

COURSE OVERVIEW RE0670 Asset Planning & Management

Course Title

Asset Planning & Management

Course Date/Venue

September 14-18, 2026/TBA Meeting Room,
Radisson Blu Gautrain Hotel, Sandton
Johannesburg, South Africa

Course Reference

RE0670

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



Course Description



This practical and highly-interactive course includes real-life case studies and exercises where participants will be engaged in a series of interactive small groups and class workshops.

This course is designed to provide participants with a detailed and up-to-date overview of Asset Planning & Management. It covers the principles of asset management, hydrocarbon infrastructure assets and asset lifecycle concept; the asset register and data structure, stakeholders in asset management and strategic asset planning; the asset criticality analysis, life cycle costing (LCC), condition assessment techniques and risk -based asset management (RBAM); the asset management software and tools and maintenance planning and scheduling; and the storage asset management (tanks and terminals) and pipeline asset management.



During this interactive course, participants will learn the pumping and compressor station assets; the marine and port asset management, rail and truck loading infrastructure and safety and environmental asset controls; the key performance indicators (KPIs) for assets, reliability -centered maintenance (RCM) and asset performance optimization; the digital transformation in asset management, asset replacement and upgrade decision tools and regulatory and compliance management; the asset management strategy development, infrastructure risk management and emergency response and asset recovery; and the asset handover and decommissioning and continuous improvement framework.



Course Objectives/Outcomes & Benefits for the Participants

Upon the successful completion of this course, each participant will be able to:-

- Apply and gain an in-depth knowledge on asset planning and management
- Discuss the principles of asset management, hydrocarbon infrastructure assets and asset lifecycle concept
- Carryout asset register and data structure, stakeholders in asset management and strategic asset planning
- Employ asset criticality analysis, life cycle costing (LCC), condition assessment techniques and risk -based asset management (RBAM)
- Identify asset management software and tools and apply maintenance planning and scheduling, storage asset management (tanks and terminals) and pipeline asset management
- Recognize pumping and compressor station assets and apply marine and port asset management, rail and truck loading infrastructure and safety and environmental asset controls
- Carryout key performance indicators (KPIs) for assets, reliability -centered maintenance (RCM) and asset performance optimization
- Employ digital transformation in asset management, asset replacement and upgrade decision tools and regulatory and compliance management
- Implement asset management strategy development, infrastructure risk management and emergency response and asset recovery
- Apply asset handover and decommissioning and continuous improvement framework

Exclusive Smart Training Kit - H-STK®



Participants of this course will receive the exclusive “Haward Smart Training Kit” (H-STK®). The H-STK® consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.

Who Should Attend

This course provides an overview of all significant aspects and considerations of asset planning and management for asset managers and asset engineers, maintenance managers, supervisors and planners, operations managers and operations personnel, reliability engineers and technical support staff, project engineers and engineering professionals, facility managers and plant engineers and those who involved in long-term planning, asset lifecycle management, or cost optimization in industrial facilities

Course Fee

US\$ 5,500 per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.


Certificate Accreditations

Haward's certificates are accredited by the following international accreditation organizations: -

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British Accreditation Council (BAC)

Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. Haward's certificates are internationally recognized and accredited by the British Accreditation Council (BAC). BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

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The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units (CEUs)** in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:



Mr. Andrew Ladwig is a **Senior Mechanical & Maintenance Engineer** with over **25 years** of extensive experience within the **Oil & Gas, Refinery, Petrochemical & Power** industries. His expertise widely covers in the areas of **Maintenance Optimization & Best Practices, Process Plant Shutdown & Turnaround, Maintenance Auditing & Benchmarking, Reliability Management, Reliability Centered Maintenance Principles & Application, Efficient Shutdowns, Machinery Lubrication, Maintenance Planning & Scheduling, Coupling & Shaft Alignment Techniques, Maintenance Auditing & Benchmarking, Reliability Management, Reliability Centered Maintenance Principles & Application, Efficient Shutdowns, Machinery Lubrication, Maintenance Planning & Scheduling, Coupling & Shaft Alignment Techniques, Reliability, Availability & Maintainability (RAM), Root Cause Analysis, Maintenance Process, Reliability-Centered Maintenance (RCM), Reliability Engineering Analysis (RE), Root Cause Analysis (RCA), Asset Integrity Management (AIM), Reactive & Proactive Maintenance, Pressure Safety Relief Valve Repair & Recalibration, PSV/PRV Troubleshooting, PRV Testing & Repair, Valve Testing & Inspection, Valve Sealing, Valve Calibration, Control Valves & Actuators, Boiler Inspection & Maintenance, Boiler Systems, Boiler instrumentation & Controls, Boiler Start-up & Shutdown, Boiler Operation & Steam System Management, Boiler Water Chemistry & Treatment, Boiler Efficiency & Waste Heat Recovery, Boiler Inspection & Testing, Boiler Maintenance, Boiler Troubleshooting & Safety, Boiler Emissions & Pollution Control, Combustion Analysis & Tuning Procedures, Water Treatment Technology, Heat Recovery Steam Generating (HRSG), Impulse Tube Installation & Inspection, Parker Compression Fittings, Pipes & Fittings, PSV Inspection, Root Cause Failure Analysis, Tank Design & Engineering, Tank Shell, Tanks & Tank Farms, Vacuum Tanks, Gas Turbine Operating & Maintenance, Reciprocating & Centrifugal Compressors, Screw Compressor, Compressor Control & Protection, Gas & Steam Turbines, Turbine Operations, Gas Turbine Technology, Valves, Process Control Valves, Bearings & Lubrication and Advanced Machinery Dynamics.**

During his career life, Mr. Ladwig has gained his practical experience through his various significant positions and dedication as the **Mechanical Engineer, Project Engineer, Reliability & Maintenance Engineer, Maintenance Support Engineer, Process Engineer, HSE Supervisor, Warehouse Manager, Quality Manager, Business Analyst, Senior Process Controller, Process Controller, Safety Officer, Mechanical Technician, Senior Lecturer and Senior Consultant/Trainer** for various companies such as the Sasol Ltd., Sasol Wax, Sasol Synfuels, just to name a few.

Mr. Ladwig has a **Bachelor's degree in Chemical Engineering** and a **Diploma in Mechanical Engineering**. Further, he is a **Certified Instructor/Trainer, a Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management (ILM)** and has delivered various trainings, workshops, seminars, courses and conferences internationally.

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures
- 20% Practical Workshops & Work Presentations
- 30% Hands-on Practical Exercises & Case Studies
- 20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Learning Design & Customization

This course can be customized to the exact requirements of clients. Haward Technology is so proud of our huge capabilities in tailoring our courses to the training needs of our valued clients.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the workshop for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: Monday, 14th of September 2026

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 0930	Principles of Asset Management Definition and Objectives of Asset Management • ISO 55000 Family Overview • Difference Between Asset Management versus Maintenance • Asset Value, Performance and Risk Balance
0930 – 0945	Break
0945 – 1030	Hydrocarbon Infrastructure Assets Overview Storage Assets: Tanks, Spheres, Caverns • Transportation Assets: Pipelines, Rail, Marine • Distribution Assets: Terminals, Depots, Stations • Fixed versus Mobile Assets
1030 – 1130	Asset Lifecycle Concept Planning and Design Phase • Acquisition and Construction • Operation and Maintenance • Renewal and Disposal
1130 – 1215	Asset Register & Data Structure Asset Hierarchy Classification • Tagging and Numbering Systems • Asset Criticality Levels • Digital Asset Database Design
1215 – 1230	Break
1230 – 1330	Stakeholders in Asset Management Asset Owner versus Operator Responsibilities • Engineers, Planners and Maintenance Teams • Regulators and HSE Authorities • Communities and Third-Party Users



1330 – 1420	Strategic Asset Planning Long-Term Infrastructure Requirements • Capacity and Demand Forecasting • Investment Planning and Prioritization • Alignment with Corporate Strategy
1420 – 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day One

Day 2: Tuesday, 15th of September 2026

0730 – 0830	Asset Criticality Analysis Risk-Based Criticality Ranking • Business Consequence of Failure • Safety and Environmental Impact • Production and Revenue Effect
0830 – 0930	Life Cycle Costing (LCC) CAPEX and OPEX Identification • Long-Term Cost Modeling • Replacement versus Repair Analysis • Financial Optimization
0930 – 0945	Break
0945 – 1100	Condition Assessment Techniques Visual Inspection Techniques • Non-Destructive Testing (NDT) • Structural Integrity Assessment • Degradation Analysis
1100 – 1215	Risk-Based Asset Management (RBAM) Probability of Failure (PoF) • Consequence of Failure (CoF) • Risk Matrices and Acceptance Levels • Risk Reduction Strategies
1215 – 1230	Break
1230 – 1330	Asset Management Software & Tools CMMS and EAM Systems (SAP, Maximo) • GIS-Based Asset Tracking • Digital Twins • Predictive Analytics
1330 – 1420	Maintenance Planning & Scheduling Preventive Maintenance Strategies • Predictive Maintenance Techniques • Shutdown and Turnaround Planning • Resource and Spare Parts Planning
1420 – 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Two

Day 3: Wednesday, 16th of September 2026

0730 – 0830	Storage Asset Management (Tanks & Terminals) Tank Inspection Schedules (API 653) • Corrosion Mapping and Thickness Monitoring • Leak Detection Systems • Secondary Containment Management
0830 – 0930	Pipeline Asset Management Inline Inspection (Smart Pigging) • Cathodic Protection Systems • Coating and Corrosion Control • Pipeline Integrity Management (PIMS)
0930 – 0945	Break
0945 – 1100	Pumping & Compressor Station Assets Equipment Condition Monitoring • Vibration and Thermal Analysis • Lubrication and Reliability Programs • Spare Parts Strategy





1100 – 1215	Marine & Port Asset Management Loading Arms and Jetties • Mooring and Docking Structures • Corrosion in Marine Environments • Structural Fatigue Analysis
1215 – 1230	Break
1230 – 1330	Rail & Truck Loading Infrastructure Rack and Gantry Systems • Metering and Safety Systems • Structural Inspection and Upgrades • Operational Risk Assessment
1330 – 1420	Safety & Environmental Asset Controls Spill Containment Systems • Fire Protection Systems • Gas Detection and Alarms • Environmental Monitoring Assets
1420 – 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Three

Day 4: Thursday, 17th of September 2026

0730 – 0830	Key Performance Indicators (KPIs) for Assets Asset Availability • Mean Time Between Failures (MTBF) • Mean Time to Repair (MTTR) • Asset Reliability Indices
0830 – 0930	Reliability-Centered Maintenance (RCM) Function-Based Asset Analysis • Failure Mode Analysis (FMEA) • Maintenance Task Selection • Cost versus Risk Optimization
0930 – 0945	Break
0945 – 1100	Asset Performance Optimization Bottleneck Identification • Asset Utilization Improvement • Flow Rate and Capacity Optimization • Energy Efficiency Enhancement
1100 – 1215	Digital Transformation in Asset Management IoT and Smart Sensors • AI and Predictive Analytics • Cloud-Based Asset Databases • Remote Monitoring Technology
1215 – 1230	Break
1230 – 1330	Asset Replacement & Upgrade Decision Tools Asset Obsolescence Analysis • Technology Upgrade Planning • Economic Justification Tools • Replacement Prioritization
1330 – 1420	Regulatory & Compliance Management API, ISO, ASME Compliance • Environmental Laws and Reporting • Safety Inspections and Audits • Compliance Documentation
1420 – 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Four

Day 5: Friday, 18th of September 2026

0730 – 0830	Asset Management Strategy Development Asset Policy Creation • Objectives and Targets • Governance Structures • Performance Monitoring
0830 – 0930	Infrastructure Risk Management Natural Hazards (Earthquake, Flood) • Human & Operational Errors • Sabotage and Theft Risks • Security and Resilience Planning
0930 – 0945	Break

0945 – 1100	Emergency Response & Asset Recovery Incident Response Planning • Contingency Assets • Disaster Recovery Strategies • Asset Restoration Procedures
1100 – 1230	Asset Handover & Decommissioning End-of-Life Evaluation • Environmental Remediation • Decommissioning Planning • Asset Disposal Process
1230 – 1245	Break
1245 – 1345	Continuous Improvement Frameworks PDCA and Kaizen Methods • Asset Performance Feedback Loops • Lessons Learned System • Benchmarking Practices
1345 – 1400	Course Conclusion Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course
1400 – 1415	POST-TEST
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course

Practical Sessions

This practical and highly-interactive course includes real-life case studies and exercises:-



Course Coordinator

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