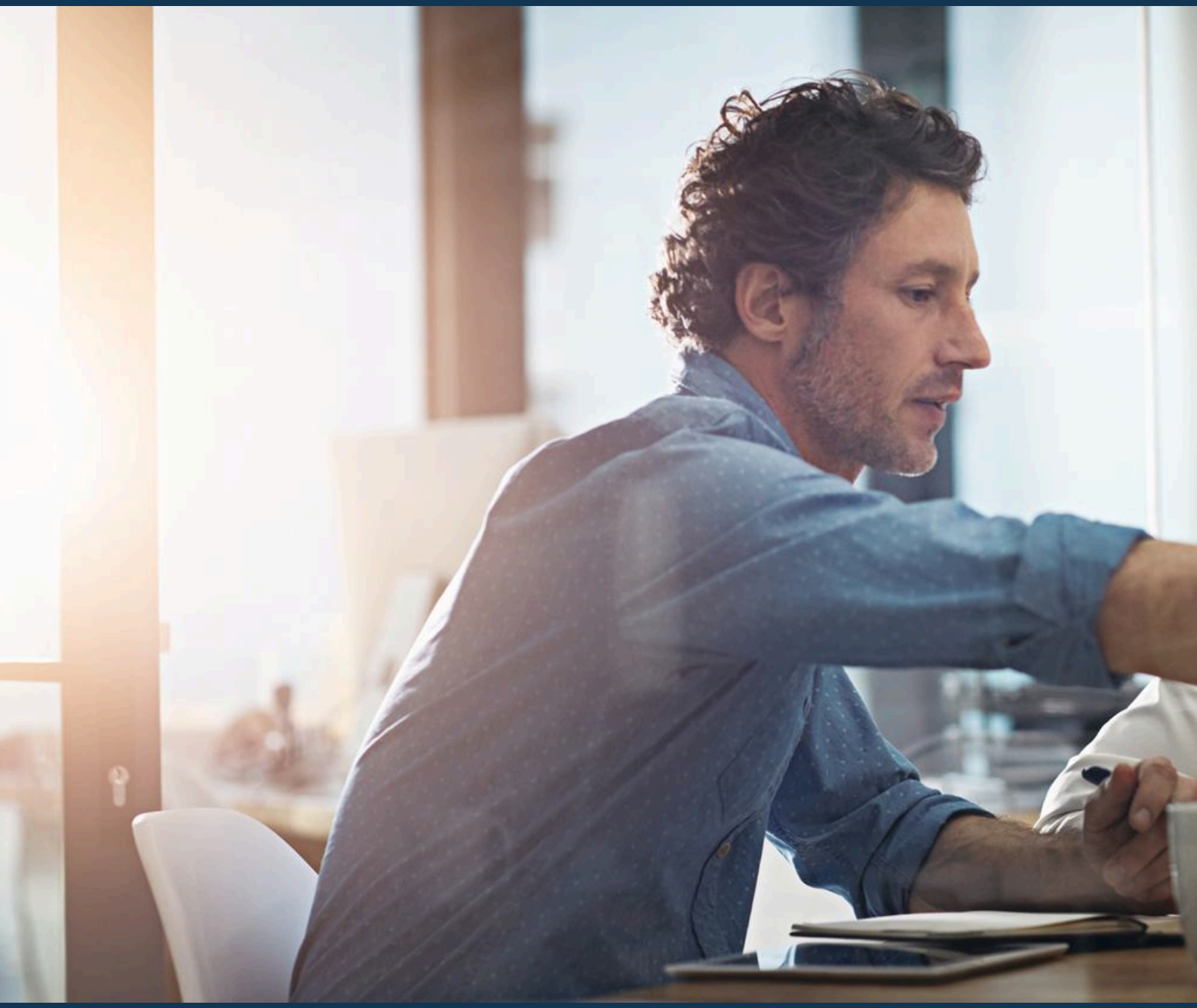
Halderstone



Training module

Auditing AI Lifecycle & Data Governance Controls

Evaluate lifecycle and data governance controls across data sourcing, training, validation, deployment, monitoring, and change in ISO/IEC 42001

Does your audit move beyond paperwork to lifecycle evidence that holds up under scrutiny?

Overview

Auditing an AI management system becomes unreliable when lifecycle evidence is fragmented: data provenance is unclear, training and validation decisions cannot be reproduced, deployments bypass change control, and monitoring fails to detect drift. In practice, this creates “false assurance”: controls exist, but they do not govern what actually happens across the AI lifecycle.

This standard-specific auditing module shows how to audit lifecycle and data governance controls in an ISO/IEC 42001 context: what to look for, where evidence typically sits, how to connect lifecycle stages, and how to judge effectiveness under change. It is designed to stand on its own in the ISO/IEC 42001 auditor pathway. Generic audit craft and generic management-system methods are assumed and briefly referenced rather than retaught.

Target audience

- Aspiring auditors who want to audit AI management systems against ISO/IEC 42001 following best practices
- Practising ISO/IEC 42001 auditors who want to strengthen their audit knowledge, judgement, and effectiveness

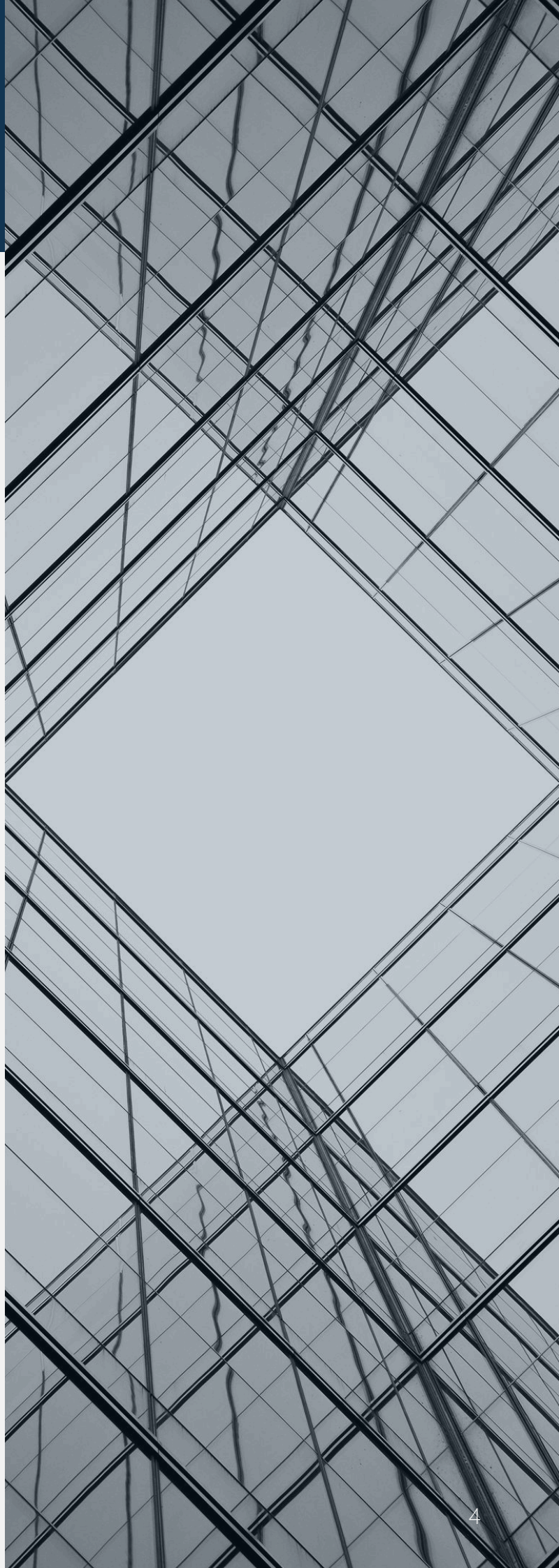
Is this module for you?

It is a good fit for you if you...

- seek to audit whether AI lifecycle controls work across real system changes.
- are aiming to judge data provenance, training, and validation evidence.
- focus on traceability from data sourcing through deployment and monitoring.
- want to audit change control and drift detection in practice.
- expect to strengthen audit conclusions on AI control effectiveness.

It may be less suitable for you if you...

- prefer to design AI governance frameworks or lifecycle processes.
- are looking for guidance on model development or data engineering.
- focus primarily on AI risk management or ethical design activities.
- do not intend to audit AI lifecycle controls under ISO/IEC 42001.



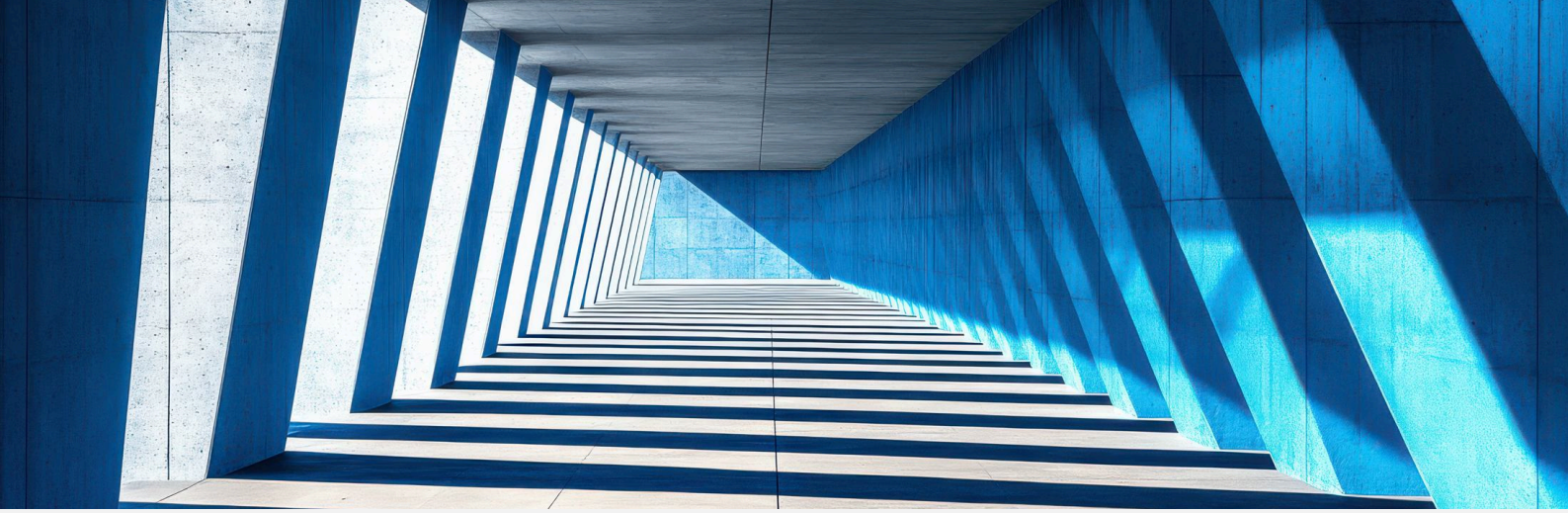
Learning outcomes

Key outcomes

- Trace an AI system from data sourcing through training, validation, deployment, and monitoring using lifecycle audit trails
- Identify lifecycle-stage evidence sources and evaluate whether they are coherent, complete, and usable
- Judge control effectiveness under change (version updates, data updates, configuration changes, and operational drift)

Additional capabilities

- Distinguish isolated control lapses from systemic lifecycle governance weaknesses
- Recognise common lifecycle and data governance failure modes that lead to “false assurance” in AI controls
- Form a defensible audit view on whether oversight mechanisms are operating as intended across the lifecycle



Agenda

Auditing the AI lifecycle in practice

Lifecycle stages as audit trails, not a process design exercise. Focus on control adequacy versus control effectiveness across stages.

Data sourcing and provenance controls

Evidence of sourcing decisions, rights and constraints, lineage, and quality gates. Red flags include unverifiable origin, unmanaged third-party data, and unknown reuse.

Training and validation controls

Evidence of dataset selection rationale, reproducibility, evaluation results, and approval points. Common breakdowns include experiment sprawl, inconsistent validation, and undocumented model selection.

Deployment and change control

Evidence of release decisions, versioning, rollback readiness, and segregation of duties. Special attention where models or platforms are externally operated.

Monitoring, drift, and operational oversight

Evidence that monitoring intent matches operation, including alert handling, incidents, and corrective actions. Drift patterns include data drift, performance drift, and silent environmental change.

Lifecycle governance and accountability evidence

Decision records showing who approved what, based on which evidence and constraints. Oversight mechanisms for exceptions, emergency changes, and unresolved issues.

Case-based audit simulation

Applying the learned concepts, methods, and approaches in a realistic case setting

Included materials

Learning materials

- Slide deck
- Participant workbook

Templates & tools

- Audit interview planning tool
- Documented information checklist
- Sampling tool
- Audit analysis worksheets
- Failure pattern library
- Supporting AI prompt set

Confirmation

- Confirmation of participation

Preparation guidance

Assumed background

This module assumes auditors can already operate within an audit assignment and apply evidence-based judgement. It also assumes basic AI lifecycle literacy (common artefacts, versioning concepts, and what "drift" means operationally).

Helpful background includes:

- Evidence logic, sampling judgement, and adequacy vs effectiveness thinking
- Familiarity with how documented information is structured and used as audit evidence
- Basic understanding of AI system lifecycle artefacts (data sources, training runs, evaluation results, deployment versions, monitoring outputs)

Preparatory modules

Foundation (depending on background)

Useful if you are new to the underlying concepts

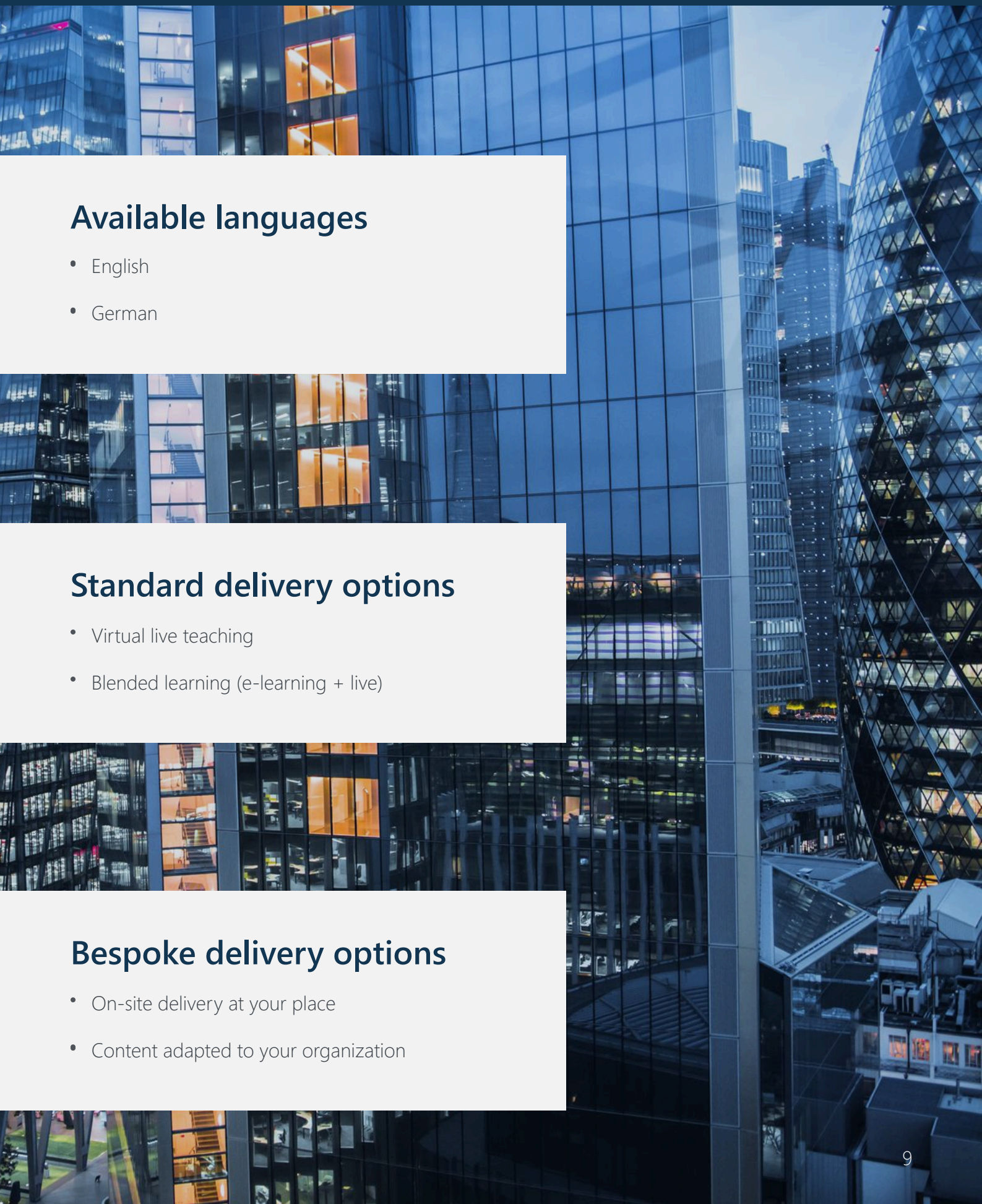
- Audit Principles
- AI Systems & Architectures

Supporting (optional)

Helpful but not required to participate effectively

- Auditing Operational Control
- AI Limitations & Failure Modes

Logistics



Available languages

- English
- German

Standard delivery options

- Virtual live teaching
- Blended learning (e-learning + live)

Bespoke delivery options

- On-site delivery at your place
- Content adapted to your organization

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