AI POST-DEPLOYMENT MONITORING
PROCEDURE QUICK START GUIDE

AI post-deployment monitoring ensures AI systems remain reliable, ethical, and compliant in real-world operations. This streamlined set of procedures provides a comprehensive framework for organizations to rapidly implement effective AI-post deployment monitoring procedures while addressing critical operational, ethical, regulatory, and security risks.

RESPONSIBLE FUNCTION	FREQUENCY	ARTIFACTS	REPOSITORY	ESCALATION CONDITIONS
1. AI Model Performance Monitoring				
Description: Continuously track AI model accuracy and performance metrics to identify model drift.				
AI Operations/ Data Science	Continuous/ Weekly	Performance Reports Alerts	AI Monitoring System/ SharePoint	To IT Governance Lead if thresholds exceeded.
2. Bias and Fairness Audits				
Description: Periodically audit AI outputs for fairness and biases using defined metrics.				
AI Ethics Committee	Monthly/ Quarterly	Bias Audit Report	Ethics Portal Compliance Folders	To Chief Compliance Officer if bias persists.
3. Data Quality Checks				
Description: Validate input data quality for completeness, accuracy, and consistency.				
Data Engineering Team	Daily/ Weekly	Data Quality Dashboard Alerts	Data Lake Repository	To Data Lead if anomalies persist.
4. Regulatory Compliance Audit				
Description: Assess AI systems for alignment with applicable legal and regulatory requirements.				
Compliance Team	Quarterly/ Annually	Compliance Report	Regulatory Compliance Folder	To Legal Counsel for critical breaches

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5. Security Vulnerability Assessment				
Description: Assess AI systems for adversarial risks, data poisoning, and other security vulnerabilities.				
IT Security/ Infosec Team	Quarterly	Security Test Results Risk Assessments Vulnerability Assessment Reports	Cybersecurity Repository	To IT Leadership for critical security risks.
6. Resource Usage Monitoring				
Description: Track AI system resource utilization (CPU memory latency) to ensure efficiency.				
IT Operations	Continuous/ Weekly	Resource Usage Reports	Cloud/ System Monitoring Tools	To IT Lead if SLAs are breached.
7. Explainability Validation				
Description: Test and document the explainability of AI outputs for key decision pathways.				
AI Governance Team	Monthly	Consistency Test Reports	QA Repository	To Governance Lead if validation fails.
8. Output Consistency Testing				
Description: Validate consistency of AI decisions across similar input data scenarios.				
QA/ Testing Team	Monthly/ Quarterly	Explainability Reports Decision Logs	AI Governance Folder	Development Lead for deviations.
9. Incident Logging and Reporting				
Description: Maintain a log for AI failures anomalies or unintended consequences with RCA analysis.				
IT Support/ AI Operations Team	Ongoing *(as incidents occur)*	Incident Logs Root Cause Analysis (RCA) Report	Incident Management System	To IT Governance for unresolved issues.

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10. Ethical Impact Assessment				
Description: Review AI outcomes for ethical implications to avoid harm or reputational risks.				
Ethics Committee	Quarterly/ Annually	Ethical Impact Report	Ethics Governance Repository	To Executive Leadership for unresolved ethical concerns.
11. Model Retraining and Updates				
Description: Retrain AI models to address drift, biases, or evolving data patterns.				
Data Science/ ML Operations	As Needed *(Triggered by Drift)*	Retraining Logs Updated Models	ML Model Registry	To AI Governance Council for retraining failures.
12. Human-in-the-Loop Validation				
Description: Implement human oversight for critical AI decisions to validate real-world accuracy and alignment.				
Operations/ Domain Experts	Monthly or As Needed	HTML Validation Logs Decision Review	AI Governance Repository	To Business Heads for recurring decision errors.
13. Stress Testing and Scenario Analysis				
Description: Test AI systems under extreme or adversarial conditions to identify vulnerabilities.				
IT Operations/ Data Science	Annually	Stress Test Results Scenario Analysis	Resilience Testing Folder	To Security Leadership for identified weaknesses.
14. Stakeholder Feedback Loop				
Description: Collect and analyze stakeholder feedback to improve AI system performance and trustworthiness.				
Customer Success/ UX Team	Quarterly	Stakeholder Feedback Report	Feedback Repository	To AI Ethics Office for unresolved concerns.

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15. Documentation and Audit Trail Maintenance				
Description: Maintain clear and comprehensive documentation for audit readiness and transparency.				
Compliance/ IT Operations	Ongoing	Version Histories Audit Trails	Compliance Document Management System	To Compliance for documentation gaps
16. AI Governance Framework Review				
Description: Review AI governance structures, policies, and accountability to ensure oversight remains effective.				
AI Governance Council	Quarterly	Governance Review Report	Governance Repository *(e.g. GRC System)*	To Senior Leadership for gaps in governance.

Key Notes:

1. Frequency: Procedures are designed to balance operational rigor with organizational capacity; continuous and triggered activities are prioritized for critical areas like monitoring and retraining.

2. Escalation: Clear escalation pathways ensure rapid resolution of issues to maintain system integrity and compliance.

3. Storage: Centralized storage systems (e.g., GRC platforms, model registries) ensure traceability and easy access for audits and reviews.

4. Deliverables: Each procedure outputs tangible artifacts to demonstrate accountability and facilitate reviews.

This quick start guide offers a foundational framework to implement Lean AI Governance and enable effective AI Post-Deployment Monitoring. It is not exhaustive and should be tailored to specific organizational needs and regulations.