Atlas Copco
Mining and Rock Excavation Technique

Capital Markets Day 2017
Helena Hedblom, Business Area President
Agenda

1. Facts in brief
2. Business fundamentals
3. Customer value in global trends
4. Summary
Mining and Rock Excavation Technique

Growth drivers

- Innovations and automation
- Focus on customers’ total cost of ownership
- Strengthen agility and resilience
- Grow service and consumables

Orders, revenues and operating margin
Mining and Rock Excavation Technique

Customer split

Orders received by customer category

- Construction: 30%
- Mining: 69%
- Other: 1%

Orders received 2016

Orders received 12 months figures

- Civil
- Mining
- Share of mining, %


Values: 0, 5000, 10000, 15000, 20000, 25000

Share of mining: 0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%
Revenues by business type

- Equipment: 30%
- Service (consumables): 25%
- Service: 45%

Revenues December 2016, 12 months figures

Revenues 12 months figures
- Equipment revenues, MSEK
- Service and consumables revenues, MSEK
- Service and consumables, share of revenues, %
**Mining**

Estimated exposure to minerals

**June 2017**

- **Gold**: 35%
- **Copper**: 24%
- **Zink**: 4%
- **Platinum**: 3%
- **Coal**: 3%
- **Iron**: 5%
- **Nickel, Lead**: 13%
- **Other**: 13%

Orders received June 2017, 12 months figures (all business types)
Mining and Rock Excavation Technique

- **Underground mining**
- **Surface mining**
- **Exploration**

- **Underground civil engineering**
- **Surface civil engineering, urban development, quarrying**
- **Geotechnical, ground engineering well drilling oil and gas**
Business fundamentals

Agility and resilience through a strong aftermarket position
Business fundamentals

Opportunities and presence in profitable niche markets
Business fundamentals

Sustainability as a core value in our strategy
Business fundamentals

Our innovation is founded in people and knowledge
Creating customer value on global trends: Mine of the future

1. Fossil free mine
2. Interoperability
3. Automation
4. Digitalization
5. Mechanical rock excavation
Traffic management
Optimized pit-to-port supply chain through analytics
Advanced analytics in remote control center
Control tower for all mine operations
Predictive maintenance through telematics
Integrated modelling of geospatial information
Automated, electric platooning trucks
Automated navigated drill rigs
Drill-to-crush process optimization
Assure on-time delivery of consumables
On-demand ventilation
Automated de-watering
Smart grid technology for electricity usage
The Mine of the Future
Fossil free mine: battery operated equipment
Creating customer value on global trends

- Complete fleet of electrified mining equipment
- Common infrastructure
- From ventilation on demand to fossil free

1. Cleaner, safer and more flexible operations
2. Potential for greater production at reduced cost due to less need for mine ventilation
   - 80% less energy for the same amount of work than a diesel machine
   - 100% reduction in CO₂ from diesel
Interoperability & automation: underground mining

Creating customer value on global trends

- From asset control to process control
- From connected equipment to real time mining
- From supplier to business improvement partner

1. Increased safety, productivity and reliability
2. Support for continuous improvement
3. Higher equipment utilization & predictability

✓ 20% improvement in rock reinforcement activity thanks to Boltec reporting status
Interoperability & automation: surface mining

Creating customer value on global trends

- From asset control to process control
- From connected equipment to real time mining
- From supplier to business improvement partner

1. Increased safety, productivity and reliability
2. Higher Predictability allowing process to run at prescribed intervals

**Autonomous**
- Pit Viper
  - 16% faster per cycle - 20% better utilization - 30% increased drill capacity

**SmartROC**
- Automation enabled with full drill cycle – automatic feed positioning – hole navigation system – remote operation
- Fleet monitoring with Certiq, Surface and ROC manager

Increased safety, productivity and reliability

Higher Predictability allowing process to run at prescribed intervals

Autonomous
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SmartROC
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### Digitalization: the mine alliance

Creating customer value on global trends

- Performance center for global connectivity
- Mine of the future

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<th>Company</th>
<th>Features</th>
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| 1 | Certiq    | ✓ Full data monitoring access  
                              ✓ Predictive maintenance |
| 2 | Mobilaris | ✓ Real time asset positioning                                   |
| 3 | Saab / Combitech | ✓ Control tower, cyber security & ecosystem solutions |
**Mine Alliance**

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<th>System Integration – Network Management – Advanced Analytics – System Security</th>
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Together with partners we offer complete mine systems solutions

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Fleet/Traffic Management System

- Atlas Copco Equipment
- Mobilaris
- ABB

- System Integration
- Network Management
- Advanced Analytics
- System Security

- SAAB
- Other OEM
- Real Time Positioning
- Process Control
- Dynamic Mine & Plant Real Time

- Mine Planning
- Production/ Maintenance
- Scheduling
- Ops Modelling & Simulation
- Work Management
- Production Management
- Business Planning

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**Atlas Copco Capital Markets Day 2017**

**Mining and Rock Excavation Technique**
Mechanical Rock Excavation
Creating customer value on global trends

- From high performance drilling and blasting to continuous mining

1. Complete fleet in one machine with high precision profiling
2. Easier scheduling and planning for increased efficiency and predictability
3. Safer operations through automation and remote operation
Summary – Mining and Rock Excavation Technique

- Agile and resilient with strong after market position
- Strong innovation focus
- Creating customer value through battery technology, automation and digitalization
Committed to sustainable productivity.
"Some statements herein are forward-looking and the actual outcome could be materially different. In addition to the factors explicitly commented upon, the actual outcome could be materially and adversely affected by other factors such as the effect of economic conditions, exchange-rate and interest-rate movements, political risks, the impact of competing products and their pricing, product development, commercialization and technological difficulties, supply disturbances, and major customer credit losses."