

Maximo Health, Safety and Environment Manager

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What is Health, Safety & Environment Management?

- The processes and programs organizations use to ensure the health and safety of:
 - Employees
 - Consumers
 - Communities
 - Environment



What is driving Health, Safety & Environment and Sustainability needs?

- **Profitability & Productivity**
 - Making sure materials are under compliance, improving productivity and product quality
- **Operating Costs**
 - Eliminating downtime caused by non-compliance, fines, accidents and/or safety incidents
- **Capital Investments**
 - Considering regulatory requirements and overall health, safety, and environmental implications
- **M&A, Divestitures, Joint Ventures**
 - Implementing a health, safety & environmental system and processes that can change with the business
- **Risk Management**
 - Avoiding fines, work stoppages, plant downtime, inventory losses, damaged reputations, supply chain disruptions



What are the HSE Business Drivers for Asset-Intensive Companies?



Asset-intensive companies must:

- Provide safe and reliable operations
- While:
 - Supporting business growth, and
 - Strengthening enterprise/operational risk management



In addition,

- Asset intensive companies are under increased pressure to:
 - Control cost,
 - Accurately track recordable injury data,
 - Maintain easily accessible material hazard information, and
 - Mitigate hazards



- HS&E administrators are looking to assure they are in compliance, and that their facilities meet complex regulatory reporting requirements
- Operations managers are looking to link Health, Safety and Environment information with plant asset information

Introducing Maximo Health, Safety and Environment Manager

The primary objective of Health, Safety & Environment initiatives is to: reduce overall risk, comply with appropriate regulations, and create a safe yet efficient operating environment

Achieving this objective is as much about standardizing HS&E practices as integrating these practices with day-to-day operations management.

Maximo Health, Safety, and Environment Manager provides a foundational enterprise platform that integrates Health, Safety, and Environment processes with work and asset management.



A Solution Fit for Maximo



It is often latent conditions created by maintenance lapses that set an accident sequence in motion or threaten its recovery..

An organization must possess the technical competence necessary to achieve safety goals..

*Competence is very closely related to the quality of an organization's safety information system.. **

* J. Reason, 1997. Managing the Risks of Organizational Accidents

- A new debate is brewing –
 - Are safety and reliability on equal footing? If not, should they be?
- Facts
 - All companies have safety as a top priority
 - Few companies have reliability as a top priority
 - Data suggests that a reliable plant is a safe and environmentally sound plant

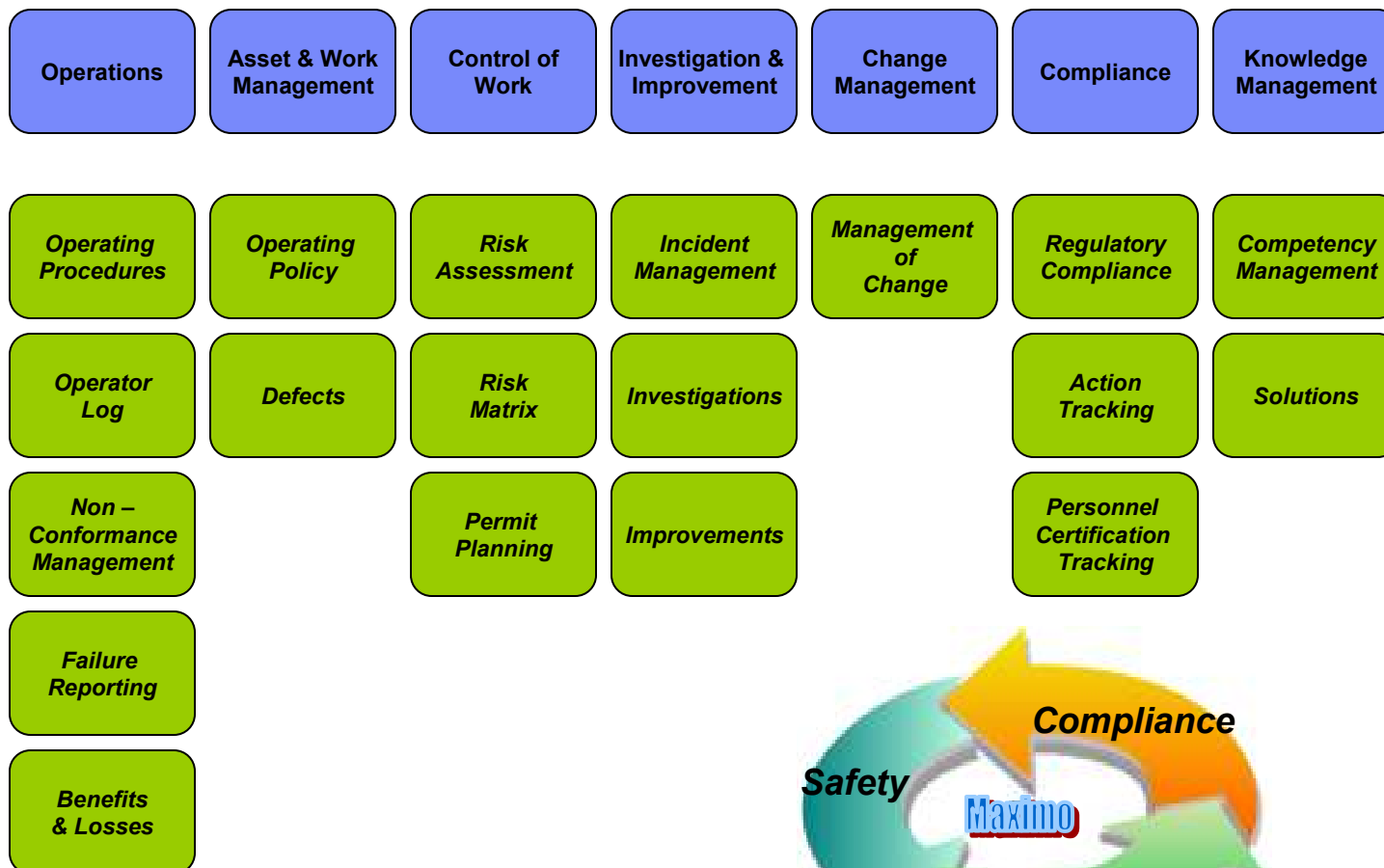
IBM Maximo, with its market leading enterprise asset management solution, addresses reliability and defect elimination.

Now, with its Health, Safety and Environment Manager solution, IBM Maximo will help companies provide a reliable and safe work environment.



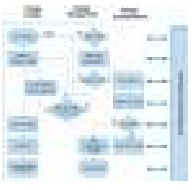


Maximo Health, Safety and Environment Manager

Critical Business Processes


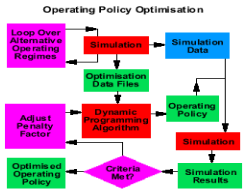

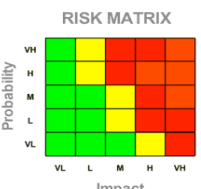

Health, Safety & Environment Applications Supporting Maximo Processes




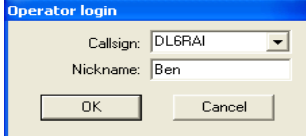



What is Maximo Health, Safety and Environment Manager?

Capability	Benefit
Incident Management 	Addresses the continuous need for customers to improve operational performance by creating, reviewing, and analyzing incidents
Investigations 	Allows customers to identify the root cause of problems arising from incidents on their plants that may be safety, environmental, or production related
Change Management 	Allows customers to support change requirements in a more robust way with multiple levels of reviews/approvals, authorization of change, pre and post start actions
Non-Conformance Management 	Provides non-conformance management capabilities designed to automate, manage, and streamline for identifying, evaluating, reviewing, and handling on non-conforming engineering specifications, materials, components, parts and processes.
Regulatory Compliance 	Identifies regulatory compliance against assets and locations and associates job plans and work orders to these regulations to ensure compliance – significantly reducing the costs associated with compliance




What is Maximo Health, Safety and Environment Manager?

Capability	Benefit
Operating Procedures 	Capabilities for documented, step-by-step operating procedures
Operating Policy 	Governance application for structuring your operating policy
Risk Assessment 	Iterative document that links all associated Health, Safety and Environment activities and organizational data. Allows customers to analyze the risks associated with work carried out through the Maximo products, identifying hazards and defining the impact ranking
Risk Matrix 	An application that models both probability and consequences of events supporting risk management processes
Improvements 	Manages continuous improvement programs like Six Sigma or similar methodologies

What is Maximo Health, Safety and Environment Manager?

Capability	Benefit
Competency Management 	Improves competency assurance through capabilities for adding, modifying, and updating competencies of the workforce
Operators Log 	Electronic log used by shift operators for recording and qualifying events which occur during an individuals shift watch
Personnel Certification Tracking 	Complete history of all personnel job roles, certifications, training and current qualifications
Action Tracking 	Allows customers to track statutory implications to ensure certain types of work and actions are completed by the agreed dates
Benefits & Losses 	Captures benefits/losses associated with improvements or costs associated with incidents, failures, survey/audit findings

What is Maximo Health, Safety and Environment Manager?

Capability	Benefit
Failure Reporting 	Reporting mechanism for capturing metrics to support consistent Failure Reporting and Corrective Action process (FRACAS)
Solutions 	Searchable learning repository associated with lessons learned, or with proven solutions having a safety, operational, maintenance or engineering context
Defect Elimination 	Integrated approach to manage or eliminate defects

National Cooperative Refinery Association

Taking crude oil and making gasoline and diesel fuel



NCRA is an 85,000 barrels/day refinery in McPherson, KS



Business Challenges	IBM Solution	Business Benefits
<ul style="list-style-type: none"> ▪ Informal and unstructured Management of Change process ▪ Informal and undocumented training and communication processes ▪ Inability to easily provide traceability in compliance and reporting processes 	<ul style="list-style-type: none"> ▪ IBM Maximo 	<ul style="list-style-type: none"> ▪ Electronic system allows for work flow ▪ Better review by multiple departments ▪ Easy location of Management of Change in the process ▪ E-mail notification of assigned action items ▪ Paperless process

“A Key Element of Safety and Compliance”

Abu Dhabi Water & Electricity Authority

Implementing government policy regarding water and electricity sector in the Emirate, including privatization of the water and electricity sector



Business Challenges	IBM Solution	Business Benefits
<ul style="list-style-type: none"> ▪ Lack of organizational efficiency and inability to prepare / respond to future challenges ▪ Ability to meet a 9% growth rate for energy consumption 	<ul style="list-style-type: none"> ▪ IBM Maximo <ul style="list-style-type: none"> ▪ Incident Management ▪ Management of Change ▪ Action Tracking 	<ul style="list-style-type: none"> ▪ Built end-to-end capacity, and optimized asset effectiveness to meet demand with a strong focus on financial, social and environmental sustainability ▪ Streamlined operating processes that enabled the efficient delivery of high quality water and power while complying with Government HSE Management System

“A Key Element of Smart Initiatives”

ENMAX



Providing electricity to regulated rate option customers in Calgary, Alberta



ENMAX is an energy generation, distribution, supply & services company in Calgary, Alberta



Business Challenges	IBM Solution	Business Benefits
<ul style="list-style-type: none">▪ Multiple disparate reporting systems▪ Limited ability to trend common causes across systems▪ Unable to track total corrective action workload▪ Limited reporting capability	<ul style="list-style-type: none">▪ IBM Maximo	<ul style="list-style-type: none">▪ Single point of entry reporting and corrective action system▪ Eliminates confusion as to which system to use for reporting▪ Enables common cause trending▪ Simplifies procedures and training▪ Provides visibility into total corrective action workload by person

“A Key Element of Problem Identification and Resolution”

Demo

- Incident
 - Related Records
 - Classifications
- Investigation
 - RCFA
 - FMECA
- MOC (VS. Improvement)
 - Risk Assessment
 - Projects
- Action Tracking
 - Work Package
 - Status Summary

Thank You!



Questions?

