

SANDVIK

5G IN MINING AUTOMATION



SAFETY FIRST

Sandvik's objective is zero harm to our people, the environment we work in, our customers and our suppliers.



PROTECTIVE
EQUIPMENT



FIRST AID
KIT



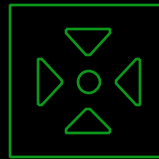
ALARM



EMERGENCY
NUMBER



EMERGENCY
EXIT



ASSEMBLY
POINT



PSYCHOLOGICAL
SAFETY



SANDVIK GROUP

42,000
EMPLOYEES

100

BILLION SEK IN REVENUES

50

R&D CENTERS
GLOBALLY

SALES IN OVER

160

COUNTRIES
AROUND THE GLOBE

3.7 BILLION SEK
ANNUAL R&D
INVESTMENT

5,900

ACTIVE PATENTS

SANDVIK'S MINING EQUIPMENT



DIGITAL TRANSFORMATION IN MINING

AUTOMATION & INFORMATION

SANDVIK

EXPLOSIONS

TOXIC
GASES

HIGH
TEMPERATURES

MUD
RUSHES

DIESEL
FUMES

HAZARDS
CONSERVATIVE PROCESSES
CHALLENGING DISTANT DEPOSITS

ROCKFALLS

FIRES

DARKNESS

HEAVY
MACHINERY
TRAFFIC

VIBRATION

FLOODING

DUST

HIGHER
PRODUCTIVITY

SAFETY &
IMPROVED
WORKING
CONDITIONS

INCREASED
PROFITABILITY

SUSTAINABILITY
& REDUCED
EMISSIONS

ROBOTICS
DIGITALIZATION
REMOTE OPERATION
ELECTRIFICATION



SANDVIK DIGITAL & AUTOMATION – FULL DIGITAL STACK

ASSET DATA MONITORING

Data-driven decision making through real time fleet insights and OEM knowledge



- ✓ My Sandvik Insight
- ✓ My Sandvik Productivity
- ✓ Mixed Fleet Offering Powered by Newtrax
- ✓ Remote Monitoring Service

PRODUCTION CONTROL

Higher productivity and safety from improved operational visibility and task management



- ✓ OptiMine® Suite
- ✓ Newtrax IoT Hub
- ✓ Sandvik iSURE (Drilling)
- ✓ My Rock Tools Suite

COLLISION AVOIDANCE

Increased safety underground



- ✓ Newtrax MineProx
- ✓ Newtrax Next Gen CAS

AUTOMATION

Safely remote-controlled environment with increased productivity



- ✓ AutoMine® Tele-Remote
- ✓ AutoMine® Lite
- ✓ AutoMine® Multi-Lite
- ✓ AutoMine® Fleet
- ✓ iSeries Equipment

MAINTENANCE AND PRODUCTIVITY SERVICES

Sandvik Asset Management System



Technical Remote Support



Expertise on Site



Productivity Premium Contracts



Operator Training and Simulators



SANDVIK

INTEGRATED DIGITAL MINING ECOSYSTEM

WIRELESS CONNECTIVITY AS THE GLUE – 5G COMING IN

My Sandvik

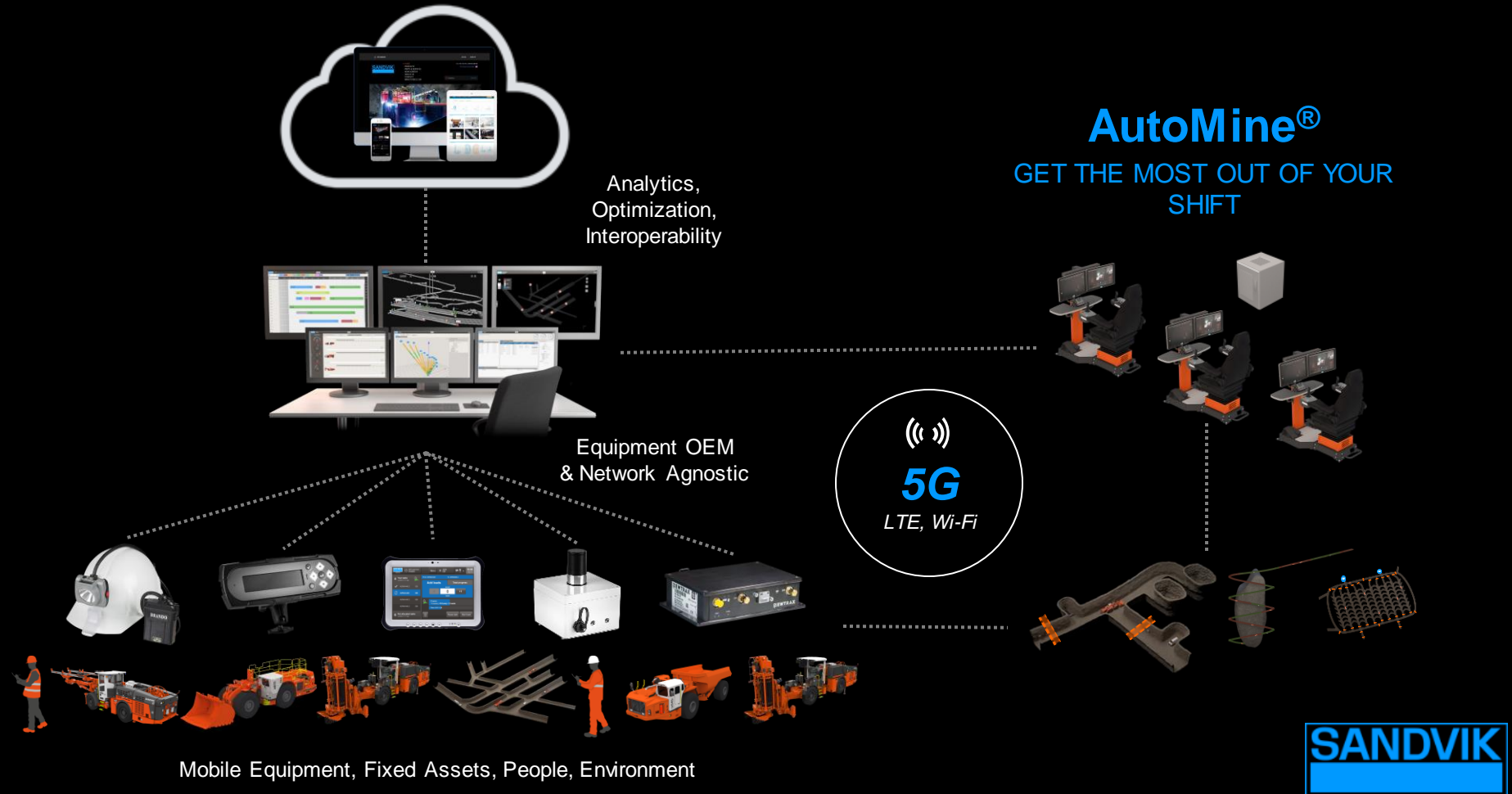
GET MOST OUT OF
YOUR SANDVIK FLEET

OptiMine®

GET MOST OUT OF
YOUR MINE

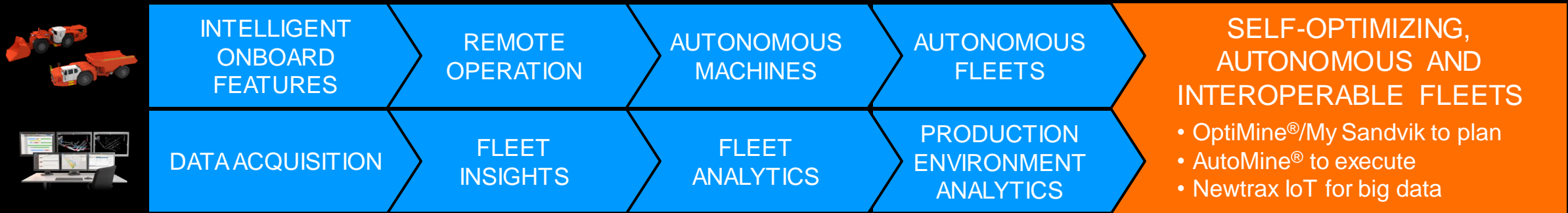
NEWTRAX

GET THE MOST OUT OF
YOUR IOT DEVICES



THE NEXT GENERATION OF AUTONOMOUS MINING (VIDEO)

SANDVIK'S MINING AUTOMATION OFFERING



THE PROMISE OF 5G

5G will support Sandvik's automation and robotics offering development by enabling many additional applications that require low latencies and high bandwidths with easy deployments

AUTOMINE® CONCEPT

THE NEXT GENERATION OF AUTONOMOUS MINING

SANDVIK & NOKIA IN PARTNERSHIP

BRINGING 5G INTO MINING



Jointly testing the integration of

- ✓ Nokia's stand-alone 5G network
- ✓ and Sandvik's mining automation systems

in Sandvik's Tampere Test Mine

SANDVIK AUTOMATION – CONNECTED SITES

WORLD-LEADING SOLUTIONS – AUTOMINE®, OPTIMINE®, NEWTRAX, MY SANDVIK

150+

AUTOMINE®
OPTIMINE® &
NEWTRAX SITES

3500+

EQUIPMENT
CONNECTED
TO MY SANDVIK



3M+

HOURS WITH
AUTOMINE® WITH
ZERO LTI'S

