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INDUSTRIAL AUTOMATION

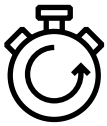
# ABB Mining Care

Service agreements built with care



# ABB Mining Care

The global standardized service agreement framework that helps our customers



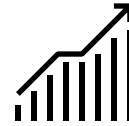
## Cut complexity

**Less time wasted. Fewer hassles. Simplified service interaction.**  
Services performed safely and efficiently with one point of contact from the start through the duration of the contract.



## Control cost

**More predictability. Fewer surprises. Consistent service delivery.**  
Structured approach with fixed annual pricing, so customers have a consistent experience every time.



## Maximize capital

**ABB equipment. Your equipment. Customized service alignment.**  
Issues detected early enough to take action, and improvements implemented that avoid problems and sustain gains.

## 1. We start with your assets so we're on the same page

Drawing from our installation database, ensuring revision levels and performing a health check if desired

Control Systems	Conveyor Systems	Drives and Motors
Gearless Mill Drive Systems	High-Pressure Grinding Rolls Drive System	Electrical Substations
Mine Hoists	Ring-Geared Mill Drive System	Robots

## 2. We work with you to understand your needs

If you need	Timely local and remote support?	Added asset and process support?	Improved and updated skills?	New features and functions?	Parts and repair availability?
	High asset utilization?	Lower production costs?	Longer asset lifecycle?	Higher production?	High asset and process reliability?
Then you should consider	Rapid response services	Inspection and diagnostics	Training or Resident Engineer	Life cycle assessment	Parts Fingerprint and Repair services
	Performance Improvement services	Collaborative Operations	Lifecycle Management services	Operational excellence services	Predictive Maintenance Services



### 3. Together, we determine the care package that meets your needs

Starting with a LifeCycle Assessment, if desired

#### 1. Rapid Response



##### Copper mine in Brazil

Needed guaranteed response time for corrective maintenance, access to technical support and recommended spare parts.



We meet that need with **RAPID RESPONSE**

Guaranteed fast and flexible service response to maximize equipment availability.

**Customer Benefit:** Higher availability

**Equipment covered:** ABB 800xA Control System and ABB Production Management software

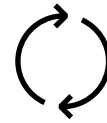
**Services include:** 4 hours Mobilization, 24/7 Technical Support and Recommended Spares

#### 2. Lifecycle Management



##### Copper mine in Chile

Needed a reliable partner for long-term service activities to improve and optimize asset life cycles.



We meet that need with **LIFECYCLE MANAGEMENT**

Provides powerful tools and our knowledge base to optimize and extend equipment life.

**Customer Benefit:** Better asset performance

**Equipment covered:** 1 SAG Mill Gearless Mill Drive System and 2 Ball Mill Gearless Mill Drive Systems

**Services include:** 24/7 Technical Support, Preventive Maintenance, Remote Troubleshooting and Spare Parts Kit

#### 3. Performance Improvement



##### Zinc and copper mine in Sweden

Needed higher cyber security, improved control performance and remote equipment monitoring.



We meet that need with

**PERFORMANCE IMPROVEMENT**

Increased productivity through usability and efficiency optimization of equipment and processes.

**Customer Benefit:** More quality production

**Equipment covered:** ABB 800xA Control System, ABB Drives,

ABB Electrical Products, ABB Mine Hoists and ABB Motors

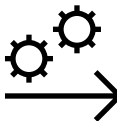
**Services include:** ABB Ability™ Performance Optimization for control systems- 800xA and Security Updates for ABB Distributed Control Systems

#### 4. Operational Excellence



##### Mining and mineral processor in Sweden

Needed a higher level of automation to improve efficiency and integrate all critical functions, such as crushers, conveyor belts, skip loading, concentrator and pumping stations.



We meet that need with

**OPERATIONAL EXCELLENCE**

Collaboratively manages your assets, operations, and risk to deliver strategic business results.

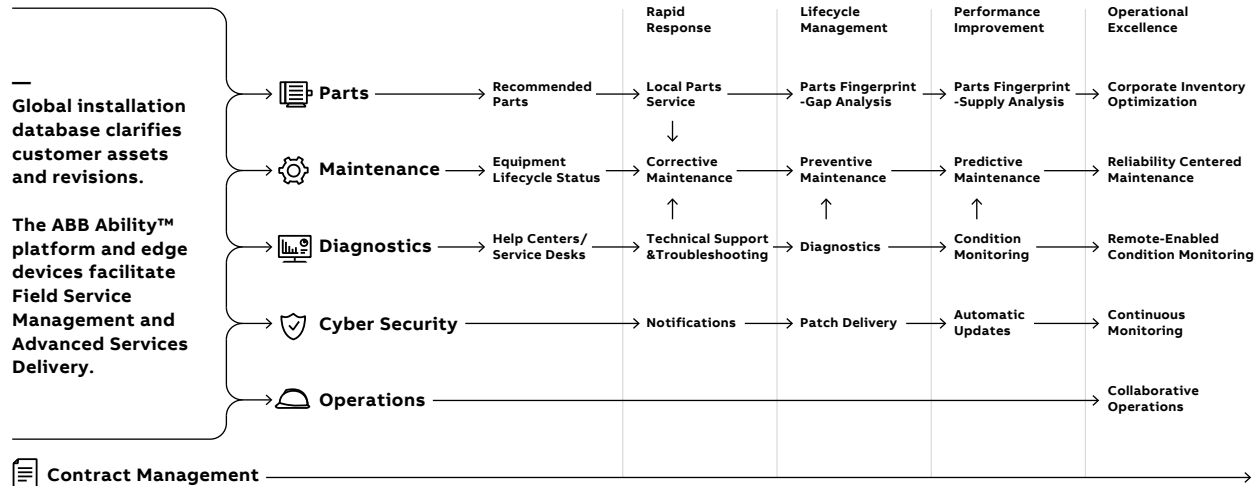
**Customer Benefit:** Improved operations

**Equipment covered:** ABB Distributed Control Systems, ABB

Drives, ABB High-voltage Transformers and ABB Mine Hoists

**Services include:** ABB Ability™ Performance Optimization for control systems- 800xA ABB SmartVentilation and ABB Ability™ Performance Optimization for hoists

## 4. We apply expert people, processes and tools to perform services



## 5. Let's get started, choose the options that optimize your agreement

x - Included    o - Optional    Shaded = standard on every agreement

	Rapid Response	Lifecycle Management	Performance Improvement	Operational Excellence
<b>Contract Management</b>	x	x	x	x
<b>Equipment Lifecycle Status</b>	x	x	x	x
<b>Recommended Parts</b>	x	x	x	x
<b>Help Center / Service Desk</b>	x	x	x	x
<b>Technical Support</b>	x	x	x	x
<b>Remote Troubleshooting</b>	o	o	o	o
<b>Corrective Maintenance</b>	x	x	x	x
<b>Spare Parts</b>	x	x	x	x
<b>Life Cycle Assesments</b>		x	x	x
<b>Preventive Maintenance</b>		x	x	x
<b>Parts Fingerprint - Gap Analysis</b>		x	x	x
<b>Performance Optimization for Control Systems</b>			x On-Site	x Remote-enabled
<b>Performance Optimization for Control Loops</b>			x On-Site	x Remote-enabled
<b>Cyber Security for Control Systems</b>			x On-Site	x Remote-enabled
<b>AssetVista Condition Monitoring</b>			x On-Site	x Remote-enabled
<b>Hoist Performance Fingerprint <sup>1</sup></b>			x On-Site	
<b>Performance Optimization for Hoists <sup>1</sup></b>				x Remote-enabled
<b>ConveyorFingerprint <sup>2</sup></b>			x	
<b>ConveyorFit <sup>2</sup></b>			x	x Remote-enabled
<b>Conveyor Roller Inspection Services <sup>2</sup></b>			x	x Remote-enabled
<b>24/7 Supportline and troubleshooting Corrective Maintenance Services <sup>3</sup></b>	x	x	x	x Remote-enabled
<b>Preventive Maintenance Services Periodic maintenance reports <sup>3</sup></b>		x	x	x Remote-enabled
<b>Predictive Maintenance Services Online Fault Prediction and notification services <sup>3</sup></b>				x Remote-enabled
<b>Parts Fingerprint - Supply Analysis</b>	o	o	x	x
<b>Training</b>	o	o	o	o
<b>Engineering &amp; Consulting</b>	o	o	o	o
<b>Electrical System Study</b>	o	o	o	o
<b>Resident Engineer</b>	o	o	o	o

<sup>1</sup> Underground Mining    <sup>2</sup> Material Handling    <sup>3</sup> Grinding