	-400
Provisions for pensions, non-current liabilities	992	1,396
Net amount in statement of financial position	562	996

Defined-benefit pension plans

Most of LKAB's pension plans for employees in Sweden are defined-benefit plans, which means that LKAB guarantees pensions based on a percentage of salary. Pension commitments in Sweden are secured by the company via accrued provisions, of which most are secured through credit insurance from FPG (Försäkringsbolaget PRI Pensionsgarant). In 2013 an internal company pension fund was started for vested defined-benefit pension plans. Promises of future retirement before the age of 65 are to a certain degree contingent upon working underground and are secured by the company via accrued provisions without credit insurance.

Note 30 continued

Commitments for retirement pensions and survivor benefits for salaried employees in Sweden are secured through insurance policies from Alecta. According to a statement from the Swedish Financial Reporting Board, UFR 10, this is a defined-benefit plan that involves several employers. The company has not had access to such information as is necessary for recognising this commitment as a defined-benefit plan. The ITP2 pension plan insured via Alecta is therefore recognised as a defined-contribution plan. The premium for the defined-benefit retirement and survivors' pension is individually calculated and depends on factors such as salary, previously earned pension and expected remaining years of service. Alecta's surplus can be distributed to the policyholders and/or the insured parties. At the end of 2022 Alecta's surplus in the form of its collective funding ratio was 172 (172) percent, which is within the normal range of 125–175 percent stated in Alecta's consolidation policy for these insurance policies.

The premium to Alecta is determined by assumptions about interest rates, longevity, operating expenses and yield tax, and is calculated so that constant payment of premiums until the retirement date is sufficient for the entire target benefit, which is based on the insured's current pensionable salary and which must be earned.

There is no set of fixed rules for how deficits that may arise should be handled, but losses should primarily be covered by Alecta's collective solvency capital and thus will not lead to increased expenses through higher contractual premiums. There are also no rules for how any surplus or deficit should be distributed when plans are terminated or a company withdraws from the plan.

In Norway, the UK and Germany LKAB has defined-benefit pension plans as a complement to local social insurance. In the UK pensions are secured via a company-managed pension fund and in Germany via internal accrued provisions combined with credit insurance. In Norway pensions are secured via a combination of a company-managed pension fund, internal accrued provisions and credit insurance. During 2020 the defined-benefit pension plans in Norway were closed to new entrants in favour of defined-contribution pension plans. The accounting effect was reported in the 2021 financial year.

Changes in the present value of obligations for defined-benefit plans

Group

MSEK	31 Dec 2022	31 Dec 2021
Obligation for defined-benefit plans as at 1 January	4,327	4,319
Benefits paid	-193	-202
Cost of service, current period	102	76
Past service cost	1	-106
Interest expense	76	51
Remeasurements:		
- Actuarial gains and losses on changed demographic assumptions	-14	4
- Actuarial gains and losses on changed financial assumptions	-807	-27
- Actuarial gains and losses on experience-based adjustments	171	56
Special employer's contributions, financial items, revaluations and service costs	-143	1
Other changes	-	27
Exchange rate differences	84	128
Obligation for defined-benefit plans as at 31 December	3,604	4,327

The present value of the obligations for the Swedish, Norwegian and UK companies, which make up 98 percent, breaks down as follows:

Group %	Sweden		Norway		UK	
	2022	2021	2022	2021	2022	2021
Active members	49	54	27	27	22	26
Paid-up policy holders	16	16	19	19	23	27
Retirees	35	30	54	54	55	47

Changes in fair value of plan assets

Group

MSEK	31 Dec 2022	31 Dec 2021
Fair value of plan assets at 1 January	3,331	2,926
Contributions	36	47
Benefits paid	-61	-66
Interest income recognised in profit or loss	60	36
Return on plan assets excluding interest income	-401	272
Other changes	-	11
Exchange rate differences	77	105
Fair value of plan assets at 31 December	3,042	3,331

Plan assets consist of the following:

Group

MSEK	31 Dec 2022	31 Dec 2021
Shares	846	1,110
Interest-bearing assets including bonds	1,192	1,469
Alternative investments	1,004	752
Total	3,042	3,331

Note 30 continued

Costs recognised in profit or loss for the year:

Group

MSEK	31 Dec 2022	31 Dec 2021
Current service cost	101	76
Past service cost	1	-106
Interest expense on obligation	76	51
Return on plan assets	-60	-36
Total net cost in profit or loss for the year	118	-15

The above income statement items are reported excluding allocation of special employer's contributions for the Group. In 2021 there were changes to defined-benefit pension plans in the Norwegian companies which had a positive effect on profit.

The costs are recognised on the following lines in the income statement:

Group

MSEK	2022	2021
Cost of goods sold	102	-30
Financial income	-60	51
Financial expense	76	-36
Total	118	-15

The above income statement items are reported excluding allocation of special employer's contributions for the Group.

Costs recognised in other comprehensive income:

Group

MSEK	2022	2021
Remeasurements:		
Actuarial gains (-) and losses (+)	-649	33
Difference between actual return and return according to discount rate on plan assets	401	-272
Exchange rate differences	7	
Net recognised in other comprehensive income	-241	-239

The above income statement item is reported excluding allocation of special employer's contributions for the Group.

Assumptions for defined-benefit obligations: the most significant actuarial assumptions at the end of the reporting period, assessed for each country but expressed as weighted averages, are given below.

Group

%	2022	2021
Discount rate as at 31 December	3.7	1.8
Return on plan assets as at 31 December	3.7	1.8
Future salary increase	3.0	2.7
Employee turnover	3.5	3.5
Future pension increase	2.7	2.7

Assumptions concerning future mortality are based on the standard DUS 21. The average life expectancy of an individual retiring at age 65 is 22 years for men and 24 years for women.

The actual return on plan assets for 2022 was 11.2 (9.3) percent.

Sensitivity analysis

The following table presents possible changes in actuarial assumptions at year-end, other assumptions being unchanged, and how these would affect the defined-benefit obligation. The calculation of the change in pension commitments includes the Swedish, Norwegian and UK commitments, which represent 98 percent of Group commitments.

Group

MSEK	Increase in assumptions	Decrease in assumptions
+ (decrease)/- (increase) in liability		
Discount rate (0.5% change)	-198	228
Expected mortality (1-year change)	95	-95
Future salary increase (0.5% change)	102	-94
Future pension increase (0.5% change)	142	-129

At 31 December 2022, the weighted average duration of the obligation was 13 (16) years.

Historical information

Group

MSEK	2022	2021	2020	2019	2018
Present value of defined-benefit obligations	3,604	4,327	4,319	4,417	4,032
Fair value of plan assets	-3,042	-3,331	-2,926	-2,942	-2,713
Net obligations	562	996	1,393	1,475	1,319

The Group estimates that payments into funded and unfunded defined-benefit plans in 2023 will amount to MSEK 64 and that payments into the defined-benefit plans that are recognised as defined-contribution plans will amount to MSEK 51.

Net liability in balance sheet

Parent Company

MSEK	31 Dec 2022	31 Dec 2021
+ Present value of obligation (calculated according to Swedish principles) for wholly or partially funded pension plans	1,230	1,078
- Fair value at end of period for specifically separated assets (in pension funds and the like)	-1,509	-1,535
= Surplus in pension fund or the like (-)/net obligation (+)	-279	-458
+ Present value of obligations (calculated according to Swedish principles) for unfunded pension plans	417	428
= Net recognised for pension obligations	417	428

Note 30 continued

Changes in net liability

Parent Company

MSEK	31 Dec 2022	31 Dec 2021
Net liabilities at start of year for pension provisions	428	435
+ Cost of company-managed pension scheme excluding taxes as recognised in the income statement	87	96
- Pension payments	-98	-103
Net liabilities at year-end for pension commitments	417	428

Fair value of assets in trust by main category

Parent Company

MSEK	31 Dec 2022	31 Dec 2021
Shares	357	524
Bonds	542	479
Other interest-bearing assets	610	532
Total	1,509	1,535

Costs relating to pensions

Parent Company

MSEK	2022	2021
Company-managed pension schemes		
Cost	87	96
Cost of company-managed pension schemes	87	96
Pension through insurance policy		
Insurance premiums	251	256
Subtotal	338	352
Special employer's contribution on pension costs	88	89
Cost of credit insurance, administrative expenses, other	7	2
Recognised net cost attributable to pensions	433	443

Net pension cost is recognised on the following lines of the income statement:

Parent Company

MSEK	2022	2021
Cost of goods sold	433	443
Total	433	443

Assumptions for defined-benefit obligations: the most significant actuarial assumptions at the end of the reporting period (expressed as weighted averages) are given below.

Parent Company

%	2022	2021
Discount rate as at 31 December	2.9	3.8

Defined-contribution pension plans

In Sweden, the Group has defined-contribution pension plans for employees that are fully paid by the companies.

Outside of Sweden there are defined-contribution plans that are financed partly by the subsidiaries and partly by employee contributions.

Payments into these plans are made regularly in accordance with the terms of each plan.

MSEK	Group		Parent Company	
	2022	2021	2022	2021
Costs for defined-contribution pension plans	309	306	253	254

No retirement solutions were paid out through insurance plans in 2022 or 2021.

Note 31 Provisions

Group

MSEK	31 Dec 2022	31 Dec 2021
Provisions		
Urban transformation	13,644	14,423
Emission allowances for carbon dioxide	447	307
Remediation costs	1,727	1,775
Other	2	1
Total	15,820	16,506

Parent Company

MSEK	31 Dec 2022	31 Dec 2021
Provisions		
Urban transformation	13,644	14,423
Emission allowances for carbon dioxide	447	307
Remediation costs	1,235	1,207
Total	15,326	15,937

Note 31 continued

Group MSEK	Urban transformation	Emission allowances	Remediation costs	Other provisions	Total
Opening balance, 1 Jan 2021	14,272	164	1,736	39	16,212
Provisions for the year	553	–	–	–	553
Reassessment of previous years' provisions	1,193	–	6	–	1,199
Utilised provisions	-1,595	–	-17	-38	-1,650
Interest adjustment on liabilities for the year	–	–	50	–	50
Emissions for the year	–	307	–	–	307
Settlement of previous years' emissions	–	-164	–	–	-164
Closing balance, 31 Dec 2021	14,423	307	1,775	1	16,506
Less: expenditures for replacement properties	-2,508				-2,508
Closing balance, 31 Dec 2021 (net)	11,915	307	1,775	1	13,998
<i>Of which to be paid out within 1 year</i>	2,979	307	204	1	3,491
<i>Of which to be paid out in 2–8 years</i>	7,614	–	259	–	7,873
<i>Of which to be paid out after 8 years</i>	1,322	–	1,312	–	2,634
Opening balance, 1 Jan 2022	14,423	307	1,775	1	16,506
Provisions for the year	14	–	–	2	16
Reassessment of previous years' provisions	191	–	-41	–	150
Utilised provisions	-984	–	-58	-1	-1,043
Interest adjustment on liabilities for the year	–	–	51	–	51
Emissions for the year	–	447	–	–	447
Settlement of previous years' emissions	–	-307	–	–	-307
Closing balance, 31 Dec 2022	13,644	447	1,727	2	15,820
Less: expenditures for replacement properties	-3,733				-3,733
Closing balance, 31 Dec 2022 (net)	9,911	447	1,727	2	12,087
<i>Of which to be paid out within 1 year</i>	3,029	447	79	2	3,557
<i>Of which to be paid out in 2–8 years</i>	6,599	–	322	–	6,921
<i>Of which to be paid out after 8 years</i>	283	–	1,326	–	1,609

Expenditures for replacement properties refers to expenses incurred which are reported as property, plant and equipment; see Note 16. The provisions and the property, plant and equipment asset are offset when the replacement property is handed over. For an overall picture of items related to urban transformation refer to Note 32.

Note 31 continued

Parent Company

MSEK	Urban transformation	Emission allowances	Remediation costs	Total
Opening balance, 1 Jan 2021	14,272	164	1,116	15,552
Provisions for the year	553	–	76	629
Reassessment of previous years' provisions	1,193	–	–	1,193
Utilised provisions	-1,595	–	-17	-1,612
Interest adjustment on liabilities for the year	–	–	32	32
Emissions for the year	–	307	–	307
Settlement of previous years' emissions	–	-164	–	-164
Closing balance, 31 Dec 2021	14,423	307	1,207	15,937
Less: expenditures for replacement properties	-2,508			-2,508
Closing balance, 31 Dec 2021 (net)	11,915	307	1,207	13,429
<i>Of which to be paid out within 1 year</i>	2,979	307	204	3,490
<i>Of which to be paid out in 2–8 years</i>	7,614	–	247	7,861
<i>Of which to be paid out after 8 years</i>	1,322	–	756	2,078
Opening balance, 1 Jan 2022	14,423	307	1,207	15,937
Provisions for the year	14	–	52	66
Reassessment of previous years' provisions	191	–	–	191
Utilised provisions	-984	–	-59	-1,043
Interest adjustment on liabilities for the year	–	–	35	35
Emissions for the year	–	447	–	447
Settlement of previous years' emissions	–	-307	–	-307
Closing balance, 31 Dec 2022	13,644	447	1,235	15,326
Less: expenditures for replacement properties	-3,733			-3,733
Closing balance, 31 Dec 2022 (net)	9,911	447	1,235	11,593
<i>Of which to be paid out within 1 year</i>	3,029	447	79	3,555
<i>Of which to be paid out in 2–8 years</i>	6,599	–	322	6,921
<i>Of which to be paid out after 8 years</i>	283	–	834	1,117

Note 32 Urban transformation

Net cost of urban transformation

The company's net cost consists of the following components:

Group and Parent Company	2022	2021
MSEK		
Costs for urban transformation, current period	-196	-297
Effect of changed assumptions and assessments	-349	-75
Total	-544	-372

The net cost of urban transformation is recognised on the following line of the income statement:

Group and Parent Company

MSEK	2022	2021
Cost of goods sold	-545	-372
Total	-545	-372

Provisions for urban transformation

Provisions are recognised on the following lines of the balance sheet:

Group and Parent Company	31 Dec 2022	31 Dec 2021
MSEK		
Current liabilities	3,029	2,979
Non-current liabilities	10,615	11,444
Total	13,644	14,423

LKAB's accounting policies for provisions state that a provision for urban transformation is reported where there is an agreement or a clear constructive obligation that defines a commitment relating to future impact areas.

Provisions are recognised for all estimated remaining commitments in respect of the impact areas for the main haulage levels decided on. The parts of the provision that relate to commitments for areas that have not been impacted by mining to date are reported as a mine asset relating to future mining. The mine asset is expensed using a production-based method; see description in Note 1 section 18.8.

Since 2006 LKAB has paid out MSEK 15,032 relating to previous years' provisions. Pay-outs in 2022 amount to MSEK 953.

The recognised provision for urban transformation does not include LKAB's own need to replace properties affected by urban transformation. Capital expenditure up to and including 2022 for replacing the company's own properties amounts to a total of around SEK 2.5 billion.

To finance future urban transformation payouts, funds are allocated in accordance with the finance policy approved by the Board from time to time. The purpose of such asset management is to ensure LKAB's ability to pay and that the return on allocated funds will cover inflation over time.

Property, plant and equipment for urban transformation

The balance sheet item includes the following assets:

Group and Parent Company

MSEK	31 Dec 2022	31 Dec 2021
Mine asset	7,337	7,658
Replacement properties	3,733	2,508
Other property acquisitions	236	253
Total	11,306	10,419

Replacement properties refers to expenditures for the construction of replacement properties for those property owners who have chosen this option. Commitments for replacement properties are recognised as a provision until handover of the replacement property. At this point, the provision is offset against expenditures for the replacement property.

Note 33 Accrued expenses and deferred income

MSEK	Group		Parent Company	
	31 Dec 2022	31 Dec 2021	31 Dec 2022	31 Dec 2021
Electricity	364	-	313	-
Payroll and employee benefit expenses	1,051	902	813	698
Accrued trade payables	474	293	404	271
Accrued expenses, iron ore derivatives	-	-	-	-
Other	531	467	431	189
Total	2,420	1,662	1,961	1,158

Note 34**Valuation of financial assets and liabilities at fair value and categorization****Classification and fair value and level of measurement hierarchy**

The following is a summary of the fair values of consolidated financial assets and liabilities with a breakdown by measurement category.

Information is also provided about to which fair value level the respective financial assets and liabilities belong.

Group, 31 Dec 2022 MSEK	Note	Carrying amount						Fair value		
		Fair value – hedging instruments	Fair value through profit or loss	Fair value through other comprehensive income		Amortised cost	Other liabilities	Total	Level 1	Level 2
Financial assets measured at fair value										
Shares, financial assets	21	–	8	6,011	–	–	–	6,019	6,011	8
Shares and alternative investments, short-term holdings	21	–	9,725	–	–	–	–	9,725	–	9,725
Interest-bearing, short-term holdings	21	–	17,668	–	–	–	–	17,668	–	17,668
Derivatives for hedging	23	–	–	–	–	–	–	–	–	–
Other derivatives	21	4	–	–	–	–	–	4	–	4
Total		4	27,401	6,011	–	–	–	33,416		
Financial assets not measured at fair value										
Non-current receivables	23	–	–	–	2	–	–	2	–	–
Accounts receivable		–	–	–	3,785	–	–	3,785	–	–
Other receivables	23	–	–	–	2,492	–	–	2,492	–	–
Accrued income	26	–	–	–	106	–	–	106	–	–
Cash and bank balances (cash and cash equivalents)	42	–	–	–	3,191	–	–	3,191	–	–
Total		–	–	–	9,576	–	–	9,576		
Financial liabilities not measured at fair value										
Issued bond loans	28	–	–	–	–	1,996	1,996	–	1,996	1,996
Other bond financing	28	–	–	–	–	–	–	–	–	–
Bank loans	28	–	–	–	–	78	78	–	–	–
Trade payables		–	–	–	–	2,583	2,583	–	–	–
Other liabilities		–	–	–	–	361	361	–	–	–
Accrued expenses	33	–	–	–	–	2,420	2,420	–	–	–
Total		–	–	–	–	7,438	7,438			



Note 34 continued

Group, 31 Dec 2021 MSEK	Note	Carrying amount					Fair value		
		Fair value – hedging instruments	Fair value through profit or loss	Fair value through other comprehensive income	Amortised cost	Other liabilities	Total	Level 1	Level 2
Financial assets measured at fair value									
Shares, financial assets	21	–	7	5,307	–	–	5,314	5,307	7
Shares and alternative investments, short-term holdings	21	–	9,720	–	–	–	9,720	–	9,720
Interest-bearing, short-term holdings	21	–	20,796	–	–	–	20,796	–	20,796
Derivatives for hedging	23	–	–	–	–	–	–	–	–
Other derivatives	21	15	–	–	–	–	15	–	15
Total		15	30,523	5,307	–	–	35,845		
Financial assets not measured at fair value									
Non-current receivables	23	–	–	–	102	–	102	–	–
Accounts receivable		–	–	–	2,074	–	2,074	–	–
Other receivables	23	–	–	–	1,045	–	1,045	–	–
Accrued income	26	–	–	–	57	–	57	–	–
Cash and bank balances (cash and cash equivalents)	42	–	–	–	6,289	–	6,289	–	–
Total		–	–	–	9,567	–	9,567		
Financial liabilities not measured at fair value									
Issued bond loans	28	–	–	–	–	2,245	2,245	–	2,245
Other bond financing	28	–	–	–	–	–	–	–	–
Bank loans	28	–	–	–	–	97	97	–	–
Trade payables		–	–	–	–	1,794	1,794	–	–
Other liabilities		–	–	–	–	544	544	–	–
Accrued expenses	33	–	–	–	–	1,662	1,662	–	–
Total		–	–	–	–	6,342	6,342		

Note 34 continued

Disclosures concerning financial assets and liabilities measured at fair value are based on a fair value hierarchy with three levels. Level 1 means quoted prices in an active market, such as stock market listings. Level 2 means observable market data other than quoted prices, either direct (such as quoted prices) or indirect (derived from quoted prices). Level 3 means the fair value is determined using inputs that are not based on directly observable market data.

The measurement of fair value for current investments is based mainly on Level 2 inputs. The value of interest-bearing instruments is calculated using data from the interest-bearing securities market, obtained from Bloomberg. Shares and alternative investments are measured using inputs from the stock market or received directly from brokers.

Fair values for derivatives are calculated based on official listings from Bloomberg, with the exception of derivatives relating to the commodities portfolio which are based on quoted market prices.

Investments in equity instruments are recognised at fair value through profit or loss or through other comprehensive income depending on the purpose for which the investment was made.

For commercial paper issued and repurchase agreement liabilities the carrying amount is a reasonable approximation of fair value because of the short time to maturity.

The fair value of interest-bearing non-current liabilities has been calculated based on the interest rate that applied on the closing date for remaining terms.

The carrying amount of accounts receivable, other receivables, accrued income, cash and cash equivalents, trade payables, other liabilities and accrued expenses is a reasonable approximation of their fair value.

Parent Company

Measurement categories for assets and liabilities as shown below follow the above measurement categories for the Group's financial instruments.

Presented below are the assets and liabilities for which the carrying amount differs from their fair value.

Parent Company	31 Dec 2022		31 Dec 2021	
	Carrying amount	Fair value	Carrying amount	Fair value
MSEK				
Financial assets at amortised cost				
Shares, financial assets	3,227	6,019	3,238	5,326
Current investments	26,758	28,196	27,645	30,516
Derivatives	-	-	12	16
Total	29,985	34,215	30,895	35,858
Financial liabilities at amortised cost				
Issued bond loans	-1,996	-1,996	-2,245	-2,252
Other bond financing	-	-	-	-
Total	-1,996	-1,996	-2,245	-2,252

Note 35**Financial risks and risk management****Framework for financial risk management**

The Group's activities expose it to a variety of financial risks. LKAB's financial risk management is regulated by a finance policy established by the Board which provides a framework for financial activities within the LKAB Group. The LKAB Treasury Centre is the company's central treasury function, which manages the Group's overall financial risk and is also the Group treasury. Reporting takes place on an ongoing basis to the Board's Audit Committee, which is responsible for ongoing monitoring of compliance with the finance policy and with guidelines passed.

The Group's aim is that financing activities will at all times support the business plan adopted and ensure that financial risks are identified, quantified and managed.

The finance policy effective for 2022 was established in February 2022. An updated finance policy was adopted in February 2023.

Cash flow risk in SEK

The LKAB Group's biggest financial risk is cash flow risk in SEK, which is mainly linked to fluctuations in the global iron ore price and exchange rates between USD and SEK. Together these factors could have a major negative impact on the company's income statement, balance sheet and cash flow. Another significant cash flow risk is energy price risk.

The finance policy provides guidelines for identifying and reporting the Group's total risk exposure as regards cash flow risk. Risk reporting is based on the cash flow forecast in the current business plan.

The finance policy also sets out frameworks for hedging activities. The basic rule is that the Group does not normally hedge future forecast cash flows other than confirmed flows relating to accounts receivable and trade payables. Some exceptions may be made; for example, prices may be hedged for individual commercial flows where a binding contract provides certainty. Also laid down in the finance policy are frameworks for hedging the transaction exposure of forecast net currency flows, the price components of iron ore deliveries and the price components of energy prices. The President or Chief Financial Officer decides the hedging strategy within these frameworks.

When carrying out hedging, the hedging strategy and effectiveness of the strategy are to be documented and the requirements of hedge accounting must be met; see also Note 1 Significant accounting policies, section 17 Derivatives and hedge accounting. At 31 December 2022, as also at 31 December 2021, there were no hedges meeting the requirements for hedge accounting.

For sensitivity analyses in respect of cash flow risks please refer to the Administration Report.

Price risk for iron ore products

Price volatility in the global iron ore market impacts LKAB's earnings and cash flows. The price of LKAB's products is affected both by the global price of iron ore and by the quality premiums added to high-grade iron ore products. The price of iron ore is established daily, while the premiums are a combined result of market price and negotiations with LKAB's customers.

As shown above, the basic rule in the Group's finance policy is that LKAB does not normally hedge forecast cash flows. In 2022 no deliveries to the spot price market were hedged in respect of iron ore prices. At 31 December 2022, as also at 31 December 2021, there was no outstanding hedging in respect of price risk for iron ore products.

Currency risk in iron ore sales

Currency risk exposure stems mainly from Group sales of iron ore where market pricing is in USD. The currency risk consists partly of the risk of fluctuations in the value of accounts receivable and partly of the currency risk in expected and contracted payment flows. These risks are known as transaction exposure.

As shown above, the basic rule in the Group's finance policy is that LKAB does not normally hedge forecast cash flows. Outstanding accounts receivable relating to iron ore sales are normally 100 percent hedged, however. At 31 December 2022 a total of 100 (100) percent of accounts receivable in USD were hedged.

The fair value of the forward contracts as at 31 December 2022 amounted to MSEK -13 (12), of which MSEK -9 (12) relates to currency hedging of accounts receivable recognised in profit for the current year. Transaction exposure in USD relating to sales of iron ore amounted to MUSD 4,195 (5,295) in 2022.

Exchange differences relating to iron ore sales are included in net sales in the total amount of MSEK 433 (182), of which MSEK -194 (-125) relates to hedges.

Note 35 continued

Energy price risk

Changes in energy prices form part of the Group's cash flow risk in SEK. The Group's energy costs correspond to 13 (11) percent of operating expenses. No financial hedging took place in 2022 to reduce this exposure.

Other currency risks

Currency risks also arise in the translation of foreign subsidiaries' assets and liabilities to the Parent Company's functional currency, known as translation exposure. LKAB does not normally hedge its translation exposure. Consolidated net foreign assets are divided into the following currencies (millions of local currency):

Maximum credit risk exposure

In local currency, million	2022	2021
EUR	10	10
GBP	141	72
USD	9	7
DKK	233	225
NOK	1,202	1,162
CNY	35	33
HKD	98	68
TRL	19	19
Total	1,747	1,596

Other companies in the Group may also have price or currency exposure through purchases and sales in foreign currencies. The finance policy contains rules on the subsidiaries' reporting of currency risks to the LKAB Treasury Centre, which is responsible for the Group's overall management of currency exposure.

The Group also has currency risks in respect of current investments in foreign currency. Under the finance policy, currency derivatives may be used in the management of financial asset portfolios provided the currency exposure remains within specified limits.

Exchange rate differences for other currency risk are included in operating profit at MSEK -34 (0) and in net financial income/expense at MSEK 419 (232).

Interest rate risk and share price risk

Interest rate risk refers to the risk of how the return on interest-bearing assets or interest expense on interest-bearing liabilities is impacted by a change in the interest rate. The level of interest rate risk is affected by changes in interest rates and by the amount of interest rate-sensitive capital. LKAB is mainly exposed to interest rate risk with regard to current investments and cash and cash equivalents. Exposure to interest rate risk among liabilities relates to bonds with variable interest rates; see Note 28 Interest-bearing liabilities for the Group.

Share price risk refers to the risk of a reduction in value due to changes in prices on the stock market.

LKAB's current investments and cash and cash equivalents are allocated to four portfolios: the liquidity portfolio, the urban transformation portfolio, the pension portfolio and the commodities portfolio. The liquidity portfolio is included in current investments and cash and cash equivalents, while the other portfolios are included in current investments.

For interest-bearing current investments the finance policy governs the maximum average duration in each asset portfolio. The frameworks are set in relation to each portfolio's commitments or purpose and in relation to a range of risk measures and restrictions. At 31 December 2022 interest-bearing investments amounted to MSEK 18,471 (20,796). The remaining term was 431 (1,078) days.

For shares and alternative investments the finance policy contains a number of guidelines and restrictions, including what current investments are permitted and the percentage of portfolio value.

Credit risk

Credit risk is the risk that a customer or counterparty in a financial instrument is unable to fulfil its commitments, thereby causing the Group a financial loss, and arises mainly from the Group's accounts receivable, derivatives and current investments.

Maximum credit risk exposure

MSEK	2022	2021
Derivatives	4	15
Interest-bearing instruments, short-term holding	17,668	20,421
Interest-bearing instruments, short-term holding (part of cash and cash equivalents)	804	375
Accounts receivable and other current receivables	4,638	3,013
Accrued income	106	57
Total	23,220	23,882

No impairment of financial assets is recognised in profit or loss for the year; see comments under each section below.

Credit risks in financial activities

The financial activities of the Group entail exposure to credit risks. This is primarily counterparty risks in conjunction with receivables from banks and other counterparties involved in the purchase of financial investments. The finance policy contains special counterparty rules stating the maximum credit exposure for various counterparties and for each designated asset portfolio. The Master Netting Agreement from the International Swaps and Derivatives Association (ISDA) is used for all counterparties in derivatives transactions.

The Group has no assets that have fallen due or have been impaired that resulted in credit losses. LKAB has not experienced any credit losses in current investments over the past five years.

Credit risk in accounts receivable

Commercial credit exposure arises in the ordinary course of LKAB's business primarily in the form of customer credit. Commercial credit risks are related to the customer's or counterparty's solvency; that is, their credit standing, the amount of credit granted and the credit period.

The Group's credit risk exposure is affected mainly by each customer's individual characteristics, but factors relating to the industry and the country where the customers operate are also taken into consideration. Information on concentration of revenue is given in Note 3.

The Group's finance policy contains a regulatory framework for credit rating that defines the criteria for evaluating new and existing customers from a credit risk perspective. The framework includes approval processes, credit limits and monitoring procedures. Monitoring is carried out on a quarterly basis by the Board's Audit Committee.

Based on historical customer losses and forward-looking information, LKAB assesses that no impairment of accounts receivable is necessary as at the closing date. The majority of the Group's customers have done business with the Group for many years and none of these customers' accounts had been written down or deemed to be credit-impaired as at the closing date.

The average collection period on accounts receivable was 36 days (34) in 2022.

Offsetting and similar contracts

Counterparty risk in derivative contracts is reduced through netting agreements; that is, netting of positive and negative values in all derivative contracts with one and the same counterparty. For exchange-traded derivatives there are clearing agreements that include netting. For all other counterparties in derivative transactions the Group enters into derivatives contracts under the International Swaps and Derivatives Association (ISDA) Master Netting Agreement, supplemented by an agreement on collateral for net exposures (Credit Support Annex, CSA).

These agreements give the Group a legal right to offset recognised amounts both in the ordinary course of business and in the case of a serious credit event. The items are also settled net in operating activities. Netting is applied to payments of obligations that are due at the same time, in the same currency, with the same counterparty and for the same type of instrument. Only the excess amount per instrument and currency is paid by the party that owes the most.

The table below presents disclosures about financial instruments that are covered by a legally binding framework agreement on netting or a similar agreement, along with details of any collateral provided.

Note 35 continued

Group, 2022

MSEK	Financial assets/ liabilities, gross	Offset amounts	Net amount in statement of financial position	Related amounts that are not offset		
				Financial instruments that are not offset	Collateral provided	Net amount
Financial assets				–	–	17
Derivatives	17	0	17	–	–	17
Financial liabilities				–	–	–
Derivatives	-13	0	-13	–	–	-13
Total	4	0	4	–	–	4

Group, 2021

MSEK	Financial assets/ liabilities, gross	Offset amounts	Net amount in statement of financial position	Related amounts that are not offset		
				Financial instruments that are not offset	Collateral provided	Net amount
Financial assets				–	–	15
Derivatives	26	-11	15	–	–	15
Financial liabilities				–	–	–
Derivatives	-11	11	0	–	–	–
Total	15	0	15	–	–	15

Financing risk

Financing risk is the risk that the LKAB Group cannot meet its commitments due to lack of liquidity or the inability to raise external loans for operating activities.

The Group's finance policy defines the Group's financing needs, in the form of operating capital, needs caused by fluctuations in cash flow and planned expenditure for commitments within urban transformation, pensions and remediation. The Group's cash flow forecast is updated quarterly. Long-term financing is to cover these financing needs, as a minimum.

Guidelines on debt management in the Group's policy include target durations for external financing related to the requirement regarding net debt. Consolidated borrowing as at 31 December 2022 amounted to MSEK 2,000 (2,250). The remaining term for financial liabilities is 799 (1,033) days.

Credit facilities as at 31 December 2022 are shown in the following table. All credit facilities are subject to 100 percent retention of title.

Credit facilities

MSEK	Nominal	Utilised (nominal)	Available
Commercial paper programme, maturing within one year	5,000	5,000	5,000
Bond programmes	7,000	2,000	5,000
<i>Maturing March 2025, green bonds</i>		2,000	
Credit facility	5,000	5,000	
Total	17,000	2,000	15,000

Note 35 continued

Maturity profile of financial liabilities – undiscounted cash flows

MSEK	2022						2021					
	Total	<1 month	1–3 months	3 months–			Total	<1 month	1–3 months	3 months–		
				1 year	1–5 years	>5 years				1 year	1–5 years	>5 years
Commercial paper	–	–	–	–	–	–	–	–	–	–	–	–
Liability, repurchase agreements	–	–	–	–	–	–	–	–	–	–	–	–
Bond loans	1,996	–	–	–	1,996	–	2,245	250	–	–	1,995	–
Bank loans	78	–	–	15	63	–	97	–	–	10	87	–
Derivatives	13	11	2	–	–	–	–	–	–	–	–	–
Lease liabilities	411	9	15	72	203	112	396	8	12	55	185	136
Trade payables	1,937	1910	27	–	–	–	1,374	1,296	77	1	–	–
Other liabilities and accrued expenses	1,665	813	69	783	–	–	1,286	631	40	615	–	–
Total	6,100	2,743	113	870	2,262	112	5,398	2,185	129	681	2,267	136

The Group's maturity profile for trade payables, other liabilities and accrued expenses is considered to be similar to that of the Parent Company in all material respects. The above information is taken from the Parent Company.

Maturity profile of financial assets – undiscounted cash flows

MSEK	2022						2021					
	Total	<1 month	1–3 months	3 months–			Total	<1 month	1–3 months	3 months–		
				1 year	1–5 years	>5 years				1 year	1–5 years	>5 years
Interest-bearing securities	18,471	3,236	3,256	2,935	8,211	833	20,796	736	929	6,606	10,358	2,167
Derivatives	17	12	1	4	–	–	15	11	4	–	–	–
Accounts receivable	3,063	2,726	337	–	–	–	2,599	2,031	568	–	–	–
Total	21,551	5,974	3,594	2,939	8,211	833	23,410	2,778	1,501	6,606	10,358	2,167

The Group's maturity profile for accounts receivable is considered to be similar to that of the Parent Company in all material respects. The information above refers to the Parent Company.

Asset management

LKAB's financial risk management is regulated by a finance policy approved by the Board. The Board's Audit Committee is responsible for ongoing monitoring of compliance with the finance policy and with investment guidelines passed.

LKAB defines its managed assets as equity in the Group excluding unrealised changes in the value of derivatives that are recognised directly in equity. Assets under management amounted to SEK 71.3 (67.5) billion at the end of the reporting period.

The Group's aim as regards economic sustainability is to be financially strong in order to be an innovative and responsible company that contributes to prosperity. The financial targets relate to capital structure, profitability and dividend.

As from October 2021, the target for the capital structure is a net debt/equity ratio of less than 60 percent. The net debt/equity ratio is defined as the net of interest-bearing liabilities and provisions as well as interest-bearing assets, divided by equity. The net debt/equity ratio was -17.1 (-24.5) percent at the end of the reporting period.

As from October 2021 the profitability target for the Group is a return on equity in excess of 9 percent. For 2022 the return was 21.7 (39.0) percent.

The Group's dividend policy states that the ordinary dividend to the shareholder is to be 40–60 percent of profit for the year. The proposed dividend of MSEK 7,540 represents 50 percent of the Group's profit.

Note 36 Leases

Lessee

The Group's property, plant and equipment consists of both owned and leased assets.

Group

MSEK	Note	2022	2021
Property, plant and equipment owned, including favourable leases from business combinations	15	33,200	30,718
Right-of-use assets	15	358	329
Total		33,558	31,047

Significant assets leased are tugboats, production premises and land, office premises and IT equipment.

Right-of-use assets

Group MSEK	Equipment, tools, fixtures and fittings				Total
	Buildings and land	Plant and machinery			
Depreciation during the year	46	5	41	92	
Additions to right-of-use assets during the year	67	12	51	130	
Closing balance, 31 Dec 2022	184	12	162	358	

Group MSEK	Equipment, tools, fixtures and fittings				Total
	Buildings and land	Plant and machinery			
Depreciation during the year	39	4	39	82	
Additions to right-of-use assets during the year	0	1	24	25	
Closing balance, 31 Dec 2021	170	5	154	329	

Additions to right-of-use assets include the cost of rights of use acquired during the year, additional amounts following review of the lease term and exchange rate changes.

Lease liabilities

Group MSEK	2022		2021
	Current	Non-current	
Current		86	58
Non-current		289	284
Lease liabilities included in the statement of financial position		375	342

For a maturity analysis of the lease liabilities see Note 35 Financial risks and risk management.

Amount recognised in profit or loss

IFRS 16

Group MSEK	2022	2021
Depreciation of right-of-use assets	92	82
Interest on lease liabilities	14	7
Costs of short-term leases	190	77
Costs of low-value leases	109	19
Total	405	185

IAS 17/RFR 2 Non-cancellable lease payments

Parent Company

MSEK	2022	2021
Within one year	21	16
Between one and five years	10	11
Longer than five years	8	9
Total	39	36

IAS 17/RFR 2 Operating lease payments expensed

Parent Company

MSEK	2022	2021
Minimum lease payments	200	105

Amounts recognised in the statement of cash flows

Group

MSEK	2022	2021
Total cash outflow attributable to leases	396	185

The above cash outflow includes both amounts for leases recognised as lease liabilities and amounts paid for short-term and low-value leases

Note 36 continued

Lessor

Lease income from leases where the Group is the lessor is as follows.

MSEK	Group		Parent Company	
	31 Dec 2022	31 Dec 2021	31 Dec 2022	31 Dec 2021
Operating leases				
Lease income	276	283	69	56

Operating leases

The Group leases out properties; mainly residential properties. The leases are classified as operating leases because the leases do not transfer the significant risks and benefits associated with ownership of the underlying asset.

Presented below is a maturity analysis of lease payments showing the undiscounted lease payments that will be received after the closing date.

IFRS 16

MSEK	Group		Parent Company	
	31 Dec 2022	31 Dec 2021	31 Dec 2022	31 Dec 2021
Within one year	138	114	37	30
Between one and two years	51	40	–	–
Between two and three years	40	39	–	–
Between three and four years	26	27	–	–
Between four and five years	25	24	–	–
Later than five years	324	23	–	–
Total undiscounted lease payments	604	267	37	30

Note 37

Investment commitments

At year-end the Group had contractual commitments to acquire property, plant and equipment. The commitments are forecast at MSEK 3,559 (3,613), of which MSEK 2771 (2,819) is expected to be settled in the following financial year. The commitments relate mainly to assured future production capacity within the Iron Ore business area and to the construction of new homes associated with the urban transformations in Kiruna and Malmberget/Gällivare. The Parent Company's commitments are forecast at MSEK 3,087 (3,396), of which MSEK 2,605 (2,609) is expected to be settled in the following financial year.

Note 38

Pledged assets and contingent liabilities

MSEK	Group		Parent Company	
	31 Dec 2022	31 Dec 2021	31 Dec 2022	31 Dec 2021
<i>Assets pledged</i>				
<i>As pledged assets for own liabilities and provisions</i>				
Floating charges	112	–	–	–
Company-owned endowment insurance	91	94	91	94
Deposit of cash and cash equivalents	112	112	112	112
Collateral provided, derivatives	152	288	152	288
Total	467	494	355	494
<i>Contingent liabilities</i>				
Guarantees, FPG/PRI	20	17	20	17
Guarantees, GP plan	3	3	3	3
Guarantees, Swedish Tax Agency	63	63	63	63
Surety given for subsidiaries	–	–	138	121
Collateral, remediation	131	128	261	264
Other surety	63	28	63	28
Other	–	–	–	–
Total	280	239	548	496

Company-owned endowment insurance is intended to cover pension commitments for the President, former President and members of Group management under the old defined-benefit pension scheme.

Deposits of cash and cash equivalents are intended to cover future expenditures for remediation measures and other restoration measures at mines after mining activities cease.

Guarantees for PRI Pensionstjänst and Gruvplanen pensions corresponded to 2 percent of commitments on the closing date.

Note 39 Related parties

Relationships with related parties

The Group is under the controlling influence of the Swedish state. The Parent Company has a related party relationship with its subsidiaries; see Note 40 Group companies.

In addition, the Parent Company has a related party relationship with the jointly controlled company Hybrit Development AB, with Vattenfall AB and its group companies, and with the Swedish Transport Administration (Trafikverket).

Summary of related party transactions

Parent Company MSEK	Year	Sales of goods/services to related parties	Interest and dividends (net)	Purchases of goods/services from related parties	Related party receivables at 31 December	Related party liabilities at 31 December
Subsidiaries	2022	1,387	109	4,772	3,230	721
Subsidiaries	2021	947	109	4,088	3,622	587
Jointly controlled entities	2022	27	–	13	1	–
Jointly controlled entities	2021	24	–	24	6	–
Other related parties	2022	–	–	748	–	23
Other related parties	2021	–	–	643	–	24

Transactions with related parties are priced on market terms.

For remuneration paid to the Board of Directors and senior executives see Note 7.

Note 40 Group companies

Parent Company

MSEK	31 Dec 2022	31 Dec 2021
Accumulated acquisition value		
Opening balance	2,407	2,255
Business combinations	472	150
Disposal	–	–
Capital contributions	749	2
Closing balance	3,628	2,407
Accumulated impairment		
Opening balance	-575	-575
Impairment for the year	-136	–
Closing balance	-711	-575
Carrying amount	2,917	1,832

Note 40 continued

Specification of the Parent Company's and Group's holdings of shares in Group companies. The following table does not include dormant Group companies.

Subsidiary/registration number/domicile	Number of shares	Share in % 2022	Share in % 2021	31 Dec 2022 Carrying amount	31 Dec 2021 Carrying amount
<i>Swedish subsidiaries</i>					
LKAB Fastigheter AB / 556009-8849 / Kiruna	5,000	100	100	95	94
LKAB Wassara AB / 556331-8566 / Stockholm	20,000	100	100	32	32
LKAB Berg & Betong AB / 556074-8237 / Kiruna	24,000	100	100	197	316
LKAB Nät AB / 556059-9796 / Kiruna	10	100	100	1	1
LKAB Minerals AB / 556223-1786 / Luleå	1,600,000	100	100	916	209
LKAB Malmtrafik AB / 556031-4808 / Kiruna	208,000	100	100	257	257
LKAB EAF 1 AB / 559252-4879 / Kiruna	25,000	100	100	0	0
Bergteamet AB / 556524-0081 / Boliden	750	75	75	150	150
LKAB Centrumhotellet AB / 559108-5724 / Kiruna	500	100	–	496	–
<i>Foreign subsidiaries</i>					
LKAB Norge AS / 918 400 184 / Narvik, Norway	300,000	100	100	763	763
LKAB Trading (Shanghai) Co., Ltd. / 91310000577478375G / Shanghai, China		100	100	10	10
<i>Indirect holdings via the subsidiary LKAB Minerals AB</i>					
LKAB Minerals B.V. / 24236591 / Breda, Netherlands		100	100	–	–
LKAB Minerals Inc / 02-0551509 / Cincinnati, USA		100	100	–	–
LKAB Minerals GmbH / HRB 16692 / Essen, Germany		100	100	–	–
LKAB Minerals Asia Pacific Ltd / 876455 / Hong Kong SAR, China		100	100	–	–
LKAB Minerals OY / 1934671-4 / Helsinki, Finland		100	100	–	–
LKAB Minerals AS / A/S277716 / Nuuk, Greenland		100	100	–	–
LKAB Minerals Tianjin Minerals Co / 70051551-5 / Dongli District Tianjin, China		100	100	–	–
LKAB Holdings Ltd (LKAB Minerals Limited) / 04621769 / Derby, UK		100	100	–	–
LKAB Minerals Ltd (Francis Flower (Northern) Ltd) / 03799817 / Derby, UK		100	100	–	–
<i>Indirect holdings via the subsidiary LKAB Berg & Betong AB</i>					
LKAB Mekaniska AB / 556013-3059 / Kiruna		100	100	–	–
LKAB Kimit AB / 556190-6115 / Kiruna		100	100	–	–
<i>Indirect holdings via the subsidiary LKAB Malmtrafik AB</i>					
LKAB Malmtrafikk AS / 974 644 991 / Narvik, Norway		100	100	–	–
Total Parent Company				2,917	1,832

Note 41 Untaxed reserves

Parent Company

MSEK	31 Dec 2022	31 Dec 2021
Accumulated depreciation in excess of plan:		
Plant and equipment	11,577	12,202
Opening balance	-375	-625
Dissolution/depreciation in excess of plan for the year		
Closing balance	11,202	11,577
Carrying amount	11,202	11,577

Note 42 Specifications for statement of cash flows**Cash and cash equivalents – Group**

MSEK	31 Dec 2022	31 Dec 2021
<i>The following subcomponents are included in cash and cash equivalents:</i>		
Cash and bank balances	2,388	5,914
Current investments, equated with cash and cash equivalents ¹⁾	803	375
In statement of financial position and statement of cash flows	3,191	6,289

Cash and cash equivalents – Parent Company

MSEK	31 Dec 2022	31 Dec 2021
<i>The following subcomponents are included in cash and cash equivalents:</i>		
Cash and bank balances	2,081	5,522
Current investments, equated with cash and cash equivalents ¹⁾	804	375
According to balance sheet and statement of cash flows	2,885	5,897

1) Cash and cash equivalents include current investments (interest-bearing investments) that were classified as cash and cash equivalents based on the following:

- They have an insignificant risk of fluctuations in value
- They can be easily converted to cash
- They have a maximum maturity of three months from date of acquisition

Interest paid and dividend received

MSEK	Group		Parent Company	
	2022	2021	2022	2021
Dividend received	568	–	568	–
Interest received	25	1	136	116
Interest paid	-39	-40	-37	-50
Total	554	-39	667	66

Note 42 continued

Adjustments for items not included in cash flow

MSEK	Group		Parent Company	
	2022	2021	2022	2021
Depreciation	3,139	3,132	2,385	2,464
Impairment of shares and participations, Group companies	–	–	136	–
Exchange differences	-23	-133	-134	-294
Return on current investments	2,990	-1,114	1,556	-7
Gain on sale/retirement of property, plant and equipment	38	29	14	68
Change in other receivables/liabilities, derivatives	8	63	–	–
Provisions for pensions	-101	-182	-14	-16
Provision for urban transformation	542	366	542	366
Other provisions	46	164	91	214
Other non-cash items	45	-143	-35	-248
Total	6,683	2,182	4,541	2,547

Reconciliation of liabilities from financing activities

Group MSEK	31 Dec 2021	Cash	Non-cash	31 Dec 2022
		flows	changes	
Bond loans	2,245	-249	–	1,996
Lease liabilities	341	33	–	374
Other liabilities	–	–	24	24
Bank loans	10	-10	78	78
Acquisition of operations	88	–	-88	0
Liabilities from financing activities	2,684	-226	14	2,472

Parent Company MSEK	31 Dec 2021	Cash	Non-cash	31 Dec 2022
		flows	changes	
Bond loans	2,245	-249	–	1,996
Other liabilities	–	–	24	24
Bank loans	10	–	-10	0
Liabilities from financing activities	2,255	-249	14	2,020

Acquisitions of subsidiaries – Group

MSEK	2022	2021
Acquired assets and liabilities		
Intangible assets	8	91
Property, plant and equipment	499	182
Financial assets	4	5
Inventories	–	18
Operating receivables	3	59
Cash and cash equivalents	–	30
Total assets	514	385
Non-current interest-bearing liabilities	–	-146
Deferred tax liabilities	-8	-12
Current operating liabilities	-31	-45
Total provisions and liabilities	-39	-203
Non-controlling interests	–	-32
Purchase price paid	475	150
Less: Cash and cash equivalents in acquired business	–	-30
Effect on cash and cash equivalents	475	120

Note 43**Key ratios – disclosures****Alternative key ratios**

The company also presents certain non-IFRS financial performance measures and key ratios in the annual report. The management considers this supplementary information to be important if readers of the report are to obtain an understanding of the company's financial position and performance.

Definitions

Return on equity	Profit after tax as a percentage of average shareholders' equity.
Underlying operating profit/loss	Operating profit/loss excluding costs for urban transformation provisions and impairment of intangible assets and of property, plant and equipment.
Operating cash flow	Cash flow from operating activities and investing activities, excluding current investments. A reconciliation of operating cash flow is given in the financial statements on page 75.
Net financial indebtedness	Interest-bearing liabilities less interest-bearing assets.
Net debt/equity ratio	Net financial indebtedness divided by equity.

Net financial indebtedness

MSEK	31 Dec 2022	31 Dec 2021
Loans payable	2,473	2,684
Provisions for pensions	992	1,396
Provisions, urban transformation	13,644	14,423
Provisions, remediation	1,727	1,775
Less:		
Cash and cash equivalents	-3,191	-6,289
Current investments	-27,393	-30,141
Financial investments	-430	-400
Net financial indebtedness	-12,178	-16,553

Net debt/equity ratio

MSEK	31 Dec 2022	31 Dec 2021
Net financial indebtedness	-12,178	-16,553
Equity	71,320	67,565
Net debt/equity ratio, %	-17.1	-24.5

Return on equity

MSEK	31 Dec 2022	31 Dec 2021
Profit/loss after tax	15,080	22,604
Average equity	69,443	57,989
Return on equity, %	21.7	39.0

Note 44**Events after the closing date**

In January LKAB announced that significant quantities of rare earth elements had been identified in the Kiruna area – elements necessary for, among other things, the production of electric cars and wind turbines.

Note 45**Proposed appropriation of earnings**

The Board and the President propose that the MSEK 56,223 in unappropriated earnings, of which MSEK 16,446 represents profit for the year, be allocated as follows:

MSEK

Dividend, 700,000 shares at SEK 10,771 per share	7,540
Carried forward	48,683
Total	56,223

The Board's statement to the 2022 Annual General Meeting of Luossavaara-Kiirunavaara AB regarding the dividend proposed for the 2022 financial year, as required under Chapter 18 section 4 of the Swedish Companies Act

The Board has proposed that a sum of MSEK 7,540 is distributed from non-restricted equity to the shareholder. Following this dividend it is proposed that MSEK 48,683 is carried forward. The proposed dividend represents 13 percent of Luossavaara-Kiirunavaara AB's non-restricted equity, which amounts in total to MSEK 56,223. In the Group as a whole retained earnings including profit for the year attributable to owners of the parent amount to MSEK 67,793 before the dividend and MSEK 60,253 after the dividend.

Operations

The company's operations are capital-intensive. Compared with other iron ore companies, which nearly all mine ore in open-pit mines, the company has a greater need for capital since underground mining requires more extensive investment. The business is highly volume-, price- and currency-dependant. In 2020 LKAB adopted a new strategy involving a major transformation of the company's business that could entail a high level of investment for a long period to come. LKAB has major commitments relating to urban transformation necessitated by the mining, in both its operating locations Kiruna and Malmberget. The company requires good financial strength over time to secure the company's commitments and strategy. In accordance with its finance policy, the company has set aside provisions to secure its liquidity needs, the urban transformation and pensions.

Financial position of the company and the Group

The financial position of the company and the Group as at 31 December 2022 is set out in the annual report for the 2022 financial year, where the accounting policies applied to assets, provisions and liabilities are also stated. The Group's equity includes accumulated unrealised gains in the amount of MSEK 2,787, of which MSEK 839 relates to changes in value during the year.

Consolidation requirements and liquidity

LKAB has a dividend policy stating that the dividend to the owner is in the long term to constitute 40 to 60 percent of the consolidated earnings after tax, adjusted to the average earnings level over a business cycle and taking into account investment plans, consolidation requirements and the Group's liquidity and position in general. The proposed ordinary dividend of MSEK 7,540 amounts to 50 percent of consolidated earnings after tax.

The proposed distribution of earnings does not impact the company's ability to meet existing and foreseen payment obligations on time. The company's liquidity ratio is considered to be clearly sufficient for the requirements that the liquidity forecasts imply, with good readiness to cope with variations in ongoing payment obligations.

Dividend justification

The Board has considered other known circumstances that could be of significance for the company's and the Group's financial position and that have not been taken into account within what is stated above.

In this consideration no circumstances have emerged that might make the proposed dividend appear unwarranted.

Dividend for the 2022 financial year

The Board proposes that a dividend is paid for the 2022 financial year in the amount of MSEK 7,540 in accordance with LKAB's dividend policy.

The Board's attestation

The Board of Directors and the President attest that the Annual Report was prepared in accordance with generally accepted accounting principles in Sweden and that the consolidated financial statements were prepared in accordance with international financial reporting standards as referred to in Regulation 1606/2002/EC of the European Parliament and of the Council of 19 July 2002 on the application of international accounting standards. The Annual

Report and the consolidated financial statements give a fair presentation of the Parent Company's and the Group's financial position and earnings. The Administration Report for the Parent Company and the Group provides a fair review of developments in the Parent Company's and the Group's operations, financial position and earnings and describes significant risks and uncertainties faced by the Parent Company and the companies included in the Group.

Proposed appropriation of earnings

The Board and the President propose that the MSEK 56,223 in unappropriated earnings, of which MSEK 16,446 represents profit for the year, be allocated as follows:

Distributed to the company's owner	MSEK 7,540
Carried forward	MSEK 48,683
Total	MSEK 56,223

Luleå, 28 March 2023

Göran Persson
Chairman of the Board

Gunnar Axheim
Board member

Catrin Fransson
Board member

Eva Hamilton
Board member

Lotta Mellström
Board member

Bjarne Moltke Hansen
Board member

Ola Salmén
Board member

Gunilla Saltin
Board member

Per-Olof Wedin
Board member

Anders Elenius
Employee representative

Dan Hallberg
Employee representative

Tomas Larsson
Employee representative

As stated above, the Annual Report, consolidated financial statements and the statutory Sustainability Report were approved for publication by the Board of Directors on 28 March 2023. The consolidated income statement, statement of comprehensive income and statement of financial position and the Parent Company's income statement and balance sheet are subject to approval at the Annual General Meeting on 27 April 2023.

Our audit report was presented on 28 March 2023.

KPMG AB

Jan Moström
President and CEO

Helena Arvidsson Älgne
Authorised Public Accountant

Audit report

To the general meeting of the shareholders
of Luossavaara-Kiirunavaara AB, corp. ID 556001-5835

Report on the annual accounts and consolidated accounts

Opinion

We have audited the annual accounts and consolidated accounts of Luossavaara-Kiirunavaara AB for the year 2022, except for the corporate governance statement on pages 55–67 and the sustainability report on pages 11–12, 16, 20, 30–40, 43–50 and 52–54. The annual accounts and consolidated accounts of the company are included on pages 11–12, 16, 18–20 and 30–130 of this document.

In our opinion, the annual accounts have been prepared in accordance with the Annual Accounts Act and present fairly, in all material respects, the financial position of the parent company as of 31 December 2022 and its financial performance and cash flow for the year then ended in accordance with the Annual Accounts Act. The consolidated accounts have been prepared in accordance with the Annual Accounts Act and present fairly, in all material respects, the financial position of the group as of 31 December 2022 and its financial performance and cash flows for the year in accordance with International Financial Reporting Standards (IFRS), as adopted by the EU, and the Annual Accounts Act. Our opinions do not cover the corporate governance statement on pages 55–67 or the sustainability report on pages 11–12, 16, 20, 30–40, 43–50 and 52–54. The statutory administration report is consistent with the other parts of the annual accounts and consolidated accounts.

We therefore recommend that the general meeting of shareholders adopts the income statement and balance sheet for the parent company and the group.

Our opinion in this report on the annual accounts and consolidated accounts is consistent with the content of the supplementary report submitted to the parent company's audit committee in accordance with Article 11 of the Audit Regulation (537/2014).

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (ISA) and generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the *Auditor's responsibilities* section of our report. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have fulfilled our other ethical responsibilities in accordance with these requirements. This includes that, based on the best of our knowledge and belief, no prohibited services referred to in the Audit Regulation (537/2014) Article 5.1 have been provided to the audited company or, where applicable, its parent company or its controlled companies within the EU.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the annual accounts and consolidated accounts of the current period. These matters were addressed in the context of our audit of the annual accounts and consolidated accounts as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Provisions for urban transformation

See disclosure notes 31 and 32 and the accounting principles on page 87 in the annual accounts and consolidated accounts for detailed information on and descriptions of this matter.

Description of key audit matter

The group has significant obligations due to deformations in the ground caused by the mining operations. As at 31 December 2022 the group and the parent company have recognised provisions related to urban transformation in the amount of MSEK 13,644.

The deformations in the ground are already so extensive, or will become so, that it is necessary to move parts of Kiruna and Malmberget.

The group has a legal obligation to compensate for damage resulting from its mining activities and therefore recognises pro-

visions for urban transformation in Kiruna and Malmberget as the obligations arise. Provisions for these obligations are dependent on the extent of the ground deformations, estimates of damage and compensation claims from affected parties, future inflation and discount rates.

The assumptions used as the basis for the provisions are complex and difficult to estimate. Changes in the estimates and assumptions could have a significant impact on the group's and the parent company's earnings and financial position.

How our audit addressed the key audit matter

We have examined the group's framework for the approval and payment of compensation to affected parties. We have evaluated the adherence to the framework through sample testing.

Furthermore, we have inspected the group's procedures to identify obligations and assess the extent of the obligations including the assumptions made.

We have examined the reasonableness of the group's accounting policies, calculations and assumptions for recognition of urban transformation provisions, and the disclosures that have been included in the annual accounts and the consolidated accounts.

Property, plant and equipment

See disclosure notes 15 and 16 and the accounting principles on pages 83–84 and 86–87 in the annual accounts and consolidated accounts for detailed information on and descriptions of this matter.

Description of key audit matter

As at 31 December 2022 the group and the parent company have recognised property, plant and equipment in the amount of MSEK 44,864 and MSEK 39,109 respectively.

Depreciation periods for main haulage levels, facilities and equipment in mines is dependent on future ore extraction and the useful economic lives of the mines. It is essential that changes in production and the ore base are reflected in the applied depreciation method and useful economic life.

Changes to the assumptions regarding useful economic lives could have a material impact on the group's and the parent company's earnings and financial position.

How our audit addressed the key audit matter

We have gained an understanding of the planned mining and ore base and evaluated the group's principles and procedures for depreciation of mining-related property, plant and equipment.

We have evaluated the group's procedures for following up construction in progress and have verified through audit sampling reported capital expenditure against actual supplier invoices and other expenditure. We have assessed whether the accounting treatment is in line with the applicable accounting framework. We have assessed the depreciation periods and methods applied by the group for plant and equipment in the mines.

We have also evaluated the disclosures on property, plant and equipment that have been included in the annual accounts and the consolidated accounts.

Other information than the annual accounts and consolidated accounts

This document also contains other information than the annual accounts and consolidated accounts, and this is found on pages 1–10, 13–15, 17, 21–29 and 135–177. The other information comprises also of the remuneration report which we obtained prior to the date of this auditor's report. The board of directors and the chief executive officer are responsible for this other information.

Our opinion on the annual accounts and consolidated accounts does not cover this other information and we do not express any form of assurance or conclusion thereon.

In connection with our audit of the annual accounts and consolidated accounts, our responsibility is to read the information identified above and consider whether the information is materially inconsistent with the annual accounts and consolidated accounts. In this procedure we also take into account our knowledge otherwise obtained in the audit and assess whether the information otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Board of Directors and the Chief Executive Officer

The Board of Directors and the Chief Executive Officer are responsible for the preparation of the annual accounts and consolidated accounts and that they give a fair presentation in accordance with the Annual Accounts Act and, concerning the consolidated accounts, in accordance with IFRS as adopted by the EU, and for such internal control as they determine is necessary to enable the preparation of annual accounts and consolidated accounts that are free from material misstatement, whether due to fraud or error.

In preparing the annual accounts and consolidated accounts the Board of Directors and the Chief Executive Officer are responsible for the assessment of the company's and the group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors and the Chief Executive Officer either intend to liquidate the entity or to cease operations, or have no realistic alternative but to do so.

Without prejudice to the Board of Directors' responsibilities and tasks in general, the Board's Audit Committee is responsible for overseeing the company's financial reporting process.

Responsibilities of the auditor

Our objectives are to obtain reasonable assurance about whether the annual accounts and consolidated accounts as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs and generally accepted auditing standards in Sweden will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual accounts and consolidated accounts.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement in the annual accounts and consolidated accounts, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of the company's internal control relevant to our audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors and the Chief Executive Officer.
- Conclude on the appropriateness of the Board of Directors' and the Chief Executive Officer's use of the going concern basis of accounting in preparing the annual accounts and consolidated accounts and, based on the audit evidence obtained, whether any material uncertainty exists related to events or conditions that may cast significant doubt on the company's and the group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the annual accounts and consolidated accounts or, if such disclosures are inadequate, to modify our opinion about the annual accounts and consolidated accounts. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or circumstances may cause an entity or a group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the annual accounts and consolidated accounts, including the disclosures, and whether the annual accounts and consolidated accounts represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated accounts. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We must inform the Board of Directors of, among other matters, the planned scope, focus and timing of the audit and of significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We must also provide the Board of Directors with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence and, where applicable, measures that have been taken to eliminate the threats or safeguards that have been implemented.

From the matters communicated with the Board of Directors we determine those matters that were of most significance in the audit of the annual accounts and consolidated accounts, including the most important assessed risks for material misstatement, which are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes disclosure about the matter.

Report on other legal and regulatory requirements

Opinion

In addition to our audit of the annual accounts and consolidated accounts, we have also audited the administration of the Board of Directors and the Chief Executive Officer of Luossavaara-Kiirunavaara AB for the year 2022 and the proposed appropriation of the company's profit or loss.

We recommend to the general meeting of shareholders that the profit be appropriated in accordance with the proposal in the administration report and that the members of the Board of Directors and the Chief Executive Officer be discharged from liability for the financial year.

Basis for opinion

We conducted the audit in accordance with generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the *Auditor's responsibilities* section of our report. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of the Board of Directors and the Chief Executive Officer

The Board of Directors is responsible for the proposal on appropriation of the company's profit or loss. A proposal regarding a dividend includes an assessment of whether the dividend is justifiable considering the requirements which the company's and the group's type of operations, size and risks place on the size of the parent company's and the group's equity, consolidation requirements, liquidity and position in general.

The Board of Directors is responsible for the company's organisation and the administration of the company's affairs. This includes, among other things, continuous assessment of the company's and the group's financial situation and ensuring that the company's organisation is designed so that the accounting, management of assets and the company's financial affairs otherwise are controlled in a reassuring manner.

The Chief Executive Officer shall manage the ongoing administration of the company according to the Board of Directors' guidelines and instructions and, among other matters, take measures

that are necessary to ensure that the company's accounting procedures are in accordance with laws and that assets are managed in a satisfactory manner.

Responsibilities of the auditor

Our objective concerning the audit of the administration, and thereby our opinion about discharge from liability, is to obtain audit evidence to assess with a reasonable degree of assurance whether any member of the Board of Directors or the Chief Executive Officer in any material respect:

- has undertaken any action or been guilty of any omission which can give rise to liability to the company, or
- in any other way has acted in contravention of the Companies Act, the Annual Accounts Act or the articles of association.

Our objective concerning the audit of the proposed appropriation of the company's profit or loss, and thereby our opinion about this, is to assess with a reasonable degree of assurance whether the proposal is in accordance with the Companies Act.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with generally accepted auditing standards in Sweden will always detect actions or omissions that can give rise to liability to the company, or that the proposed appropriation of the company's profit or loss is not in accordance with the Companies Act.

As part of an audit in accordance with generally accepted auditing standards in Sweden, we exercise professional judgment and maintain professional scepticism throughout the audit. The examination of the administration and the proposed appropriation of the company's profit or loss is based primarily on the audit of the accounts. Additional audit procedures performed are based on our professional judgment, taking risk and materiality as a starting point. This means that we focus the examination on such actions, areas and relationships as are material for the operations and where deviations and violations would have particular significance for the company's situation. We examine and test decisions taken, support for decisions, actions undertaken and other circumstances that are relevant to our opinion concerning discharge from liability. As a basis for our opinion on the Board of Directors' proposed appropriation of the company's profit or loss, we examined the Board of Directors' reasoned statement and a selection of supporting evidence in order to be able to assess whether the proposal is in accordance with the Companies Act.

The auditor's examination of the corporate governance statement

The Board of Directors is responsible for the corporate governance statement on pages 55–67 and for ensuring that it is prepared in compliance with the Annual Accounts Act.

Our examination of the corporate governance statement has been conducted in accordance with FAR's auditing standard RevR 16 *The auditor's examination of the corporate governance statement*. This means that our examination of the corporate governance statement is different and substantially less in scope than an audit conducted in accordance with International Standards on Auditing and generally accepted auditing standards in Sweden. We believe that the examination has provided us with sufficient basis for our opinion.

A corporate governance statement has been prepared. Disclosures in accordance with chapter 6 section 6 second paragraph points 2–6 of the Annual Accounts Act and chapter 7 section 31 second paragraph of the same law are consistent with the other parts of the annual accounts and consolidated accounts and are in accordance with the Annual Accounts Act.

Auditor's limited assurance report on the statutory sustainability report

The Board of Directors is responsible for the sustainability report on pages 11–12, 16, 20, 30–40, 43–50 and 52–54 and for ensuring that it is prepared in accordance with the Annual Accounts Act.

Our examination has been conducted in accordance with FAR's recommendation RevR 12 *The auditor's opinion regarding the statutory sustainability report*. This means that our examination of the sustainability report has a different focus and is substantially less in scope than an audit conducted in accordance with International Standards on Auditing and generally accepted auditing standards in Sweden. We believe that our examination provides a reasonable basis for our opinion.

A statutory sustainability report has been prepared.

KPMG AB, Box 382, 101 27 Stockholm, was appointed as auditor of Luossavaara-Kiirunavaara AB by the general meeting of shareholders held on 28 April 2022. KPMG AB or auditors operating at KPMG AB have been the company's auditor since 2019.

Stockholm, 28 March 2023

KPMG AB

Helena Arvidsson Ågne
Authorised Public Accountant

Sustainability notes

Sustainability guides us in all parts of the business and our sustainability reporting is therefore integrated with the Group's annual report. The sustainability notes contain supplementary information and key performance measures.

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Contact

The contact person for LKAB's sustainability reporting is Pia Lindström, Senior Vice President of Environment and Sustainability, pia.lindstrom@lkab.com.

About LKAB's sustainability reporting

LKAB publishes its sustainability report annually as an integrated part of its annual report. The sustainability report covers the 2022 financial year unless otherwise stated. The last report, prior to this one, was published in March 2022. This year's version is to be seen as an update since there have been no major changes between the years.



Since 2008 LKAB has prepared its sustainability reports in accordance with the framework for sustainability reporting issued by the Global Reporting Initiative (GRI). For 2022 the version applied is the GRI Universal Standards 2021. The Mining and Metals Sector Supplement (MM) is also applied. The sustainability report is published annually and covers the period 1 January 2022 to 31 December 2022, which is in line with LKAB's financial reporting. This sustainability report was published on 29 March 2023. Where the GRI framework calls for detailed descriptions of specific topics, LKAB has chosen to include supplementary information and clarifications in the sustainability notes.

The Annual and Sustainability Report also contains information about how we are contributing to Agenda 2030 and the global sustainability goals. LKAB has begun the process of reporting according to TCFD guidelines and in 2022 carried out scenario analysis; see page 52.

Sustainability information in the Annual Report encompasses the pages indicated in the GRI index on pages 164–165. The statutory sustainability report prepared in accordance with Chapter 6 Section 10 of the Swedish Annual Accounts Act has been integrated into LKAB's administration report, its scope being defined in the Annual and Sustainability Report's table of contents on page 2.

Boundaries of the report

As in previous years, the report concentrates on the Nordic activities and focuses on the iron ore operations in Sweden and Norway. The Iron Ore business area makes up the bulk of activities, accounting for around 90 percent of the Group's total sales. Documentation from the Special Products business area is also included. Information concerning subsidiaries has been included in the report where deemed relevant. Which entities are covered is detailed in the report alongside the data reported.

External assurance

LKAB's sustainability reporting is assured by an external party in accordance with the government's ownership policy for state-owned companies. The table of contents on page 2 specifies which pages are subject to external assurance. The auditing firm KPMG is regarded as independent of LKAB's Board of Directors, which issues and signs the Annual and Sustainability Report as a whole.

Process for defining report content

The sustainability report has been prepared in accordance with the GRI principles and the implementation requirements in the GRI Universal Standards 2021. Sustainability matters are an integral part of LKAB's strategy and operations in order to contribute to sustainable development. The strategy, including our strategic goals, is reported on pages 11–16.

Our material topics

The materiality analysis carried out in 2022 identified nine material topics where the company has the greatest obligation and opportunity to minimise negative impact and the greatest opportunity to maximise sustainable development.

Transition for a sustainable climate

Our operations in Sweden account for four percent of total carbon emissions from industry in Sweden. We have therefore seen opportunities and taken on a major challenge: to transition to carbon-free processes and products by 2045. Entirely fossil-free production from mine to steel is the cornerstone of our development projects.

[► Read more on page 146](#)

Energy security

Our transformation means that we will need to use much more electricity. Fossil fuels will be phased out and replaced by more electricity produced from wind, water or nuclear power. To fully meet electricity requirements different types of power sources will have to be used.

[► Read more on page 147](#)

Circularity and resource efficiency

We work to minimise waste and enable use, and we create circular flows for our residual products. In 2022 these efforts continued with the development of technology for making the most of mineralisations and rare earth elements and for turning waste into valuable resources.

[► Read more on page 148](#)

Biodiversity

Our operations have a material impact on the environment, utilise land and impact the look of the landscape, biodiversity and the livelihoods of those around us. One of our strategic goals is to be a net contributor to biodiversity, which means making a positive contribution to biodiversity in the regions and environments in which we operate.

[► Read more on page 149](#)

Responsible and attractive employer

To stay attractive as an employer we offer opportunities for lifelong learning, clear career paths and personal development. Skills supply is a key important strategic issue for achieving our transformation. A healthy organisational and social work environment that enables people to develop and ensures that diversity, equal opportunity and non-discrimination are a given.

[► Read more on page 151](#)

Community engagement

We have a major impact on our local communities as a significant employer and as an actor in trade and industry. Our ambition is development before phase-out. We invest in our operating locations and work in partnership with residents, municipalities and other actors to ensure well-functioning infrastructure and social services, including good housing, schools, services and culture.

[► Read more on page 154](#)

Dialogue with stakeholders

To ensure long-term social acceptance for our operations and development we need those who live, work and have their livelihoods in our local communities to be kept informed of our development and included in our transformation. We maintain a continuous dialogue with our stakeholders. We endeavour to minimise our negative impact and maximise the positive.

[► Read more on page 157](#)

Financial strength

Our profitability creates jobs for employees and external stakeholders. We have an economic impact and create value through the dividend to our owner as well as through taxes, investments in research and development, infrastructure, the urban transformations, acquisitions and sponsorship. Our goal is to be a strong, sustainable company that remains competitive under varying economic conditions.

[► Read more on page 158](#)

Sustainable value chains

Our social responsibility extends throughout the value chain. We will work preventively and systematically to combat corruption and maintain good business ethics. We will give consideration to human rights and take responsibility for ensuring that these rights are respected, with a particular focus on our social impact from mining, on our operations and production in high-risk countries, and on the rights of indigenous peoples.

[► Read more on page 159](#)

Materiality analysis and priorities for sustainability work

The materiality analysis forms a basis for our strategic decisions on and objectives for sustainable development. It also provides a framework for the content of the sustainability report.

LKAB reports on the topics identified as relevant according to the materiality analysis and based on dialogue with our stakeholders. See the matrix on page 145 and specific disclosures on pages 146–160.

In 2021 new strategic goals were adopted for the period 2022–2030 and LKAB updated the strategic framework in order to clarify our priorities within environmental and climate sustainability, social sustainability and financial sustainability. A new materiality analysis was conducted 2022 with the aim of identifying stakeholders' expectations and priorities in relation to our transformation and strategic focus.



Principles of materiality analysis

Material topics are defined based on GRI principles:

- Stakeholder inclusiveness
- Sustainability context
- Materiality
- Completeness

Business intelligence

Sustainability topics that are important for stakeholder trust and for LKAB's ability to contribute to a sustainable society are identified through broad and continuous business intelligence that is based on:

- Identifying best practice for sustainable business in general and for the industry specifically, including the development of guidelines aligned with the EU Taxonomy.
- Comparing with topics identified as material by competitors and industry colleagues, in Sweden and globally.
- Standards based on international initiatives such as the UN Sustainable Development Goals (SDGs) and management systems.
- Topics and issues raised by the media that are related to LKAB and the mining industry.

Stakeholder engagement

LKAB identifies stakeholders based on impact in the value chain. We define stakeholders as groups of people that, directly or indirectly, may affect or be affected by our operations and the decisions made. Priority stakeholders are selected based on this definition and on mutual influence.

We maintain continuous dialogue with our stakeholders to identify topics and expectations, as well as to validate the ongoing work and our priorities. A more in-depth analysis is carried out regularly – most recently in 2022, which included surveys, in-depth interviews and a workshop. For our stakeholders, forms of dialogue and topics raised see pages 140–141.

Prioritisation of material topics

We apply an external and an internal perspective when prioritising material topics, the external perspective being based on the topics that stakeholders highlight as priorities. The stakeholders' priorities then form a common basis for an internal assessment. The internal perspective is further based on the topics where we have an opportunity and a responsibility to drive sustainability and create value within the frameworks of our business model and vision. A topic with a major impact on sustainable development may be given a lower materiality classification if LKAB's procedures and governance are adequate and the risks associated with the topic are therefore assessed to be lower.

Validation of the materiality analysis

The prioritised topics are validated continually with internal and external stakeholders, and we also check them against opinion polls that we commission and against our employee surveys. Stakeholders give feedback on the sustainability reporting continually during the year.

Boundaries

The boundaries of the reporting on each material topic are described on pages 146–160, where it is specified whether the topic is material to the LKAB Group (internally) or for some point in the value chain (externally).

Responsibility for the materiality analysis

The environment and sustainability department ensures that there is a current materiality analysis and participates in prioritising material topics and in the validation of the analysis. The analysis is presented to a steering group for decisions. Members of executive management's central departments are represented on the steering group.

Our stakeholders

LKAB maintains active ongoing dialogue with many different stakeholders in order to encourage the cooperation required to run a sustainable business and lead the transformation of our industry.

Stakeholders and forms of dialogue	Topics raised	How LKAB impacts this group
Customers Continuous dialogue in various forums, collaborations and development projects.	<ul style="list-style-type: none"> ▪ Product development for more sustainable products and solutions. ▪ Communication to create incentives that encourage active sustainability work, what we are doing within social sustainability and other areas of our environmental efforts, as well as the company's plans going forward. ▪ Expand sustainability reporting, e.g. to include Scope 3 greenhouse gas emissions. 	<i>Locally and globally:</i> Several of our customers are active in the global market, and through development projects and long-lasting customer relationships we promote sustainable development by developing climate-efficient products and processes.
Employees Informal and formal dialogue in the form of workplace meetings, performance reviews, strategy days, health and safety officer meetings, union negotiations and employee surveys.	<ul style="list-style-type: none"> ▪ Attractive employer – a broad commitment to recruitment, securing skills supply, careers, further training and rehabilitation, among other things. ▪ Helping to make the locations where we operate more attractive. ▪ Credibility of messages and actions: "practise what you preach" – the importance of sending the right signals. ▪ Continued focus on values and inclusion. 	<i>Locally:</i> Strategic work to achieve good working conditions, greater equality and diversity contributes to health and wellbeing among employees.
Suppliers and contractors Regular meetings, dialogue, supplier days and partnerships with suppliers.	<ul style="list-style-type: none"> ▪ Environmentally friendly transport systems/logistics: transport by rail rather than road. ▪ Clear requirements specification and evaluation process for sustainability topics in procurement. ▪ Information about sustainability to increase awareness throughout the value chain. 	<i>Locally:</i> We secure jobs locally and regionally. <i>Globally:</i> To positively impact human rights, environmental and economic sustainability throughout the value chain we set requirements of our suppliers in accordance with the Supplier Code of Conduct.
Communities – local residents Cooperation agreements with municipalities affected by our operations. Individual and public meetings, consultation, publications and social media content ensure opportunities for dialogue. LKAB also engages in collaborative projects and sponsorship, and is involved with various organisations.	<ul style="list-style-type: none"> ▪ Including the community in processes and decisions, including the perspective of young people. ▪ Clear and frequent information, communication and cooperation. ▪ Helping to make the Swedish orefields more attractive, housing options. ▪ Minimising local environmental impact. 	<i>Locally:</i> The operations have varying degrees of social, environmental and economic impact on residents and other livelihoods in the local areas. Dialogue with e.g. different interest groups enables us to understand impacts.

Stakeholders and forms of dialogue	Topics raised	How LKAB impacts this group
Communities – indigenous peoples	<ul style="list-style-type: none"> ▪ Land management and utilisation of land. ▪ Remediation of affected areas, restoring nature, wetlands, watercourses and post-treatment of old deposits. ▪ Limit negative environmental impact, emissions to air, water and land. ▪ Dialogue and consultation. ▪ Rights of indigenous peoples, needs of and impact on reindeer herding. 	<p>Locally: The operations have varying degrees of social, environmental and economic impact on indigenous peoples. Dialogue in various areas enables us to understand our impact.</p>
Authorities and legislators	<ul style="list-style-type: none"> ▪ Good advance planning for all decisions and processes. ▪ Mandate and responsibility to comply with permit requirements. ▪ Setting an example together. ▪ Reduced climate and environmental impact. 	<p>Locally: Authorities and legislators set requirements of the operations in order to minimise negative impact and ensure that LKAB works to maintain permits. Globally: We contribute specialise expertise (in the EU, for example) so as to have a positive impact on social, environmental and economic norms.</p>
Interest groups	<ul style="list-style-type: none"> ▪ Human rights, particularly the rights of children and indigenous peoples. ▪ Circular economy, recycling and sustainable consumption. ▪ Legislation and political governance, including for efficient permitting processes. ▪ Attractive workplaces to ensure skills supply. ▪ Elevating the entire spectrum of sustainability work and creating acceptance for mining operations. 	<p>Locally and globally: Dialogue with e.g. interest groups in various areas enables us to understand impacts.</p>
Schools, universities and colleges	<ul style="list-style-type: none"> ▪ Playing a greater role in the discussion of minerals policy relating to permitting processes. ▪ Attractive workplaces with equal opportunities in "heavy industry". ▪ Digitalisation on human terms. 	<p>Locally and globally: Ongoing dialogue plus continuous and project-based collaboration with schools, universities and colleges increases knowledge and opportunities for continued operation and positive development.</p>
Owner	<ul style="list-style-type: none"> ▪ Safe and healthy work environment, good terms of employment. ▪ Human rights. ▪ Diversity and equal opportunity. ▪ Reduced climate and environmental impact through sustainable use of resources. ▪ Good business ethics and active anti-corruption efforts. ▪ Achieve the strategic goals for sustainable value creation. ▪ Contribute to achieving the global Sustainable Development Goals. 	<p>Locally and globally: We are owned by the state, which sets high requirements that its portfolio of companies must provide an example of sustainable enterprise. This results in increased focus on sustainability topics both in the company and in the value chain.</p>
Silent stakeholder	<ul style="list-style-type: none"> ▪ A healthy external environment. ▪ Contributing to achieving the Sustainable Development Goals. ▪ Introducing fundamental environmental and climate aspects into the company's priority actions. ▪ Working actively on strategies that both respond to and proactively manage these aspects, and identifying challenges and opportunities. 	<p>The silent stakeholder impacts or is impacted by the operations but has not been sufficiently prioritised. All other stakeholders and operations are entirely dependent on having a healthy external environment and a good climate.</p>

Overall sustainability management approach

The Group's strategic goals for sustainable value creation are set by the Board of Directors. The goals ensure that the business is run with a focus on sustainability, providing the conditions for and acceptance of its long-term operation. LKAB must also satisfy its owner's requirement that, as a state-owned company, it sets an example of sustainable enterprise. The strategic goals are detailed on page 16. The Board of Directors has overall responsibility for the company's sustainability work; see pages 33–40.

Governing documents

In 2021 new strategic goals were adopted for the Group and the strategic framework was reviewed in order to link sustainability even more clearly to the business. As part of this we reviewed the management approach to measurement and monitoring of the goals at all levels in the business. The sustainability perspective is integrated into our business management.

Our governing documents provide a starting point for this, setting out our approach and how our business is to be run. In addition to the State Ownership Policy, they include our vision, mission and values as well as our Code of Conduct and a number of policies and Group guidelines that support our work in key areas.

The governing documents that embody how we will achieve the desired development include the Group strategy for the period up to 2045. This provides a framework for other governing documents. Part of the Group strategy is Roadmap 2030, which sets out in concrete terms how active sustainability work is to contribute to the realisation of the Group's strategy. There is also the Group's business plan. The most operational category of governing document consists of the sustainability programmes and business plans for the business areas and the central departments, which break down the Group's overall goals into targets and activities specific to their activities.

Responsibility, monitoring and evaluation

Operational responsibility lies with the President and CEO. The environment and sustainability department is responsible for developing and supporting the Group's sustainability work. The Senior Vice President of Environment and Sustainability is a member of the Group management team.

Reporting to the Board takes place on a monthly and quarterly basis and in conjunction with dialogue with the owner.

Many key performance indicators are monitored continuously to ensure that LKAB is complying with permits and conditions. The results are sent to the competent authorities for external monitoring.

Data collection and the quality of processes are evaluated by internal business auditors as well as in the external assurance of the sustainability reporting.

LKAB has a whistleblower system for reporting any irregularities. The system is called SpeakUp and is available to both internal and external parties. Reports can be made in multiple languages and anonymously, verbally, in writing or via a meeting. The accounting and finance department is responsible for investigating matters received. Reporting takes place to the Board's Audit Committee. The Ethics Council acts as an advisor to the legal department and is responsible for procedures, calibration and evaluation of the system. The Ethics Council includes the Chief Financial Officer, General Counsel and the Senior Vice President of HR.

Membership of associations

CSR Sweden

Network for working on and driving sustainability efforts

Euromines

The European association for the mining industry

UN Global Compact

Initiative to promote sustainability topics

Jernkontoret

Industry association of the Swedish steel sector

Svemin

The industry association of the mining, minerals and metals sector in Sweden

Swedish Wind Energy Association (SWEA)

Trade association for companies working with wind power and renewable energy

Swedish Safety Culture Network (SÄKU)

Network for safety culture

Transparency International Sweden

Anti-corruption network

External charters, principles and initiatives



Agenda 2030

LKAB works actively to contribute to the UN Sustainable Development Goals, also known as Agenda 2030. Read more on pages 39–40.

EcoVadis

LKAB Minerals' sustainability efforts are assessed annually by EcoVadis based on criteria relating to the environment, health and safety, human rights, ethics and sustainable procurement. EcoVadis has reviewed more than 60,000 companies globally and in 2022 LKAB's industrial minerals operations received a rating of gold, representing the 95th percentile – thereby surpassing over 95 percent of companies rated by EcoVadis.

UN Global Compact

In autumn 2019 we signed up to the UN Global Compact. Our membership is a way of showing that we accept our responsibilities as regards human rights, labour, the environment and anti-corruption in accordance with the Global Compact's Ten Principles. These are based on the Universal Declaration of Human Rights, the International Labour Organization's Declaration on Fundamental Principles and Rights at Work, the Rio Declaration on Environment and Development, and the United Nations Convention Against Corruption. These principles form the basis of the Group's Code of Conduct and Supplier Code of Conduct.

UN Guiding Principles on Business and Human Rights

We aim to act in accordance with UN Guiding Principles on Business and Human Rights, which is reflected in our Code of Conduct, Sustainability Policy, Human Rights Guideline and the Supplier Code of Conduct.

Global Reporting Initiative (GRI)

Since the 2008 reporting year LKAB has applied the GRI's guidelines on sustainability reporting, in accordance with the State Ownership Policy. For 2022 the GRI Universal Standards 2021 have been applied, supplemented with the Mining and Metals Sector Supplement.

OECD Guidelines for Multinational Enterprises

We aim to comply with these international guidelines, which have been incorporated into the Group's Code of Conduct and Supplier Code of Conduct.

REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals)

LKAB is covered by the EU regulation on chemical substances. The majority of the chemically modified products that are produced and sold are registered, while other products are naturally occurring minerals that are exempt from registration under REACH.

UNICEF's Children's Rights and Business Principles

Our commitment to these principles on children's rights is reflected in the Group's Code of Conduct and Supplier Code of Conduct.

Certification

To ensure compliance with Swedish legislation, comply with LKAB's management systems and similar requirements, and to systematically identify risk factors and meet future demands and expectations, LKAB's operations are certified to ISO 9001

– Quality Management, ISO 14001 – Environmental Management, ISO 45001 – Occupational Health and Safety, ISO 50001 – Energy Management and SA 8000 – Social Accountability.

ISO certification held	ISO 9001	ISO 14001	ISO 45001	ISO 50001	SA 8000
LKAB	●	●	●	●	●
LKAB Berg & Betong AB	●	●	●		
LKAB Mekaniska AB	●	●	●		
LKAB Kimit AB	●	●	●		
LKAB Fastigheter AB					
LKAB Nät AB					
LKAB Malmtrafik AB	●	●	●	●	
LKAB Malmtrafikk AS	●	●	●	●	
LKAB Norge AS	●	●	●	●	
LKAB Minerals AB	●	●	●		
LKAB Minerals Ltd	●	●	●		
LKAB Minerals Oy	●	●	●		
LKAB Minerals BV	●	●	●		
LKAB Minerals GmbH	●				
LKAB Minerals AP	●	●	●		
LKAB Minerals Tianjin	●				
LKAB Minerals Inc	●				
Likya Minerals	●	●	●		
LKAB Wassara	●	●	●		
LKAB Trading	●				●

Business-critical permit matters

LKAB's operations require permits under the Environmental Code. These permits are crucial for allowing us to maintain production and to make investments and environmental improvements. During the year we worked on a number of matters in parallel.

In 2022 the permit application submitted to the Land and Environment Court in July 2018 for existing and enhanced mining operations and production in Kiruna was finally rejected. The permit application, which cost LKAB around MSEK 100, was rejected by the Land and Environment Court at the end of 2021 on the grounds that LKAB had not adequately conducted a separate consultation process with the parties mentioned as being particularly affected.

LKAB subsequently appealed the decision to the Land and Environment Court of Appeal and finally to the Supreme Court, since we believe that the consultation complied with practice. The Supreme Court did not grant leave of appeal. LKAB will continue to conduct its operations in accordance with the existing permit and is working to produce a new application. The process for the new application involves updated investigations and other documents, as well as a new consultation process with affected parties and the general public as an important part of the preparations.

The production of application documents for continued and enhanced operations in Malmberget is in progress. In addition to the regular mining and processing operations, the application includes a demo plant for direct reduction of iron ore with hydrogen using the HYBRIT technology as well as

an apatite plant for extracting the phosphate mineral apatite from residual material. In 2022 consultations took place with authorities, organisations and individuals, as well as with the general public affected.

Work is in progress to produce application documents for a new enterprise in Luleå. This relates to the establishment of LKAB's circular industrial park, with a planned location in the Svartön industrial area, for further processing of residual material from the orefields into products such as phosphorus for mineral fertiliser, fluorine and gypsum as well as rare earth elements (REE). In 2022 consultations took place with authorities, organisations and individuals, as well as with the general public affected.

The exploration that we have been conducting for a number of years has shown that the Per Geijer deposit, which is situated close to existing operations in Kiruna, contains a large mineral resource. We are carrying out further investigations and plan to submit an application for an exploitation concession during 2023. There are many challenges associated with land use that need to be managed in dialogue with stakeholders. Investigations will be carried out to see how we can avoid, minimise and compensate in accordance with the mitigation hierarchy.



Material topics, impact in the value chain and risk

LKAB is working to achieve a sustainable mining industry both nationally and internationally, including by setting requirements in the value chain for social, environmental and economic sustainability. Within each topic we have identified a number of material issues. Our work on these material issues is linked to our strategic risks and impacts the various parts of the value chain as shown below.

Material issue	Suppliers	LKAB	Customers	Communities	Link to strategic risk
Transition for a sustainable climate	●	●	●	●	<ul style="list-style-type: none"> ▪ Market risk ▪ Risk of a lack of efficient, legally certain processes ▪ Risk of negative environmental impact ▪ Risk of not being sufficiently competitive
Energy security	●	●	●	●	<ul style="list-style-type: none"> ▪ Market risk ▪ Risk of a lack of efficient, legally certain processes ▪ Risk of negative environmental impact
Circularity and resource efficiency	●	●	●	●	<ul style="list-style-type: none"> ▪ Market risk ▪ Risk of a lack of efficient, legally certain processes ▪ Risk of negative environmental impact
Biodiversity	●	●	●	●	<ul style="list-style-type: none"> ▪ Risk of insufficient social and legal acceptance ▪ Risk of a lack of efficient, legally certain processes ▪ Risk of negative environmental impact
Responsible and attractive employer	●	●		●	<ul style="list-style-type: none"> ▪ Risk of accidents and poor health ▪ Risk of skills shortage ▪ Risk of insufficient social and legal acceptance ▪ Risk of break-in/damage by external parties
Community engagement	●	●		●	<ul style="list-style-type: none"> ▪ Risk of insufficient social and legal acceptance ▪ Risk of negative environmental impact
Dialogue with stakeholders	●	●	●	●	<ul style="list-style-type: none"> ▪ Risk of insufficient social and legal acceptance ▪ Risk of a lack of efficient, legally certain processes
Financial strength	●	●	●	●	<ul style="list-style-type: none"> ▪ Financial risk ▪ Risk of insufficient mineral reserves/mineral resources ▪ Market risk ▪ Risk of not being sufficiently competitive
Sustainable value chains	●	●	●	●	<ul style="list-style-type: none"> ▪ Market risk ▪ Risk of insufficient social and legal acceptance

Transition for a sustainable climate

Materiality and impact

Mining and processing iron ore is a highly energy-intensive business. Our operations caused direct emissions of 661 Kt carbon dioxide in 2022. That means we account for four percent of total carbon emissions from industry and are in fourth place among companies with the highest carbon emissions in Sweden. We have therefore taken on a great challenge, seeing opportunities in transitioning to carbon-free processes and products by 2045. Entirely fossil-free production from mine to steel is the cornerstone of our development projects. Read more about our strategy on pages 11–16.

Our direct carbon emissions are mainly caused by the fact that our current processes are half supplied with energy from fossil fuels such as coal, fuel oil and diesel. LKAB's goal to eliminate our carbon emissions involves phasing out fossil fuels. This is being done through electrification, by replacing fossil fuels with biofuels and by reusing existing energy in our processes, which also helps to reduce energy intensity.

In 2022 one of the pelletising plants in Malmberget fully replaced heavy fuel oil with tall oil pitch. The transition from oil-fired boilers to district heating for maintaining oil temperature at the energy depot in Luleå has shown good indications of significantly decreased energy requirements and has almost entirely eliminated carbon emissions from the facility.

Boundary: material both internally and externally.

Direct carbon emissions

LKAB has emissions of the greenhouse gas carbon dioxide and reports these. The calculation methods are linked to national legislation and the EU Emissions Trading System, and are based on actual materials and energy used.

The emissions are caused by fuels and additives used in pellet production and transport. Transport is not included in the monitoring for EU ETS, but is included in the emissions and goals monitored and reported in the Annual and Sustainability Report. The emission factors used for each fuel and additive are regulated through permits for carbon dioxide emissions.

Indirect carbon emissions

The indirect emissions of carbon dioxide originate from electricity and are calculated using the electricity suppliers' emission factors. In 2021 electricity purchases in Norway and Sweden consisted of origin-labelled electricity from non-fossil sources. Work to identify Scope 3 greenhouse gas emissions, i.e. by customers and suppliers, was carried out in 2021. Efforts to reduce Scope 3 emissions continued in 2022 with the initiation of various partnerships with suppliers and customers linked to sustainable purchasing and green transport.

Carbon emissions

LKAB Minerals outside Sweden	2022	2021
Carbon dioxide (kt)	31.3	37.0

Energy consumption

LKAB Minerals outside Sweden	2022	2021
Energy consumption (GWh)	145	154

Governance

This area is governed overall by the Sustainability Policy and the Group's energy management system, which is certified to ISO 50001. The energy management team works to bring about continual improvements and to ensure action plans are implemented. Reducing carbon emissions is also a Group goal and is reported quarterly and on an annual basis. We are also covered by the EU Emissions Trading System and report to the competent authorities on an ongoing basis. Responsibility for strategic management lies with the Senior Vice President of Environment and Sustainability, while operational responsibility is delegated to the Senior Vice Presidents of the business areas and from there on to the organisation's departments and subsidiaries. Central departments support the efforts and provide an internal control function. Governance and reported emissions and energy use are reviewed by external parties annually.



Through our work on the material topic *Transition for a sustainable climate* we are contributing to achieving UN Global Development Goals 9, 13 and 17.



Energy security

Materiality and impact

The great impact that the steel industry currently has on the climate and LKAB's transition to carbon-free processes and products by 2045 mean that LKAB is going to need to use much more electricity. Production will be switched across in stages and LKAB's electricity requirements are expected to increase to just over 70 TWh per year once all the production plants are fully converted to sponge iron production in around 2050. The operations in Malmberget are to be transitioned first and this is scheduled to be complete in the first half of the 2030s.

Historically, hydroelectric power and fossil fuels such as oil and coal have been our main energy source, but in the future fossil fuels will be phased out and replaced with more electricity produced using wind, water or nuclear power. To meet the need for electricity different types of power sources will have to be utilised. A large part of the volume needed in the near future already exists in Sweden, but there are many actors that require more electricity and it is expected that Sweden's electricity consumption will need to double over time – which is why power production capacity needs to be continually added.

Wind power, mainly land-based, is judged to be the most realistic solution up to and including the start of 2030. Wind power has the lowest variable electricity cost (lowest marginal cost in the market), but it needs to be supplemented with hydrogen storage or another energy storage solution to ensure consistent power output during periods when wind power is unstable. Offshore wind power and nuclear power are potential energy sources at a later stage after 2030. The Small Modular Reactors (SMR) concept is in development and its potential is being assessed.

In view of the above, LKAB has begun collaborating with various energy companies and other actors on the following:

- Establishing power production in electricity price areas SE1 and SE2. Sweden has four price areas in total, SE1 and SE2 being the two northern areas.
- Establishing solutions for power distribution.
- Establishing solutions for hydrogen production and hydrogen infrastructure.

Boundary: material both internally and externally.

Governance

Overall, this topic is governed by the Sustainability Policy and the Group Strategy. Reduced energy intensity is also a strategic Group goal and is reported quarterly and on an annual basis. Responsibility for strategic management lies with the Senior Vice President of Environment and Sustainability, while operational responsibility is delegated to the Senior Vice Presidents of the business areas and from there to the organisation's departments and subsidiaries. Central departments support the efforts and provide an internal control function. Governance and reported energy use are reviewed by external parties annually.



Through our work on the material topic **Energy security** we are contributing to achieving UN Global Development Goals 7 and 9.



Circularity and resource efficiency

Materiality and impact

Our mines are among the most high-tech in the world. Safe, resource-efficient production using well-developed production methods and processes is crucial for our profitability. Our goal is to be a strong, sustainable company that remains competitive under varying economic conditions. We will achieve this by developing our core business of high quality iron ore products through reliability and sustainable innovation, and by becoming more broadly established in the industrial minerals market – both through acquisitions and by developing new products.

The focus is on safety, autonomy, productivity and decreased environmental impact and on eliminating greenhouse gas emissions throughout the value chain. Developing processes and products that decrease our customers' environmental impact provides competitive advantages.

Our development work for internal processes is carried out in a chain that runs from laboratory scale through pilots to full-scale trials, with a focus on maximising product yield and minimising the volume of residual products and emissions both at LKAB and among our customers. Successful development involves cooperation between different categories of personnel, often both within our own organisation and among our customers. Our development

work is based on a fundamental understanding of the function of the products in our customers' processes in order to meet quality requirements.

In 2022 efforts in the Special Products business area continued with the development of technology for utilising our mineralisations, so that waste can be converted into valuable resources such as phosphorus and rare earth elements. We are working to minimise waste and enable usage, and to create circular flows for our residual products. Development work is in progress to find potential ways of disposing of waste lime instead of depositing it. We are also investigating ways to reduce wet waste through thickening. In addition, we have tested geomorphological deposition in which piles of barren rock are shaped to appear more natural in the landscape. We are also working to increase our circular flows within water and energy, since large quantities are required for pellet production.

Using residual material or secondary materials in order to work in a more resource-efficient way and with greater circularity is an ever greater element of our operations. LKAB's circular focus is underpinned by several factors, including the risk of materials shortages (caused by pit permits and recent changes in the market for easily available materials). Here LKAB can contribute to more

circular alternatives within cement and to society's need for critical and strategic raw materials, where LKAB is able to make a real contribution to various materials identified by the EU.

Boundary: material both internally and externally.

Governance

Resource management is governed at an overall level by the Sustainability Policy and by the Group's quality, energy and environmental management systems. Our materials and energy use is monitored at an increasingly detailed level. Responsibility for strategic management lies with the Senior Vice President of Environment and Sustainability, while operational responsibility is delegated to the Senior Vice Presidents of the business areas and from there on to the organisation's departments and subsidiaries. Central departments support the efforts and provide an internal control function.



Through our work on the material topic **Resource efficiency** we are contributing to achieving UN Global Development Goals 12 and 13.

Biodiversity

Materiality and impact

Our operations have a material impact on the environment, utilise land and impact the look of the landscape as well as biodiversity and livelihoods of those around us. LKAB conducts operations at six sites close to protected areas or areas with high nature values. Biodiversity has therefore long been a priority at LKAB. Operations that are affected are Kiruna, Svappavaara (Gruvberget and Leveäniemi), Malmberget, Mertainen, Masugnsbyn and the Wicken plant in the UK, which is situated close to a nature reserve, and one operating location close to Denizli in Turkey. In 2022 a part of a designated natural land area with a high level of biodiversity (class 1 and 2¹) was utilised for the construction of a new road that allowed new IT infrastructure to be established. The area consists of low alpine scrubland in Swedish biodiversity class 2 and is situated within Kiruna's industrial area. The part of the area affected is 0.1 hectare in size (the complete area extends to around 40 hectares) and the infrastructure has been designed so that as short a section as possible cuts through the area with this biodiversity classification. Low alpine scrubland is a commonly occurring type of nature in the region and the land we have utilised is relatively small, resulting in the assessment that the intervention does not have a risk of negative impacts on any species either locally or regionally or in such a way as to threaten the survival of any species.

As well as utilising land, the mining operations discharge water to neighbouring lakes and watercourses. Although there is a high degree of recirculation in the processing operations, the groundwater pumped up from the mines means that the operations generate

surplus water. The water is discharged in the form of wet tailings and goes into dam systems where sedimentation takes place before it is discharged into the surroundings. There is a local impact on ecological parameters such as fish size and plankton composition. Various kinds of nitrogen and salts (known as principal elements) occur in increased concentrations in the discharge water. The water quality in the recipients is monitored in respect of chemical and biological values. Study of the causes of the impact is in progress, and possible treatment methods have been investigated and tested for a number of years.

Another significant impact is diffuse dust from industrial areas. To study the impact of the dust generation on vegetation and ecosystem services research projects are under way in partnership with the Swedish University of Agricultural Sciences (SLU) and Oslo University. We work to create well-maintained and green industrial areas and to plan what form our management, remediation and landscape design will take in the future.

One of our strategic goals in the period up to 2030 is increased biodiversity, which means making a net contribution to biodiversity in the regions and environments in which we operate. This is in line with the industry-wide roadmap that we helped to produce in partnership with Svermin. Guidance on how LKAB is to work to promote biodiversity in the operating locations and their immediate surroundings was produced in 2022 and a systematic survey of the operations' impact on biodiversity has been begun. This will be developed further through local biodiversity plans starting in 2023.

Boundary: material both internally and externally.

Governance

LKAB's sustainability efforts go further than the legislation requires, with our own environmental goals, implemented environmental management systems and development work. Compliance with the permit levels is ensured through regular follow-up based on self-monitoring programmes. We also monitor progress in connection with reporting on sustainability objectives to the Board and for the sustainability report, as well as in the annual environmental reports compiled for regulatory authorities. The environmental management system is certified to ISO 14001, one element of which involves risk analysis that applies the precautionary principle in order to prevent adverse environmental consequences. Environmental incidents are reported via a nonconformity management system.

The Sustainability Policy and the guidelines on land use and water management provide a foundation for the management of environmental efforts. The guidelines on land use apply to all LKAB's operating areas and state that the mitigation hierarchy is to be followed as far as possible, with efforts based on the following steps: avoid, minimise, restore and – as a last resort – compensate for environmental damage. The guidelines on water management set out that water is a resource that must be protected and managed. Water management is to optimise the utilisation of water resources while they are being used by LKAB and ensure that subsequently the water is of the quality required to be able to return it to the natural cycle.

Responsibility for strategic management lies with the Senior Vice President of Environment and Sustainability, while operational responsibility for all environmental aspects is delegated to the Senior Vice Presidents of the business areas and from there on to the organisation's departments and subsidiaries. Group functions assist with environmental permit applications, research and development and with self-monitoring.

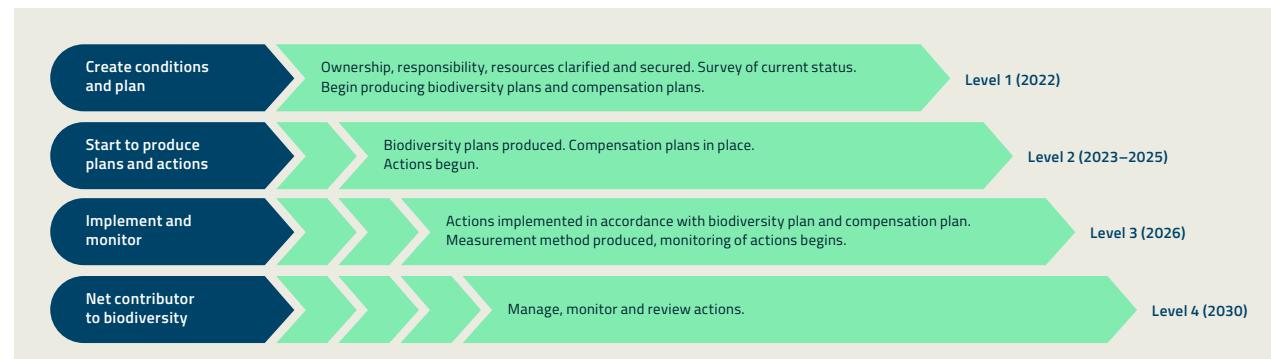
Remediation plans

The permitting process requires remediation plans to be submitted that include a general description of how LKAB intends to restore land used for industrial and mining activities. Our internal guidelines also describe ecological remediation efforts which aim to speed up the increase in the land's biodiversity as well as its values for reindeer husbandry.



Through our work on the material topic **Biodiversity** we are contributing to achieving UN Global Development Goal 15.

¹ Biodiversity class 1 = highest level of positive significance for biodiversity; Biodiversity class 2 = high level of positive significance for biodiversity; Biodiversity class 3 = substantial level of positive significance for biodiversity.



Environmental impact

Nitrogen oxides (NOx), sulphur oxides (SOx) and other significant air emissions

The process for pellet production results in emissions to air of primarily sulphur dioxide (SO₂), nitrogen oxides (NOx) and carbon dioxide (CO₂) from the burning of fuel. This can have a regional impact on sulphur and nitrogen balances, and by extension a global impact through the greenhouse effect – thereby in turn impacting biodiversity, natural resources and ecosystem services, for example.

Determination of emissions to air is based on samplings regulated in self-monitoring programmes and, where applicable, on calculations based on quantities of fuel consumed and emission factors, or mass balance calculations. Mass balance calculations are completed for emissions of SO₂, F and HCl from the pellet process. Both mobile and stationary sources are covered by environmental conditions and are included in the reported data. Emissions to air are monitored continuously via measurement as well as random sampling. In Kiruna the limit for SO₂ was exceeded in 2022. Production had problems involving breakdowns and multiple startups as well as problems with respect to lime, which are believed to be contributory factors. Intensive work is under way to improve the effectiveness of flue gas scrubbing and to reduce the number of startups and shutdowns.

Precipitated particulates are measured using the NILU (Norwegian Institute for Air Research) method at a number of measuring points in the communities. More information on data measurement points and measurement techniques can be found in LKAB's annual environmental reports and in the self-monitoring programmes submitted to supervisory authorities. In Svappavaara the limit for precipitated particulates was exceeded for 2022. The causes are being analysed.

Total number and volume of significant spills

In autumn 2021 it was discovered that an unusually large volume of oil had been consumed despite normal use and that around 1,600 m³ EO1 was missing at the industrial area in Kiruna. Further investigation found evidence of leakage in the ground, railyard and ditches during summer and autumn 2022. The incident was found to have been caused by worn material in a pipeline laid in the ground. A review of procedures and management for control of both volumes consumed and material strength was carried out. During the autumn acute clean-up measures were begun, but further remediation and restoration work is expected to be carried out for several years. We work continuously to identify and address hazardous situations or facilities where spills may occur, through risk analysis and the reporting of incidents and risks.

Significant fines and other sanctions for non-compliance with environmental laws and regulations

No fines or other sanctions were imposed on LKAB in 2022.

Mined amounts, inputs, residual products and emissions	2022	2021	Mined amounts, inputs, residual products and emissions	2022	2021
Mined amounts			Emissions to air from product manufacturing¹⁾		
Crude ore, magnetite and hematite (Mt)	48.0	52.4	Particulates (t) ²⁾	592	581
Huntite (kt)	27	30	Sulphur dioxide (t)	483	437
Dolomite (kt)	112	166	Hydrogen fluoride (t)	36	30
Finished products (Mt)	25.0	26.7	Hydrogen chloride (t)	81	75
			Nitrogen oxide (t)	3,884	4,568
Inputs			Emissions to water³⁾		
Explosives (kt)	19	21	Nitrogen (t)	457	560
Concrete produced (103 m ³)	216	240	Phosphorus (kg)	377	575
Additives (kt)	820	828	Trace metals (kg)	149	184
Residual products			Emissions of trace metals³⁾		
Barren rock (Mt)	20.2	22.3	Chromium (kg)	1.6	1.5
Barren rock recirculated (Mt)	7.8	7.7	Cadmium (kg)	0.3	0.3
Tailings (Mt)	4.7	4.6	Copper (kg)	26.1	27.7
Tailings recirculated (Mt)	0	0	Nickel (kg)	71.8	100.2
Waste lime (kt)	71	113	Lead (kg)	0.3	0.2
Waste lime recirculated (Mt)	0	0	Zinc (kg)	33.2	34.7
Other waste deposits LKAB Minerals (kt)	5	8	Arsenic (kg)	15.4	18.9
			Total trace metals (kg)	148.8	183.5

1) Refers to total emissions in Kiruna, Svappavaara and Malmberget.

2) Refers to total emissions from pelletising plants, central boiler plant as well as operating and maintenance plants in Kiruna, Svappavaara, Malmberget, Luleå and Narvik.

3) The quantities are based on overflow water from ponds in Kiruna, Svappavaara and Malmberget.

Significant spills in 2022	Kiruna	Malmberget	Svappavaara	Narvik	Luleå	Special Products
Significant spills with financial impact, number	0	0	0	0	0	0
Spills reported to authority, number	97	24	11	2	2	0
Volume, litres	14,707	2,600	1,600	250	40	0
Description of spills reported to authority (mainly oil, diesel and glycol)	Oil spillage. Remediation was carried out for all and no material negative impact was able to be found.	Oil spillage. Remediation was carried out for all.	Spillage of oil and diesel on ground and in water. Remediation was carried out for all.	Spillage of hydraulic oil and diesel.		

Responsible and attractive employer



Materiality and impact

To stay attractive as an employer we offer opportunities for lifelong learning, clear career paths and personal development. An important parameter in this is a healthy organisational and social work environment that enables people to develop and ensures that diversity, equal opportunity and non-discrimination are given. Strategic workforce planning is carried out to identify critical skills and future recruitment needs.

Our operations involve health and safety risks for employees, contractors and suppliers, and LKAB has a great responsibility as regards health and safety, the work environment and working conditions. Anyone wishing to enter the industrial areas and mines must complete interactive safety training, whether they are employed by us or an external contractor. Plans and organisation for managing various types of crises are in place, and training activities take place regularly.

Work to prevent and eliminate occupational health and safety risks, to create safe workplaces and to manage work-related injuries and unsafe situations is based on cooperation between employer, employees, trade unions, health and safety officers, support organisations, clients and suppliers.

Boundary: material internally.

Governance

This work is governed by national regulations and legislation on health and safety and by the Group's Sustainability Policy, health and safety goals, safety management system, Code of Conduct,

guidance on diversity, Supplier Code of Conduct, Supplier Handbook, Group HR guidelines, the "Safety first" Group guidelines, the Employee Handbook, and Group guidelines on communication. We are certified to ISO 45001 which sets requirements concerning systematic health and safety work. To reduce the number of accidents we use a group-wide monitoring model and describe desired behaviours in "The Golden Rules", aiming to reinforce the safety culture. Contractors are also included in these efforts and statistics are also kept of accidents involving contractors. Objectives within this area are followed up on a quarterly basis, with reporting to the Board of Directors. In addition, other metrics are monitored to ensure that the work is proceeding according to plan and in accordance with the goals for the operations.

Work environment and health-related matters are handled by local work environment teams and by central work environment, health and safety and rehabilitation committees. The teams include representatives of employees and trade union organisations. The President and CEO has delegated employer responsibility to department, section and production managers. The Senior Vice President of HR is responsible for strategic personnel matters, including skills availability and salaries, but operational responsibility is delegated down the line.

Employee performance reviews and surveys

Performance reviews and employee surveys are conducted regularly and we work on the results on a continual basis. The most recent employee survey was carried out in autumn 2021. A new employee survey is planned for the fourth quarter of 2023.

Incident management

All employees as well as our suppliers can report incidents in the work environment such as risks, near misses, accidents and occupational illness. Such incidents are investigated and remedial measures are taken to avoid injury and ill-health among employees and suppliers. The goal for 2022 onwards is to achieve an accident rate no higher than four by 2026 and no higher than two by 2030.

Workforce

The number of permanent employees is 4,952 (4,825), of whom 26 (25) percent are women and 74 (75) percent men. A total of 36 of the permanent employees work part-time, of whom 18 are women

and 18 men. The number of fixed-term employees is 387, consisting of 178 women and 209 men. All employees in Sweden and Norway are covered by collective bargaining agreements, with the exception of Group management. Of the total volume of hours worked by LKAB and suppliers, suppliers account for 42 percent with the majority of contracted hours relating to IT support, construction projects and maintenance of LKAB's sites. The number of suppliers and contractors within LKAB's industrial areas varies during the year and peaks in conjunction with LKAB's maintenance shutdowns.

The information is compiled from payroll systems and HR systems in each country.

LKAB has no workers on zero hours contracts and hence this reporting is not applicable.

Labour/management relations

The notice period in connection with organisational changes in the Group varies, but complies with applicable legislation, working methods and procedures. In the case of organisational changes discussions take place with the trade unions at an early stage and employees are supported by a social action plan that is adapted to the local circumstances.

Diversity and equal opportunity

Diversity and equal opportunity contribute to long-term sustainability and LKAB has zero tolerance of any kind of discrimination or harassment.

We have guidance on diversity for the period 2020–2025 and aim to create the conditions for increased diversity and to prevent and exclude discrimination. The results of the work are measured continually, including through employee surveys.

In 2022 the following were discovered:

- Five incidents of discrimination/harassment, of which four involved sexual harassment and one related to discrimination in respect of workwear. All the incidents were addressed and dealt with.



Through our work on the material topic **Responsible and attractive employer** we are contributing to achieving UN Global Development Goals 5 and 8.

Number of employees	Number of part-time employees	Number of full-time employees	2022	2021	Permanent employees in Sweden ¹⁾	Age	2022	2021	Labour practices and decent work	2022	
	2022	2021	2022	2021			2022	2021			
Asia, total number of employees	0	17	17	21	<25		266	261	Number of newly recruited permanent employees	492	
Asia, men	0	7	7	9	25–29		467	504	Percentage of newly recruited permanent employees who are women	34%	
Asia, women	0	10	10	12	30–34		624	649	External recruitments as a percentage of permanent employees at 31 December previous year	10%	
UK, total number of employees	5	238	243	234	35–39		540	560	External departures as a percentage of permanent employees at 31 December previous year	8%	
UK, men	0	197	197	176	40–44		440	474	Number of permanently employed women who left during the year	104	
UK, women	5	41	46	58	45–49		474	511	Number of permanently employed women aged <30 who left during the year in the region Sweden/Norway	21	
Finland, total number of employees	0	6	6	5	50–54		571	632	Number of permanently employed women aged 30–50 who left during the year in the region Sweden/Norway	47	
Finland, men	0	2	2	1	55–59		506	620	Number of permanently employed women aged >50 who left during the year in the region Sweden/Norway	14	
Finland, women	0	4	4	4	60–		260	289	Number of permanently employed men who left during the year	264	
Netherlands, total number of employees	3	15	18	20	1) Broken down into average values for the year.				Number of permanently employed men aged <30 who left during the year in the region Sweden/Norway	47	
Netherlands, men	0	13	13	14					Number of permanently employed men aged 30–50 who left during the year in the region Sweden/Norway	76	
Netherlands, women	3	2	5	6					Number of permanently employed men aged >50 who left during the year in the region Sweden/Norway	105	
Norway, total number of employees	1	211	212	209					Number of permanently employed men left during the year	105	
Norway, men	0	184	184	178					Number of permanently employed men aged <30 who left during the year in the region Sweden/Norway	47	
Norway, women	1	27	28	31					Number of permanently employed men aged 30–50 who left during the year in the region Sweden/Norway	76	
Slovakia, total number of employees	0	1	1	1					Number of permanently employed men aged >50 who left during the year in the region Sweden/Norway	105	
Slovakia, men	0	1	1	1					Deviation: Individuals born abroad stated only for the whole of the Swedish operations.		
Slovakia, women	0	0	0	0							
Sweden, total number of employees	25	4,750	4,775	4,708							
Sweden, men	18	3,400	3,418	3,425							
Sweden, women	7	1,350	1,357	1,283							
Turkey, total number of employees	0	49	49	54	Individuals born abroad, according to data from Statistics Sweden						
Turkey, men	0	48	48	53		2022	2021				
Turkey, women	0	1	1	1	Percentage with a foreign background, total	10.0	9.5				
Germany, total number of employees	2	9	11	10	Percentage with a foreign background, women	10.1	9.8				
Germany, men	0	6	6	5	Percentage with a foreign background, men	10.0	9.3				
Germany, women	2	3	5	5	Percentage with a foreign background, <35 years old	9.8	8.5				
Spain, total number of employees	0	1	1	1	Percentage with a foreign background, 35–54 years old	10.8	9.9				
Spain, men	0	1	1	1	Percentage with a foreign background, >55 years old	9.8	10.2				
Spain, women	0	0	0	0	Percentage with a foreign background, white-collar	14.8	13.8				
Greece, total number of employees	0	1	1	1	Percentage with a foreign background, blue-collar	7.0	7.1				
Greece, men	0	1	1	1							
Greece, women	0	0	0	0							
USA, total number of employees	0	5	5	5	The HR statistics have been taken from current and previous HR systems where values could not be otherwise obtained. The status date is 31 December unless otherwise stated. The average number of employees is based on the actual number of hours worked in relation to each individual's standard working hours and was taken from the payroll system. The foreign companies report data manually and the number per month has been added up before being divided by 12 and rounded up to the nearest whole number.						
USA, men	0	1	1	2	Comparative figures for employee turnover have been obtained by comparing the outcome with the number of employees on the closing date last year.						
USA, women	0	4	4	3							



Accidents	2022	Comments	Boundaries
Number of accidents leading to absence, employees	43		Group-wide
Number of lost-time accidents, women	9	The gender of the injured person is specified for employees in Sweden and Norway, and is thus not certain for contract workers and other countries.	Group-wide
Number of lost-time accidents, men	34	The gender of the injured person is specified for employees in Sweden and Norway, and is thus not certain for contract workers and other countries.	Group-wide
Number of lost-time accidents, Sweden/Norway	40		Sweden/Norway
Number of lost-time accidents, other countries	3		Other countries
Number of lost-time accidents, contractors	46		Sweden, including LKAB Minerals
Fatalities due to occupational accidents, employees	0		Group-wide
Fatalities due to occupational accidents, contractors	0		Group-wide
Accident rate, calculated as number of lost-time accidents per million hours worked	6.5	The 2026 target is maximum 4 accidents per million hours worked. Effective from 2017 contractors' accidents are also included in monitoring.	Group-wide, including contractors
Most common type of injury	Sprains/strains	Among lost-time accidents the category "Tripping or falls on the same level" was the commonest cause. The commonest injury is sprains/strains.	Group-wide
Number of working days lost due to accidents	442		Group-wide, excluding LKAB Minerals

Community engagement

Materiality and impact

LKAB has a major impact on local communities as a significant employer and business actor, and through various initiatives LKAB helps develop attractive communities. The urban transformations being carried out in the operating locations for continued mining operations are having a major impact and are helping to develop new residential areas, business premises and functions and the construction of a new city centre in Kiruna. The urban transformations make great demands of LKAB's ability to cooperate with all property owners and other stakeholders such as municipalities, authorities, businesses and residents. Communication is very important, as it has been through the years, for taking people's views into consideration and maintaining a respectful, open and transparent dialogue both concerning the day-to-day operations and concerning changes and unforeseen events.

Dialogue and cooperation with property owners and stakeholders take place directly and indirectly, for example via meetings, consultation, information meetings, news forums, partnerships with suppliers, sponsorship, outdoor ventures and educational initiatives.

The Sami people and Sami communities have a special position as a stakeholder group due to their status as indigenous peoples. Cooperation agreements have been drawn up with the Sami communities on whose land LKAB conducts mining operations. See also the material topic "Dialogue with stakeholders".

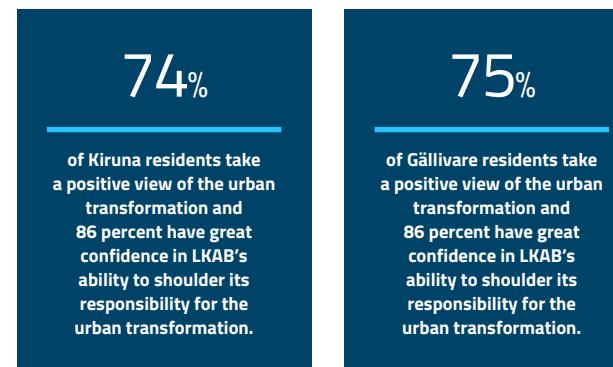
Boundary: material both internally and externally.

Governance

The President and CEO and the Senior Vice President of Communication and Climate have the main responsibility for our internal and external communication, but can delegate operational responsibility to designated departments and executives.

Activities relating to the utilisation of land and urban transformation are governed by laws and regulations, LKAB's guidelines on land use and a compensation model for property purchases that was published in 2015. The compensation model has been evaluated and supplemented over the years, most recently in 2022. The Senior Vice President of Urban Transformation, the Senior Vice President of Environment and Sustainability, and the Senior Vice President of the Iron Ore business area have responsibility within their respective areas.

LKAB receives community- and environment-related views and grievances by post, email or phone. All cases and incidents are investigated, with feedback provided on a continuous basis. Follow-up is carried out primarily by the organisation affected and responsible



Results for 2022 for Kiruna, Malmberget, Svappavaara and Narvik

Grievances filed about environmental impacts

Total number of complaints filed concerning environmental impacts	123
Number of complaints addressed during the period	123
Number of complaints resolved during the period	108
Number of previous complaints resolved during the period	0

Grievances filed about social impacts²⁾

Total number of claims filed during the period	19
Number of claims addressed during the period	19
Number of claims accepted during the period	0
Number of claims rejected during the period	2
Number of previous claims accepted during the period	0
Number of previous claims rejected during the period	3

Grievances filed about urban transformation

Total number of complaints filed during the period	3
Number of complaints addressed during the period	3
Number of complaints resolved during the period	3

Grievances filed via whistleblower system SpeakUp¹⁾

Total number of complaints	9
Number of complaints addressed/dealt with during the period	7

1) All SpeakUp grievances are reported to the Board's Audit Committee, which in turn informs the Board. Of the grievances raised via SpeakUp, seven were dealt with and concluded without action and two are still being investigated. The grievances fall into the following categories: corruption (5 grievances), leadership (3) and sex discrimination (1).

2) Claims filed are included in reported environmental grievances.



Resettlement, dwellings and residents

Number of households resettled in 2022 (total)	264 (300)
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Approach and measures taken to prevent negative consequences of resettlement for those affected

For tenants within LKAB's own housing portfolio LKAB Fastigheter conducts the dialogue with affected tenants. LKAB Fastigheter informs its own tenants with plenty of notice, with the aim of starting the dialogue five years before resettlement has to take place. The resettlements are managed based on the tenants' own preferences for resettlement in newly constructed housing or within existing housing stock. Existing compensation rules provide for gradual rent increases over an extended period of eight years, with full rent being paid by the tenant from the ninth year. LKAB works to ensure that private property owners that are landlords and municipal housing companies accept the same responsibilities in respect of their own tenants if functional replacement has been agreed. Their tenants are also covered by compensation for staged rent increases. For other property owners living in co-op apartments and single-family houses an offer is made in accordance with the compensation rules (monetary compensation or functional replacement). Under the compensation rules, businesses affected are dealt with by special resettlement efforts in which LKAB works closely with the municipal property companies. One of the main aims in Kiruna was to use the compensation rules to offer new properties and premises that are finished and adapted for all the businesses, so that they could move to Kiruna's new city centre together and be operating there from September 2022. In Malmberget the relocation to Gällivare has historically been going on for longer, which has meant that there are considerably fewer businesses to relocate than in Kiruna. Relocation of the businesses affected has been dealt with individually in accordance with the compensation rules. LKAB has agreed compensation for relocation or closure for the majority of the property owners, according to their own preference.

Significant disputes that have arisen in the process and how these were resolved

LKAB has an ongoing dispute with Gällivare Municipality concerning fencing within a phase-out area in east Malmberget. In brief, LKAB has placed fencing on its own land to avoid undesired access to the deformation zone and the Municipality has complained about this. The parties have not been able to agree on the matter, which will now go before the courts.

– for example, by the environmental department or the department for urban transformation in Kiruna or Malmberget. Depending on the nature of the incidents, they are reported to the supervisory authority and followed up through formal information exchange.

Work on communication and sponsorship is governed by our communication strategy and by the Group guidelines on communication.

Other social impacts of the operations

Control and monitoring of land impacts and deformation limits are regulated by conditions in the environmental permits. The measurements are mainly taken using GPS measurement rods placed around the communities in Kiruna and Malmberget. During the ongoing urban transformation in Kiruna the land deformation has impacted some properties that forecasts suggested should not yet be affected as much as they have been. Overall around 30 households in central Kiruna have been impacted, resulting in ongoing relocation being brought forward. For those households impacted the effects have resulted in them being able to be relocated and in conjunction with this, depending on the type of housing and agreement, some have been prioritised for vacant apartments and offered relocation expenses in accordance with LKAB's compensation principles. In some cases this has involved LKAB using its own property portfolio to provide extra assistance to those in particular need. A review of documentation and methods is being conducted in order to estimate future deformation from the mining.

Vibrations and atmospheric shock waves are measured continuously by online monitoring equipment at the operating locations of Kiruna, Malmberget, Svappavaara and Masugnsbyn, and through vibration measurement in Narvik. The vibration limit for the operations in Narvik was exceeded in 2022. To reduce the number of vibration incidents above the limit values, projects are under way to improve monitoring and the mechanisms and circumstances that generate vibrations are being investigated. In due course this will result in proposed actions.

Another environmental impact monitored is noise, which is measured annually at a number of measurement points at all the operating locations in accordance with the Swedish Environmental Protection Agency's guidelines for measurement of external industrial noise emissions. The noise limit was exceeded at the port of Narvik in 2022. The main sources of noise have been identified and noise-damping measures have been proposed.



Through our work on the material topic **Community engagement** we are contributing to achieving UN Global Development Goals 11 and 17.

Urban transformation

The extensive changes in the communities in recent years as a result of the mining in Kiruna and Malmberget have taken place gradually. The majority of residents are affected in some way. LKAB takes responsibility for the impact that the mining has by compensating those who have to relocate and making it easier for them. The development of attractive and vibrant operating locations in partnership with the people who live there, the municipalities and local businesses is a key part of our strategy.

The mining and LKAB's investments for the future require long planning horizons and access to the land that is impacted and needed. Current environmental permits and agreements with municipalities and property owners secure access to the land that LKAB needs. Once zoning plans have been changed to indicate industrial land in accordance with agreements and municipal decisions, LKAB can apply for and be given the necessary permits for mining with land being allocated by Bergsstaten (the Mining Inspectorate of Sweden). In 2022 some of the zoning plans that had been decided on previously by municipal officials in Kiruna and Gällivare took legal effect following decisions in the Land and Environment Court. In Kiruna the zoning plan for area GP 3:2 that had been appealed against came into force following proceedings in the Land and Environment Court. LKAB also received municipal planning decisions for the new zoning plans for GP4 and GP5 in Kiruna, with implementation agreements also being signed with Kiruna Municipality during the year. For Malmberget the zoning plans for the areas 4 and 6:1 in west Malmberget took legal effect after the appeal had been heard in the Land and Environment Court of Appeal. These were important and positive decisions for LKAB for the expansion of the industrial mining areas.

Milestones in Kiruna

In Kiruna the urban transformation has prioritised zoning plans and received the decisions mentioned above within the area marked for phase-out, to secure land for continued mining.

To facilitate relocation to the development areas, Kiruna's new city centre is a priority area. Here LKAB continued its work to carry out various important projects for the construction of new homes, office premises and retail space. The residential project in district 4 was completed and the various buildings were handed over, in some cases to private property owners as compensation

and in other cases to LKAB Fastigheter, after which tenants moved in. Another very large project is taking place in districts 7, 8 and 9, where a majority of the retail premises were completed and leased out in 2022. After a lot of hard work, the overall schedule for Kiruna's new city centre to open for trading was able to be met and a grand opening took place on 1–3 September.

During the year the project in district 6 also progressed. Here LKAB is constructing a large commercial building containing a hotel for Kiruna Municipality, office premises and a small number of retail spaces. LKAB's project for a large new police station with room for other police functions approached completion and is scheduled to be occupied in 2023.

The project portfolio for residential properties accords with current needs, taking into consideration the pace of the phase-out work. However, LKAB still sees a need for a continual and long-term realisation of more residential projects and is working strategically to drive development faster than phase-out and persuade Kiruna Municipality to work in partnership with LKAB to achieve this objective.

A project for the construction of more than 220 rental homes in various districts of the Skjutbane area is proceeding according to plan. During the year LKAB put out to tender and started up another residential project at Flyttleden for the construction of around 200 rental homes.

A very successful phase-out project has been carried out with the demolition of a number of older homes within what is known as the railway area, which also included the relocation of five of railway company SJ's former residential buildings to the loco shed area. LKAB worked further on the project to move Kiruna's church, which has now moved into a design phase, and is carrying out preparatory work to ready the former industrial site where the church is to be located next to the new city centre.

In 2012 LKAB paid for a new railway line to Kiruna as part of the work to secure land for continued mining. One outstanding issue concerns a permanent replacement railway station. The Swedish Transport Administration has carried out an investigation and produced a plan for a recommended solution located close to Kiruna's new city centre. The financing for laying the tracks to the new station location has not yet been clarified, since there is no funding for this in the Transport Administration's budget.

In 2021 LKAB signed an agreement with Region Norrbotten to pay for a preliminary study for a new hospital in Kiruna, since the current hospital must be replaced due to the impact of the mining. Negotiations are in progress with Region Norrbotten, but no preliminary study for a new hospital has yet been reported, which LKAB has asserted is an important prerequisite. The situation is aggravated by the fact that Kiruna Municipality and Region Norrbotten have not reached agreement on the location of the hospital. Two different alternatives are currently being investigated. The protracted process means that it is now a matter of great urgency to reach an agreement on the hospital's replacement and location since otherwise there is an imminent risk of the existing hospital having to be taken out of operation before there has been time to build a new one.

Milestones in Malmberget and Gällivare

The urban transformation in Malmberget and Gällivare has been in an intensive phase in recent years. New residential areas have been built and various new municipal buildings have been opened. In other words, the future townscape of Gällivare has begun to take shape.

In 2016 LKAB signed an agreement with Gällivare regarding compensation for municipal buildings in the area that would be impacted by the mining. This agreement made it possible to build new, modern structures such as the new Kunskapshuset upper secondary school and the new sports arena, both of which were opened in October/November, and the new multiactivity arena that is now being built in central Gällivare.

In addition to the municipal buildings, at the end of 2022 LKAB had acquired and entered into agreements with property owners for 97 percent of the properties within the phase-out areas in Malmberget. 82 percent of these properties have been vacated and have either been demolished or are in the process of being demolished. To compensate, over these years LKAB built a total of 1,550 homes in Gällivare and Koskullskulle. Residential building work in the new Bryggeribacken area is also progressing and many new buildings are now in place in this area. The first homeowners in Bryggeribacken moved in during summer 2020.

Houses within the development area in west Repsvaara, LKAB's second largest area for replacement single-family homes, is continuing to emerge at the same time.

In 2022 LKAB continued to complete various projects to replace the homes that are being phased out in Malmberget. In total 111

rental apartments were completed in 2022 and a further 400 apartments are under construction or planned.

Another stage in the relocation of heritage buildings from Malmberget to Nuolajärvi in Gällivare has been completed, which was a project carried out in 2022. As part of this project a total of 12 buildings containing 40 apartments were moved. The project encompasses further buildings that will be moved in summer 2023.

In autumn 2022 builders broke ground for Gladan, one of northern Sweden's biggest construction projects. Gladan will become an important part of Gällivare's centre and will add a further 85 apartments of varying sizes, a retail store, heated parking garage and other business premises.

Another milestone was that the old tower from Disponentvillan in Malmberget – a house originally built for the use of the presidents of LKAB – was lifted into place on the replica building in Koskullskulle. This is highly symbolic since it has been possible to preserve parts of the old building that could not be moved.

For some years LKAB has been in dialogue with Gällivare Municipality concerning how to deal with the residential area in east Malmberget that lies outside the area affected by the mining. The parties have not succeeded in finding a solution and their positions are far apart. Linked to this is an ongoing dispute with Gällivare Municipality concerning fencing within the phase-out area in east Malmberget. In brief, LKAB has placed fencing on its own land to avoid undesired access to the deformation zone and the Municipality has complained about this. The parties have not been able to agree on the matter, which will now go before the courts.

Principles of the urban transformation

LKAB aims for development before phase-out, which means that new homes, commercial premises and important social functions are to be completed or under construction before previous built environments are phased out. LKAB and the municipalities agree schedules for the urban transformation. The municipality determines what form the communities will take, while under the Minerals Act it is LKAB that pays for the costs that arise when mining makes the transformation necessary.

Property owners are offered an equivalent home or financial compensation equal to the market value plus 25 percent. For industrial and commercial properties LKAB again aims to find constructive solutions together with the property owners based on the same principles.



LKAB compensates residential tenants for their removal expenses, offers staged rent increases and has negotiated lower rents with the Swedish Union of Tenants (Hyresgästföreningen) for tenants moving from phase-out areas into new-build replacement housing. The same principles apply in the case of commercial tenants.

Those living in apartments in private housing cooperatives are offered monetary compensation equivalent to the price of an equivalent new-build apartment within a housing cooperative in the area. One new element is that from 2022 LKAB is giving those who live in an apartment in one of the housing cooperatives that LKAB is acquiring the option of using their compensation to buy an equivalent new-build apartment within a housing cooperative in the area. This offer includes living in one of the housing cooperatives that LKAB has yet to acquire within the impact area of the mining and is not being applied retrospectively.



Dialogue with stakeholders

Materiality and impact

To ensure long-term social acceptance for our operations and development we need those who live, work and have their livelihoods in our local communities to be kept informed of our development and be included in our transformation. We maintain continuous dialogue with our stakeholders to identify issues and expectations, as well as to validate the ongoing work and our priorities. We endeavour to minimise our negative impact and maximise the positive. Successful social sustainability efforts involve systematically identifying and managing risks associated with our operations' impacts on our stakeholders, but also giving consideration to and actively including our stakeholders in our decision-making processes.

As an employer it is important to have a continual dialogue with employees, for example by talking to both employees and trade union representatives, since these represent the employees' interests. Employees are represented on the Board by union representatives.

Consensus with stakeholders in the local community is key to ensuring the access to land and the legally certain permitting processes required to create the LKAB of the future. In this the Sami people and communities have a special position because of their status as indigenous peoples. To ensure that LKAB does not violate the human rights of indigenous peoples, the Group maintains dialogue and cooperation with the three Sami communities within whose territories LKAB conducts operations. Cooperation agreements have been drawn up, with relevant parts based on the principle of free, prior and informed consent (FPIC) as expressed in international law on the rights of indigenous peoples. The agreements form a framework for the forums and working methods that are needed for sharing information, decision-making and ongoing consultation. They are built on reciprocity and respect, and aim to put everyone in a better situation to reach agreement and find solutions on different issues.

See the table Our stakeholders on pages 140–141.

Incidents of violations involving rights of indigenous peoples

Questions have been raised as to whether LKAB has disregarded human rights (protection of property) as a result of the substantial number of collisions with reindeer along the Ore Railway. An external review is being carried out in cooperation with the Sami communities affected.

Boundary: material both internally and externally.

Governance

Our values "Committed – Innovative – Responsible", our Code of Conduct, Sustainability Policy, our Group guidelines on human rights, Group HR guidelines, Supplier Code of Conduct and Supplier Handbook provide guidance on desired behaviour within and outside of the organisation. In accordance with international guidelines such as the OECD Guidelines on Due Diligence, Agenda 2030, the UN Guiding Principles and the GRI framework for sustainability reporting we maintain a continual dialogue with our stakeholders. In addition to this, in 2022 we formed an internal steering group for community dialogue as well as an internal steering group for cooperation with Sami communities. We also have cooperation agreements with the three Sami communities within whose areas LKAB conducts operations.

Responsibility for strategic management lies with the Senior Vice President of Environment and Sustainability, while operational responsibility lies with the central departments or the Senior Vice Presidents of the business areas and from there on to the organisation's departments and subsidiaries.

Financial strength

Materiality and impact

LKAB is to work in accordance with national and international tax legislation and guidelines and is not to use contrived tax structures to avoid paying taxes. In our relations with tax authorities we act transparently and provide insight into our business. LKAB has a significant economic impact. Our profitability creates jobs for employees, contractors and suppliers. Over the past decade the dividend to our owner – the Swedish state – has been significant, as have the taxes we have paid in Sweden, Norway and other countries. Investments in research and development, infrastructure, the urban transformations, acquisitions and sponsorship are further effects of the economic value we create.

Our economic stability is dependent on two things: mineral reserves and demand for our products. A mineral resource is an accumulation of minerals in bedrock which can be commercially extracted. A mineral reserve is the part of the resource that can be profitably extracted. Good knowledge of mineral reserves is essential for major long-term investment decisions, since the volume and quality of the minerals are crucial for product quality, production volumes and costs.

As mining takes place at deeper levels in our mines, further cost efficiencies need to be made in the way we mine in order to maintain our competitiveness. Efficient mining methods on an even greater scale, automation and transport using self-driving vehicles, 24-hour mine operation and production management in real time are important development areas for competitive mining.

To ensure continued demand and a stable global customer base our products must be of high quality and be delivered on schedule.

To achieve this we must work constantly to minimise disruptions in production and engage in ongoing product and process development, so that we can continue to be the most competitive supplier in the future. Our transition to carbon-free processes and products involves major investments over a long period, which will primarily be financed by cash flow from LKAB's own operations. At the end of 2019 LKAB issued our first green bonds. These amounted to SEK 2 billion in total with a maturity of 5.25 years. The proceeds have been used for investments in the transformation to carbon-free, autonomous mining.

Boundary: material both internally and externally.

Governance

LKAB is governed by financial targets and by policies for dividends, currency, credit and finance, among other things. The President and CEO and the Chief Financial Officer (CFO) are responsible for financial performance as reported in interim reports and in the Annual and Sustainability Report. In its exploration work LKAB complies with permits, national legislation and with international and Nordic guidelines.



Through our work on the material topic **Financial strength** we are contributing to achieving UN Global Development Goals 8, 9 and 11.

Economic value distributed (MSEK)	2022
Suppliers excl. sponsorship	17,336
Sponsorship activities	34
Employees	5,085
Urban transformation payments	2,216
Shareholders	12,432
Taxes	4,564
Total value distributed	41,667

Distributed to suppliers incl. sponsorship (MSEK)	2022
Materials etc.	3,177
Energy	3,289
Transport	937
Other operating expenses	9,964
Board fees	3
Total distributed to suppliers	17,370

Distributed taxes by country (MSEK)	2022
Sweden	4,466
Norway	33
Rest of World	65
Total distributed to tax	4,564

Sustainable value chains

Materiality and impact

Social responsibility extends throughout the value chain – within our organisation, to our local communities, to suppliers and customers. We must give consideration to human rights and take responsibility for ensuring that these rights are respected, with a particular focus on our social impact from mining, on our operations and production in high-risk countries, and on indigenous peoples in the communities where we operate. Successful social sustainability efforts involve systematically identifying and managing risks associated with impacts on human rights, but also giving consideration to and actively including our stakeholders in the local communities in our decision-making processes.

Corruption is an obstacle to sustainable development. Internationally, the risks within the mining sector are substantial and to protect ourselves we need to have a high level of awareness as well as effective and continually updated anti-corruption efforts. Our business is to be run with great integrity and we must act in a professional, businesslike and impartial manner in our relations with our business partners. Our desire to set an example both in industry and in the community demands systematic and preventive work within anti-corruption and business ethics, which develops our own organisation along with our business partners in the value chain. These efforts are aimed at promoting social factors such as health, safety and labour rights, and preventing the risk of child labour and forced labour. We also work together to manage environmental factors such as biodiversity, emissions to land, water and air, as well as emissions that impact the climate.

LKAB is both a supplier to and a customer of various sectors. Certain geographical areas, goods and segments are associated with greater sustainability risks, particularly as regards corruption, environmental impact, working conditions and human rights. Our aim is to work with business partners that set an example in sustainable enterprise, which also reduces business risk and contributes to cost savings.

We take preventive action to combat corruption and ensure that human rights are respected in our business, through risk assessments, transparent systems and clear monitoring.

Boundary: material both internally and externally.

Governance

We have committed to respect and comply with human rights. To effectively identify and manage risks associated with direct and indirect negative impacts on human rights we carry out risk assessments that result in action plans. Risks of corruption and irregular practices are assessed as part of the Group's overall risk manage-

ment. An in-depth analysis of corruption risk carried out in 2020 provided a basis for developing an anti-corruption programme that is expected to be completed in 2023.

The Code of Conduct is available in Swedish, Norwegian, English, German, Dutch, Chinese and Turkish to meet the needs of the employees. Training in the Code of Conduct is continuous and takes place through interactive training as well as through discussion and review at workplace meetings. The training also forms part of the induction process for new employees.

Our values "Committed – Innovative – Responsible", our Code of Conduct, Sustainability Policy, our Group guidelines on human rights, Group anti-corruption guidelines and the Code to Prevent Corruption in Business, the Group-wide procurement guidelines, Supplier Code of Conduct and Supplier Handbook provide guidance on desired behaviour within and outside of the organisation.

Responsibility for strategic management lies with the Senior Vice President of Environment and Sustainability, while operational responsibility is delegated to the Senior Vice Presidents of the business areas and from there on to the organisation's departments and subsidiaries. Central departments support the efforts and provide an internal control function.

Modern slavery

Each year LKAB publishes a statement on modern slavery and human trafficking, describing the measures taken to ensure that modern slavery and human trafficking do not occur in our operations and value chain. For the 2022 financial year we have also incorporated the Norwegian legislation into our governing document "LKAB Modern Slavery Act and Transparency Act Statement 2022".

Modern Slavery Act 2015

In accordance with the requirements of section 54 of the UK Modern Slavery Act 2015, which applies to all companies with operations in the UK, we must describe the steps taken to ensure that no form of modern slavery or human trafficking occurs within our operations or our supply chains.

Norway's Transparency Act (LOV-2021-06-18-99)

Åpenhetsloven – Lov om virksomheters åpenhet og arbeid med grunnleggende menneskerettigheter og anstendige arbeidsforhold

In accordance with the requirements applicable to companies with operations in Norway we must describe the steps taken to promote the operations' respect for fundamental human rights and decent labour working conditions in conjunction with the production of goods

and provision of services. A description is also to be given of how we ensure public access to information concerning how our business manages negative impacts on fundamental human rights and decent work within our operations and in our supply chains.

Corruption

Incidents where an employee has used their position for personal gain

- 2022: 5 incidents (2021: 0 incidents), of which four incidents have been dealt with and concluded and one incident is being investigated

Arbitrary conduct

Incidents with consequences for an employee under labour law because of breach of the contract of employment

- 2022: 2 incidents (2021: 3 incidents), all of which have been dealt with

2022	LKAB Group
Number of suppliers audited in respect of the following impacts:	
308-2 Environmental	39
414-2 Social	43
Number of suppliers identified as having significant actual and potential negative impacts:	
308-2 Environmental	0
414-2 Social	0
Significant actual and potential negative impacts identified:	
308-2 Environmental	–
414-2 Social	–
Percentage of suppliers identified as having impacts with which improvements were agreed upon as a result of assessment, as a percentage in each area:	
308-2 Environmental	0%
414-2 Social	0%
Percentage of suppliers identified as having impacts with which relationships were terminated as a result of assessment. Information for each area:	
308-2 Environmental	0%
414-2 Social	0%



Purchases and suppliers

LKAB makes significant purchases that impact the world around us. We must act in a sustainable way to reduce the risks all along the value chain, focusing on the goals in Agenda 2030. Specific priority areas include suppliers' work on human rights, the work environment, the environment and business ethics/anti-corruption.

We have around 5,400 suppliers in various sectors. These include 43 that have been identified as being higher risk. Just over half of purchasing consists of contract work, transport and logistics. A further significant part is made up of purchases of equipment, raw materials and chemicals, as well as various types of services. LKAB's suppliers can be found in 35 different countries; mostly in Sweden and Norway, but also in the rest of Europe, the US and Asia.

During the year a Group guideline was established for purchases with a view to creating the conditions for and ensuring sustainable purchasing, maintaining a high level of business ethics and purchasing competitively, efficiently and in accordance with regulations.

Risk-based approach

LKAB's work on sustainable purchasing is based on a risk perspective. Suppliers are classified as regards geographic risk, industry/product risk and business-critical risk. Our Supplier Code of Conduct has two parts: basic requirements and enhanced requirements. The basic requirements must be met by all suppliers from the first delivery of goods or services. These are requirements to which we take a zero tolerance approach. The enhanced requirements take the basic requirements and add a greater level of detail. We expect all suppliers to try to fulfil the enhanced requirements within an agreed period and to pass on these requirements along their value chains.

Under the State Ownership Policy, in its purchasing LKAB must specify labour law requirements that suppliers must meet. These are minimum terms for wages, working hours and annual leave in accordance with applicable laws and regulations or terms that have been agreed in relevant collective bargaining agreements. The requirements made of the main supplier also apply to any subcontractors that directly contribute to producing the product or service at any stage.

We conduct follow-ups on suppliers' sites where there is deemed to be a high risk of deviation from the Supplier Code of Conduct. During these site visits LKAB analyses the operations and interviews employees and management. After its visits the supplier is given a report detailing identified points of non-compliance with our requirements and recommended actions that should be prioritised. The suppliers then come back with an action plan, which may result in joint improvement projects. Restrictions due to Covid-19 to some extent limited the number of on-site supplier audits during the year. Where on-site audits were not possible, we chose instead to carry out audits online and held preparatory talks with suppliers to ensure a sustainable value chain.

To gain greater insight and make us better able to check that we are not doing business with companies that are not *bona fide*, training days were held together with the Swedish Economic Crime Authority.

Strategic partnerships with suppliers

LKAB sees great advantages in developing partnerships with strategically important suppliers. The intention is to identify innovative products and solutions that contribute to increased sustainability, productivity and cost efficiency. Measures such as consolidating the work to fewer suppliers and establishing long-term relationships with ongoing dialogue meetings provide better conditions to develop along with our suppliers in priority areas such as the work environment, safety and quality. In procurement, greater importance is being attached to suppliers having the skills and resources to work on sustainability matters.

Buying office in Asia

LKAB's local buying office in Shanghai, China, helps to lower costs, improve quality and reduce sustainability risk in the value chain. This local presence makes it easier to support suppliers that are considered to have good potential to develop and improve, for example in the areas of health and safety, employment terms, the environment and business ethics.

Reporting according to the EU Taxonomy Regulation

Since the mining industry is not yet included as a sector in the EU Taxonomy Regulation, only small parts of LKAB's operations within logistics, real estate and recycling of residual products are eligible for the Taxonomy. The proportion of the LKAB Group's economic activities eligible for and consistent with the EU Taxonomy Regulation in 2022 is shown in the tables on the following pages.

Accounting principles applied

Reporting for the 2022 financial year relates to the environmental objectives (1) climate change mitigation and (2) climate change adaptation. For these environmental objectives, the proportion of both Taxonomy-eligible and Taxonomy-aligned activities is to be reported. In order for a particular economic activity to be classed as environmentally sustainable by LKAB it must make a substantial contribution to one or more of the Taxonomy-defined environmental objectives, must not significantly harm any of the other objectives and must meet minimum requirements within sustainability.

LKAB's Code of Conduct is based on recognised declarations and conventions such as the UN Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises, UNICEF's Children's Rights and Business Principles, and the Code to Prevent Corruption in Business (the Business Code). LKAB has also been a member of the UN Global Compact since 2019 and of Transparency International since 2020. The Global Compact consists of principles in areas such as human rights, labour and anti-corruption. By being a signatory to the Global Compact LKAB aims to ensure that impacts in the community and in production in high-risk countries do not have negative social impacts.

LKAB complies with the requirements of the UK Modern Slavery Act, which means that each year a statement is published stating that no forms of modern slavery, human trafficking, forced or slave labour occur within LKAB's operations or supply chain. For more information about our social sustainability efforts in areas such as human rights, anti-corruption, tax and fair competition, see also pages 145–160.

To assess whether an economic activity does significant harm to any of the Taxonomy-defined environmental objectives an analysis was carried out for each operation against the screening criteria given in Regulation 2021/2139/EU. Risk assessment and scenario analysis were performed at an overall level based on the TCFD framework, and climate scenarios with a time horizon of 10–30 years were obtained from the Swedish Meteorological and Hydrological Institute (SMHI).

The analysis of which economic activities are covered by the Taxonomy Regulation was carried out on a company-by-company basis using definitions of sectors, in the first instance via NACE codes, as described in the technical criteria. The proportion of Taxonomy-defined capital expenditure (CapEx) and operational expenditure (OpEx) has been analysed based on defined accounting standards and the costs defined in the Taxonomy Regulation.

Associated companies are not normally consolidated and therefore are not included in the Taxonomy reporting. LKAB's involvement in the associated companies HYBRIT Development AB and REEtec Holding AS are therefore not included in the Taxonomy reporting.

When calculating Taxonomy-defined CapEx and OpEx the precautionary principle was applied, and only costs material to the operations were included. The same applies in cases where there are technical restrictions on the data that can be collected. Double-counting has been avoided by ensuring that only external sales and separate cost components were included in the totals for the relevant activities.

Turnover: External net sales according to IFRS 15 Revenue and the portion of other operating income that relates to rental income for properties in accordance with IFRS 16 Leases.

OpEx: Costs of development, maintenance and repair, renovation and other direct costs required to maintain the function of property, plant and equipment. This means that OpEx does not correspond to the LKAB Group's total operating expenses, but rather only – as mentioned above – expenditure associated with the asset's continuation and functioning as intended.

CapEx: Additions to intangible assets and property, plant and equipment before depreciation and amortisation, revaluations including impairment losses, with the exception of changes in fair value. The amounts include assets added through business combinations.

Ongoing investments relating to replacement properties that are to be handed over to property owners upon completion are not included within Taxonomy-defined CapEx.

Capital expenditure for the year in the category acquisition and ownership of buildings includes financing via green bonds that were used to fully or partly finance investments in the amount of MSEK 96, which is around 15 percent of environmentally sustainable CapEx in 2022.

Proportion of turnover from products or services associated with Taxonomy-aligned economic activities – disclosure covering year N

Economic activities (1)

A. TAXONOMY-ELIGIBLE ACTIVITIES

A.1. Environmentally sustainable activities (Taxonomy-aligned)

	Substantial contribution criteria	DNSH criteria ('Does Not Significantly Harm')							
		Biodiversity and ecosystems (16)	Circular economy (14)	Pollution (15)	Safeguards (17)	Minimum	Taxonomy-aligned proportion of turnover; year N (18)	Category (transitional activity) (21)	
Materials recycling of non-hazardous waste	5.9	1,266	2.7%	100%	N/A	Yes	N/A	N/A	Yes
Rail transport, freight	6.2	2	0.0%	100%	N/A	Yes	N/A	Yes	0.0%
Acquisition and ownership of buildings	7.7	31	0.1%	100%	N/A	Yes	N/A	N/A	0.1%
Turnover of environmentally sustainable activities (Taxonomy-aligned) (A.1)		1,300	2.8%						2.8%
A.2 Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)									
Rail transport, freight	6.2	0	0.0%						
Acquisition and ownership of buildings	7.7	211	0.4%						
Turnover of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		211	0.4%						
Total (A.1+A.2)		1,510	3.2%						2.8%

B. TAXONOMY-NON-ELIGIBLE ACTIVITIES

Turnover of Taxonomy-non-eligible activities (B)	45,283	96.8%
Total (A+B)	46,793	100%

Proportion of OpEx from products or services associated with Taxonomy-aligned economic activities – disclosure covering year N

Economic activities (1)

A. TAXONOMY-ELIGIBLE ACTIVITIES

A.1. Environmentally sustainable activities (Taxonomy-aligned)

	Substantial contribution criteria	DNSH criteria ('Does Not Significantly Harm')							
		Biodiversity and ecosystems (16)	Circular economy (14)	Pollution (15)	Safeguards (17)	Minimum	Taxonomy-aligned proportion of turnover; year N (18)	Category (transitional activity) (21)	
Materials recycling of non-hazardous waste	5.9	22	0.4%	100%	N/A	Yes	N/A	N/A	Yes
Rail transport, freight	6.2	256	4.4%	100%	N/A	Yes	N/A	Yes	4.4%
Acquisition and ownership of buildings	7.7	1	0.0%	100%	N/A	Yes	N/A	N/A	0.0%
OpEx of environmentally sustainable activities (not Taxonomy-aligned activities) (A.1)		278	4.8%						4.8%
A.2 Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)									
Rail transport, freight	6.2	13	0.2%						
Acquisition and ownership of buildings	7.7	48	0.8%						
OpEx of Taxonomy-eligible not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		62	1.0%						
Total (A.1+A.2)		340	5.8%						4.8%

B. TAXONOMY-NON-ELIGIBLE ACTIVITIES

OpEx of Taxonomy-non-eligible activities (B)	5,482	94.2%
Total (A+B)	5,822	100%

Proportion of CapEx from products or services associated with Taxonomy-aligned economic activities – disclosure covering year N

Economic activities (1)	Code(s) (2)	Absolute turnover (3)	MSEK	Proportion of turnover (4)	%	Climate change mitigation (5)	%	Substantial contribution criteria		DNSH criteria (Does Not Significantly Harm)						Category (transitional activity) (21)							
								Water and marine resources (7)	Circular economy (8)	Biodiversity and ecosystems (10)	Pollution (9)	%	Climate change mitigation (11)	Yes/No	Yes/No	Yes/No	Yes/No						
A. TAXONOMY-ELIGIBLE ACTIVITIES																							
A.1. Environmentally sustainable activities (Taxonomy-aligned)																							
Materials recycling of non-hazardous waste		5.9	11	0.2%	100%			N/A	Yes	N/A	N/A	N/A	Yes	Yes	0.2%	–							
Rail transport, freight		6.2	260	4.2%	100%			N/A	Yes	N/A	Yes	Yes	N/A	Yes	4.2%	– T							
Acquisition and ownership of buildings		7.7	372	6.0%	100%			N/A	Yes	N/A	N/A	N/A	N/A	Yes	6.0%	–							
CapEx of environmentally sustainable activities (Taxonomy-aligned) (A.1)			644	10.3%											10.3%								
A.2 Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)																							
Rail transport, freight		6.2	268	4.3%																			
Acquisition and ownership of buildings		7.7	474	7.6%																			
CapEx of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)			742	11.9%																			
Total (A.1+A.2)			1,385	22.2%												10.3%							
B. TAXONOMY-NON-ELIGIBLE ACTIVITIES																							
CapEx of Taxonomy-non-eligible activities (B)			4,837	77.8%																			
Total (A+B)			6,222	100%																			

GRI Index

Declaration concerning use: LKAB has reported in accordance with the GRI Standards for the period 1 January 2022 to 31 December 2022.

GRI 1 used: GRI 1: Foundation 2021.

Applicable GRI sector standard: Not yet published.

GRI Standard	Disclosure	Location	Comments and omissions
GRI 2: General disclosures			
GRI 2: General Disclosures 2021	Organisational profile		
2-1	Organisational details	2, 18–26, 152, 170	
2-2	Entities included in the organisation's sustainability reporting	68, 88, 136	
2-3	Reporting period, frequency and contact point	135–136	
2-4	Restatements of information	136	
2-5	External assurance	136, 165	
Activities and employees			
2-6	Activities, value chain and other business relationships	18–26, 159	
2-7	Employees	151–152	
2-8	Workers who are not employees	151	
Corporate governance			
2-9	Governance structure and composition	57–61	
2-10	Nomination and selection of the highest governance body	57, 59–60	
2-11	Chair of the highest governance body	57, 59	
2-12	Role of the highest governance body in overseeing the management of impacts	57, 142–143	
2-13	Delegation of responsibility for managing impacts	57	
2-14	Role of the highest governance body in sustainability reporting	57, 142	
2-15	Conflicts of interest	59	
2-16	Communication of critical concerns	150	
2-17	Collective knowledge of the highest governance body	60	
2-18	Evaluation of the performance of the highest governance body	60	
2-19	Remuneration policies	61	
2-20	Process to determine remuneration	60–61, 93–94	
2-21	Annual total compensation ratio	61, 94, 152	
Strategy and policy			
2-22	Statement on sustainable development strategy	12–15, 58	
2-23	Policy commitments	37, 58, 62, 142–143, 149, 159	
2-24	Embedding policy commitments	58, 142–143, 159	
2-25	Processes to remediate negative impacts	140–141, 149, 151, 154, 157	
2-26	Mechanisms for seeking advice and raising concerns	142, 151, 154	
2-27	Compliance with laws and regulations	58, 142–143, 150	
2-28	Membership associations	142	
2-29	Approach to stakeholder engagement	138–140, 157	
2-30	Collective bargaining agreements	151	

GRI Standard	Disclosure	Location	Comments and omissions
GRI 3: Material Topics 2021			
GRI 3: Material Topics 2021	3-1	Process to determine material topics	137–141
	3-2	List of material topics	137–141
	3-3	Management of material topics	58, 137–139, 142–145
GRI 200: Economic Disclosures			
Economic performance			
GRI 3: Material Topics 2021	3-3	Management of material topics	15, 42–43, 58, 137–139, 142–143, 145, 158
GRI 201: Economic Performance 2016	201-1 + MM	Direct economic value generated and distributed	158
	201-3	Defined benefit plan obligations and other retirement plans	110–113
Indirect economic impacts			
GRI 3: Material Topics 2021	3-3	Management of material topics	137–139, 142–143, 145, 158
GRI 203: Indirect Economic Impacts 2016	203-2	Significant indirect economic impacts	19, 154–156
Anti-corruption			
GRI 3: Material Topics 2021	3-3	Management of material topics	40, 58, 137–139, 142–143, 145, 159–160
GRI 205: Anti-corruption 2016	205-3	Confirmed incidents of corruption and actions taken	154, 159
GRI 300: Environmental disclosures			
Materials			
GRI 3: Material Topics 2021	3-3	Management of material topics	3–4, 15, 20–26, 34, 40, 58, 137–139, 142–143, 145–147
GRI 301: Materials 2016	301-1	Materials used by weight or volume	150
Energy			
GRI 3: Material Topics 2021	3-3	Management of material topics	15, 34, 40, 58, 137–139, 142–143, 145–147
GRI 302: Energy 2016	302-1	Energy consumption within the organisation	7, 15, 34, 146–147
	302-3	Energy intensity	7, 15, 34
Biodiversity			
GRI 3: Material Topics 2021	3-3	Management of material topics	15, 35, 40, 58, 137–139, 142–143, 145, 149–150
GRI 304: Biodiversity 2016	304-2 + MM	Significant impacts of activities, products and services on biodiversity	35, 149
	MM2	Sites requiring biodiversity management plan	35, 149

GRI Index cont.

GRI Standard	Disclosure		Location	Comments and omissions	GRI Standard		Disclosure		Location	Comments and omissions				
Emissions to air														
GRI 3: Material Topics 2021	3–3	Management of material topics	15, 33–34, 40, 58, 137–139, 142–143, 145–146, 150		GRI 3: Material Topics 2021	3–3	Management of material topics	36–38, 40, 58, 137–139, 142–145, 151–153						
GRI 305: Emissions 2016	305–1	Direct (Scope 1) GHG emissions	7, 15, 34, 146		GRI 405: Diversity and Equal Opportunity 2016	405–1	Diversity of governance bodies and employees	36, 65–67, 151–152						
	305–2	Energy indirect (Scope 2) GHG emissions	146		Non-discrimination									
	305–7	Nitrogen oxides (NOx), sulphur oxides (SOx) + MM	150		GRI 3: Material Topics 2021	3–3	Management of material topics	38, 58, 137–139, 142–145, 151–153						
Effluents and waste														
GRI 3: Material Topics 2021	3–3	Management of material topics	34–35, 40, 28, 137–139, 142–143, 145, 148–150		GRI 406: Non-discrimination 2016	406–1	Incidents of discrimination and corrective actions taken	38, 151						
GRI 306: Effluents and Waste 2020	306–3	Significant spills	150		Rights of indigenous peoples									
	MM3	Total amounts of overburden, rock, tailings and sludges	150		GRI 3: Material Topics 2021	3–3	Management of material topics	36, 38, 40, 58, 137–139, 142–145, 154, 157, 159						
Environmental compliance														
GRI 3: Material Topics 2021	3–3	Management of material topics	33–35, 40, 58, 137–139, 142–143, 145, 148–149		GRI 411: Rights of Indigenous Peoples 2016 + MM 5	411–1	Incidents of violations involving rights of indigenous peoples	157						
GRI 307: Environmental Compliance 2016	307–1	Non-compliance with environmental laws and regulations	150			MM5	Operations in or adjacent to indigenous peoples' territories, and agreements with indigenous peoples	38, 154, 157						
Supplier environmental assessment														
GRI 3: Material Topics 2021	3–3	Management of material topics	37–38, 40, 58, 137–139, 142–145, 159–160		Human rights assessment									
GRI 308: Supplier Environmental Assessment 2016	308–2	Negative environmental impacts in the supply chain and actions taken	37–38, 159–160		GRI 3: Material Topics 2021	3–3	Management of material topics	38, 40, 137–139, 142–145, 157, 159–160						
GRI 400: Social disclosures														
Employment														
GRI 3: Material Topics 2021	3–3	Management of material topics	30–32, 36–38, 40, 58, 137–139, 142–145, 151–153		GRI 412: Human Rights 2016	412–1	Operations that have been subject to human rights reviews or impact assessments	157, 159–160						
GRI 401: Employment 2016	401–1	New employee hires and employee turnover	151–152		Supplier social assessment									
Labour/management relations														
GRI 3: Material Topics 2021	3–3	Management of material topics	30–32, 36–38, 40, 58, 137–139, 142–145, 151–153		GRI 414: Supplier Social Assessment 2016	414–2	Negative social impacts in the supply chain and actions taken	159						
GRI 402: Labour/Management Relations 2016	402–1	Minimum notice periods regarding operational changes	151		Local communities									
Occupational health and safety														
GRI 3: Material Topics 2021	3–3	Management of material topics	15, 36–38, 40, 58, 137–139, 142–145, 151–153		GRI 3: Material Topics 2021	3–3	Management of material topics	18–19, 31, 58, 137–139, 142–145, 154–156						
GRI 403: Occupational Health and Safety 2018 + MM	403–2	Types of injury and rates of injury, occupational diseases, lost days and absenteeism, and number of work-related fatalities	7, 36, 153		GRI 413: Local Communities 2016	413–2	Operations with significant actual and potential negative impacts on local communities	154						
Resettlement														
GRI 3: Material Topics 2021	3–3	Management of material topics	57–58, 137–139, 142–145, 154–156		GRI 3: Material Topics 2021	3–3	Management of material topics	57–58, 137–139, 142–145, 154–156						
	MM9		Households affected by resettlement, and effect on their livelihoods			MM9		Households affected by resettlement, and effect on their livelihoods	154–156					
Closure plan														
GRI 3: Material Topics 2021	3–3	Management of material topics	27–28, 33, 35, 137–139, 142–145		GRI 3: Material Topics 2021	3–3	Management of material topics	27–28, 33, 35, 137–139, 142–145						
	MM10		Operations with closure plans			MM10		Operations with closure plans	149					
Emergency preparedness														
GRI 3: Material Topics 2021	3–3	Management of material topics	137–139, 142–145, 151		GRI 3: Material Topics 2021	3–3	Management of material topics	137–139, 142–145, 151						

Auditor's Limited Assurance Report on the Sustainability Report

To Luossavaara-Kiirunavaara AB,
corporate identity number 556001-5835

Introduction

We have been engaged by the Board of Directors of Luossavaara-Kiirunavaara AB ("LKAB") to undertake a limited assurance engagement of LKAB's Sustainability Report for the year 2022. The company has defined the scope of the Sustainability Report in conjunction with the table of contents on the inside cover.

Responsibilities of the Board of Directors and the Chief Executive Officer for the Sustainability Report

The Board of Directors and the Chief Executive Officer are responsible for the preparation of the Sustainability Report in accordance with the applicable criteria, which are explained on page 136 of the Sustainability Report and are the parts of the Sustainability Reporting Guidelines (published by the Global Reporting Initiative) which are applicable to the Sustainability Report, as well as the accounting and calculation principles that the Company has developed. This responsibility also includes such internal control as is relevant to the preparation of a Sustainability Report that is free from material misstatement, whether due to fraud or error.

Responsibilities of the auditor

Our responsibility is to express a conclusion on the Sustainability Report based on the limited assurance procedures we have performed. Our engagement is limited to the historical information reported and thus does not include forward-looking information.

We conducted our limited assurance engagement in accordance with ISAE 3000 Assurance Engagements Other Than Audits or Reviews of Historical Financial Information (revised). A limited assurance engagement consists of making inquiries, primarily of persons responsible for the preparation of the Sustainability Report, and applying analytical and other limited assurance procedures. The procedures performed in a limited assurance engagement vary in nature from, and are less in extent than for, a reasonable assurance engagement conducted in accordance with IAASB's Standards on Auditing and other generally accepted auditing standards in Sweden.

The firm applies ISQC 1 (International Standard on Quality Control) and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with professional ethical requirements, professional standards and applicable legal and regulatory requirements. We are independent of LKAB in accordance with generally accepted auditing standards in Sweden and have otherwise fulfilled our ethical responsibilities under these requirements.

The review procedures conducted consequently do not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Our procedures are based on the criteria defined by the Board of Directors and the Chief Executive Officer as described above. We consider these criteria suitable for the preparation of the Sustainability Report.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion below.

Conclusion

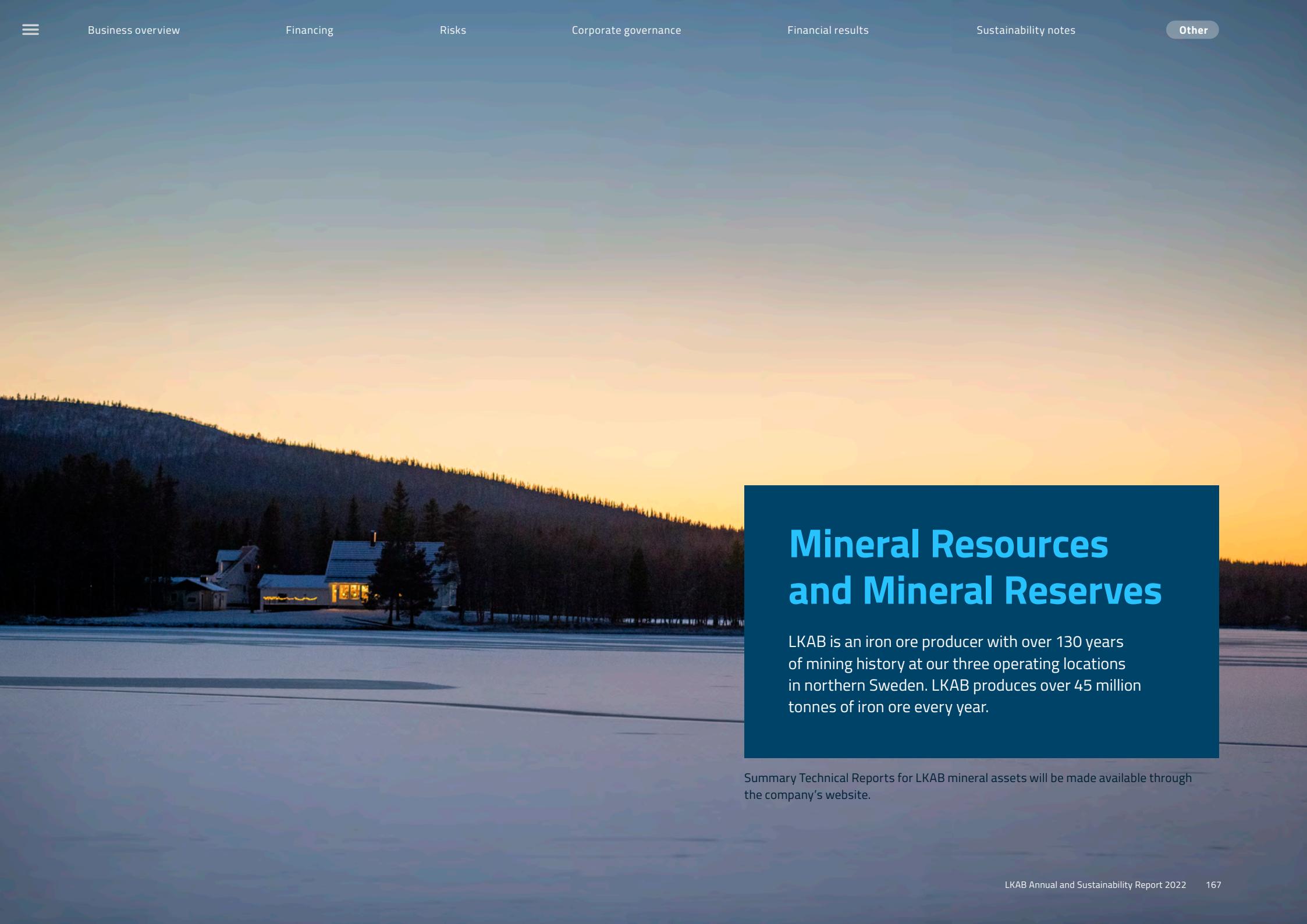
Based on the limited assurance procedures we have performed, nothing has come to our attention that causes us to believe that the Sustainability Report is not prepared, in all material respects, in accordance with the criteria defined by the Board of Directors and Chief Executive Officer.

Stockholm, 28 March 2023

KPMG AB

Helena Arvidsson Ålgne
Authorised Public Accountant

Torbjörn Westman
Expert Member of FAR



Mineral Resources and Mineral Reserves

LKAB is an iron ore producer with over 130 years of mining history at our three operating locations in northern Sweden. LKAB produces over 45 million tonnes of iron ore every year.

Summary Technical Reports for LKAB mineral assets will be made available through the company's website.

Development 2022

This year's update of the Mineral Resources and Mineral Reserves continues to show good results from the ongoing exploration activities and technical studies. LKAB continually updates the geological interpretations for each asset and maintains international best practise during the exploration activities, for geological data collection and resource and reserve modelling.

Mineral Resources and Mineral Reserves

Mineral Resources and Mineral Reserves are the basis of a mining company's operations and require successful and continuous exploration and application of mining processes. Mining costs and the ore price are important factors that affect the level of Mineral Resources and Mineral Reserves being reported. The exploration initiatives over the past year have resulted in a further increase of about 16 percent to the Mineral Resources. Total Mineral Reserves tonnage is around 6 percent lower than last year.

Alongside the growth in iron and phosphorous Resources, LKAB are also reporting for the first time a significant rare earth element

Resource at the Per Geijer deposit. This new reporting builds upon the rare earth Mineral Resource inventory commenced last year at the Kiruna and Malmberget deposits. LKAB is in a unique position where the phosphate mineralisation in the iron ore carries a potentially significant value addition to the business rather than being treated as deleterious.

Intensive exploration and technical studies

Highlights of the 2022 activities include the identification of significant mineralisation at the Gruvberget deposit, which will be further investigated throughout 2023.

LKAB's knowledge of the Per Geijer deposit continues to develop at a high pace, with new drill data and encouraging metallurgical testwork supporting the geological model and optimisation studies to result in an increase to the Mineral Resource of 177 million tonnes. In addition, with an increased geological confidence the classification of a maiden Indicated Mineral Resource has been declared. Also the metallurgical testwork has been achieved to support the maiden Inferred rare earth

Mineral Resource. The Per Geijer deposit is now estimated to contain over 1 million tonnes of in-situ rare earth oxides, sufficient to be considered one of the largest rare earth element projects in Europe.

Kiruna and Malmberget continue to deliver encouraging exploration results with extensions to those deposits explored during the reporting period. Technical studies to understand the mechanisms and implications of seismic failure at Kiruna mine in 2020 resulted in changes to sub-level caving fronts in the mine and a reduction of around 60 Mt in Mineral Reserves from the affected area.

During 2023, LKAB will continue to develop the model evolution process to ensure maximum value from the exploration activities and also to continue technical studies including optimisation of mining techniques to deliver safe extraction of iron ore at greater depths, permit applications at Per Geijer, and pilot studies to support fossil-free iron production at Malmberget.

Definitions

About The Classification

Mineral Resources and Mineral Reserves are estimated separately and are divided into different categories. LKAB's Mineral Resources are reported exclusive of mineral reserves. Mineral Reserves are those portions of Mineral Resources which, after the application of the modifying factors, result in an estimated tonnage and grade or quality, that in the opinion of the Competent Person making the estimates can be the basis of a viable project. When Mineral Resources are converted to Mineral Reserves, those quantities are subtracted from the Mineral Resources. The Mineral Resource statement presented here has been classified following the definitions and guidelines of The PERC Reporting Standard (2021) from which the following definitions have been taken.

Inferred Mineral Resource

An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

Indicated Mineral Resource

An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of modifying factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.

Measured Mineral Resource

A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of modifying factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proved Mineral Reserve or to a Probable Mineral Reserve.

Probable Mineral Reserve

A Probable Mineral Reserve is the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. The confidence in the modifying factors applying to a Probable Mineral Reserve is lower than that applying to a Proved Mineral Reserve.

Proved Mineral Reserve

A Proved Mineral Reserve is the economically mineable part of a Measured Mineral Resource. A Proved Mineral Reserve implies a high degree of confidence in the modifying factors.

Environmental, Social and Governance (ESG) Considerations

LKAB strives to maintain very high ESG standards and throughout the 2022 reporting period have commenced aligning group ESG policies to the PERC reporting code. This allows the reporting of our Mineral Resources and Mineral Reserves to be in a transparent manner with an evaluation of ESG context and factors to ensure extraction can be reasonably justified at the time of reporting. Work continues to deliver urban transformation as part of the current mine plan, together with obtaining and maintaining environmental permits from regulatory bodies and a social licence to operate from host communities and neighbours who may potentially be affected by future operations. The company's participation in the Hybrit-initiative is a key goal to achieving sustainability of future operations.

Iron Mineral Resources and Mineral Reserves in 2022

Kiruna

Measured Mineral Resources have increased overall due to an update to the geological model. Confidence in the Mineral Resources has been improved through ongoing geological studies based upon additional drilling and technical review of the data. Proven Mineral Reserves increased but overall Mineral Reserves have decreased as a result of updated extraction factors based on review of the mine production performance, and depletion of Mineral Reserves due to mining.

Malmberget

Successful exploration of down-dip extensions of the Fabian, Printzsköld-Alliansen and Western Field deposits has resulted in significant additions to the Mineral Resources reported this year. Reclassification of Mineral Resources from Indicated to Measured has enabled Proven Reserves to remain essentially unchanged. Overall, Mineral Reserves decreased as a result of depletion from mining, partially offset with new Mineral Resources being converted to Mineral Reserves.

Svappavaara

Leveäniemi

Mineral Reserves increased for the year largely due to optimisation of the mine plan offsetting depletion from mining. Limited exploration drilling combined with only minor changes to the geological model have resulted in only minor changes to the Mineral Resource. Although reclassification of Mineral Resources has enabled an increase in Proven Mineral Reserves.

Gruvberget

Exploration down-dip on the northern half of the deposit, combined with updates to the geological model have resulted in an increase in Mineral Resources. Of note, high-grade magnetite mineralisation has been identified as extensions to the known mineralisation.

Mertainen

No updates to the geological model were completed in 2022 although the model was converted to LKAB's standard software package, and the Mineral Resource estimate was updated. This included a reclassification following LKAB's developing standard protocols.

Per Geijer

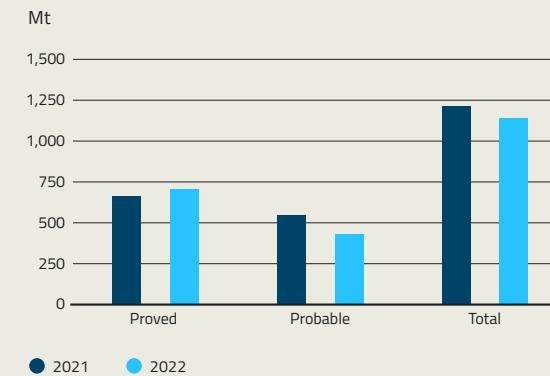
Portions of the Per Geijer deposit were upgraded to the Indicated Mineral Resource category because of additional drill data being available. In addition, metallurgical testwork supported the maiden Inferred Mineral Resource for the rare earth elements as well as providing updated optimisation assumptions that increased the overall tonnes in the Mineral Resource statement.

Iron Mineral Resources as at 31 December 2022¹⁾



¹⁾ Does not include Must Take material as this is being reported for the first time.

Iron Mineral Reserves as at 31 December 2022



Iron Mineral Resources (Mineral Reserves excluded)

as at 31 December 2022 (including sorting plants)

	Quantity, Mt		Percent, Fe	
	2022	2021	2022	2021
Kiruna magnetite¹⁾				
Measured	403	112	63.6	64.0
Indicated	244	481	60.5	61.9
Inferred	147	90	54.4	56.0
Total	795	683	60.7	61.4
Kiruna				
Must Take	5	6	12.4	8.6
Malmberget magnetite				
Measured	439	211	57.9	58.0
Indicated	214	258	57.8	57.7
Inferred	374	373	54.5	58.4
Total	1,027	842	56.6	58.0
Malmberget mixed				
Measured	6	4	57.7	59.0
Indicated	18	18	51.7	52.0
Inferred	31	4	44.3	53.4
Total	55	27	48.2	53.3
Malmberget hematite				
Measured	5	5	61.2	63.0
Indicated	6	6	54.9	55.1
Inferred	0.4	0.1	52.7	48.1
Total	12	11	57.6	58.5
Malmberget				
Must Take	102	101	23.9	24.5
Leveäniemi magnetite				
Measured	81	90	44.0	43.0
Indicated	44	58	44.6	43.1
Inferred	10	14	31.5	36.4
Total	135	162	43.2	42.5

	Quantity, Mt		Percent, Fe	
	2022	2021	2022	2021
Leveäniemi mixed				
Measured	0.9	1	62.4	59.4
Indicated	0.6	1	60.2	53.6
Inferred	0.01	0.04	59.0	57.2
Total	1.5	2	61.5	57.7
Leveäniemi hematite				
Measured	–	–	–	–
Indicated	–	–	–	–
Inferred	–	–	–	–
Total	–	–	–	–
Leveäniemi				
Must Take	–	–	–	–
Iron Mineral Resources (projects with no Mineral Reserves)				
per 31 december 2022				
Gruvberget magnetite				
Measured	53	36	52.9	56.0
Indicated	86	110	42.2	43.5
Inferred	125	68	54.6	41.1
Total	264	214	50.2	44.8
Gruvberget mixed				
Measured	9	7	54.1	56.9
Indicated	16	19	50.1	42.2
Inferred	24	25	55.4	57.0
Total	49	51	53.4	51.4
Gruvberget hematite				
Measured	18	12	52.8	55.6
Indicated	34	29	54.7	40.7
Inferred	34	53	57.6	60.5
Total	86	94	55.5	53.8

	Quantity, Mt		Percent, Fe	
	2022	2021	2022	2021
Gruvberget				
Must Take	3	5	9.9	16.3
Mertainen magnetite				
Measured	47	63	36.0	34.1
Indicated	58	68	34.4	35.0
Inferred	44	24	32.6	31.8
Total	149	155	34.4	34.1
Mertainen				
Must Take	–	–	–	–
Per Geijer magnetite				
Measured	–	–	–	–
Indicated	136	–	52.6	–
Inferred	227	281	50.8	56.3
Total	363	281	51.5	56.3
Per Geijer mixed				
Measured	–	–	–	–
Indicated	42	–	47.4	–
Inferred	109	72	45.6	49.2
Total	151	72	46.1	49.2
Per Geijer hematite				
Measured	–	–	–	–
Indicated	23	–	54.6	–
Inferred	48	55	55.3	51.3
Total	71	55	55.0	51.3
Per Geijer				
Must Take	0.6	0.3	9.2	13.3

1) Including Konsulin.

Iron Mineral Reserves as at 31 December 2022 (including sorting plants)				
	Quantity, Mt		Percent, Fe	
	2022	2021	2022	2021
Kiruna				
Proved	365	336	42.4	42.2
Probable	392	494	41.4	41.2
Total	757	830	41.9	41.6
Malmberget magnetite				
Proved	247	247	40.3	40.6
Probable	25	37	37.8	39.4
Total	272	284	40.1	40.4
Malmberget hematite				
Proved	7	8	46.8	46.7
Probable	5	6	46.3	45.5
Total	12	14	46.6	46.2
Leveäniemi				
Proved	89	74	47.1	50.7
Probable	8	11	27.2	24.2
Total	97	86	45.4	47.2



UK operations

Operations are located at Dimmock Cote Quarry and Bracken Quarry in the UK and for the third time, LKAB is reporting Mineral Resources and Mineral Reserves from its UK operations under the PERC Standard.

Limestone Mineral Resources (Mineral Reserves excluded) as at 31 December 2022

Bracken Quarry, Lund, UK	Limestone	
	2022	2021
	Kt	Kt
Measured	0	0
Indicated	0	0
Inferred	789	789
Total	789	789

Limestone Mineral Reserves

as at 31 December 2022

Dimmocks Cote Quarry, Wicken Cambridgeshire, UK	Limestone			
	2022	2021	2022	2021
	Kt ¹⁾	Kt ¹⁾	Kt ¹⁾	Kt ²⁾
Proved	—	—	—	—
Probable	647	673	471	471
Total	647	673	471	471

1) Included in planning permission.

2) Not included in planning permission.

Phosphorous and rare earth element Mineral Resources in 2022



LKAB plan to create a sustainable business from LKAB mine tailings and offer Phosphate-fertilizer products and by-products containing rare earth elements (REE), fluorine, and gypsum. The initiative is part of an ongoing LKAB study for extracting critical minerals from the by-products of the mining and processing of iron ore.

LKAB's mine tailings are a by-product of iron ore mining; they are essentially a secondary raw material from which an apatite mineral concentrate rich in phosphorus ("P") can be recovered. The iron ore has demonstrated "Reasonable Prospects of Eventual Economic Extraction" ("RPEEE") as required by international Mineral Resource reporting codes. This equally demonstrates the continued production of apatite tailings in which rare earth oxides ("REO") are also found.

The project is planned to be implemented through a flotation process of fresh tailings to produce an apatite concentrate. This will be followed by additional hydro-chemical processes to produce Phosphorous products, MREO concentrate, fluorine product and gypsum. By extracting the mineral apatite from the iron ore tailings, these by-products are under detailed technical evaluation as a revenue generator from the existing tailings stream currently produced. Key drivers in this initiative are sustainability, resource efficiency, circularity, and the drive to fossil fuel-free manufacturing methods.

Current studies are focussed on the Kiruna and Malmberget future tailings although the Svappavaara and Per Geijer future tailings will also be considered as potential apatite sources following further studies. Recent metallurgical testwork has been completed on the Per Geijer project with similar properties being observed when compared to the Kiruna and Malmberget operations.

The main products will be a phosphoric acid and/or a mineral fertiliser. The fertiliser product goals are the commodity products MAP and DAP (Monoammonium phosphate (11-52-0) and Diammonium phosphate (18-46-0)).

In addition, the process aims to produce the following biproducts:

- Rare earth elements as an oxide concentrate,
- Fluorine product of fluorsilicic acid,
- Gypsum, at commercial grade for plasterboard or cement manufacturing

As part of the project and to accelerate future technical studies, the P and REO have been estimated into the Mineral Resource models. This includes the first reported TREO Mineral Resource at Per Geijer.

To date, estimation of phosphorous within the Resource models follows the same strategy and uses the same data quantity as the iron estimate. As such, the classification of the phosphorous Resources is aligned with the iron classification. No Mineral Reserves are currently being reported for phosphorous or contained apatite.

Rare earth data collection commenced as part of the standard assay suite in 2017 and as such, rare earth data have a more limited spatial extent throughout the Kiruna and Malmberget deposits. Per Geijer, being based on recent drill data only, has an equal count of Fe, P and REE analyses. However, the limited data at Kiruna and Malmberget and the early-stage metallurgical test work being undertaken, has restricted the classification of the rare earth elements to the Inferred Mineral Resource category.

Phosphorous Mineral Resources (inclusive of Reserves)

as at 31 December 2022

	Quantity, Mt		Percent, P	
	2022	2021	2022	2021
Kiruna¹⁾				
Measured	983	704	0.35	0.17
Indicated	287	555	0.26	0.57
Inferred	147	90	0.39	0.12
Must Take	19	24	0.18	0.26
Total	1,437	1,373	0.33	0.33
Malmberget				
Measured	707	474	0.61	0.74
Indicated	292	352	0.43	0.50
Inferred	406	377	0.61	0.45
Must Take	165	168	0.50	0.60
Total	1,570	1,371	0.57	0.58
Svappavaara				
Measured	301	292	0.45	0.42
Indicated	245	287	0.45	0.49
Inferred	236	184	0.51	0.59
Must Take	3	5	0.15	0.61
Total	785	769	0.47	0.49
Per Geijer				
Measured	—	—	—	—
Indicated	201	—	2.74	—
Inferred	384	407	2.24	2.73
Must Take	1	1	0.79	1.03
Total	585	408	2.41	2.73

REE Mineral Resources (inclusive of Reserves)

as at 31 December 2022

	Quantity, Mt		Percent, TREO ²⁾	
	2022	2021	2022	2021
Kiruna¹⁾				
Measured			—	—
Indicated			—	—
Inferred		1,418	1,349	0.017
Must Take		19	24	0.009
Total	1,437	1,373	0.017	0.016
Malmberget				
Measured			—	—
Indicated			—	—
Inferred		1,405	1,203	0.022
Must Take		165	168	0.020
Total	1,570	1,371	0.022	0.023
Per Geijer				
Measured			—	—
Indicated			—	—
Inferred		585	—	0.182
Must Take		0.6	—	0.091
Total	585	—	0.182	—

1) Including Konsuln.

2) Content in percent of all rare earth elements in oxide form.

Basis for estimates

LKAB reports its Mineral Resources and Mineral Reserves in accordance with the PERC Reporting Standard (2021). Estimation of Mineral Resources and Mineral Reserves requires judgment to interpret available geological data and subsequently to select an appropriate mining method and then to establish an extraction schedule. The estimation process requires assumptions about future commodity prices and demand, exchange rates, production costs, transport costs, close-down and restoration costs, recovery rates and discount rates and, in some instances, the renewal of mining licenses. There are many uncertainties in the estimation process and assumptions that are valid at the time of estimation may change significantly when new information becomes available. New geological or economic data, or unforeseen operational issues may change the estimates of Mineral Resources and Mineral Reserves. Estimates are made based on the following underlying factors:

Metal prices

Mineral Resources and Mineral Reserves provide a basis for the company's long-term planning. Mineral Resource estimates are reported within an optimised open pit and / or underground optimised stopes at Svappavaara with the addition of a 20% Fe cut-off at Mertainen due to modelled low-grade material falling within the Mertainen optimised open pit. At Kiruna and Malmberget, no cut-off is applied due to an approximate 40% Fe cut-off applied during the modelling process. This approach is considered by the Competent Person to represent 'reasonable prospects for eventual economic extraction'. Mineral Reserve estimates are reported considering a long-term price of 65 USD/tonne of iron ore (62% Fe) over the coming business cycle.

Dilution

Dilution is referred to as the waste material that is being mined along with the ore during mining operations. This varies in percentage, depending on various mining and geological factors. LKAB systematically monitors the quantity of waste rock mixed with mined ore and this data is included in all estimates of Mineral Reserves.

Recovery

Depending on the mining method employed, orebody geometry and other technical and geological factors, some percentage of the ore

cannot be recovered. The percentage of recoverable mineable Mineral Reserves is defined as ore recovery. This factor has been taken into consideration in the estimates of Mineral Reserves.

Risks and uncertainties

Not achieving environmental permits remains a future threat to mining at LKAB. Seismic behavior of rock, associated with mining at deeper levels, can disrupt mining operations by restricting production rates and Mineral Reserves as experienced at the Kiruna mine in 2020. Future challenges associated with mining at depth also pose a risk to the declaration of the company's Mineral Resources. LKAB's participation in the Hybrit-initiative creates opportunities to access new emerging markets for fossil-free iron and introducing new sustainability production practices. Technical studies undertaken have shown the reasonable prospect for eventual economic extraction of phosphate and rare earth oxides as by-products of iron ore tailings. This ongoing testwork is at an early stage of development and the final process route to eventual product has not as yet been confirmed.

Standards, codes and recommendations

The Mineral Resource and Mineral Reserve estimates have an effective date of 31 December 2022 and have been classified and reported in accordance with the PERC Reporting Standard 2021.

Competent Persons

The Mineral Resource estimates were prepared under the supervision of Howard Baker FAusIMM(CP), Managing Director and Resource Geologist, Baker Geological Services Ltd (BGS) who is a "Competent Person" as defined in the PERC Reporting Standard 2021. Mr Baker has reviewed and approved the scientific and technical information in this report and has confirmed that: "At the effective date of the Public Report, to the best of my knowledge, information and belief, the Public Report contains all scientific and technical information required to be disclosed in order to make the Public Report not misleading".

The Mineral Reserves estimates were prepared under the supervision of Tim McGurk CEng FIMMM, Corporate Consultant (Mining Engineering) with SRK Consulting (UK) Ltd who is a "Competent Person" as defined in the PERC Reporting Standard 2021.

Mr McGurk has reviewed and approved the scientific and technical information in this news release and has confirmed that: "At the effective date of the Public Report, to the best of my knowledge, information and belief, the Public Report contains all scientific and technical information required to be disclosed in order to make the Public Report not misleading".

The above text was compiled by Mr Howard Baker and Mr Tim McGurk. The Mineral Resource and Mineral Reserve statements in this report have been reviewed and approved by Howard Baker (BGS), Guy Dishaw, Principal Consultant and Tim McGurk, Corporate Consultant of SRK Consulting (UK) Limited.

March 2023

Tim McGurk B.Eng, C.Eng, FIMMM
Competent Person

Howard Baker, FAusIMM(CP).
Competent Person

Guy Dishaw, P.Geo.
Competent Person

Pan-European Reserves & Resources Reporting Committee (PERC) Reporting Standard

LKAB compiles its Mineral Resources and Mineral Reserves annually. LKAB's reporting method follows the PERC Reporting Standard 2021 aimed at a balanced assessment of the value of LKAB's mines and deposits. The 2021 edition of the PERC Reporting Standard is aligned with the November 2019 version of the CRIRSCO International Reporting Template (Committee for Mineral Reserves International Reporting Standards). This report covers the reporting period from 1 January 2022 to 31 December 2022.

Ten-year overview

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Results, MSEK										
Net sales	46,543	48,812	33,914	31,260	25,892	23,367	16,343	16,200	20,615	23,873
Operating profit before impairment losses and provisions	21,344	27,270	13,050	13,229	8,975	7,148	1,621	1,548	4,002	8,259
Impairment of property, plant and equipment	–	–	–	–	–	–26	–1,192	–7,136	–	–
Costs for urban transformation provisions	–545	–372	–1,396	–1,441	–2,106	–1,147	–2,106	–1,568	–3,432	–620
Operating profit/loss	20,799	26,898	11,654	11,788	6,869	5,975	–1,677	–7,156	570	7,639
<i>Operating margin, %</i>	44.7	55.1	34.4	37.7	26.5	25.6	–10.3	–44.2	2.8	32.0
Net financial income/expense	–2,119	1,484	797	1,136	–185	290	613	–115	24	129
Profit/loss before tax	18,680	28,382	12,452	12,924	6,685	6,266	–1,063	–7,271	594	7,768
Tax	–3,600	–5,778	–2,695	–2,751	–1,411	–1,462	85	1,585	–247	–1,736
Profit/loss for the year	15,080	22,604	9,757	10,173	5,274	4,803	–978	–5,686	347	6,032
Depreciation according to plan – property, plant and equipment, MSEK	3,141	3,132	3,136	2,907	2,857	2,886	2,746	2,800	2,865	2,432
Production and deliveries										
Production volume, Mt	25.0	26.7	27.1	27.2	26.9	27.2	26.9	24.5	25.7	25.3
Delivery volume, Mt	25.8	27.0	28.5	24.9	26.8	27.6	27.0	24.2	26.0	25.5
Deliveries of pellets, %	83	83	84	83	82	83	84	84	83	83
Capital structure and return, MSEK										
Non-current assets	54,183	49,329	43,514	41,331	40,562	34,309	35,461	35,558	40,775	35,213
Current assets	43,441	45,316	31,755	33,350	28,399	25,990	22,165	20,470	22,359	22,609
Total assets	97,624	94,645	75,269	74,681	68,961	60,298	57,626	56,028	63,134	57,822
Liabilities and equity, MSEK										
Equity	71,320	67,565	48,412	45,528	38,573	36,348	30,551	32,116	37,756	41,472
Non-current liabilities	17,095	18,458	18,542	21,467	20,040	17,139	17,740	17,900	18,402	11,670
Current liabilities	9,209	8,622	8,315	7,685	10,347	6,811	9,335	6,011	6,976	4,680
Total equity and liabilities	97,624	94,645	75,269	74,681	68,961	60,298	57,626	56,028	63,134	57,822
Return on equity, %	21.7	39.0	20.8	24.2	14.1	14.4	–3.1	–16.3	0.9	14.7
Operating assets, MSEK	59,850	52,090	49,095	49,032	46,833	38,836	42,567	40,820	45,254	41,128
Return on operating assets, %	34.8	51.6	23.8	24.6	16.0	14.8	–4.0	–16.6	1.4	19.3
Net financial indebtedness, MSEK	–12,178	–16,553	–1,470	–1,158	3,552	–2,382	6,329	3,203	–16	–7,315
Net debt/equity ratio, %	–17.1	–24.5	–3.0	–0.9	11.0	–3.9	23.1	10.8	1.4	–16.2

Ten-year overview, cont.

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Cash flow, MSEK										
Cash flow from operating activities	15,907	23,485	8,963	9,469	7,059	8,860	526	3,834	7,536	8,557
<i>of which expenditure for urban transformation</i>	-2,216	-2,681	-4,191	-2,624	-1,871	-2,178	-1,035	-291	-1,354	-295
Investing activities										
Investing activities, net – operations	-5,751	-3,497	-2,925	-2,487	-3,673	-1,724	-3,288	-6,204	-5,463	-6,123
Operating cash flow	10,156	19,988	6,038	6,981	3,386	7,136	-2,762	-2,370	2,073	2,434
Investing activities – financial	-504	-9,960	1,780	-2,476	-972	-6,770	-1,159	1,357	-703	2,325
Cash flow after investing activities	9,652	9,670	7,817	4,506	2,414	366	-3,921	-1,013	1,370	4,759
Financing activities										
Borrowing/repayments	-352	-986	-600	-1,325	705	-937	2,114	108	2,793	-
Dividend	-12,432	-5,850	-6,104	-3,164	-2,882	-	-	-139	-3,500	-5,500
Cash flow for the year	-3,132	2,834	1,112	17	237	-571	-1,807	-1,044	663	-741
Employees										
Average number of employees	4,513	4,469	4,535	4,348	4,188	4,118	4,224	4,463	4,539	4,427
Proportion of women, %	26	25	25	24	22	21	21	20	19	18
Lost time accidents per million hours worked ¹	6.5	8.2	6.3	6.8	7.7	6.8	5.8	6.2	5.3	6.7
Sick leave, %	4.8	4.2	4.4	3.5	3.6	3.7	3.7	3.0	2.9	2.9

¹ Accident rate includes suppliers.

Definitions

Operating margin: operating profit as a percentage of net sales.

Return on equity: profit for the year according to the income statement as a percentage of average equity.

Return on operating assets: operating profit as a percentage of average operating assets.

Operating assets: intangible assets, property plant and equipment, inventories, accounts receivable, other receivables. Not financial assets, cash & cash equivalents and current investments.

Net financial indebtedness: interest-bearing assets minus interest-bearing liabilities.

Net debt/equity ratio: net financial indebtedness in relation to equity.

Terms and definitions

General glossary

Concentrating: beneficiation of finely ground ore by separation into a concentrate of iron ore powder with very high purity, known as slurry.

Open-pit mining: an ore deposit that is situated close to the surface and is mined in the open air.

Zoning plan: a zoning plan shows how a defined area in a municipality may be built on and how land and water areas may be used.

Direct reduction (DR) pellets: DR pellets are iron ore pellets designed for using natural gas to reduce the oxygen in the iron ore to produce DRI, which is used to produce steel in an electric arc furnace.

Direct Reduced Iron (DRI): input material for steelmaking in electric arc furnaces; also known as sponge iron.

Remediation: clean-up, restoration and/or ecological compensation of mining areas that have reached end-of-life.

Fossil-free steel: steel produced using reducing agents and energy from fossil-free sources.

Fossil-free steel production: steel produced from renewable energy sources and iron ore reduced to crude iron using fossil-free reducing agents, such as hydrogen.

GRI (Global Reporting Initiative): international standard for sustainability reporting.

Mine City Park: the areas that are to be phased out in favour of mining and transformed into park areas in Kiruna. More parks will be added as the urban transformation continues.

Waste rock: collective economic term for the rock that is not ore.

Hematite: mineral, iron ore (Fe_2O_3), named from the Greek for "blood stone". Has no magnetic properties.

Huntite: mineral with various uses, including as a halogen-free flame-retardant additive in plastics and cables.

Main haulage level: haulage level in an underground mine from which ore is transported to surface level via skip hoists.

Industrial minerals: collective term for rocks, minerals or other naturally occurring materials that are of economic value, excluding metals, energy minerals and gemstones.

Iron ore: ore with a high content of the element iron. A mineralisation is described as ore if it is profitable to mine it. The minerals magnetite and hematite are examples of iron ore.

Sponge iron: sponge iron is produced by removing the oxygen from the iron ore at low temperatures using carbon dioxide and hydrogen made from natural gas.

Corruption: incidents where an employee uses their position in the company for personal gain.

Magnetite: mineral, ferrimagnetic iron ore (Fe_3O_4), also known as lodestone, which in upgraded form is used for iron- and steelmaking. Other applications for magnetite include water purification, noise and vibration dampening and as ballast in high-density concrete.

Ore: economic term for a mineral that is deemed profitable to mine.

Ore base: the percentage difference between the mined crude ore and the theoretical quantity of ore.

Swedish orefields: describes a geographical area in the northern Swedish county of Norrbotten that includes Kiruna, Gällivare and Svappavaara.

Orebody: underground mining of ore is largely about finding orebodies and building drifts – which involves blasting tunnels/passageways in the rock – in order to be able to mine the ore along these orebodies.

Ground deformation: the mining gives rise to ground deformation – in other words, ground movements.

Blast furnace pellets: iron ore pellets that are reduced to crude iron in a steelworks blast furnace.

Pelletising: process whereby slurry is mixed with additives and binder, rolled into balls and sintered in a pelletising plant.

Pellet premium: mark-up factor on the iron ore price for producers of upgraded iron ore products.

Exploration: systematic searching for natural raw materials such as minerals and rocks. Exploration may take the form of geophysical surveys, geochemical investigation or geological surveys.

Crushed ore: designates iron ore from the mines before it has been upgraded.

Crude ore: see crushed ore.

Crude iron: molten iron from a blast furnace that is subsequently refined in a steelworks.

Seismic event: rock tremor, earthquake.

Barren rock: rock that is not ore; synonymous with waste rock.

Sintering: fusing of fine-grained ore (fines) into lumps (sinter) at a high temperature.

Sub-level caving: the method of mining that LKAB employs in its underground mines. It means that the ore is mined level by level and that waste rock loosens and fills the space where the ore was. As a result, no cavities are left underground, while the ground above slowly sinks.

Sorting: rough sorting, crushing and screening to separate waste rock and increase the iron concentration of the ore.

Values: LKAB's values: committed – innovative – responsible.

Units and abbreviations

g: gram

GWh: gigawatt hour

kg: kilogram

ktonne: kilotonne

kWh: kilowatt hour

m³: cubic metre

mg: milligram

mg/m³ ndg: milligrams per normal cubic metre dry gas

SEK bn: billion Swedish kronor

MSEK: million Swedish kronor

Mt: million tonnes

ppm: parts per million

TJ: terajoule

TWh: terawatt hour



Production

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Financial information

Interim reports

- 27 April
Interim Report, Q1 2023
- 14 August
Interim Report, Q2 2023
- 27 October
Interim Report, Q3 2023
- February 2024
Interim Report, Q4 2023
together with Year End Report

Contacts

Please direct any questions regarding LKAB's financial information to Stefan Loréhn, CFO or Jan Moström, President and CEO.

Please direct any questions regarding the sustainability report to Pia Lindström, Senior Vice President Environment and Sustainability.

Forward-looking information

This report may contain forward-looking information including, but not limited to, statements concerning operations and earnings, our strategy and market conditions. Forward-looking information is based on current expectations and forecasts relating to future events and includes assumptions and estimates that are associated with risks and uncertainties. Actual results may therefore differ from what is described. Some of these risks and uncertainties are described further in the section on risks on pages 44–54.

Annual General Meeting

Date

LKAB's Annual General Meeting will be held at 3 pm on Thursday 27 April 2023.

Attendance

The Annual General Meeting is open to the public.

Notice of general meeting

The notice of the Annual General Meeting, financial information and other information can be found at lkab.com.

Printed financial information can be ordered by emailing info@lkab.com.

A printed version of LKAB's Annual and Sustainability Report 2022 will be available on 27 April 2023.



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