

Maximo Asset Management

delivering business value to Mining organisations

In an environment where tough economic conditions prevail, organisations are increasingly challenged with providing assurance to their stakeholders that corporate obligations are being achieved in all areas of operations. Effective management of Mining operations **Physical Assets** is an essential element in the delivery of stakeholder value.

The Mining Asset portfolio is becoming increasingly diverse, with assets such as Mobile Mining fleet, Fixed Plant & infrastructure including Rail, Roads and Port facilities. Asset Managers are challenged with ensuring an organizations assets are managed effectively, with a focus on optimum performance whilst minimizing costs and mitigating risk, aligned to its organisational strategic plan.

Industry challenges

The Mining Industry has undergone significant transformation in recent years as organisations consolidate to ensure global competitiveness.

Strong demand and high commodity prices is driving investment as organisations strive to deliver new operations and optimise production at existing sites, in an environment where regulatory demands are becoming increasingly stringent.

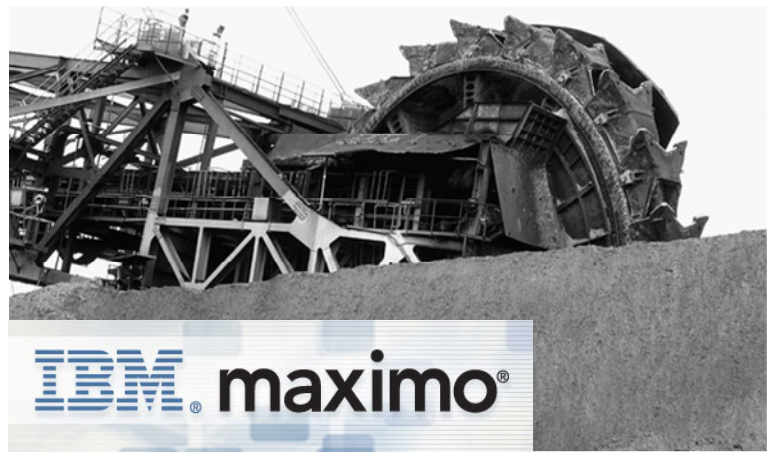
Mining operations continue to confront a series of challenges that impact on their competitive performance and the delivery of value to their stakeholders including:

- *a commitment to workforce safety*
- *a focus on cost containment*
- *the shortage of skills and retention of knowledge*
- *the drive for continuous improvement towards operational excellence*
- *environmental and regulatory compliance*
- *the efficient & effective management of Physical Assets*

Maximo Enterprise Asset Management (EAM) solution provides an integrated process enabled capability that empowers Mining organisations to address these challenges and deliver tangible and sustainable business value to the bottom line.

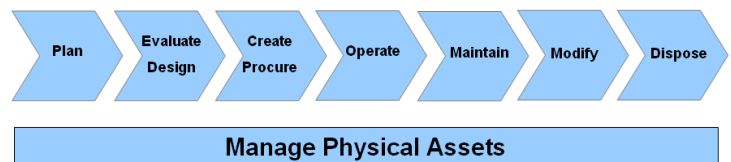
How Maximo delivers

IBM Maximo is a complete **process based** Asset Management solution for the Mining Industry. Built on a service-oriented architecture (SOA), Maximo for Mining comprises six key functional areas: Asset, Work, Materials, Procurement, Contracts and Service Management supported by powerful reporting and analytics capabilities - delivering traditionally separate business functions in a single, integrated platform for the management of all assets.



Asset life cycle

Supporting the activities associated with the Asset Life Cycle model, Maximo delivers a process centric capability with a foundation based on the Management of Physical Assets (MPA).



The MPA processes supported by Maximo provide Asset Managers with complete lifecycle visibility of all asset information including specifications, parts, work history and complete costs thereby enabling the efficient and effective management of organisations assets, aligned to corporate strategy.

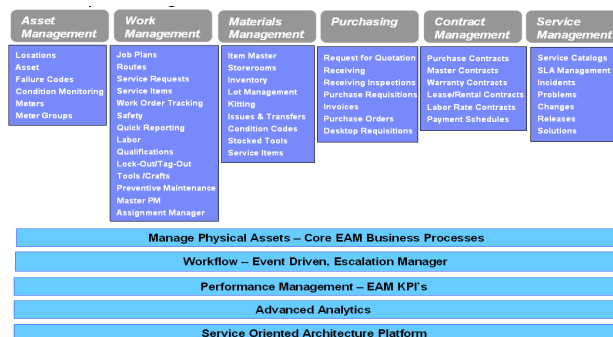
Maximo provides Asset Managers with accurate, real time information that increases productivity, delivers cost savings and influences Return on Assets (ROA) through improved equipment reliability, optimization of inventory investment and effective utilization of both internal and contract resources.

Productivity benefits can be sustained by leveraging Maximo's powerful workflow engine to drive key business processes for planning, scheduling and the execution of work. Management decision making is enabled through the presentation of role based KPI's, complemented by EAM analytics that drive ongoing business improvement initiatives.

Why Maximo...?

1. Integrated

Seamless integration across the Maximo suite of modules underpinned by a powerful workflow engine that promotes operational excellence through streamlined business processes that eliminate costly bottlenecks and supports the effective execution of work.



2. Process based solution

As organisations strive to deliver value to its shareholders, operational processes are often scrutinized to ensure they are aligned to business objectives.

The integrated suite of Maximo modules provides deep functionality to support those activities associated across the asset lifecycle and utilizes a Manage Physical Assets (MPA) model to ensure seamless processes are enabled in the execution of work practices.

Whilst these processes can sometimes be complex, the seamless integration offered by Maximo underpinned by role based user profiles ensures business activities are undertaken in an efficient and effective manner.

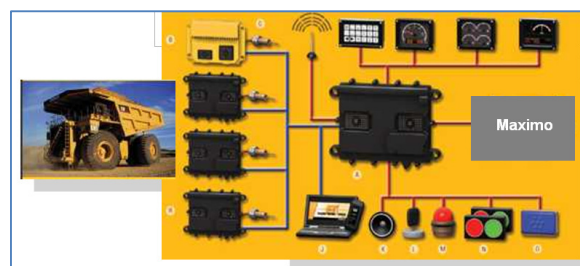
The outcome is reliable, accurate and timely information to support management decision making and drive future business improvements. Organisations can lock in the value of these processes using Maximo's powerful workflow engine, which enables productivity sustainment by ensuring consistent work practices thereby eliminating bottlenecks and mitigating risk associated with safety and regulatory compliance.

3. Open standards based architecture

Maximo is built on a standards-based, open, service-oriented architecture (SOA) which integrates with modern technology infrastructures.

The Maximo architecture enables simple, seamless integration with operational systems and external data sources that provides process optimisation capability for Mining organisations. These include;

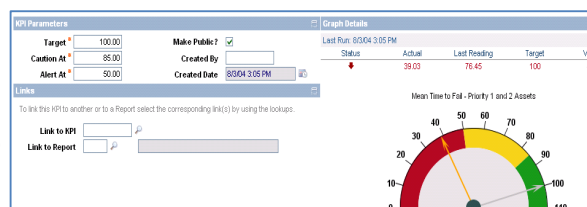
- Plant Control systems such as DCS, SCADA & PLC
- Fleet & Haul Truck monitoring systems
- Telemetry, field and condition monitoring devices
- E-commerce & B2B applications
- Spatial applications
- Financial systems



This capability leverages investment across disparate systems and delivers value by eliminating redundancy and enabling the reliable sharing of key business information for timely decision making and effective work execution.

4. Complete reporting and analytics

The demand for accurate, timely and meaningful information is a fundamental requirement that enables Managers to monitor, influence and initiate actions that impact on the performance of their business.



Maximo provides a full suite of tools which delivers comprehensive information including;

- Daily operational reporting that delivers real time information for line of business representatives including rich text editing and formatting capabilities combined with embedded graphical content
- Performance Management capability in the form of role based Start Centers that provide real time insight into business performance through the presentation of industry recognised KPI's
- Extensive Analytic capability that enables visualization, analysis and optimisation of key business data that provides Managers with the necessary information to initiate and effect business improvement initiatives

Maximo delivering business value

Maximo is the leading EAM solution used by over 10,000 organisations across the globe to optimize the performance of their assets. The integrated Maximo suite offers Mining organisations sustainable business value in the management of its assets by maximizing reliability, improving performance, mitigating risk, and reducing costs which in turn delivers a higher ROA to its stakeholders.

The Mining Industry is constantly challenged by key issues that impact on the competitive performance of their operations. Maximo provides capability across the organisation to ensure the necessary information is available in a timely manner to effect management decision making, drive productivity and ensure optimum business performance.

	Executive Management	Asset Manager	Maintenance Manager	Supply Manager	Contract Manager
Issue	Business Value				
Safety	Work procedures, parts and tools are defined to ensure compliance with Organisational policy	Effective Asset registration to support ALM needs; <ul style="list-style-type: none"> - Specifications - Technical drawings - Spare parts - OEM data - Maintenance procedures 	Effective job plans, procedures, competencies	Accreditation of Vendors and Asset Spares to ensure performance is aligned to business needs	Accreditation of Contractors to ensure performance is aligned to business needs
	Procedural documentation is provided for operational activities		Visibility of resources & associated skills		
Capital Spend	Capital investment is aligned to budget	Asset Reliability capability to ensure asset lifecycle is optimised	Optimise maintenance practises	Inventory optimization to support financial and operational demands	Contractor performance analysis to ensure compliance with quality, safety and regulatory requirements
	Asset performance aligned to Corporate strategy	Planning for capital spend	Mitigate need for capital replacement/refurbish		
Resource Management	Accurate projection of labour effort and costs	Visibility of resource projections to identify overheads, shortfalls	Optimum resource utilisation for maintenance, operations, shut downs	Streamlined processes for procurement, inventory and storekeeping	Contractor performance aligned to business need
	Effective Workforce planning		Skills, competencies are aligned to operational need		
Cost Management	Cost Management is aligned to budget	Visibility of total asset lifecycle costs	Management of Maintenance budgets	Optimisation of Inventory levels	Management of enterprise pricing agreements.
	Productivity improvement initiatives are supported	Cost projection & analysis Overall Equipment Effectiveness (OEE) analysis	Predictive Job Planning & Scheduling Elimination of reactive work	Effective Vendor/OEM relationships to support pricing and service level expectations	Execution of Warranty agreements to mitigate cost leakage
Asset Performance	Reliable performance metrics across the asset portfolio	Analytics to influence asset performance across all operations Asset Management strategy aligned to Corporate objectives	Performance measurement and analytic capability to enable effective & efficient management of maintenance activity	Sourcing of preferential parts to ensure operational objectives are achieved	Contract arrangements aligned to operational strategy requirements
	Optimise asset life, to ensure effective ROA			Service delivery aligned to business risk analysis	

For more information

To find out how you can leverage integrated asset and service management solutions from IBM for the mining industry, contact your IBM representative or IBM Business Partner, or visit:

ibm.com/software/tivoli/solutions/asset-management

Additionally, financing solutions from IBM Global Financing can enable effective cash management, protection from technology obsolescence, improved total cost of ownership and return on investment. Also, our Global Asset Recovery Services help address environmental concerns with new, more energy-efficient solutions. For more information on IBM Global Financing, visit:
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