MAWA EVENTS

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

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

THE INTERNET OF THINGS (IOT) IN AGRICULTURE

""Leveraging Smart Technologies to Optimize Agricultural Productivity, Sustainability, and Efficiency""

Schedule

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

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

Agriculture is rapidly evolving through the integration of Internet of Things (IoT) technologies. Smart sensors, connected devices, and data analytics now enable real-time monitoring and precision control of farming operations—from soil conditions and crop health to irrigation and equipment management. IoT in agriculture not only improves yields but also supports sustainable farming and resource efficiency.

This 5-day course explores how IoT technologies are transforming modern agriculture. Participants will gain practical insights into sensor networks, communication protocols, edge computing, and big data applications in agriculture. Through case studies, hands-on exercises, and solution design workshops, professionals will learn to plan and implement IoT-enabled smart farming systems.

Objectives

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

- Understand the fundamentals and components of IoT architecture in agriculture
- Identify use cases for IoT in crop monitoring, livestock management, and supply chains
- Evaluate sensor types, connectivity options, and data integration techniques
- Design and deploy basic IoT solutions tailored to agricultural needs
- Analyze and interpret IoT-generated data to support decision-making

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 adopt modern technologies that improve agricultural productivity and quality
- To enable real-time monitoring of crops, livestock, and environmental conditions
- To reduce input waste and promote sustainable resource use
- To increase operational transparency and automate routine tasks
- To prepare for the digital transformation of farming and agribusiness

Target Audience

This program is designed for:

- Agricultural engineers and farm managers
- Agri-tech entrepreneurs and consultants
- Policy-makers and smart farming planners
- IT, IoT, and data science professionals in the agriculture sector
- Researchers and academics exploring precision agriculture

Individual Benefits

Key competencies that will be developed include:

- IoT solution design and implementation for agriculture
- Knowledge of sensor selection, network configuration, and data protocols
- Use of dashboards, cloud platforms, and mobile apps for farm management
- Understanding IoT security, scalability, and integration challenges
- Ability to assess ROI and sustainability outcomes from IoT deployments

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved productivity, efficiency, and yield forecasting in agricultural operations
- Reduced waste through precision irrigation, fertilization, and pest control
- Built-in traceability and real-time reporting across the food supply chain
- Capacity to innovate using cutting-edge technologies and smart systems
- A more data-driven approach to agricultural planning and policy

Instructional Methodology

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

- Strategy Briefings – IoT architecture, market trends, and smart farming policies
- Case Studies – Global examples of IoT in greenhouse, dairy, and crop farming
- Workshops – Design IoT systems using sensors, gateways, and dashboards
- Peer Exchange – Cross-sector experiences in deploying agri-IoT systems
- Tools – Farm monitoring apps, cloud dashboards, open-source hardware kits

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: Introduction to IoT and Smart Agriculture

- Module 1: Fundamentals of IoT and Digital Agriculture (07:30 – 09:30) • What is IoT and how it applies to farming • Key components: sensors, connectivity, platforms
- Module 2: Smart Farming Use Cases and Market Landscape (09:45 – 11:15) • Applications in crops, livestock, aquaculture, and forestry • Global adoption trends and key players
- Module 3: IoT Architecture and Communication Protocols (11:30 – 01:00) • MQTT, LoRaWAN, NB-IoT, Zigbee – pros and cons • Data flow from device to cloud
- Module 4: Workshop – Mapping IoT Needs to Farm Scenarios (02:00 – 03:30) • Develop a use-case map for smart agriculture

Day 2: Sensor Technologies and Farm Connectivity

- Module 1: Agricultural Sensors – Selection and Deployment (07:30 – 09:30) • Soil moisture, temperature, humidity, pH, livestock tags • Mounting, calibration, and maintenance
- Module 2: Connectivity Options for Rural and Remote Farms (09:45 – 11:15) • Wi-Fi, GSM, LoRa, satellite, mesh networks • Connectivity planning and infrastructure needs
- Module 3: Gateways, Edge Devices, and Data Transmission (11:30 – 01:00) • Edge computing basics and data preprocessing • Role of gateways in hybrid architectures
- Module 4: Hands-On – Sensor Setup and Network Design (02:00 – 03:30) • Design a sensor network for a greenhouse or open-field scenario

Day 3: Data Collection, Storage, and Analysis

- Module 1: Data Acquisition and IoT Platforms (07:30 – 09:30) • Cloud-based and on-premise options • API integration and interoperability
- Module 2: Visualization and Decision Support Tools (09:45 – 11:15) • Dashboards, alerts, and predictive insights • Farm management systems (FMS)
- Module 3: Analytics and Machine Learning in Agriculture (11:30 – 01:00) • Yield forecasting, disease prediction, and irrigation optimization
- Module 4: Workshop – Build a Sample Dashboard (02:00 – 03:30) • Use sample data to create visual reports and alerts

Day 4: IoT Deployment, Integration, and Security

- Module 1: End-to-End Solution Design and Integration (07:30 – 09:30) • Bringing sensors, platforms, and analytics together • Planning an IoT deployment roadmap
- Module 2: IoT Security Risks and Mitigation (09:45 – 11:15) • Data integrity, device authentication, and access control • Cybersecurity considerations for remote operations
- Module 3: Cost, ROI, and Sustainability Evaluation (11:30 – 01:00) • Cost-benefit models for smart agri projects • Measuring environmental and economic impact
- Module 4: Simulation – Design an End-to-End Farm IoT System (02:00 – 03:30) • Group project for specific agricultural scenarios

Day 5: Innovation, Policy, and Future of Smart Agriculture

- Module 1: Emerging Trends in IoT and AgriTech (07:30 – 09:30) • Blockchain, drones, robotics, and satellite data integration
- Module 2: Standards, Regulations, and Data Ethics (09:45 – 11:15) • Data ownership, privacy, and ethical considerations • National and international IoT standards in agriculture
- Module 3: Final Project Presentations (11:30 – 01:00) • Group presentations of designed IoT solutions
- Module 4: Certification and Course Wrap-Up (02:00 – 03:30) • Discussion, feedback, and certificate distribution

MAWA EVENTS

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

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

Certification

Participants will receive a Certificate of Completion in The Internet of Things (IoT) in Agriculture, validating their ability to design, implement, and evaluate smart farming technologies for modern agricultural practices.

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**