Agenda

• Who are we?
• Why intelligent machines?
• Autonomous loaders
• Autonomous drill rigs
Who are we?

1873  Company founded
1905  The pneumatic rock drill
1936  The jackleg and Swedish method
1973  The hydraulic rock drill and mechanized drilling
2018  Split from Atlas Copco and listing of Epiroc as an independent company

Digitalization
Automation
Electrification
Why intelligent mining machines?

• Mining is:
  – dirty,
  – dull, and
  – dangerous

• Intelligent machines will:
  – Increased safety and health
  – Increased ore production
  – Decreased operating costs
Autonomous loaders
Autonomous loaders on Youtube

https://www.youtube.com/watch?v=kWp_rWEHGI0
Lidars and cameras

Inertial measurement unit

Hinge angle sensor

Navigation computer

Wheel encoder
Autonomous drill rigs
Autonomous drill rigs on Youtube

https://www.youtube.com/watch?v=qnbfKkMDDEk
Future Challenges

• For our customers:
  – Change mind set
  – Educate operators
  – Educate service personnel

• For us:
  – Improve robustness
  – Fleet optimization
  – Recruit personnel