MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

Phone: +601116373203 | **Email:** info@mawaevents.net

DIGITAL TRANSFORMATION IN EXTRACTIVE INDUSTRY (MINING)

""Leveraging Smart Technologies to Improve Safety, Productivity & Sustainability in Mining Operations""

Schedule

Date	Venue	Fees (Face-to-Face)
14 – 18 Sep 2026	London, UK	USD 3495 per delegate

Introduction

The extractive industries, particularly mining, are embracing digital transformation to enhance efficiency, safety, and environmental responsibility. The integration of IoT, automation, AI, digital twins, and real-time analytics is reshaping the way mining operations are planned, monitored, and managed. To remain competitive, mining companies must modernize their technologies, workflows, and decision-making capabilities.

This 5-day course provides mining professionals with the strategic insight, technical awareness, and practical tools required to drive digital innovation across the mining value chain—from exploration to production to reclamation. Participants will engage with use cases, risk considerations, and transformation roadmaps tailored to the realities of mining operations.

Objectives

By the end of this course, participants will be able to:

- Understand the digital transformation landscape in the mining sector
- Evaluate technologies such as automation, drones, sensors, and AI for mining applications
- Design a digital strategy aligned with safety, production, and ESG goals
- Use data analytics and digital tools to improve decision-making and operational performance
- Address cybersecurity, integration, and change management challenges

MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

Phone: +601116373203 | **Email:** info@mawaevents.net

Why Attend

- To modernize mining operations with scalable and cost-effective technologies
- To reduce environmental impact and improve safety through data-driven solutions
- To streamline operations using automation, remote control, and condition monitoring
- To enhance predictive maintenance and production efficiency
- To build a clear, actionable roadmap for sustainable digital transformation

Target Audience

This program is designed for:

- Mining and operations managers
- Digital transformation leaders in mining companies
- Mine engineers, geologists, and planning professionals
- Maintenance, health & safety, and environmental specialists
- IT, automation, and data analytics professionals in mining sector

Individual Benefits

Key competencies that will be developed include:

- Digital systems integration and roadmap development
- Technology evaluation for surface and underground mining
- Data-driven operational and safety optimization
- Project planning for digital implementation in remote or rugged environments
- Leadership in innovation, culture change, and digital capability building

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved asset productivity and equipment reliability
- Enhanced safety through automation and remote monitoring
- Better ESG performance through transparency and digital controls
- Reduced downtime, costs, and environmental risks
- Alignment of digital investment with corporate sustainability and growth goals

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings – Global mining trends, regulatory expectations, and tech disruption
- Case Studies – Real-world mining transformation examples and pitfalls
- Workshops – Strategy planning, use case evaluation, and process digitization
- Peer Exchange – Interactive discussion of digital opportunities and constraints
- Tools – Digital audit templates, roadmap guides, cost-benefit calculators, and KPI dashboards

MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

Phone: +601116373203 | **Email:** info@mawaevents.net

Course Outline

Detailed 5-Day Course Outline

Training Hours: 7:30 AM – 3:30 PM Daily Format: 3–4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: The Future of Mining – A Digital Perspective

- Module 1: Industry 4.0 in Mining – Opportunities and Pressures (07:30 – 09:30) • Global shifts in mining operations and stakeholder expectations • Digital business models in extractive industry • Major disruptors: cost, climate, safety, skills
- Module 2: Building the Digital Mining Enterprise (09:45 – 11:15) • Maturity stages of mining digitalization • Benchmarking readiness and defining digital success • Leadership roles and governance
- Module 3: Strategic Planning for Digital Projects (11:30 – 01:00) • Objectives, value drivers, and ROI targets • Technology investment planning and stakeholder buy-in
- Module 4: Workshop – Maturity Assessment & Visioning (02:00 – 03:30) • Assess current state and map strategic goals

Day 2: Enabling Technologies and Applications in Mining

- Module 1: Automation and Robotics in Mining (07:30 – 09:30) • Autonomous drilling, loading, and haulage • Remote operations and tele-remote control • Integration with safety and control systems
- Module 2: Industrial IoT and Sensor Networks (09:45 – 11:15) • Condition monitoring, geotechnical sensors, and predictive alerts • Use of real-time data in maintenance and operations
- Module 3: UAVs, Drones and Imaging in Mining (11:30 – 01:00) • Surveying, blasting, and stockpile monitoring • Digital terrain models and volumetric analysis
- Module 4: Group Case – Automation Strategy Design (02:00 – 03:30) • Outline a technology strategy for a sample mining site

Day 3: Data, AI, and Predictive Intelligence

- Module 1: Data Management and Architecture (07:30 – 09:30) • Data sources across exploration, operations, and logistics • Cloud systems, edge computing, and integrations
- Module 2: Advanced Analytics and AI in Mining (09:45 – 11:15) • Predictive models for equipment failure and ore recovery • AI in exploration targeting and environmental risk analysis
- Module 3: Dashboards and Real-Time Operations Centers (11:30 – 01:00) • Control rooms and digital twins • Custom KPIs and visualization tools
- Module 4: Workshop – Build a Mining Data Strategy (02:00 – 03:30) • Design a data flow and analysis framework

Day 4: ESG, Cybersecurity, and Risk Management

- Module 1: Digital Tools for Safety and Environment (07:30 – 09:30) • Fatigue monitoring, proximity detection, and emergency systems • Water, tailings, and emissions tracking via digital sensors
- Module 2: Cybersecurity for Remote Mining Sites (09:45 – 11:15) • Risks from IT/OT convergence • Critical control systems protection
- Module 3: Digital Compliance and Reporting (11:30 – 01:00) • ESG dashboards and real-time compliance tracking • Traceability and stakeholder transparency
- Module 4: Simulation – Incident Response Planning (02:00 – 03:30) • Test cybersecurity and safety system responses

Day 5: Roadmapping and Implementation Planning

- Module 1: Change Management and Workforce Upskilling (07:30 – 09:30) • Overcoming cultural resistance and skills gaps • Building digital capability across departments
- Module 2: Building the Transformation Roadmap (09:45 – 11:15) • Project timelines, resource allocation, and quick wins • Monitoring transformation progress and KPIs
- Module 3: Final Presentations – Digital Roadmap (11:30 – 01:00) • Group project: present a digital transformation proposal
- Module 4: Wrap-Up and Certification Ceremony (02:00 – 03:30) • Participant feedback and certificate distribution

Certification

Participants will receive a Certificate of Completion in Digital Transformation in Extractive Industry (Mining), confirming their expertise in planning and implementing smart technologies to optimize mining safety, performance, and sustainability.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation's unique goals.

In-House / Customized Training Interested in running this course for your team? Please contact us:	TEL: **+601116373203**	EMAIL: **info@mawaevents.net**