



LCS

**Life Cycle
Services**

4

Maintenance and
Process
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 reliability.

Once your process is achieving its best productivity rates and shutdowns are running as planned, the next step is reliably maintaining performance levels while keeping maintenance costs in check. To do this, putting industry-standard maintenance strategies in place, supported by proven reliability engineering tools, becomes critical.

Keeping track of evolving supplier products, however, can be challenging. Each has its own maintenance schedule, procedures and safety considerations, which can make planning problematic. All it takes is one weak link in your maintenance plan to trigger unnecessary equipment failure, shutdown delays and lost production.

The solution: Maintenance and Process Optimization

Keeping your equipment running smoothly.

An LCS Maintenance and Process Optimization solution means you get one supplier helping you not only get the most out of your shutdowns, but also supporting you in the development and efficient delivery of a comprehensive Maintenance Strategy.

An industry-best Maintenance Strategy brings together all the necessary safety, planning, documentation, inventory, staffing and reporting requirements, focussing on your greatest areas of need to give you reliability and the most bang for your buck. We provide you with maintenance expertise from hundreds of Metso-supervised sites worldwide, our Original Equipment Manufacturer (OEM) knowledge and access to our globally benchmarked maintenance data. All of this is backed by commercial terms and payment plans that work for you.

What we do: Plan the maintenance and execute the plan.

- Conduct a Criticality Analysis study to determine which equipment to focus on
- Analyze failure modes for your most critical machines using FRACAS and other tools
- Implement Metso Maintenance Solution, a custom Computerized Maintenance Management System (CMMS) software
- Examine optional custom-engineered solutions using Reliability Availability Maintainability (RAM) tools

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- Develop KPIs together with your team and measure the plan's performance against them, looking for areas to improve
 - Create Health, Safety and Environmental (HSE) plans based on world-class practices
 - Load related procedures and manuals in the CMMS document library for easy access
 - Schedule and establish trained crews, inventory and tooling needs
 - Create maintenance plans detailing info on all tasks, safety requirements, permits, labour, parts and tools to be loaded into the CMMS

Extra features:

- Manage your cash flows better with fixed monthly payments, rather than upfront lump sums
- All elements of our Scheduled Inspections, Shutdown and Wear Parts Optimization, and Shutdown and Process Optimization packages can also be included, ensuring less downtime and higher productivity rates. Consult their respective inserts for more details.



Benefits

Core benefit: Improved reliability to ensure your equipment runs like it should

By implementing cost-effective Maintenance Strategies, baselined on hundreds of Metso-supervised sites, you can be sure your equipment's reliability is in good hands. New elements of the Maintenance and Process Optimization package focus on keeping your equipment running at their highest levels.

- **Zero compromise on safety:** Our utmost priority, plain and simple. By keeping maintenance documentation in one place, and with better planning and access to Metso custom-designed tools, safety risks can be minimized.

- **Lowest sustainable cost:** High equipment reliability does not always equal higher costs. We work with you by measuring and continuously refining KPIs to lower your cost of maintenance. With our OEM knowledge of crushing and grinding equipment, we'll help you cut out unnecessary maintenance steps.

- **Higher availability and optimal production rates:** You also get the full slate of benefits from prior LCS packages—liner optimization, shutdown planning, custom-designed tools, specially trained crews, follow-up work, etc. Everything to ensure fewer outages, faster shutdowns and optimized production levels.

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.**