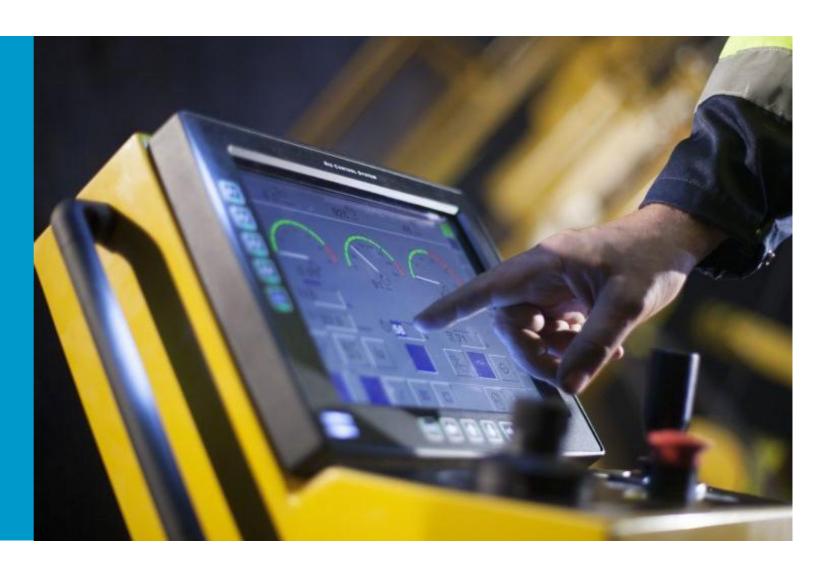


# **AGENDA**

- 1. Innovation drivers
- 2. How do we work with innovation
- 3. Innovations
- 4. Summary





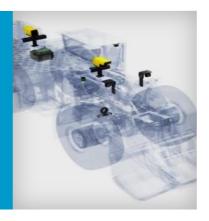
#### INNOVATION DRIVERS

#### **Trends**

Increased demand for natural resources



Increased demand for automation / fleet management and safety



Focus on energy efficiency and carbon footprint



Growth in emerging markets' middle segment



A growing demand for competent labor

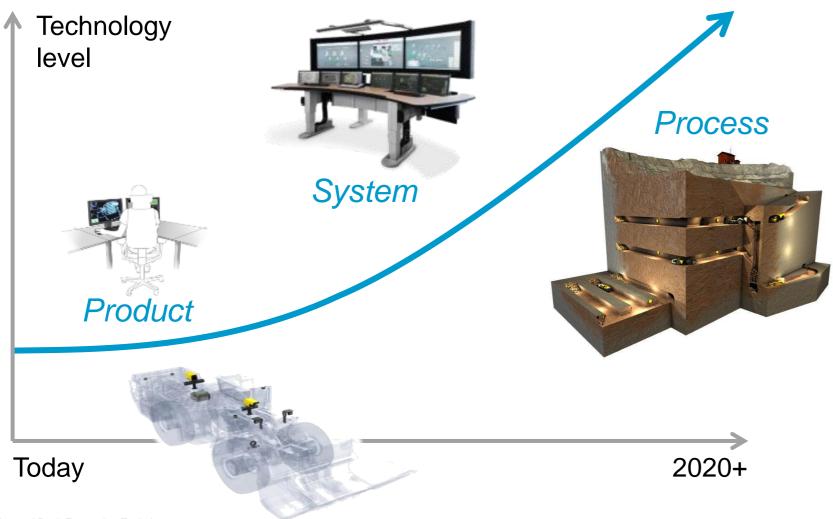


Quicker communication and availability of information





#### HOW WE WORK WITH INNOVATION



Short term and long term simultaneously



Mining and Rock Excavation Technique Atlas Copco Capital Markets Day 2014

# **PRODUCT INNOVATION**

ST 18 loader





# **PRODUCT INNOVATION**

#### Differentiated value proposition











# **SERVICE INNOVATION**

Training

Rig Scan

Service packaging





# **CONSUMABLES INNOVATION**



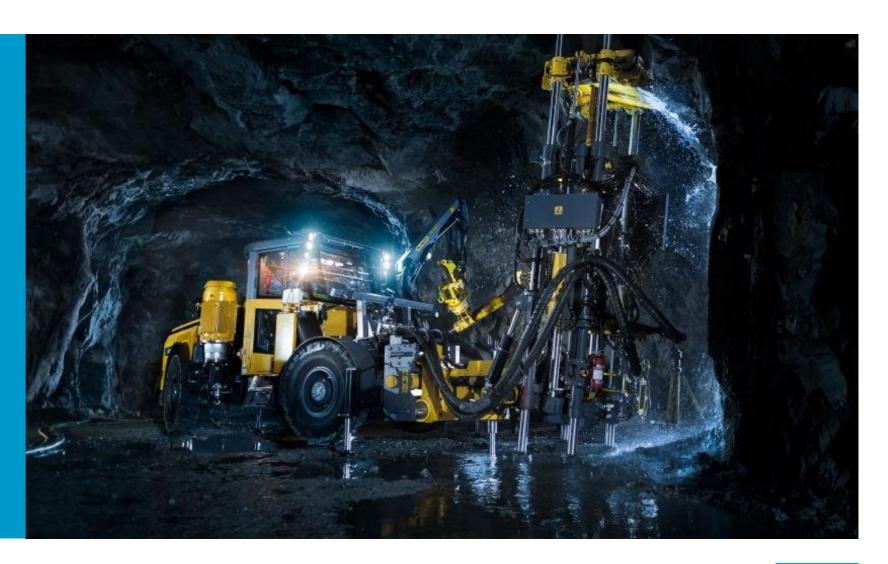
Threaded equipment ...and more



# **MECHANICAL ROCK EXCAVATION**

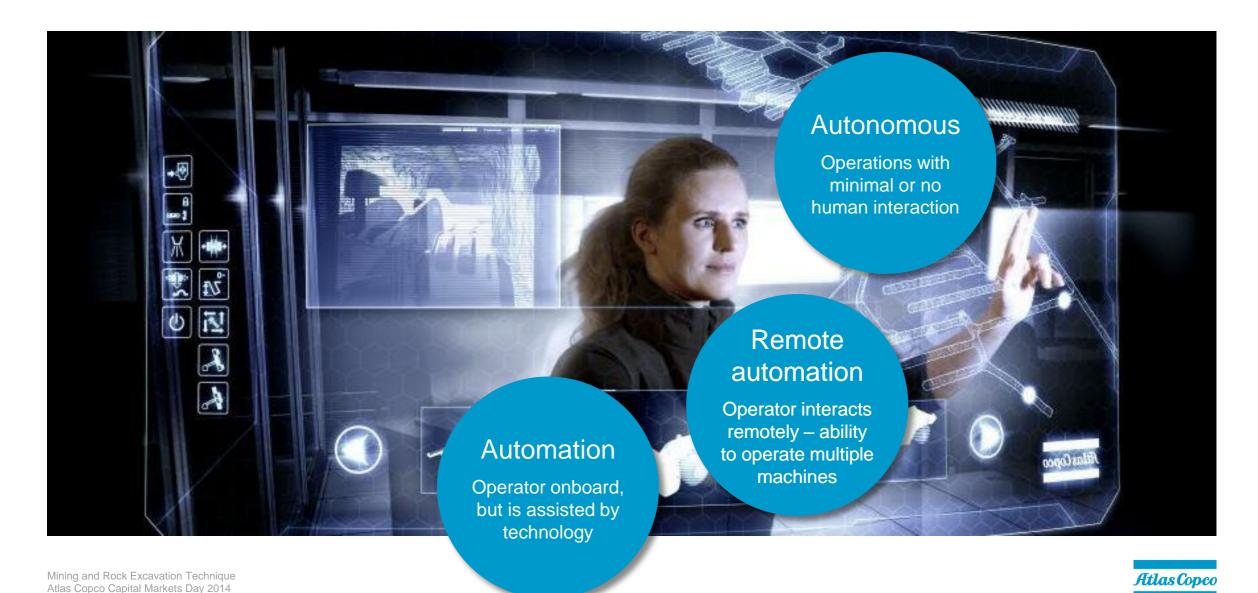
Easer

...and more





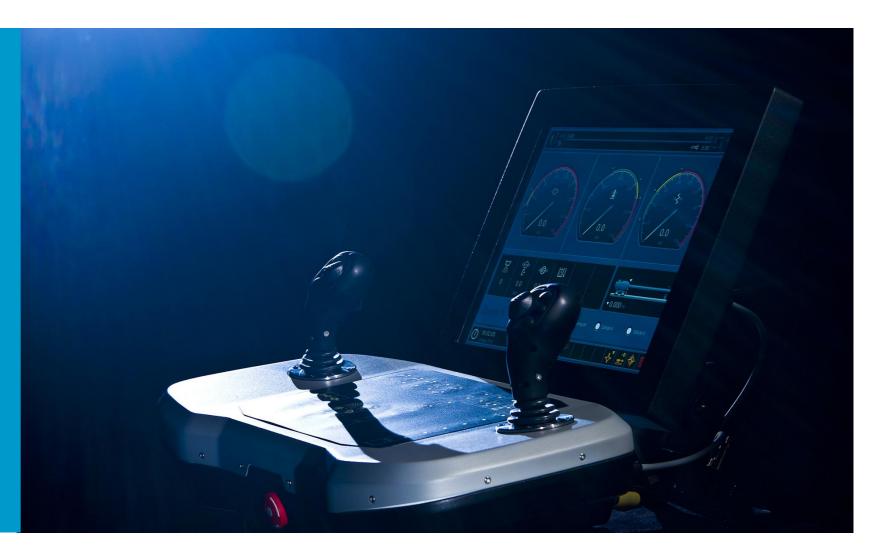
### **MINING AUTOMATION**



### **AUTOMATION**

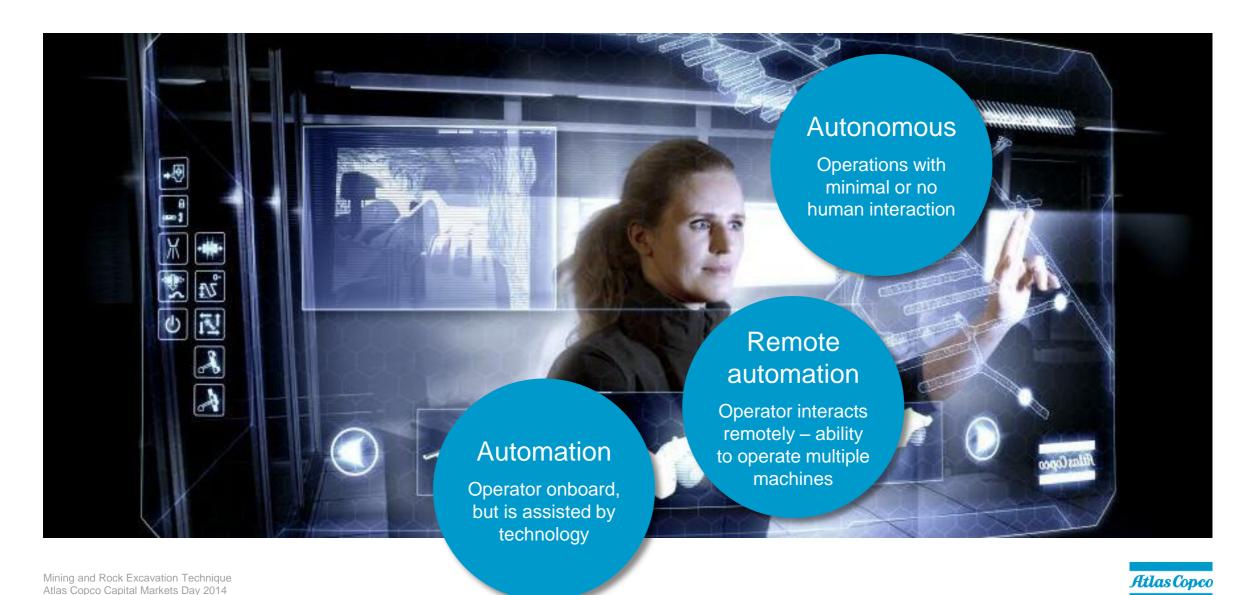
Rig Control System installed on equipment increases productivity and enables automation

Large installed fleet





### **MINING AUTOMATION**



#### **MULTI-MACHINE OPERATIONS**

One operator can monitor and operate up to six production drill rigs

One shift per day – rigs on auto through the night

Operators sit in office





### **LOADER AUTOMATION**



14 ton loader operating in a 10 ton loader sized drift

Control room 80 km from the mine



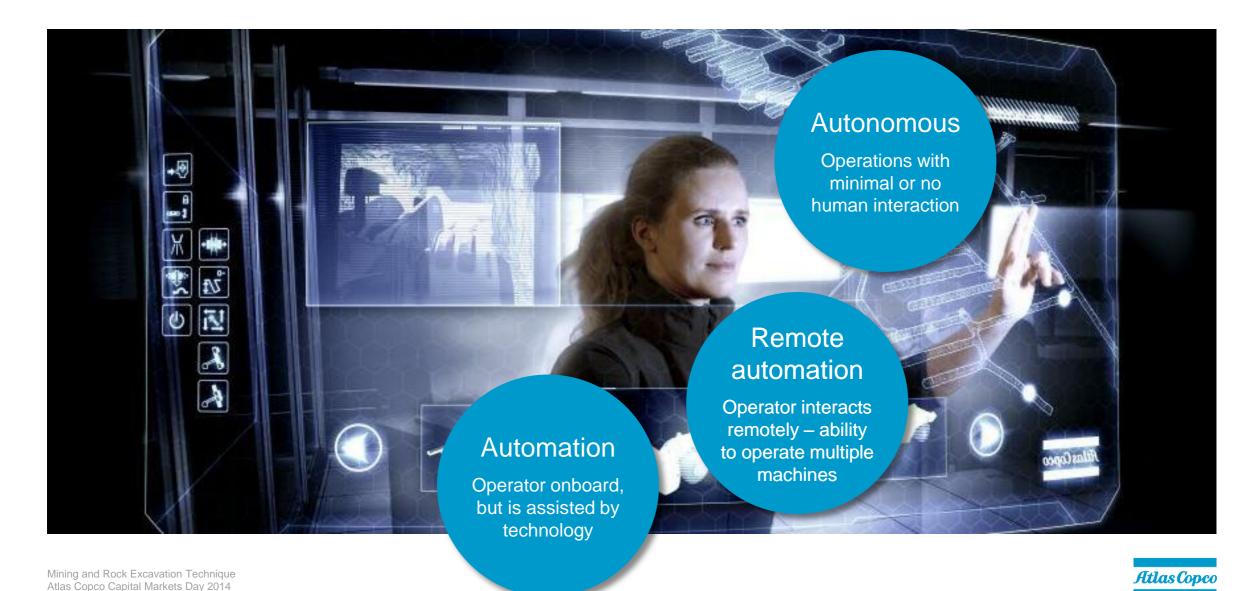
### **BENCH REMOTE**

One operator runs two drill rigs with remote control





### **MINING AUTOMATION**



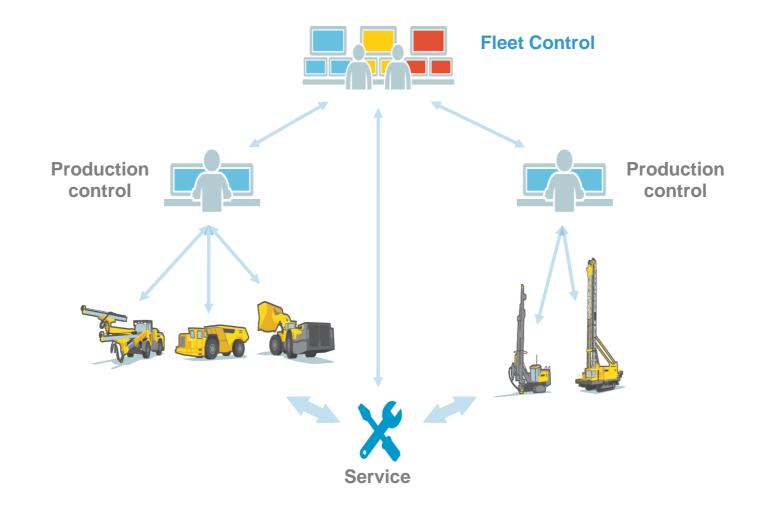
# **FULLY AUTONOMOUS**





#### **MINING AUTOMATION – THE FUTURE**

#### Large installed fleet with process control and consultancy products





#### **SUMMARY**

- More productive and efficient equipment, services and consumables
- Mechanization and automation
- Efficiency and time to market
- Growth opportunities





# COMMITTED TO SUSTAINABLE PRODUCTIVITY.



# Atlas Copco