



SCANIA MINING

# TIME FOR SMARTER SOLUTIONS



**SCANIA**



# SMARTER MINING

Think of your mine as a factory production line. From digging, to loading and supply, each operation depends on one another. This is where your business is made, where every second counts. Idle vehicles and logistical waste can make your entire production cycle fail. Which is why it pays to take a holistic approach to your operations, as we do, at Scania.

With our long history in lean production and global mining transport, we offer solutions built for your daily reality. Our tailored product offering, on-site services and real-time data collection and monitoring work together to improve your total operating economy.

## **Tailored products**

Our unique modular design approach allows us to deliver reliable Scania quality time and again. Whether it's our in-pit trucks, service vehicles, outbound haulage, crew transport or industrial engines, there's a Scania for every step in your production line.

## **On-site services**

Your vehicles need to be on the move at all times. However, challenging mining environments can lead to more idle time. Scania's on-site driver and vehicle services are designed to maximise uptime and keep your operations flowing – in even the harshest conditions.

## **Real-time data**

We apply our expertise within lean production to help you identify waste and problem areas across your cycle. Focusing on time, load and road factors, we'll work with you to ensure optimal productivity and operating costs from load to supply.





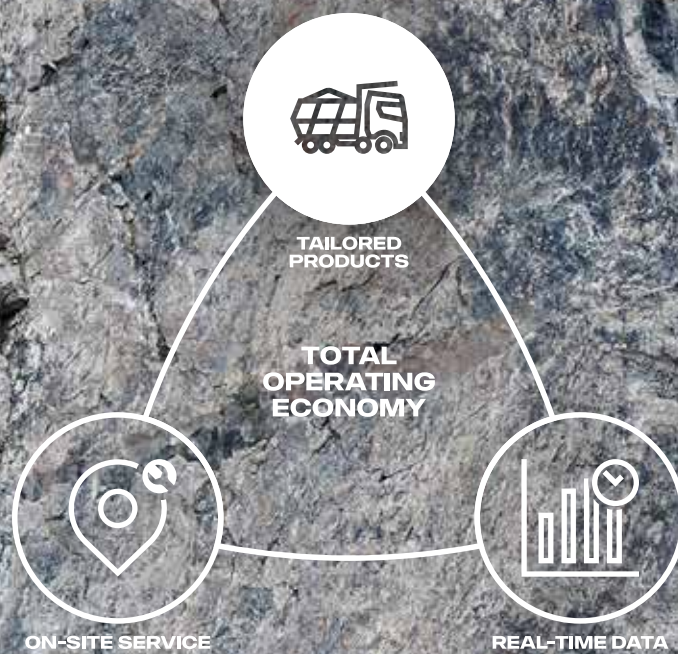






# **TAILORED PRODUCTS**







# THERE'S A SCANIA FOR EVERY STAGE OF MINING

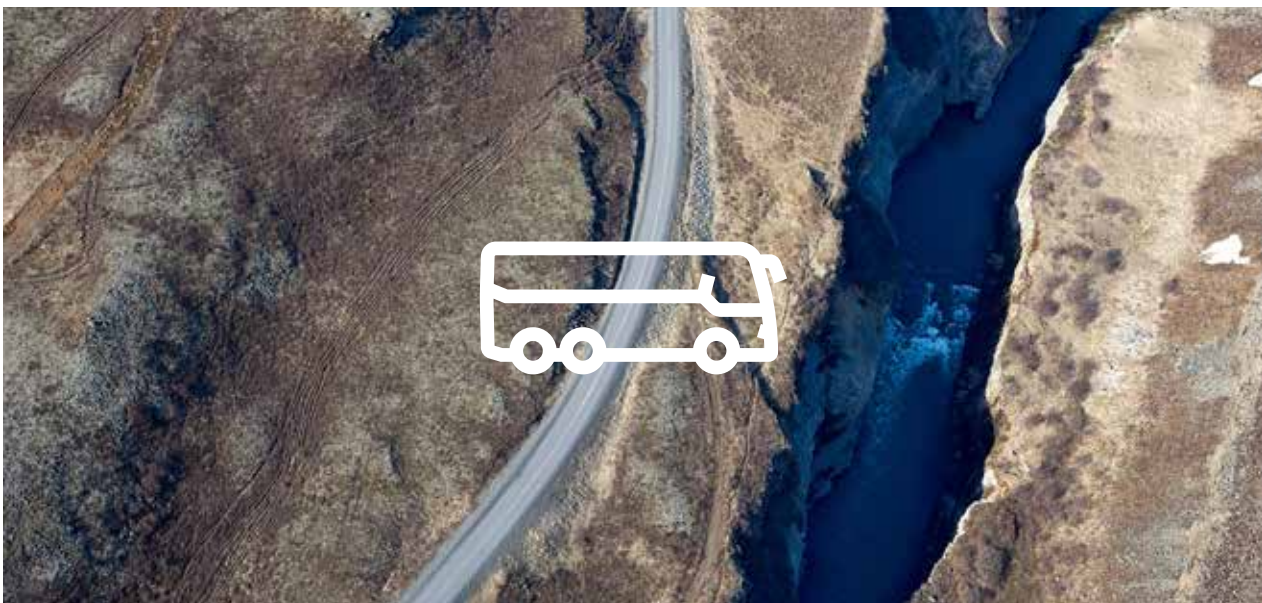
Scania vehicles and engines are setting new standards across the industry. From exploration to reclamation, in-pit mining to outbound haulage, our versatile fleet is built to ensure optimal operational flow at every stage of your mining cycle.

Scania's space-optimised trucks are built to deliver on even the most testing roads, and offer tailored solutions for your loading and unloading times, fuel economy, local speed limits, maintenance requirements and more. They can also be operated on public roads with greater safety.

Our holistic approach also extends to our world-leading on-site services which include vehicle maintenance, field workshops and even driver and service technician training.

However you demand it, there's a Scania for every stage of mining.







# TAILOR-MADE PERFECTION

Each Scania is unique. From the moment it leaves our production facilities, its journey begins to serve your unique demands, challenges and operating environments.

All of our solutions are developed to be tailored uniquely to your business operations. Through our extensive global network of local partners, we can help you to customise your chassis based on your operational requirements and needs through our Site Assessment Program. After all, the shorter the lead time, the sooner you can have your Scania in operation.









An aerial photograph of a gravel quarry. A dark, winding road or path cuts through a vast area of grey gravel. The gravel is uneven and textured, with some small patches of green moss or vegetation. The lighting is natural, creating soft shadows and highlights on the gravel surface.

# SAFETY AT EVERY TURN

Operating in the harshest environments, your vehicles must deliver uncompromising safety at all times – to protect your people and keep your operations going for longer. At Scania, our vehicles are the result of generations of thorough research, design and testing, making them exceptionally safe. This is due to the wide array of innovative safety and support systems built in to each Scania vehicle.

No matter where you are in the world, we'll make sure that your products and services are tailor-made with your local requirements in mind, for maximum safety across your operations.

## **Built-in safety**

Safety demands a comprehensive approach across both the design and testing stages. Scania's ergonomic cabin design, systems and driver aids facilitate quicker and more intuitive decision making. This can make all the difference in the split-second decisions you face every day. All Scania cabs are approved by the Swedish cab test – one of the world's toughest impact test.

## **Safe service**

In our workshops, we train mining crews and technicians all over the world with an emphasis on safer ways of working. We'll help you to push the limits of efficiency without compromising the safety of your crew or operations, so you can achieve maximum uptime with minimal disruption to production.

## **Operational safety**

Sub-standard equipment, spillage and bad roads are the biggest factors which contribute to risk. Scania Site Optimisation helps you to identify risk factors and find suitable measures – resulting in higher productivity with reduced risk.











# IN-PIT HAULAGE

Your in-pit operations require robust workhorses, capable of hauling as much as possible, time and again. Scania's three-, four- and five-axle heavy tippers, are built to deliver outstanding reliability in even the harshest mines. Above ground, underground. Any material, anywhere in the world.

Scania vehicles are engineered to guarantee reduced tare-weight-to-payload ratio, to minimize vehicle weight per each tonne of transported material and offer you superior fuel economy and sustainability of use, also on the return trips.

## TECHNICAL WEIGHTS



Axle configuration	6x4	8x4	10x4
Gross vehicle weight	49,000 kg	60,000 kg	71,000 kg
Front axle weight	11,000 kg	2 x 11,000 kg	2 x 11,000 kg
Bogie weight	38,000 kg	38,000 kg	49,000 kg

### Correct payload is crucial to ensure safety and productivity

A too large tipper body will cause overloading, jeopardizing durability, uptime and operating costs. The sum of payload and empty weight may never exceed gross vehicle weight. The empty weight can vary depending on chassis specification and tipper body design. Heavier and more abrasive material will require thicker steel in the floor and side walls of the tipper body.

This will increase the empty weight of the tipper body, thus decreasing the payload capacity. Weight optimization of the tipper body can be achieved by using high-tensile steel.

Material loaded into a tipper body will form a heap. This heap shall be taken into account when defining the body size. The dimensions of the tipper body shall allow for a heap according to the SAE 2:1 principle (global standard ISO 6483).

## RECOMMENDED TIPPER BODY SIZES



Material density (kg/m <sup>3</sup> )	Transported material	SAE 2:1 heap volume (m <sup>3</sup> )	Struck design volume (m <sup>3</sup> )
2,000	Iron ore	19.0	17.0
1,800	Copper ore, gold ore	21.1	18.8
1,600	Overburden, nickel ore	23.8	21.2
1,500	Limestone	25.3	22.8
1,400	Bauxite	27.1	24.2
1,200	Salt	31.7	28.5

Example of 8x4 with gross vehicle weight 60,000 kg, empty weight 22,000 kg and payload 38,000 kg.



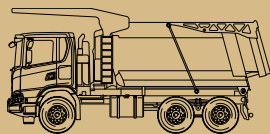
# OUTBOUND HAULAGE

In mining, your outbound operations need to be agile and economical. From established to short-term mining operations, the flexibility of Scania's haulage solutions ensure that you can move your material long before most traditional rail and conveyor systems are in place.

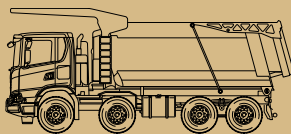
Through Scania Fleet Management, you can track haulage performance such as location, speed, engine condition, driver behaviour, route deviation, fuel consumption and CO<sup>2</sup> emissions – pushing the limits of efficiency and helping you to move faster.

Keep your business on track. Take the road train with Scania.

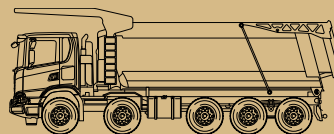
Examples of outbound haulage setups with gross vehicle weight (GVW) and gross combination weight (GCW)



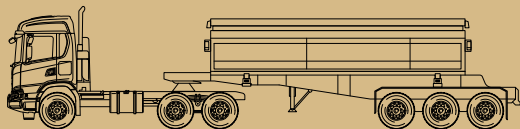
GVW 49 tonnes



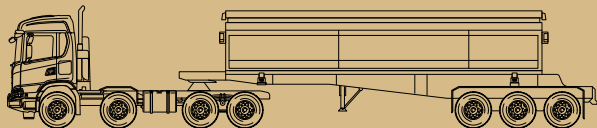
GVW 60 tonnes



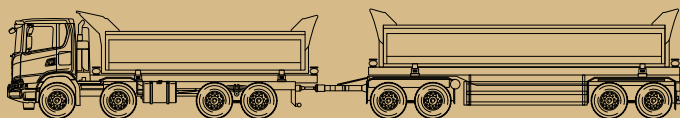
GVW 71 tonnes



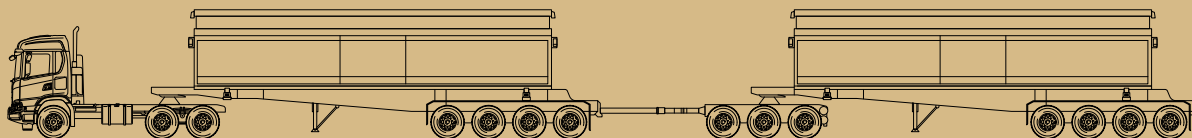
GCW 90 tonnes



GCW 115 tonnes



GCW 120 tonnes



GCW 300 tonnes







## Tailored products



Explosives



Stemming



Lubrication



Mobile crane



Heavy machine transport



# SERVICE VEHICLES

Scania's service fleet is the logistical lifeblood which safeguards your productivity. Our robust service vehicles are built to excel across all terrain and applications, ensuring that your water trucks, heavy equipment haulers and crew transport are fit for purpose through all challenges.

Available in all-wheel drive for extra mobility in delivering critical parts and preventive maintenance, we'll help you to make up the seconds where it matters.



Water truck



# BUILT TO LAST

Scania's new XT generation comes equipped with a range of powerful features – engineered with purpose to excel in the most challenging of environments.

**High air intake**  
Developed for dusty and exposed environments, Scania's high air intake solution supplies the engine with the cleanest possible air.

**Vertical exhaust pipe**  
Can be chosen in two different heights to accommodate bodywork.

**Step cab side**  
Can be selected as a step or, alternatively, a smart storage compartment.

**Skid plate**  
Protects the cooling system and other vital parts in the front from rocks and other obstacles.

**Heavy-duty suspension**  
Stronger parabolic suspensions at the front (5x27 steel springs) and the rear (5x48) increases payload capacity and vehicle uptime. Shock absorbers available on all axle positions, for increased comfort. Anti-roll bars offer increased stability.

**Brake chambers**  
Brake chambers are assigned greater protection in a higher position.

**Robust bodywork brackets**  
The heavy-duty frame is equipped with robust attachment brackets to sustain heavy-duty bodywork.





#### **Cab tilting**

The cab is equipped with an electric hydraulic pump, activated by a switch on the instrument panel, to tilt the cab for easier inspection and maintenance. Also available as a manual pump.

#### **Scania Opticruise**

Provides accurate and smooth automated gear changing for reduced driver fatigue and improved productivity.

#### **Rear-view cameras and working lights**

Efficient lighting lets you work safely around the truck. Working lamps can be specified for the rear wall of the cab, the sides below the cab, and for the frame rear end. Several options for camera installations are available.

#### **Scania Retarder**

Improves braking performance and reduces wear on the wheel brakes especially for steep downward slopes. Maximum brake torque 4,100 Nm, maximum output 500 kW for short use.

For more technical data, please contact your local Scania dealer.

#### **Warning beacons**

Rotating/flashing. LED option available.

#### **Safe driver environment**

2-circuit emergency steering and side curtain airbags.

#### **Scania XT-range bumper**

With its 150-mm protrusion, the XT-range bumper offers effective protection of lower front components, head lamps and cab corners. Scania XT vehicles are also compatible with front underrun protection in high or low positions.

#### **Head lamp protection**

Steel grid protects headlamp from external damages.

#### **Towing jaw**

Mounted in drawbeam. Can be replaced by a wide range of drawbar couplings, or a rigid closing cross member.

#### **Tyres**

325/95R24 available on all axle positions, with or without inner tubes. All major tyre brands are available.

#### **Engines**

High torque output and outstanding fuel economy are a few of the benefits of Scania's renowned engines. The comprehensive range is available with power outputs up to 770 hp. All emission levels are available.











# AN INDUSTRY POWERHOUSE

Scania has been designing and building heavy-duty engines for more than a century. Today, we're the preferred engine supplier to many of the industry's leading equipment manufacturers. So, the chances are, you probably already enjoy the benefits of a Scania engine, you just don't know it.

Our engines are reliable powerhouses, engineered for uptime and built for better operating economy. From gensets to pumping systems, Scania engines are designed to perform and deliver prime power in even the most testing conditions – 24 hours a day, 365 days a year.

Our engines are available in a range of 202 to 617 kW for every application.



Scania's modular design means that the engines, chassis, axles and powertrains on your buses are identical to those you'll find in your trucks. This simple yet ingenious approach allows you to interchange the same parts across your entire mixed vehicle fleet, reducing dependence on additional service capabilities.





# TRANSPORTING PEOPLE

Your business depends on your ability to transport skilled crews and technicians quickly, reliably and safely across remote and challenging terrain. Whether it's to and from, or within the mines.

From smaller crew cabs to larger rugged buses, our transport solutions are built according to Scania's unique modular design. This makes it possible to deliver the reliability, safety and comfort which the world has come to expect of Scania. It also means that you'll receive quicker service and maintenance – at less cost, for maximum uptime.



A photograph of a person's hand on a steering wheel inside a truck cab. The person is wearing a red and black watch and a gold ring. The background shows a blurred view of a road and trees through the windshield. The text 'IN-HOUSE FINANCIAL SERVICES' is overlaid in large white letters.

# IN-HOUSE FINANCIAL SERVICES

By understanding your business needs, risks and vehicle usage, we tailor optimised solutions - both now and in the long run.

This is why we offer financing solutions tailored specifically to your needs, with predictable costs and manageable risks - adding value to your business.

Let's talk about how we can help you do better business.









**VALUE AT  
EVERY TURN**







# MAINTAINING PRODUCTIVITY

There's no room for error in your production line. Your business demands that your vehicles are on the move in every condition, at every point in the chain.

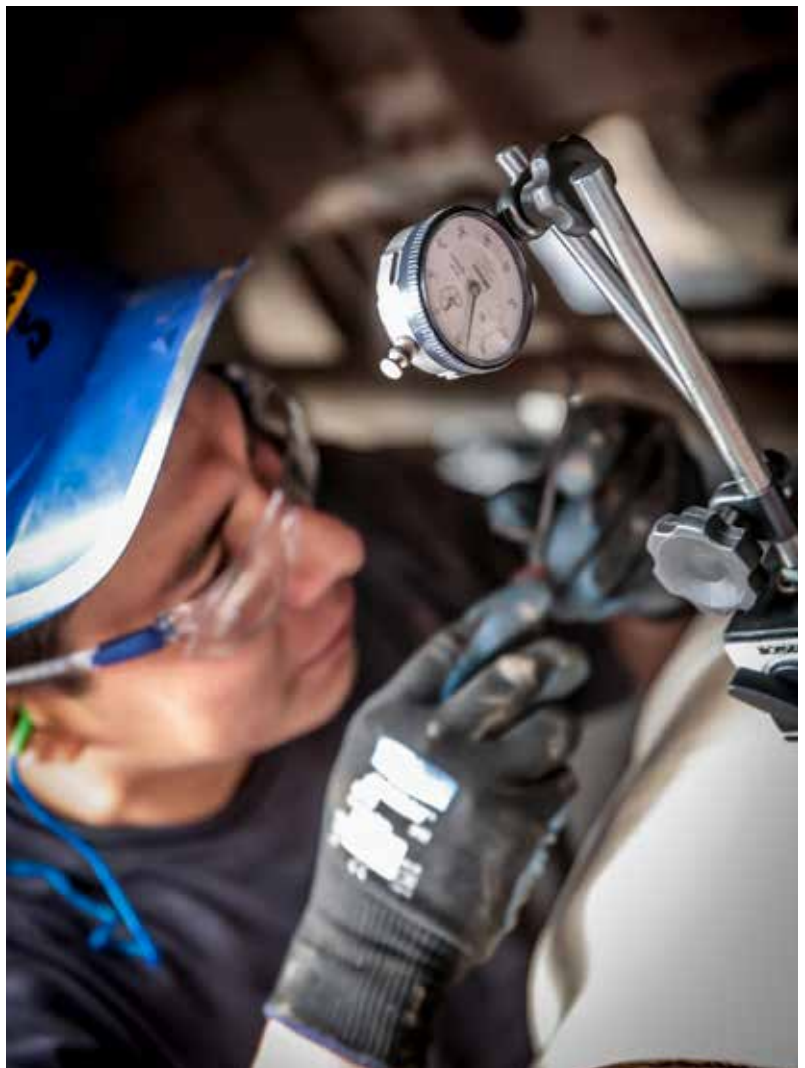
**On-site support** makes all the difference for your mining operations. Developed in collaboration with mining companies, Scania's on-site services are tailored specifically to your mission-critical reality. Our maintenance, driver and workshop services are geared for uptime at each stage of the modern mining chain. Services which you can rely on in any condition.

## **Maintenance contracts**

Geared to each vehicle or operating characteristic, Scania's Full Maintenance Contracts (FMC) ensure optimal performance, uptime and operating efficiency of your fleet over its entire working cycle. Through a single fixed-cost invoice, which accounts for all parts, installation and servicing costs, you'll be safeguarded against all unforeseen maintenance expenses. Instead, you can easily tailor your monthly cost per kilometre, hour or tonne of material transported.

## **Driver services**

Your drivers are crucial to your operating success. They keep your operations safe, they drive your profitability. Scania's Driver Training will optimise how your vehicles are operated, by improving fuel economy, ensuring safety and reducing driver inefficiency. Scania Driver Coaching provides your operators with real-time support to increase driving economy – such as improving gear change, braking and other driving techniques.





# WHENEVER WHEREVER

Behind the scenes, your mining operations are sustained through a holistic network of services; from parts storage to environmental stations, accommodation to kitchen facilities and more. Scania's remote field workshops are developed specifically to provide you with a range of immediate, reliable and flexible services – whenever and wherever your operations demand it.



#### **Field workshop units**

Scania's flexible workshops can be housed in as many as eight types of mobile containers – delivering functionality at less time and cost.

#### **From excavation to reclamation**

Ideal for start-up activities or where temporary facilities are needed in mature markets, our specialists can have you fully operable within a week of the foundation being laid.



# A BLUEPRINT FOR UPTIME

Many things have changed in the world during our more than 130-year history. One thing which refuses to change, however, is Scania's unique tradition of modular engineering. This smarter approach to engineering ensures that our solutions contain up to 30,000 fewer unique parts than the industry average.

Our modular solutions are complemented by a strong support network in over 100 countries, comprising more than 20 regional distribution depots and 1600 service points, meaning that we can guarantee up to 95 per cent parts availability within 24 hours to any Scania Service Point worldwide.

Our unique blueprint for uptime is developed to support your bottom line. All the time, every time.

## Scania parts

Our global parts network is connected through a single global digital network, meaning that we can get your parts to you faster. Quite often, however, we'll stock most of the parts you'll need on-site. Or, we can even establish service and parts depots along your transport routes.

## Modular engineering

We build up to 90% of all our engines from the same parts – whether they're designed for our trucks, buses, gensets or water pumps. This provides more efficient service, with less space taken for spares and tools.

## Uptime and rapid maintenance

Our maintenance procedures are based on maximizing your uptime. At our facilities, we can change an engine in six hours, instead of the industry standard of two days. A complete overhaul of any one of our engines takes only two or three days in a properly equipped field workshop.









An aerial photograph capturing a catastrophic event, likely a dam breach or a massive mudslide. A large, turbulent plume of thick, orange-brown mud flows from a high, eroded earthen embankment into a body of water at the bottom of the frame. The surrounding landscape is rugged, with steep slopes and patches of green vegetation. In the upper right, some industrial or construction structures are visible. The overall scene conveys a sense of immense scale and potential danger.

# REAL-TIME DATA





TAILORED  
PRODUCTS

TOTAL  
OPERATING  
ECONOMY



ON-SITE SERVICE



REAL-TIME DATA







# DECISIONS BASED ON FACTS

The key to operational connectivity lies in your ability to transform real-time operational and logistical data into valuable, actionable information which impacts your entire operation.

Scania's connected service solutions are specifically developed to equip you with real-time logistical data from across your fleet and operations, so that you can make decisions based on facts, not beliefs.

## **Scania Fleet Management**

All Scania vehicles offer plug-in compatibility with Scania Fleet Management, an in-built digital interface designed to monitor and report on vehicle performance, fuel consumption, loading and unloading, driver behaviour, safety follow-ups and route planning – improving efficiency in your transport logistics and reducing overall maintenance costs.

## **Monitoring tower**

Tailored to fit your operational needs, Scania's monitoring tower solutions are uniquely developed to increase the value in your chain. Vehicle and operational data are collected and analysed to offer you seamless insight over your entire operation.





# SCANIA SITE OPTIMISATION

An integrated framework of tools, methods, and best-practise, Scania Site Optimisation will help you to optimal profitability in your transport process from production to supply. Together, we'll help you to identify and overcome efficiency gaps which slow down your cycle times, supply logistics, as well as safety and sustainability initiatives – reducing risk and increasing your revenue.

## Factors that count



### Time

Your productivity is optimised through time. By measuring working time against the total available time, as well as cycle and takt time, you can measure the efficiency of your haulage operations and identify ways to optimize your time cycles.



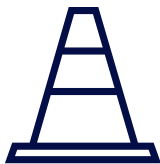
### Load

Overloading your vehicles can increase the risk of production stops – while also reducing the vehicle's lifecycle. Scania will help you to identify pressure points in your loading cycle, to better avoid the risk of queueing, spillage and equipment damage.



### Road

Road quality can impact equipment, safety and driver comfort. Scania will help you to measure road quality, providing vital information to ensure your fleet rolls optimally.



### Safety

The number one focus in the mining industry, safety is critical to ensuring both the wellbeing of your crew and longevity of your operations. At Scania, all of our products, services, and solutions are tailor-made to your local safety standards, wherever you are in the world.



### Sustainability

At Scania, we believe that sustainability begins with your operational efficiency. Scania's better tare weight-to-payload ratio improves your fuel economy, thereby reducing harmful CO2 emissions and significantly lowering the risk of overloading, queueing and idling.



At its very core, Scania Site Optimisation is a partnership which implements best-practice lean tools and methods to deliver optimal operating cost and productivity in real mining situations.



#### Workshop Assessment

Our service team will help you to maximise productivity in your various workshops. Whether you would like us to improve your current workshop operation, or manage the whole operation for you, we've got you covered.



Scania Site Optimisation is tailored to your unique way of running things, based on operational need and requirement. Our offer ranges from site- and workshop assessment, to full site optimisation project.



#### Site Assessment

A Scania expert will work with you independently to help you identify efficiency gaps and find the best way to utilise your equipment – Scania or not – and improve your processes. As well as identifying the suitable solutions for your operational needs.



#### Partnership Solutions

We'll work together with you to drive your operations forward, and turn potential into progress. Over 20 years' experience of continually driving success across our own production processes serves as proof of concept.



# TAKE YOUR OPERATIONS TO THE NEXT LEVEL

Our tailored products, superior on-site services and smart use of real-time data are part of our holistic approach to improve your total operating economy. From load to supply, Scania takes your operations to the next level by helping you to overcome risk factors, reduce logistical waste and deliver productivity which you can rely on, time and again.

Allow us to introduce you to Scania and our Buffalo range.

## BUFFALO RANGE

MODEL	CHASSIS	GVW
Medium (M)	G460 B6x4 HZ	49T / 16m <sup>3</sup>
Large (L)	G460 B8x4 HZ	60T / 22m <sup>3</sup>
Extra Large (XL)	G460 B8x4 HZ	60T / 25m <sup>3</sup>





KH-KIPPER

**BUFFALO**

HAUL ORE NOT STEEL

SCANIA



