

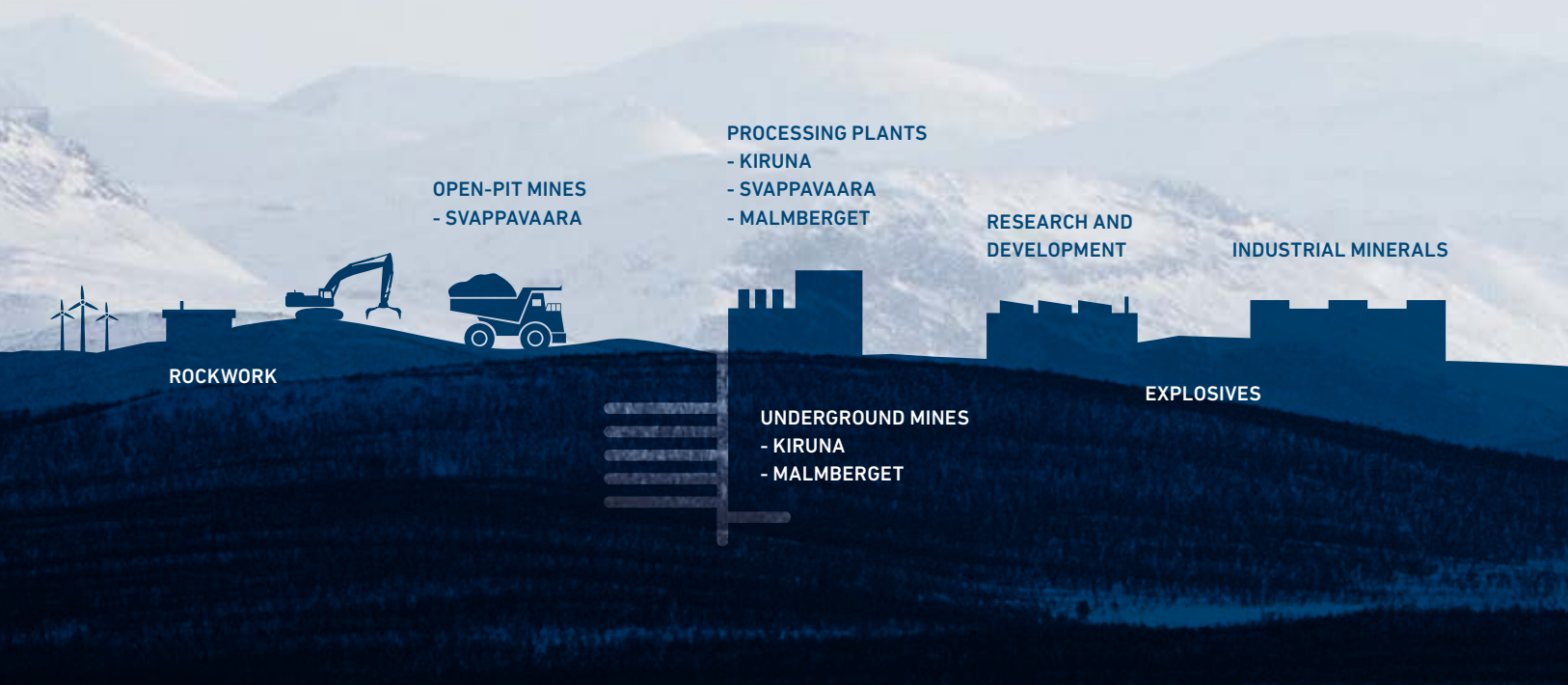


# 2019 IN BRIEF

ANNUAL AND SUSTAINABILITY REPORT

# EUROPE'S LEADING MINING AND MINERALS GROUP

LKAB is an international high-tech mining and minerals group that mines and upgrades the unique iron ore of northern Sweden for the global steel market. Sustainability is at the core of our business and our ambition is to be one of the industry's most innovative, resource-efficient and responsible companies. The Group's operations also include industrial minerals, drilling systems, rail haulage, rockwork services and property management.



SEK **31.3** bn

Net sales for 2019 amounted to SEK 31.3 (25.9) billion.

SEK **11.8** bn

Operating profit for 2019 amounted to SEK 11.8 (6.9) billion.

SEK **6.1** bn

The Board of Directors proposes an ordinary dividend of SEK 6.1 billion to the annual general meeting.

**4,300**

LKAB has circa 4,300 employees.

**2<sup>nd</sup>**

LKAB is the world's second-largest producer in the seaborne pellet market.

**80%**

LKAB is Europe's largest iron ore producer and mines around 80 percent of all iron ore within the EU.

**>30**

LKAB has more than 30 industrial minerals in its product portfolio.

**1890**

LKAB, established in 1890, is one of Sweden's oldest industrial companies and is wholly owned by the Swedish state.

→ LKAB aims to create prosperity by being one of the most innovative, resource-efficient and responsible mining and minerals companies in the world.

MINING AND CONSTRUCTION SERVICES,  
ENGINEERING SERVICES

PROPERTIES

RAIL TRANSPORT

PORTS

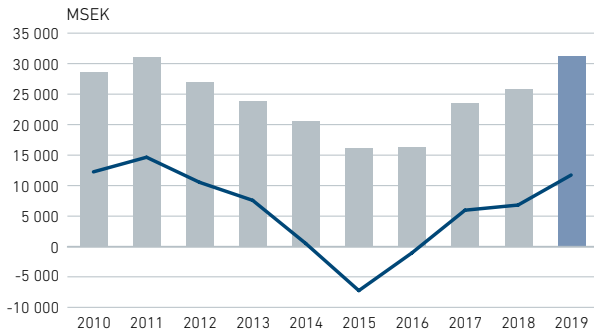
DRILLING SYSTEMS



# THE YEAR IN BRIEF

## NET SALES AND OPERATING PROFIT

■ Net sales ■ Net sales 2019 — Operating profit



## FINANCIAL OVERVIEW, GROUP

	2019	2018
Net sales, SEK million	31,260	25,892
Operating profit, MSEK	11,788	6,869
Less: Costs for urban transformation provisions, MSEK	1,441	2,106
Underlying operating profit <sup>1</sup> , MSEK	13,229	8,975
Operating margin, %	37.7	26.5
<b>Profit/loss for the year</b>	<b>10,173</b>	<b>5,274</b>
Operating cash flow, MSEK	6,981	3,386
Return on equity, %	24.2	14.1
Net debt/equity ratio, %	-2.5	9.2
Capital expenditure on property, plant and equipment, MSEK	2,373	2,455
Provisions for urban transformation at end of reporting period, MSEK	16,873	17,625
Dividend to owner <sup>2</sup> , MSEK	6,104	3,164

<sup>1</sup> Underlying operating profit is reported in Note 45 on page 120.

<sup>2</sup> The dividend proposed by the Board of Directors will be put to the Annual General Meeting for approval on 23 April 2020.

## PRODUCED

Iron ore products

27.2 Mt



## DELIVERED

Iron ore products

24.8 Mt



## CO<sub>2</sub> EMISSIONS

CO<sub>2</sub> emissions per tonne of products

25.8 kg/tonne



## ENERGY INTENSITY

Energy intensity per tonne of product

158 kWh/tonne



## SAFETY

Accidents involving absence per million hours worked.

6.8 accident rate



## GENDER EQUALITY

Percentage of women in the Group.

23.8%



## Q1 JAN–MAR

Production was negatively impacted at the start of the year following minor operational disruption at the pelletising plants in Kiruna and by maintenance work at the pelletising plant in Svappavaara.

LKAB announces its decision to invest MSEK 45 in pilot plants in the Swedish orefields, aimed at industrialising the extraction of phosphorus and rare earth elements from residual products arising from iron ore production.

LKAB signs agreement with PEAB to reconstruct the classic Bolagshotellet in Kiruna based on drawings from 1925. The hotel was a landmark for Kiruna's residents, and an active and very significant part of LKAB's operations for nearly 120 years.

## Q2 APR–JUN

Together with SSAB and Vattenfall, LKAB starts building a unique test facility – the first of its type in the world – as part of the HYBRIT initiative. HYBRIT aims to achieve fossil-free steelmaking by 2035.

The global spot price for iron ore reached levels of around USD 125/tonne at the year's peak during the summer. The price then fell significantly following a slowdown in demand from the steel industry. Towards the end of the year prices increased again, and at the end of the year the price was USD 92/tonne.

→ Stable production and favourable market conditions enabled LKAB to achieve strong earnings in 2019, despite lower delivery volumes.

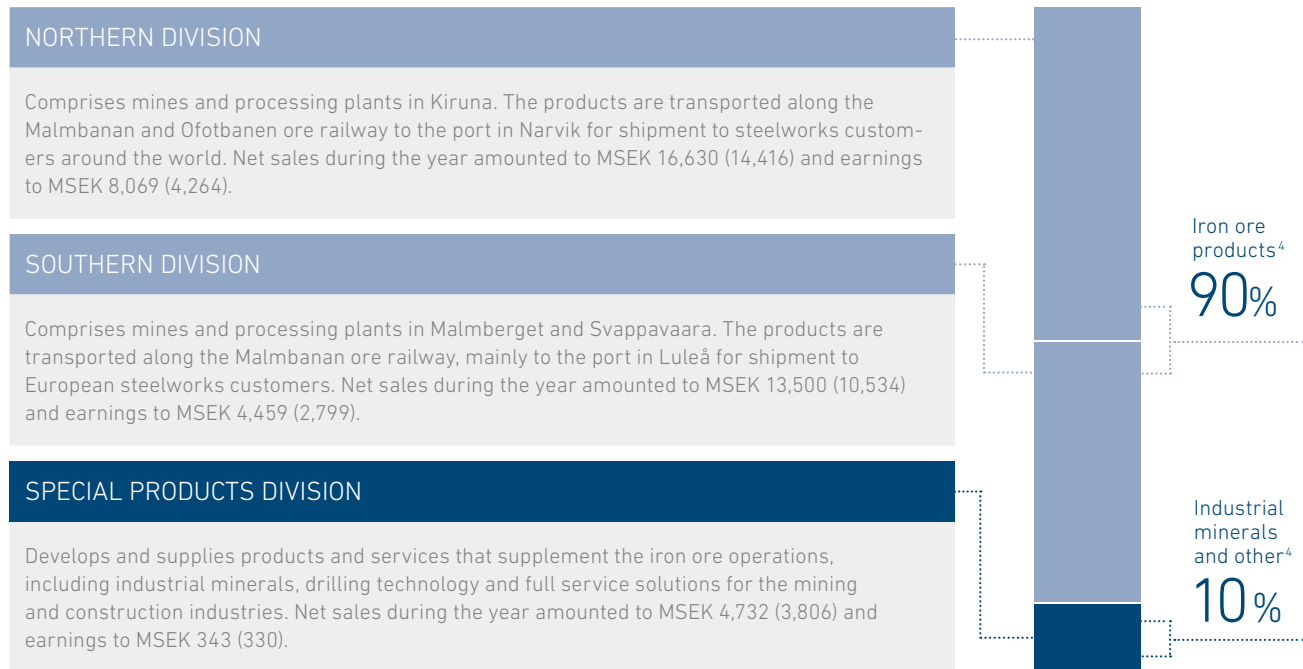
**MSEK 11,788**

Operating profit increased by 72 percent compared with 2018.

**MSEK 6,981**

Operating cash flow was boosted to MSEK 6,981 (3,386).

#### NET SALES AND EARNINGS BY DIVISION<sup>3</sup>



<sup>3</sup> Effective from 1 January 2020 the three divisions – Northern, Southern and Special Products – have been reorganised into two business areas, Iron Ore and Special Products. However, the Annual and Sustainability Report for 2019 reflects the three divisions in effect during the year.

<sup>4</sup> Percentage of the Group's sales.

### Q3 JUL–SEP

In September, LKAB attends the UN climate summit in New York, where the HYBRIT initiative was highlighted as one of the most ambitious and most transformative initiatives to combat climate change.

Despite the start to the year, production was stable in 2019 and ended with two strong quarters. During the third quarter the Group hit its previous production record of 7.3 Mt in a single quarter.

### Q4 OCT–DEC

LKAB issues its first green bonds, raising SEK 2 billion in total. The bonds mature in 5.25 years and the proceeds will be used by LKAB to invest in transforming itself for the carbon-free, autonomous mining of the future.

At the end of the year, LKAB presents the SMMART (Swedish Magnetite Microwave Asphalt Road Technology) project, which is developing microwave-based technology to heat asphalt mixed with magnetite. This allows the asphalt to be heated using electricity rather than fossil fuels, thereby reducing emissions.

LKAB presents a new Group structure effective from 1 January 2020 as the next step in developing a decentralised organisation. Three divisions are being replaced by two business areas, partly in order to differentiate more clearly between Group functions and production functions.

# EQUIPPED FOR THE FUTURE

During the year, LKAB combined stable production and strong earnings with further steps towards the transition to a more sustainable industry.



## How would you sum up 2019?

Development. 2019 was the year in which the whole world woke up to the issue of climate change. The development work that LKAB is driving along with its customers and suppliers is important not just for us. When we and our partners develop processes and technology for carbon-free autonomous mining, as well as processes for carbon-free production of direct-reduced iron, this is of huge significance for Sweden's climate targets. At a global level the effect is even more crucial.

LKAB is investing significantly in the future, which requires us to be competitive here and now. I am very proud of the work that LKAB's employees are doing. We are driving change and innovation on all fronts. We are working in parallel on improvements in day-to-day operations and on creating the conditions for major technological advances. This would not have been possible without a great focus on leadership and employeeship, as well as a culture and organisation based on individual responsibility and mandate.

## Iron ore prices have been volatile over the year. How has that affected LKAB?

Up until the summer, demand for iron ore was very good and price levels were high. However, uncertainty and decreased demand for steel, combined with histori-

cally high prices for the raw materials, impacted steelmakers' profitability in the first half. Demand for iron ore, particularly in Europe, fell noticeably from August onwards and brought down the price levels. For LKAB, this meant that during the autumn we had to redirect our volumes to other customers and markets – which we were very successful in doing. However, delivery volumes for the full year were at a somewhat lower level than in the previous year.

Our production was relatively stable during the year, particularly in the third and fourth quarters.

Overall, we are able to report strong earnings of nearly SEK 12 billion. Despite the slowdown in the second half of the year, the average price level during the year was good and we also benefited from the dollar remaining strong.

## How will you secure the Group's competitiveness going forward?

LKAB's business remains focused on highly upgraded iron ore products that provide steel customers with climate advantages and more efficient production. LKAB enjoys a niche position and is today the world's second largest producer of iron ore pellets in the seaborne market.

Since we cannot influence world market prices for iron ore, we are focusing on things that are within our own control

– such as sustainability and quality. We are also focusing on cost control and efforts to increase volumes.

Stable production is the key to this. A lack of production stability impacts both our financial results and our sustainability results. When our plants are at a standstill, they consume almost as much energy as during production – making it difficult for us to achieve our targets for reduced carbon dioxide emissions or energy efficiency. The same is true for our costs.

During the year we developed our way of working with strategic maintenance in order to optimise production. We expect to have completed all major maintenance work within four to six years. We will then gradually move across to new production structures. The ambition is for LKAB to be carbon-neutral by 2045.

## You are also aiming to establish LKAB more broadly in the industrial minerals market?

We are looking to supplement our iron ore business so that we can fend off fluctuations in the market more effectively – for example, by developing our offering to the industrial minerals market. At the end of 2018 we acquired the UK company Francis Flower, which among other things processes residual products from the steel industry.

We will continue to evaluate value-adding acquisitions while at the same time assessing opportunities to utilise by-products from our existing operations. One example of this is the ReeMap project, which has moved into a pilot phase of extracting rare earth elements and phosphorus from the residual products of iron ore mining. During the year, we also began work to develop extraction of vanadium from the iron ore in Svappavaara.

With effect from 1 January 2020, a new Group structure is being introduced in which the three divisions are replaced by two business areas: Iron Ore and Special Products. The aim is to further decentralise the organisation and at the same time make clear our focus on a broader and stronger LKAB.

**The current main haulage levels are expected to be mined out by around the mid-2030s. What does that mean for LKAB?**

In short, it means that we need to be ready to make investment decisions in the mid-2020s on what the next generation main haulage levels will be. Since these are time-critical decisions, we are also working on the possibility of extending production from the current main haulage levels by one or more years.

It means that exploration efforts have increased substantially over the past year. This is partly in order to extend the life of existing production plans, but also to secure mine production in the long term. During the year, we continued to drive exploration drifts and started test drilling. This is a lot of work, but it is necessary to enable us to make the right decisions.

By around the mid-2030s we will be ready to mine iron ore deeper down in the mines, assuming that we have determined what form the new main haulage levels are to take. This is where the Sustainable Underground Mining (SUM) development programme comes in. It is a project that we are conducting jointly with ABB, Epiroc, Combitech and Volvo Group with the aim of developing a new global standard for large-scale mining at great depths that is also carbon-free, digitalised and autonomous. I am pleased with the progress made during the year. We have completed the physical test mine in Kiruna, which means that in 2020 we will move into an intensive test phase.

**How important to LKAB is collaboration?**

It is important to work together if we are to overcome the challenges ahead. At the UN climate summit last September, LKAB was invited to join the newly formed UN's "Leadership Group for Industry Transition" which is to lead the way towards transition.

Working together with other operators allows us to find solutions more quickly, thereby enhancing each company's long-term competitiveness. It is also about technological advances that in the longer term will contribute to the development of a more sustainable industry.

We have worked purposefully to build up a mining cluster in Sweden – both on the downstream side, where we are working with SSAB and Vattenfall within the HYBRIT initiative to achieve fossil-free steelmaking, as well as upstream, where SUM is a prime example.

**What have been the biggest challenges during the year?**

Protracted permit processes with uncertain outcomes are a real challenge

for us. There is a strong common interest in securing LKAB's future in the Swedish orefields. Permit and regulatory processes are very drawn out, are not transparent and in many cases the environmental benefit takes a back seat. We are not calling for less stringent environmental and climate rules when permit applications are assessed, but rather we want predictability through effective and legally certain processes that focus on the environment.

This issue is impacting others, too, not just LKAB. Among other things, we are working with the county governors in Norrbotten and Västerbotten and through the industry organisation SveMin to improve coordination between authorities. During the year, the cluster of companies associated with Swedish mining industry actively participated in a constructive debate.

At a municipal level, we have seen the process for local plans stalled because municipalities mix their governing role with compensation matters in an unfortunate way.

**What are the big challenges within sustainability?**

My experience is that our sustainability work is generally progressing well and, in particular, sustainability matters are fully integrated into the business. One source of concern is that our work to become a supplier of carbon-free direct reduced iron will be dependent on effective and legally certain permit processes. We do not have that at present, and if we are unable to achieve it in the near future then we will clearly have problems in achieving our goals.

During the year, we issued our first green bonds, the proceeds of which are earmarked for investments in the transition to carbon-free autonomous mining.

One of our highest-priority sustainability goals is to reduce the accident rate, and we have not yet made enough progress here. Work to boost the safety culture is continually ongoing, with constant training and dialogue. In parts of the organisation we have made great progress; our hydraulics team, for example, celebrated 1,000 accident-free days during the year. In 2019, we had a total of 6.8 accidents per million hours worked compared with 7.7 in 2018.

The issue of dam safety remains a high priority. In January 2019 there was a serious accident in Brazil when a tailings dam was breached. Such events affect the world's confidence in the whole industry. It is important that LKAB can give a clear account of our dam safety work. We must be a leader here too.

**How are the urban transformations going?**

2019 saw a high level of activity in both Gällivare and Kiruna. New residential areas have been established and large infrastructure projects are in progress, and at the same time a number of cultural buildings were relocated. The first phase of the new E10 road in Kiruna opened in October and the new city centre is starting to take shape with both commercial and residential properties as well as the new city hall.

The urban transformations are hugely complex projects which need to satisfy many different interests. Working together is key, not least with the municipalities responsible for the local plans. Our ambition is to complete the urban transformations on schedule, at a reasonable cost and in a way that creates security for residents and local businesses.

**How do you see the outlook for LKAB going forward?**

As the world's population continues to grow, the need for steel – and thus high quality iron ore – will also increase. However, the value chain from mine to steelworks has to be sustainable – and here LKAB is part of leading the transition. This means that we take into consideration environmental, economic and social aspects.

LKAB bases its work partly on Agenda 2030 and the global Sustainable Development Goals when developing our strategies, and during the year we signed up to the Global Compact in order to make it even clearer that we are taking responsibility not just as regards the environment, but also in respect of human rights, labour law and anti-corruption.

There are great challenges ahead of us, but we are determined to drive the technological transformation of the industry while at the same time utilising our expertise in mining, processing and logistics to broaden the business. I am proud that LKAB is leading the way and I am convinced that we are building a stronger company at the same time.

Luleå, 23 March 2020



Jan Moström, President and CEO



# OBJECTIVES FOR SUSTAINABLE DEVELOPMENT

LKAB's mission is to utilise Sweden's iron ore resources in a responsible way and to secure lasting competitiveness and long-term value creation. Sustainability work is therefore central to our business strategy.

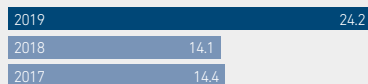
## ECONOMIC SUSTAINABILITY

LKAB needs to be financially strong in order to be an innovative and responsible company. Our ambition is to double the ore reserve in the longer term, while at the same time broadening our business. We will also continue to improve our competitiveness, with the aim of increasing our productivity by 40–50 percent in the next generation of mining and processing.

### PROFITABILITY

Return on equity of at least 12 percent over a business cycle.

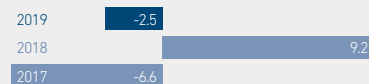
**24.2%** return



### CAPITAL STRUCTURE

Net debt/equity ratio of 0–30 percent.

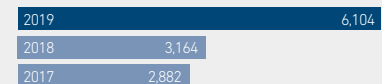
**-2.5%** net debt/equity ratio



### DIVIDEND TO THE SWEDISH STATE

Ordinary dividend of 40–60 percent of profit for the year.<sup>1</sup>

**MSEK 6,104** dividends



<sup>1</sup>The Board of Directors is proposing to the Annual General Meeting that the ordinary dividend amounts to MSEK 6,104 – corresponding to a dividend of 60 percent of profit for the year.



## SOCIAL SUSTAINABILITY

LKAB shall provide secure and attractive workplaces, where diversity, non-discrimination and equality are a given. LKAB works to secure leading competence, maintain exemplary stakeholder dialogues and an ethical approach throughout the value chain. We actively contribute to ensure our operating locations are lively and attractive communities.

### SAFETY

Reduce accidents resulting in absence to a rate of 3.5 per million hours worked by 2021.

**6.8** accident rate



### DIVERSITY AND EQUAL OPPORTUNITY

Women to make up at least 25 percent of employees by 2021. Women to make up at least 25 percent of management by 2021.

**23.8%** % women



**23.0%** % female managers



### SOCIAL RESPONSIBILITY AND COOPERATION

Compliance with LKAB's Code of Conduct and well-functioning dialogue with stakeholders.

**90.4%** have completed Dialogue training according to plan



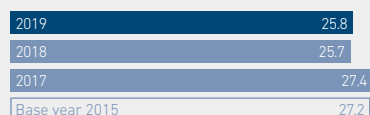
## ENVIRONMENTAL SUSTAINABILITY

LKAB aims to be one of the most resource-efficient and environmentally efficient mining companies in the world. Our long-term ambition is to achieve carbon-neutral operations. Our ambition also includes environmentally neutral use of water and energy, and no impact from emissions on our surroundings. We safeguard biodiversity and are working to turn by-products into resources.

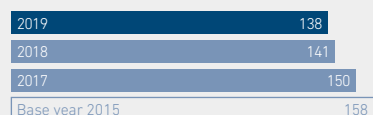
### EMISSIONS

Reduce carbon emissions by at least 12 percent per tonne of finished product by 2021 compared with 2015 and at the same time reduce emissions of nitrogen to air (NOx).

**25.8 kg/tonne** carbon dioxide emissions

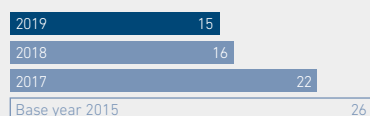


**138 g/tonne** nitrogen to air



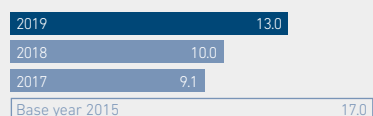
Reduce discharges of nitrogen to water by at least 20 percent per tonne of finished product by 2021 compared with 2015.

**15 g/tonne** nitrogen to water



Reduce emissions of particulates to air from scrubbing equipment by at least 40 percent by 2021 compared with 2015.<sup>2</sup>

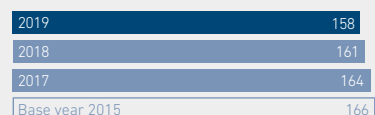
**13 mg/m<sup>3</sup> ntg** particulates to air



### ENERGY INTENSITY

Reduce energy intensity (kWh per tonne of finished product) by at least 17 percent by 2021 compared with 2015.

**158 kWh/tonne** finished product



<sup>2</sup> The objective covers dust extractors throughout LKAB's operations. The objective thus does not include the flues in the pelletising plants, where problems with or an absence of scrubbing equipment have resulted in the limits for sulphur dioxide and particulates being exceeded. For further information see "Environmental impact and resource consumption" on pages 46–47.

# STRATEGIC PRIORITIES FOR A BROADER, STRONGER LKAB

Our strategy aims to ensure LKAB's long-term competitiveness. By efficient utilization of our existing production structure combined with development of profitable and sustainable growth opportunities we create a broader and stronger LKAB.



## HIGHLY UPGRADED AND CLIMATE-EFFICIENT IRON ORE PRODUCTS

LKAB enjoys a niche position and is today the world's second largest producer of iron ore pellets in the seaborne market. For future competitiveness, LKAB needs to continue to increase production volumes and productivity, and to lower our costs per tonne. We are doing this by securing the supply of crushed ore in parallel with increasing our production capacity.

### Strategic activities

- Strengthen the culture with focus on safety, production stability and continual improvement.
- Expand existing production systems by developing technology and processes.
- Double mineral reserves through increased exploration.
- Evaluate acquisitions of deposits, mines and companies.

## NEW TECHNOLOGY FOR PROFITABLE AND SUSTAINABLE MINING AND PROCESSING

After the mid-2030s, when the current main haulage levels are expected to be mined out, LKAB needs to be ready to mine iron ore deeper down in the mines. The transition to the next generation of mining operations brings considerable opportunities for the future, not least as regards sustainability.

### Strategic activities

- Evaluate and develop new technology to increase productivity and resource efficiency in current and future production systems.
- Development initiative in partnership with SSAB and Vattenfall for a fossil-free steelmaking process: HYBRIT (Hydrogen Breakthrough Ironmaking Technology).
- Development initiative in partnership with ABB, Epiroc, Combitech and Volvo Group for efficient, safe, carbon-free, digitalised autonomous mining at great depths: SUM (Sustainable Underground Mining).

## PRODUCT PORTFOLIO THAT SUPPLEMENTS THE IRON ORE OPERATIONS

LKAB needs to broaden its operations in order to supplement the iron ore business and fend off fluctuations in the market more effectively. Among other things, LKAB is focusing on establishing itself more broadly in the industrial minerals market, both through acquisitions and by developing new products. A strong financial position allows larger acquisitions, which can balance out fluctuations within the iron ore segment and at the same time ensure that cash flow remains strong.

### Strategic activities

- Establish LKAB more broadly in the industrial minerals market, both organically and through acquisitions.
- Diversify the business into areas where LKAB's core competencies add value.

## BUSINESS DEVELOPMENT WITH A FOCUS ON RECYCLING AND NEW PRODUCTS

LKAB is working to evaluate new opportunities for recycling residual products, both in our own value chain and in that of our customers. This means processing and developing by-products, which results in better use of resources from existing operations and strengthens profitability.

### Strategic activities

- Development initiative for extraction of phosphorus and rare earth elements from by-products of iron ore production: ReeMAP.
- Development initiative for extracting vanadium from iron ore.
- Continual evaluation of product development and acquisition opportunities that result in increased resource utilisation along the value chain.







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