



LCS

Life Cycle
Services

2

Shutdown and
Wear Parts
Optimization

1

Scheduled Inspections

2

Shutdown and Wear Parts
Optimization

3

Shutdown and Process
Optimization

4

Maintenance and Process
Optimization

Life Cycle Services Contracts

Life Cycle Services (LCS) take the entire range of services Metso provides and conveniently bundles them into customizable, easily manageable packages, ranging from the basics to more complete solutions, depending on the scale of your needs. Our packages are equipped to cover a single-event shutdown or span multiple years, measured against strict key performance indicators (KPI).

The challenge: It's all about availability.

Shutdowns don't just happen. They need to be measured and improved on a continual basis. If any aspect of a shutdown isn't synchronized, delays can set in quickly, at which point you risk losing production volumes and revenues.

Equipment shutdowns for planned or emergency maintenance directly impact your production, and it can be challenging to coordinate all required resources, equipment, tools, procedures and schedules. In addition, many suppliers only provide one part of a shutdown package, meaning multiple teams become involved, which can complicate the process.

The solution: Shutdown and Wear Parts Optimization

Get your equipment back up and running. Fast.

An LCS Shutdown and Wear Parts Optimization solution means you get one supplier performing all components of a shutdown from start to finish. With this package, we take responsibility for reducing your downtime due to shutdowns over the life of the contract. We also look to improve your efficiency by optimizing your wear parts for longevity and their highest production capacity.

When you sign on, we'll give you everything you need, backed by commercial terms and payment plans that work for you. Our package gives you:

1. Scheduled inspections

2. Wear parts design, supply and optimization

3. Shutdown planning, execution and follow-up

4. Wear and spare parts inventory (you don't pay for liners until they are installed)

What we do: Take care of the shutdown planning, execution and follow-up.

- Plan and schedule shutdown based on your task list, using specialized planning tools
- Analyze and optimize your wear parts
- Conduct SMED time-and-motion studies and simulations for safer, more efficient shutdowns

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- Meet and exceed all site-specific safety requirements and regulations
 - Manage the production schedule and delivery for mill liners and others major wears
 - Bring all wears and spares to the site ahead of time and maintain inventory
 - Provide all shutdown labour, tools and wear parts optimized through simulations
 - Execute the shutdown based on experience gained from thousands of Metso installations
 - Make follow-up measurements and hold a process improvement meeting with your team
 - Conduct a full cleanup and provide shutdown reports from our Computerized Maintenance Management Solution (CMMS).



Extra features:

- We guarantee shutdown time with remuneration tied to KPIs to ensure we perform
- Under an LCS contract, shutdown times are guaranteed to improve over time, ensuring no cost overruns
- Fixed monthly invoicing, rather than a lump sum payment, allows better management of your cash flow
- All elements of our base package (Scheduled inspections) can also be included in this package

Benefits

Core benefit: Maximized availability and less downtime

Our ability to optimize the life of your liners means you'll change wear parts less often, minimize planned downtime and optimize production. Along with our planning, custom-designed tools, specially trained shutdown crews and follow-up work, you'll also be guaranteed faster shutdown events. Simply put, this package spells more uptime for your equipment. You'll also get:

- **Zero compromise on safety:** Our utmost priority, plain and simple. Documented time-and-motion studies of your shutdowns help pinpoint potential hazards, while better planning and access to Metso-designed tools reduces onsite risks and keeps your team safe.

- **Increased production:** Higher uptime, more effective crushing and grinding through optimization of your wear parts, and continuous support from a process specialist ensures you maximize your productivity rate over the life of the wear components.

- **Lowest sustainable cost:** By extending the life of wear parts and reducing lost production, you can be sure that your costs will be minimized over the life of the contract.

- **Improved reliability:** Scheduled inspections, coupled with our maintenance expertise, help reduce the chances of unexpected shutdowns.

LCS Packages	Package 1	Package 2	Package 3	Package 4	Customized Package
LCS Service Offerings	Scheduled Inspections (and EPP)	Shutdown and Wear Parts Optimization	Shutdown and Process Optimization	Maintenance and Process Optimization	Custom Selections (Mix and Match)
Wears and Spares					
· Preliminary Diagnostics and Baseline Studies	X	X	X	X	Yes
· Inspections and Equipment Protection Plan (EPP)	X	X	X	X	Yes
· Inventory Optimization	Recommended	X	X	X	Yes
· Wears Consignment Inventory	Recommended	X	X	X	Yes
· Spares Consignment Inventory	Recommended	X	X	X	Yes
· Liner Profile Optimization		X	X	X	Yes
· Wear Component Analysis		X	X	X	Yes
· Wear Component Replacement Labour		X	X	X	Yes
· Spare Component Replacement Labour		X	X	X	Yes
· Health, Safety and Environment (HSE) Planning		X	X	X	Yes
Shutdown Improvements					
· Shutdown Planning		X	X	X	Yes
· Shutdown Optimization by SMED Analysis		X	X	X	Yes
· Shutdown Guarantee		X	X	X	Yes
· Metso Special Tooling		X	X	X	Yes
Process Optimization					
· Comminution Optimization		Recommended	X	X	Yes
· Condition Analysis (Acoustic Mill Condition Monitoring)			X	X	Yes
· Process Integration and Optimization (PIO)			X	X	Yes
· Control Performance using Plant Triage Software			X	X	Yes
· Ore Characterization (Using SmartTag)			X	X	Yes
· Geometallurgical Modelling (Using GeoMetso)			X	X	Yes
Maintenance and Training Offers					
· Metso Maintenance Solution (customized CMMS)			Recommended	X	Yes
· CMMS FRACAS Reliability Studies				X	Yes
· Maintenance Planning				X	Yes
· Equipment Documentation Library				X	Yes
· Equipment Performance Report				X	Yes
· Overall Equipment Effectiveness Reporting				X	Yes
· Plant Maintainability (Plant Design) Review				X	Yes
· Root Cause Analysis (RCA)				X	Yes
· Criticality Analysis Report (CA)				X	Yes
· Reliability Event Model Analysis				X	Yes
· Vibration Analysis				X	Yes
· Lubricant Condition Monitoring				X	Yes
· Lubrication Labour				X	Yes
· LCS Training Plans					Yes
Financial and Costing Programs					
· Fixed Monthly Fee Payments	Recommended	Recommended	Recommended		Yes
· Cost Per Ton Payment Plan				Recommended	Yes
· Key Performance Indicators (KPI) Reporting				Recommended	Yes
· Total Cost of Ownership Reporting				Recommended	Yes
· Payment Deferral Plan					Yes



Why Metso?

As a manufacturer of comminution equipment, replacement parts and wear parts, and—most importantly—as a provider of services, only Metso offers you a single package covering the build, operation and maintenance of mining equipment. Each LCS package is backed by commercial terms and services aligned to your needs. Our people, knowledge and solutions, coupled with experience gained through thousands of global shutdowns, ensure you only the best results. **This is our guarantee to you.**