

# Automated Data Collection Pipelines in M&E Training Course

Professional Development Training Course Outline

|          |                           |               |                         |
|----------|---------------------------|---------------|-------------------------|
| Category | Monitoring and Evaluation | Duration      | 10 Days                 |
| Base Fee | \$3,000 USD               | Delivery Mode | Online / On-site Hybrid |

## Course Introduction

Automated Data Collection Pipelines in M&E Training Course is a cutting-edge training course designed to equip professionals with the skills to build, manage, and optimize real-time, scalable, and reliable data flows for evidence-based decision-making. As development programs increasingly adopt digital M&E systems, cloud platforms, APIs, mobile data collection tools, and data warehouses, automation has become essential for improving data quality, timeliness, accuracy, and accountability across projects and portfolios.

This course bridges traditional M&E frameworks with modern data engineering concepts, enabling participants to design end-to-end automated pipelines from data capture and validation to integration, analysis, and reporting dashboards. Through hands-on case studies from humanitarian, health, governance, and climate programs, learners will gain practical expertise in low-code and no-code automation, interoperability standards, data governance, and adaptive learning systems aligned with donor and institutional requirements.

## Programme Curriculum

### Automated Data Collection Pipelines in M&E Training Course

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### **Course Duration**

10 days

### **Course Objectives**

By the end of the training, participants will be able to:

1. Design end-to-end automated M&E data pipelines
2. Integrate digital data collection tools into M&E systems
3. Apply real-time data validation and quality assurance
4. Implement API-driven data integration for M&E
5. Automate indicator tracking and reporting workflows
6. Build interoperable M&E systems across platforms
7. Leverage cloud-based data storage and processing
8. Apply data governance and compliance frameworks
9. Use low-code/no-code automation tools in M&E
10. Enable real-time dashboards and visualization
11. Strengthen adaptive management using automated insights
12. Improve donor reporting efficiency and transparency
13. Future-proof M&E systems using scalable digital architectures

### **Target Audience**

1. Monitoring & Evaluation Officers and Specialists
2. Program and Project Managers
3. Data Analysts and MIS Officers
4. NGO and INGO M&E Teams
5. Government Planning and Statistics Officers
6. Donor and Development Partner Staff
7. Digital Transformation and ICT Officers
8. Research and Learning (MEL) Professionals

### **Course Modules**

#### **Module 1: Foundations of Automated M&E Data Systems**

- Evolution from manual to automated M&E
- Key components of data pipelines
- Benefits of automation in development programs
- Common tools and platforms
- Case Study: NGO transitioning from Excel-based M&E to automated systems

#### **Module 2: Digital Data Collection Tools**

- Mobile data collection platforms

- Online surveys and sensors
- Offline-to-online synchronization
- Tool selection criteria
- Case Study: Mobile data collection in remote humanitarian settings

### **Module 3: Data Pipeline Architecture for M&E**

- Data sources, flows, and destinations
- ETL/ELT concepts for M&E
- Modular pipeline design
- Scalability considerations
- Case Study: Multi-project data architecture for a donor portfolio

### **Module 4: API Integrations in M&E**

- Understanding APIs and web services
- Connecting M&E tools via APIs
- Data exchange standards
- Automation triggers
- Case Study: API integration between KoboToolbox and DHIS2

### **Module 5: Data Validation and Quality Automation**

- Automated data cleaning rules
- Real-time error detection
- Indicator consistency checks
- Data completeness monitoring
- Case Study: Improving data accuracy in health programs

### **Module 6: Cloud-Based Data Storage**

- Cloud databases and data lakes
- Security and access controls
- Cost-effective storage strategies
- Backup and recovery
- Case Study: Cloud migration for national M&E systems

### **Module 7: Indicator Automation and Tracking**

- Mapping indicators to data sources
- Automated indicator calculations
- Performance thresholds and alerts
- Longitudinal data tracking
- Case Study: Automated SDG indicator monitoring

### **Module 8: Dashboards and Visualization Automation**

- Real-time dashboards for M&E
- Data refresh automation
- Visualization best practices
- Decision-focused reporting
- Case Study: Executive dashboards for donor reporting

## **Module 9: Low-Code & No-Code Automation Tools**

- Workflow automation platforms
- Connecting M&E tools without coding
- Automation templates
- Limitations and risks
- Case Study: No-code automation in small NGOs

## **Module 10: Interoperability & Data Standards**

- Data interoperability principles
- Open data standards
- Cross-system compatibility
- Metadata management
- Case Study: Multi-agency data harmonization

## **Module 11: Data Governance & Compliance**

- Data protection and privacy
- Ethical data management
- Access and ownership policies
- Donor compliance requirements
- Case Study: GDPR-aligned M&E data pipelines

## **Module 12: Real-Time Learning & Adaptive Management**

- Feedback loops in automated M&E
- Using alerts for program adaptation
- Learning agendas
- Evidence-based adjustments
- Case Study: Adaptive humanitarian response systems

## **Module 13: Risk Management in Automated Pipelines**

- Data security risks
- System failures and contingencies
- Quality control risks
- Sustainability planning
- Case Study: Pipeline failure recovery strategies

## **Module 14: Scaling Automated M&E Systems**

- Scaling across projects and regions
- Performance optimization
- Cost and infrastructure planning
- Capacity building strategies
- Case Study: Scaling national education M&E systems

## **Module 15: Future Trends in Automated M&E**

- AI-enabled data collection
- Predictive analytics in M&E

- IoT and sensor data
- Smart decision-support systems
- Case Study: AI-driven early warning systems

## Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

## Register as a group from 3 participants for a Discount

Send us an email: [info@fineskilltrainingcenter.com](mailto:info@fineskilltrainingcenter.com) or call +254769199797

## Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

## Tailor-Made Course

We also offer tailor-made courses based on your needs.

## Key Notes

- a. The participant must be conversant with English.
- b. Upon completion of training the participant will be issued with an Authorized Training Certificate
- c. Course duration is flexible and the contents can be modified to fit any number of days.
- d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.
- e. One-year post-training support Consultation and Coaching provided after the course.
- f. Payment should be done at least a week before commence of the training, to FINESKILL TRAINING CENTER account, as indicated in the invoice so as to enable us prepare better for you.

## Upcoming Scheduled Sessions

| Start Date  | End Date    | Location | Price   |
|-------------|-------------|----------|---------|
| 07 Sep 2026 | 18 Sep 2026 | Physical | \$3,000 |

| Start Date  | End Date    | Location | Price   |
|-------------|-------------|----------|---------|
| 14 Sep 2026 | 25 Sep 2026 | Physical | \$3,000 |
| 21 Sep 2026 | 02 Oct 2026 | Physical | \$3,000 |
| 28 Sep 2026 | 09 Oct 2026 | Physical | \$3,000 |
| 05 Oct 2026 | 16 Oct 2026 | Physical | \$3,000 |
| 12 Oct 2026 | 23 Oct 2026 | Physical | \$3,000 |
| 19 Oct 2026 | 30 Oct 2026 | Physical | \$3,000 |
| 26 Oct 2026 | 06 Nov 2026 | Physical | \$3,000 |

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: [info@fineskilltrainingcenter.com](mailto:info@fineskilltrainingcenter.com) | Website: [www.fineskilltrainingcenter.com](http://www.fineskilltrainingcenter.com)