

# AI Process Mining for Operational Improvement Course

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## Overview

AI Process Mining for Operational Improvement Course is a one-week foundation course for operations managers, improvement teams, quality professionals, business analysts, transformation teams, and process owners, who leave with a Process Mining Improvement Evidence Pack. Participants prepare event logs, discover actual process paths, check conformance, analyze variants, bottlenecks and rework, test root-cause hypotheses, and prioritize governed improvement actions. Agile Leaders Training Center provides training in AI-assisted process mining for operational improvement.

## Who Should Attend

- Operations teams responsible for process performance
- Process improvement teams responsible for change priorities
- Quality teams responsible for deviations and corrective action
- Business analysts responsible for process evidence
- Transformation teams responsible for improvement portfolios
- Process owners responsible for governance and results

The course assumes participants can describe an operational process and leaves out generic operational excellence, standalone process mapping, robotic process automation, software configuration, advanced data science, and technical process-mining implementation.

## Departments and Industries

The course supports evidence-led process improvement across service and production operations.

- Operations and process management functions
- Quality and continuous improvement teams
- Business analysis and transformation offices
- Finance, procurement, and shared-service operations
- Manufacturing, logistics, utilities, and maintenance organizations
- Banking, healthcare, government, and professional services

## Learning Objectives

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

- Apply event-log readiness criteria to a process question
- Use process discovery to map observed paths and variants
- Analyze conformance deviations, bottlenecks, delays, and rework
- Evaluate root-cause hypotheses and supporting evidence
- Prioritize improvement actions with ownership and validation
- Build a Process Mining Improvement Evidence Pack

## Course Agenda

### Day 1: Questions and Event-Log Readiness

- Operational Process Question Charter
- Case, Activity, and Timestamp Definition Sheet
- Event Data Source Register
- Event-Log Completeness and Quality Check
- Scope, Privacy, and Access Boundary

### Day 2: Process Discovery and Variants

- Directly-Follows Process Graph
- Process Discovery View Selection
- Trace and Variant Frequency Table
- Start, End, Loop, and Rework Pattern Review
- BPMN 2.0 Interpretation Bridge

### Day 3: Conformance and Performance Analysis

- Expected-to-Observed Process Comparison
- Conformance Deviation Register
- Bottleneck and Waiting-Time Heatmap
- Rework and Handoff Analysis
- Performance Variant Comparison Matrix

### Day 4: Root Causes and Improvement Priorities

- Root-Cause Hypothesis Tree
- Attribute and Segment Evidence Table
- AI-Assisted Finding Validation Checklist
- Improvement Impact and Feasibility Matrix
- Action Owner and Measurement Register

## Day 5: Process Mining Improvement Practice

- Suggested Exercise: Prepare an Event-Log Readiness Review
- Suggested Exercise: Discover Paths and Process Variants
- Suggested Exercise: Check Conformance and Bottlenecks
- Suggested Exercise: Validate Causes and Prioritize Actions
- Capstone Exercise: Process Mining Improvement Evidence Pack

## Practical Exercises

The course uses suggested activities that turn event data into validated process-improvement evidence.

- Suggested activity: frame a process question and define cases, activities, timestamps, sources, quality, and access boundaries
- Suggested activity: construct a directly-follows view and interpret paths, variants, loops, and rework
- Suggested activity: compare expected and observed behavior and analyze deviations, bottlenecks, waiting, and handoffs
- Suggested activity: test root-cause hypotheses, validate AI-assisted findings, rank actions, assign owners, and define measures

## FAQs

### Who suits AI process mining for operational improvement training?

AI process mining for operational improvement training suits operations, improvement, quality, analysis, transformation, and process-owner teams. It assumes familiarity with a business process and requires no programming.

### How does process mining differ from standalone process mapping?

Process mining reconstructs observed behavior from event logs and measures variants, deviations, and performance. Standalone process mapping documents a designed or reported process without requiring event evidence.

### What data does process mining require?

Process mining requires events linked to a case, an activity, and a timestamp, supported by suitable identifiers, attributes, source definitions, extraction rules, quality checks, and scope boundaries.

### How does process mining identify bottlenecks and rework?

Process mining compares event sequences, elapsed times, waiting points, repeated activities, handoffs, variants, and segments to locate where flow slows, loops, departs from expectations, or consumes additional effort.

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## What belongs in a Process Mining Improvement Evidence Pack?

The pack should include the question charter, event-log readiness review, discovery views, variant table, conformance register, bottleneck analysis, root-cause evidence, validation checks, priority matrix, owners, actions, and measures.

## Conclusion

Participants take back a Process Mining Improvement Evidence Pack linking event-log readiness, discovery, variants, conformance, performance, root causes, validation, and improvement priorities. The pack separates observed behavior from assumptions. It supports traceable operational decisions, accountable actions, and measurable process change.

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