

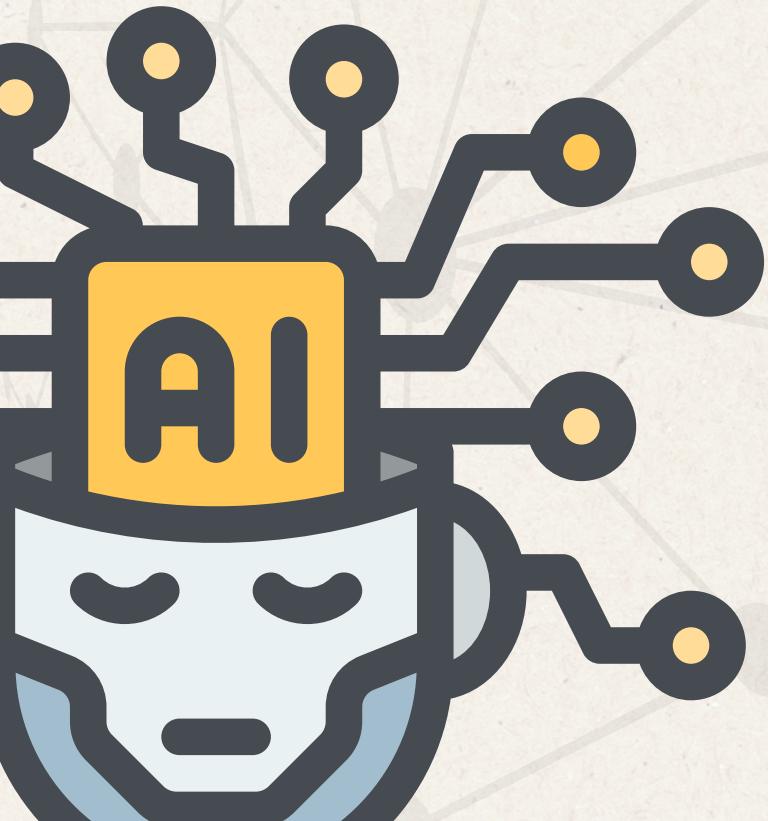


ISO 42001

A Practical 15-Step Guide to Building Your AI Management Systems Guide



ISO 42001 is the world's first international standard for Artificial Intelligence Management Systems (AIMS).

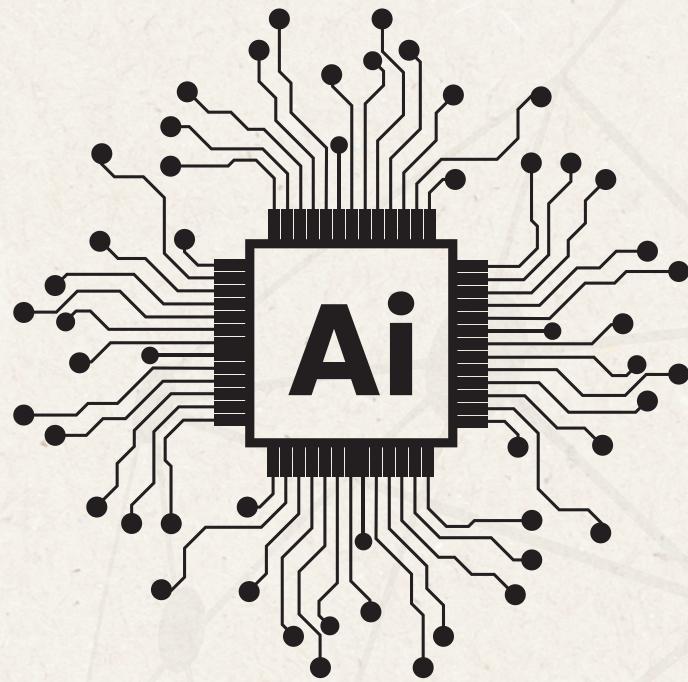


It helps organizations:

- Govern AI systems ethically and safely
- Identify risks like bias, explainability, and data misuse
- Ensure trust, accountability, and legal compliance

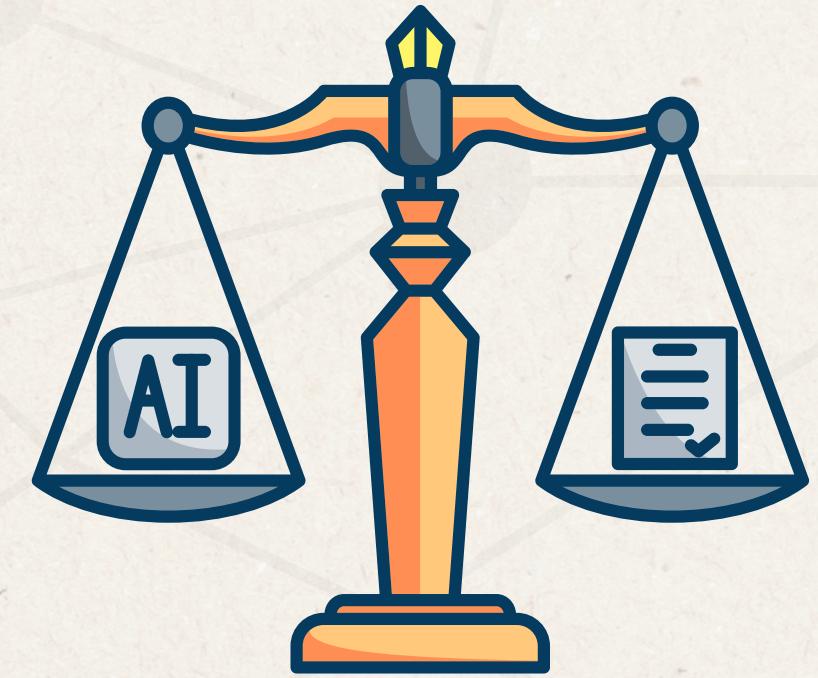
“If AI is a powerful engine, ISO 42001 is the steering wheel and brakes”

Key Terms & Core Concepts



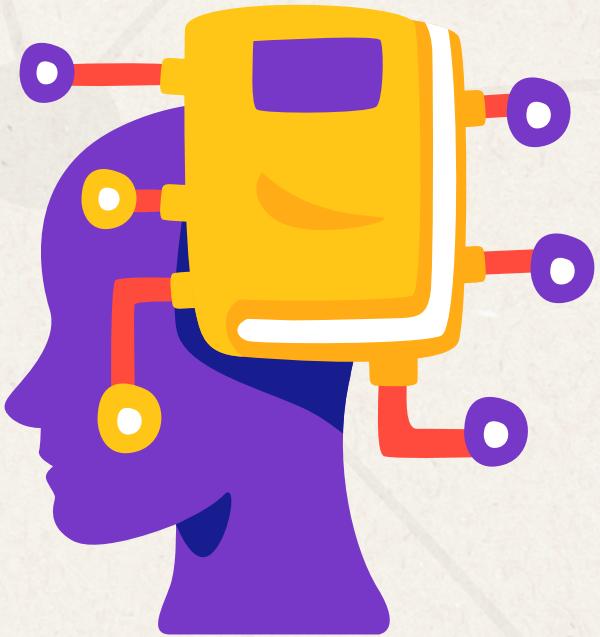
Artificial Intelligence (AI)

A system that mimics human intelligence – like learning, decision-making, and problem-solving.



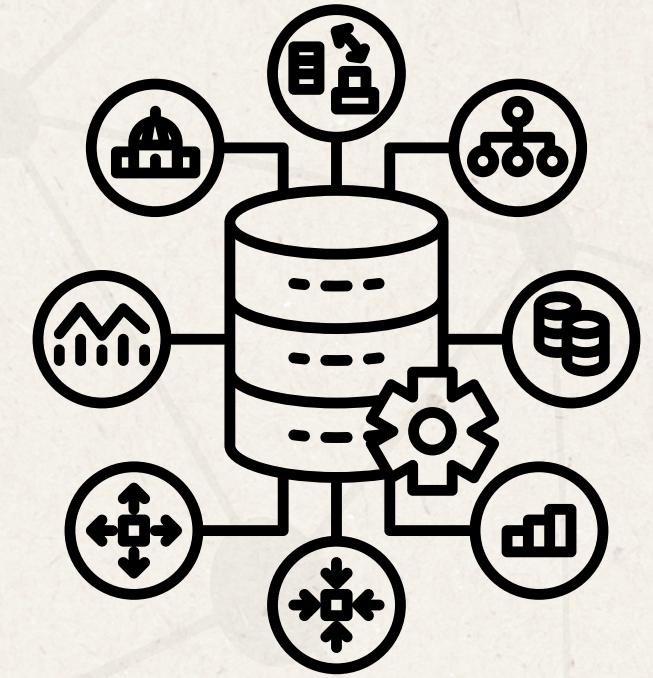
AI Governance

The policies, processes, and oversight to make sure AI is used safely, ethically, and responsibly.



Machine Learning (ML)

A subset of AI where the system learns from data to make predictions or decisions.



AIMS (AI Management System)

A structured way (like ISO 27001 for InfoSec) to manage and improve your AI operations.

"Think of AI like a robot chef – governance ensures it doesn't secretly add poison or break the kitchen."

Scope, Boundaries & Context



Understand Your Organization's AI Usage



Identify Internal & External Context



Decide Scope Boundaries



Document the Scope Clearly

What AI systems are you using or building?

Example: Chatbot, recruitment algorithm, fraud detection model

Legal requirements (e.g., DPDP Act, GDPR)

Stakeholders (customers, regulators, users)

Social and ethical expectations

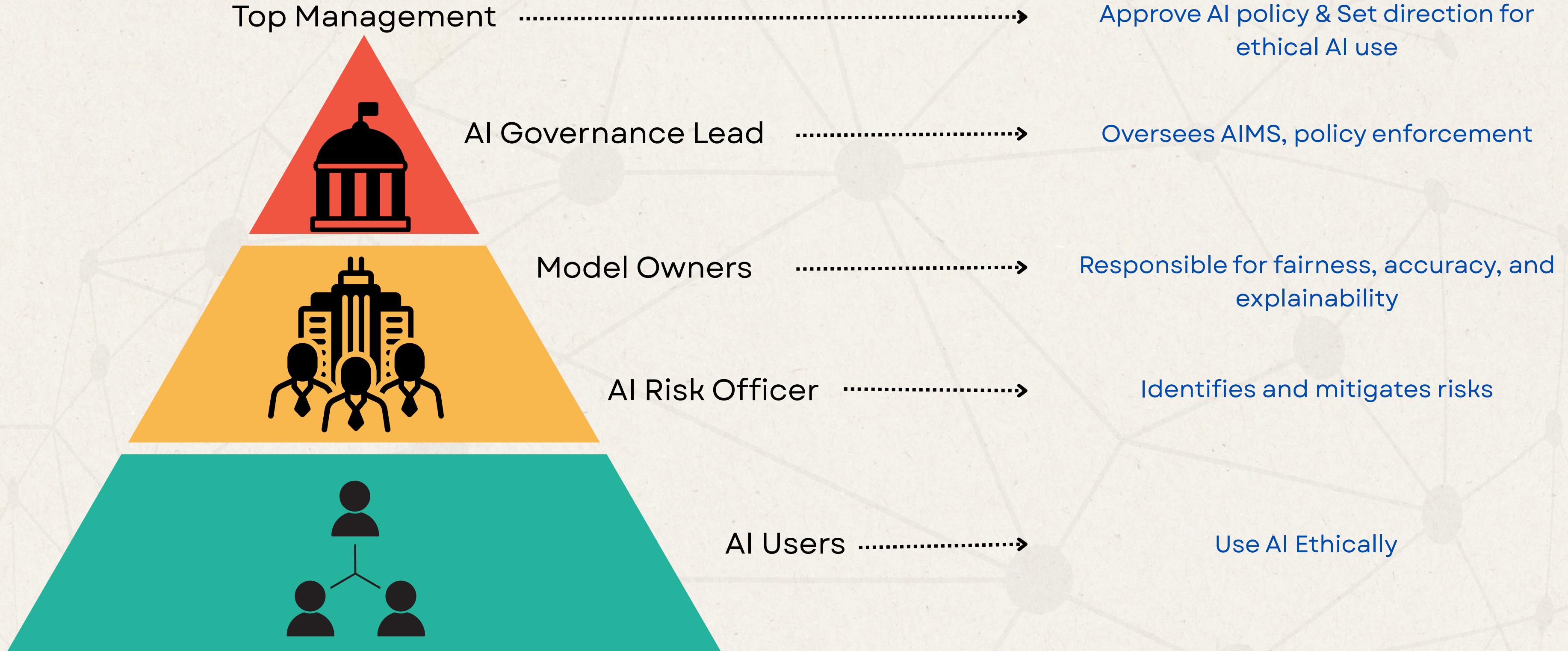
What's included (e.g., model dev, deployment)?

What's excluded (e.g., third-party AI services)?

Example scope:
“This AIMS applies to the design, development, deployment, and monitoring of the AI-powered resume screening engine used in our HR platform.”

“Don't overcomplicate – start small with one critical AI use case and expand scope later.”

Leadership & Governance



“Assign clear owners early. AI governance fails when it’s ‘everyone’s responsibility’ but no one’s accountability.”



Risk & Opportunity Management

AI risks aren't just technical – they impact trust, fairness, compliance, and reputation.

Risk	Impact	Likelihood	Mitigation
Bias in HR screening	High	Medium	Add fairness tests & human review
Data drift	Medium	High	Model retraining schedule
Black-box output	High	Medium	Use explainable AI methods
Overfitting on data	Low	Medium	Cross-validation & A/B testing

"Treat your AI like a product under test – list risks, assign owners, and revisit regularly."

AI Objectives and Planning



Why Set AI Objectives?

Align AI initiatives with business goals

Improve governance, performance, and trust

Enable measurable improvement

“Bad AI objectives sound good but can’t be measured. Always ask: ‘How will I prove this is achieved?’”

Objective Example	SMART Breakdown
Reduce bias in hiring model by 30%	Specific, Measurable
Conduct AI impact assessment on 100% models	Achievable, Time-bound
Improve model explainability score >80%	Relevant, Measurable, Timely
Train 100% staff on AI ethics policy	Specific, Attainable, Time-bound

AI Governance Policies and Controls



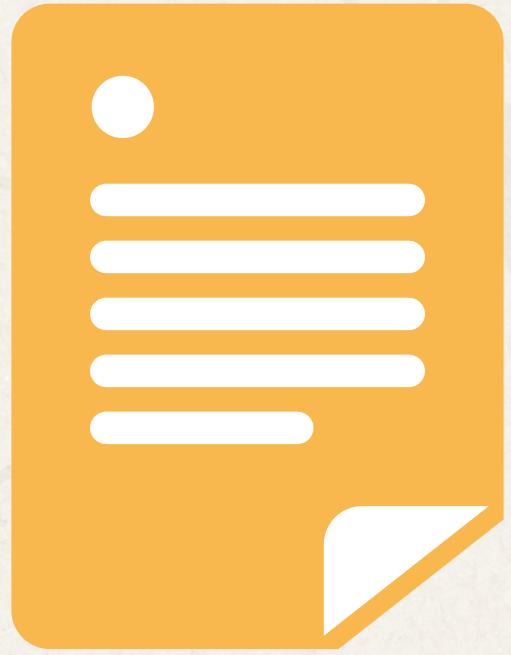
Data & Privacy Policy

What data is used,
stored, shared



Ethical AI Use Policy

Fairness, non-
discrimination, and
accountability



Explainability Policy

Ensuring outputs can
be understood



Bias & Risk Mitigation Policy

Continuous testing
and controls



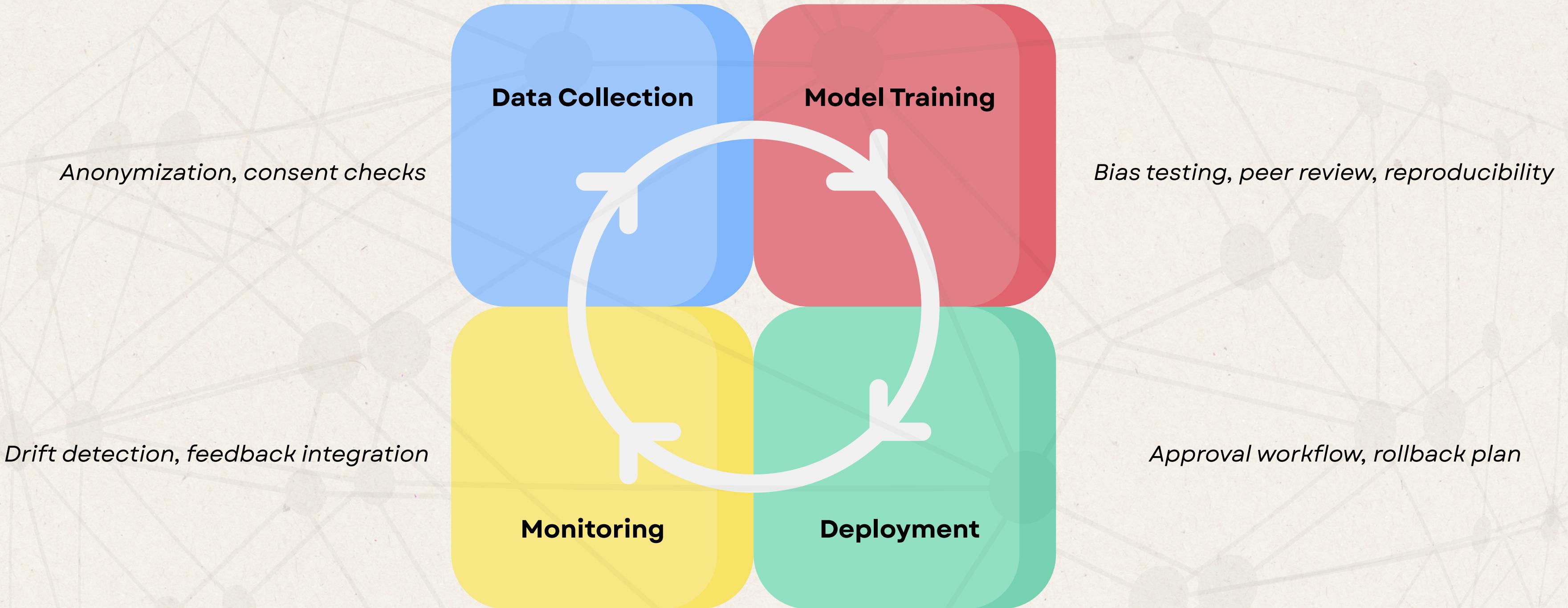
Model Management Policy

Versioning, approval
workflows,
monitoring

“Policies don’t work if they’re just documents – connect them directly to AI lifecycle actions.”

AI Governance Policies and Controls

AI Lifecycle Stage



Competence, Awareness & Training

“Training the Humans Who Train the Machines”



Data Scientists

Ethics, bias testing,
explainability tools

Business Teams

What AI can/can't
do, limitations

Security & Legal

Privacy,
compliance, risk

Management

Accountability
and oversight

Dev/ML Engineers

AI fairness,
explainability tools

“If your team doesn't understand AI risks, your compliance is only on paper.”

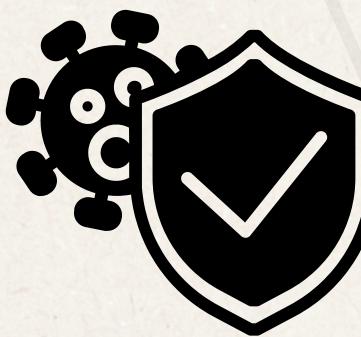
Communication & Transparency

Why Communication Matters

Builds trust with users and regulators



Prevents misuse and misinterpretation of AI systems



Ensures internal alignment across teams



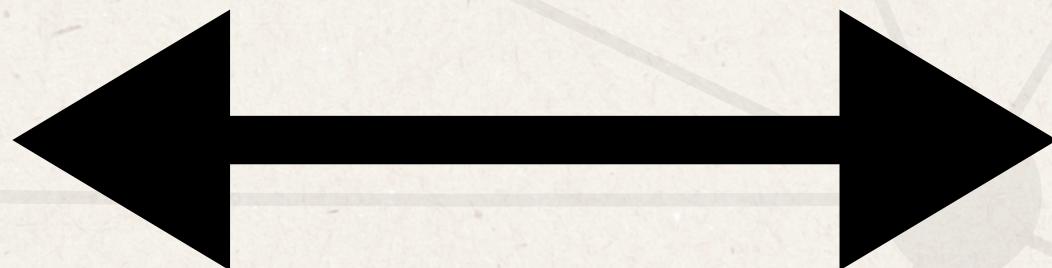
Internal Communication

AI policy rollouts and updates

Risk findings, mitigation plans

Model explainability for business units

Change logs & drift alerts for ops teams



External Communication

Be open about AI usage

Share purpose, limitations, and impacts

Publish fairness reports

Communicate user rights (opt-out, appeal decisions, etc.)

“Silence breeds mistrust. Explain what the AI does, and more importantly, what it doesn’t.”

AI Impact Assessment

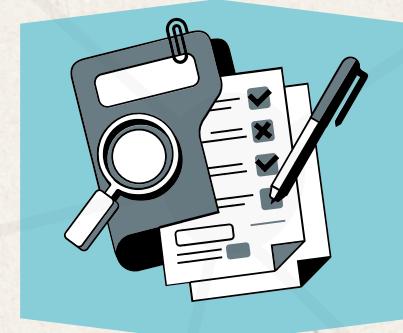
Spot Risks Before They Strike

What Is an AI Impact Assessment (AIIA)?

A structured review of an AI system's potential harms to individuals, society, and business.



Identify risks (bias, unfair outcomes, opacity)



Evaluate impact on data subjects and stakeholders



Ensure ethical and regulatory alignment

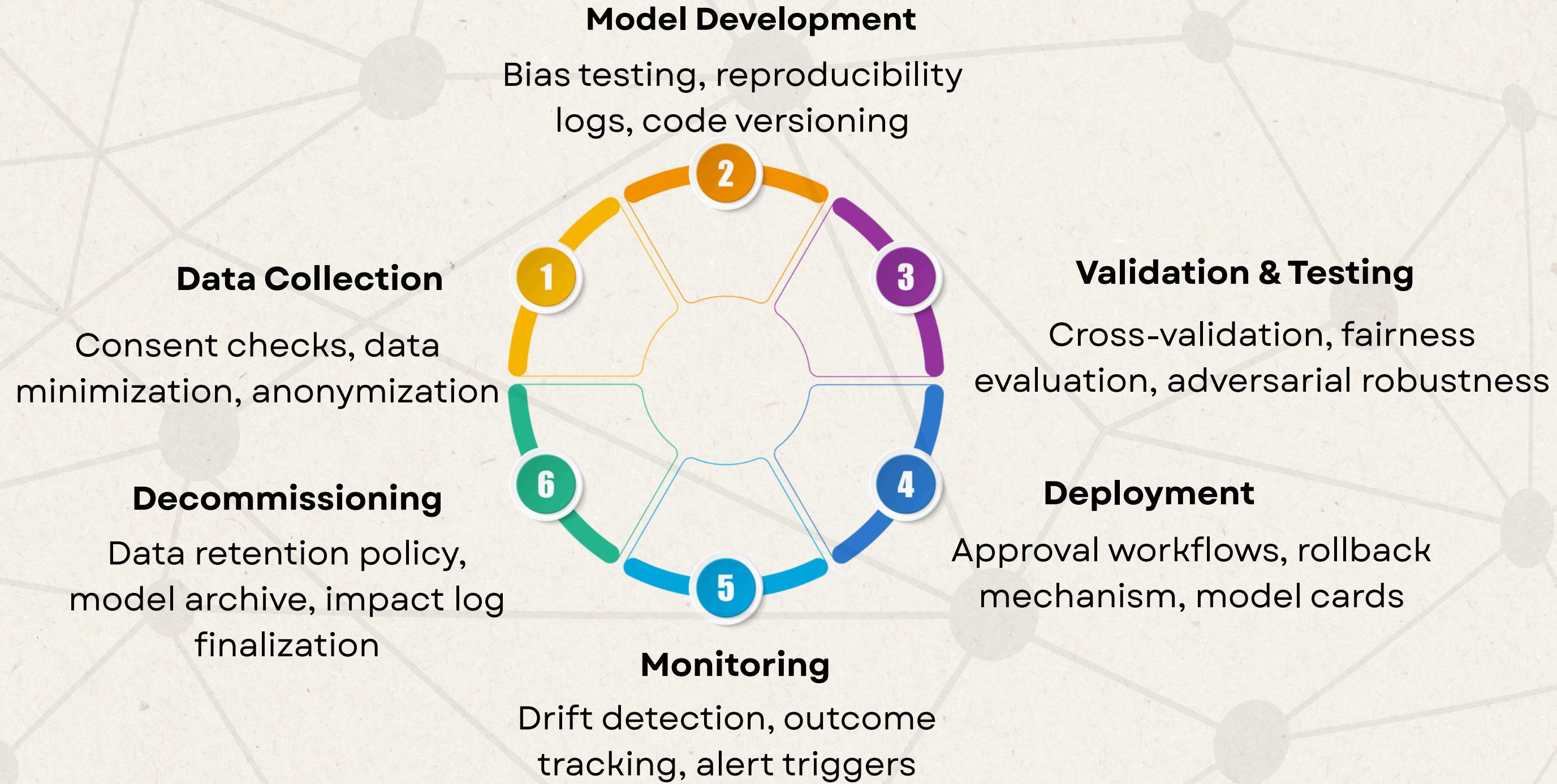
Core Components of a Simple AIIA

Section	What to Include
Purpose of the AI System	What it does, why it's used
Stakeholders Affected	Users, employees, third parties
Risks Identified	Bias, discrimination, opacity, misuse
Risk Mitigation Plan	Technical + organizational controls
Human Oversight	Manual checks, appeal mechanisms
Legal & Ethical Review	Regulatory check (DPDP, GDPR, etc.)

“Don't just assess risk. Document it, own it, and act on it – before the system goes live.”

Operational Planning and Controls

Lifecycle Stage



“AI governance is not a one-time review – it’s a living control system that runs with your models.”

Monitoring, Measurement & Audit

Keeping AI Accountable – Monitor, Measure & Audit

Why It Matters?

AI systems evolve –
and can drift, fail, or
misbehave silently

Ongoing monitoring ensures your
models stay fair, accurate, and
aligned with business + ethical goals

Audits help detect blind spots
and prove compliance
(internally & externally)



Internal Audits – What to Include

- Review of AI risk register & impact assessments
- Evaluation of model lifecycle compliance
- Evidence of training, decisions, escalations
- Gaps or nonconformities with action plans



“Don’t just measure what’s easy – measure what builds trust. Fairness, transparency, and real-world impact.”



What to Monitor & Measure

Category	What to Track	How to Measure
Model Performance	Accuracy, precision, recall, F1 score	Weekly/monthly dashboards
Fairness	Demographic parity, equal opportunity	Bias detection tools (e.g., AIF360)
Drift	Data distribution changes	Monitor input/output anomalies
Explainability	Clarity score, XAI metrics	LIME, SHAP, human evals
Incidents	Errors, complaints, escalations	Ticketing + feedback systems

“Don’t just measure what’s easy – measure what builds trust. Fairness, transparency, and real-world impact.”

Summary & ISO 42001 Readiness Checklist



Your AI Governance Journey!



What You've Learned (Quick Recap)

- ISO 42001 sets the standard for AI Management Systems (AIMS)
- It's about people, processes, and principles – not just code
- Governance must cover the full AI lifecycle – from design to decommissioning
- Documentation, transparency, and continuous improvement are key



“Don’t just measure what’s easy – measure what builds trust. Fairness, transparency, and real-world impact.”

THANK YOU!!

”

NEED HELP?



MoS Team is ready to assist you with the implementation of ISO 42001

**CONNECT
WITH US**



WWW.MINISTRYOFSECURITY.CO