

How Often Should Security Awareness Be Conducted



Defining the ideal cadence for training and reinforcement



Frequency as strategic risk management, not a compliance checkbox



Key factors: risk profile, regulations, retention, incident data



Goal: select, justify, and defend your organization's frequency

Why Training Frequency Matters

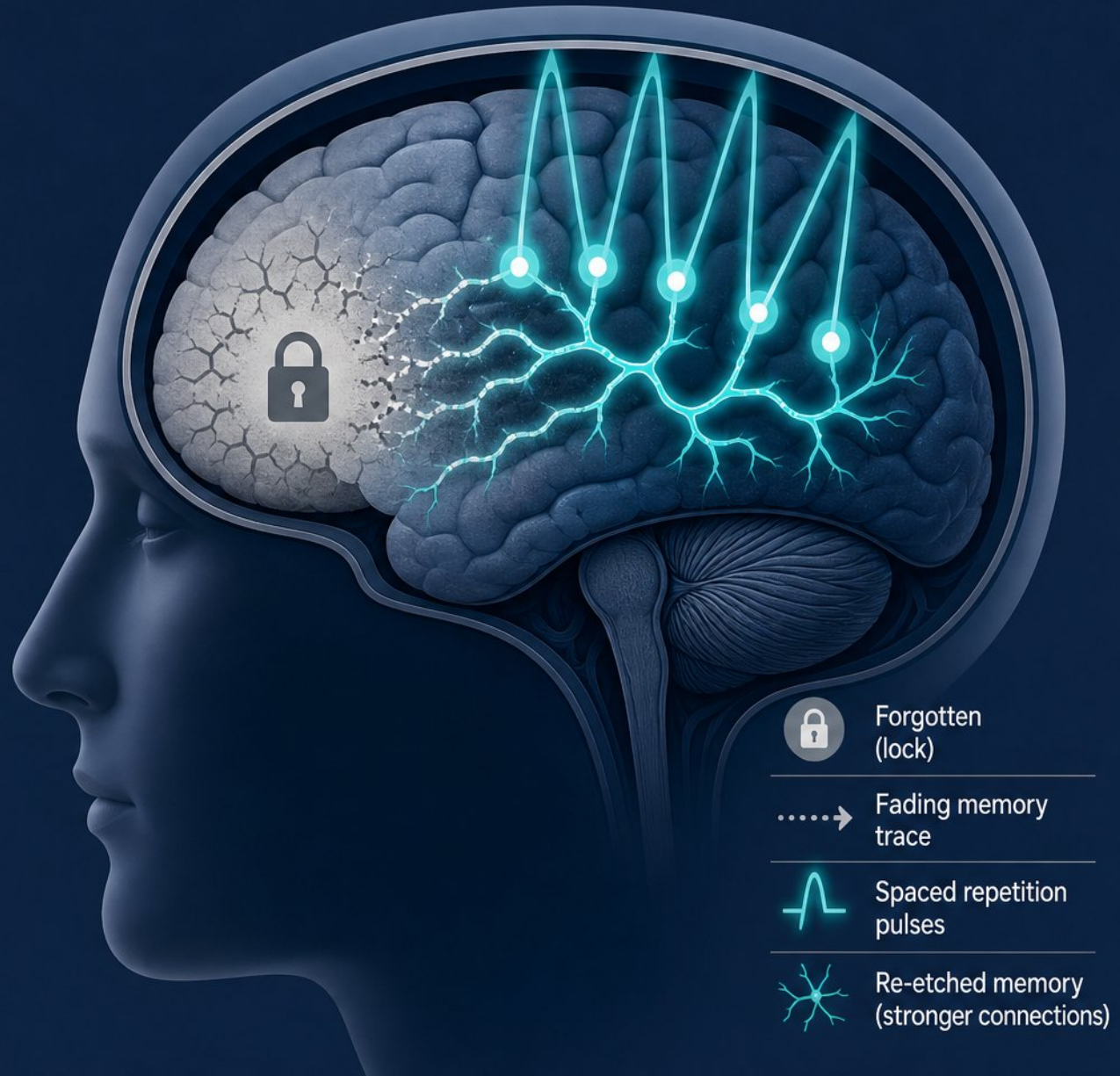
Security awareness is perishable—most knowledge fades within weeks or months without reinforcement.

- - **Too infrequent:** knowledge gaps return and unsafe habits resurface
- - **Too frequent:** learner fatigue, disengagement, and weaker message impact
- - **Goal** is measurable behavior change—not completion rates



The Forgetting Curve and Security Retention

- - Technical knowledge decays within 15 days; application knowledge in 15–30 days
- USENIX SOUPS 2020: phishing detection drops significantly by six months
- Refreshers needed at least every six months to restore detection ability
- Spaced repetition flattens the forgetting curve and builds durable habits
- Annual-only training leaves a long vulnerability window; reinforce continuously





Compliance Minimums: The Floor, Not the Ceiling

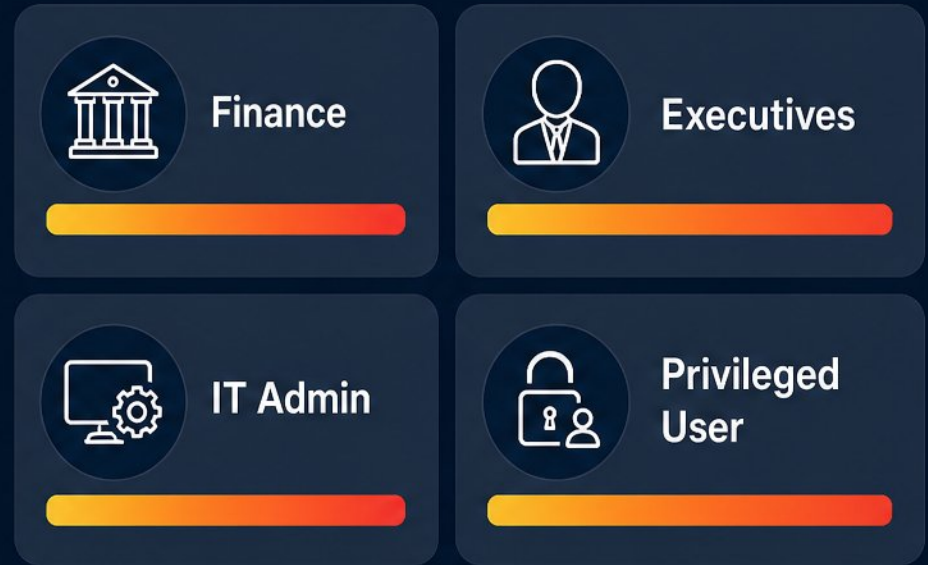
- **PCI DSS v4.0:** train at hire and at least every 12 months; phishing simulations mandatory (Req. 12.6.3)
- **HIPAA:** "periodic" training, interpreted by HHS as annual, plus sessions when threats or policies change
- **SOC 2, ISO 27001, GDPR:** no fixed interval, but documented recurring training and competency evidence expected
- Cyber insurers increasingly expect semi-annual or quarterly cadence plus documented phishing simulation results
- Annual compliance training is the foundation — layer continuous reinforcement on top



Risk-Based Cadence Decisions

- High-risk roles—finance, executives, IT, privileged users—need more frequent training
- New threats, phishing waves, incidents, or policy changes trigger immediate reinforcement
- Use risk assessments and human risk scoring to segment audiences dynamically
- Align cadence with attack surface, business operations, and role-specific exposure
- High-performing departments still get evaluated for further improvement

HIGH-RISK ROLES

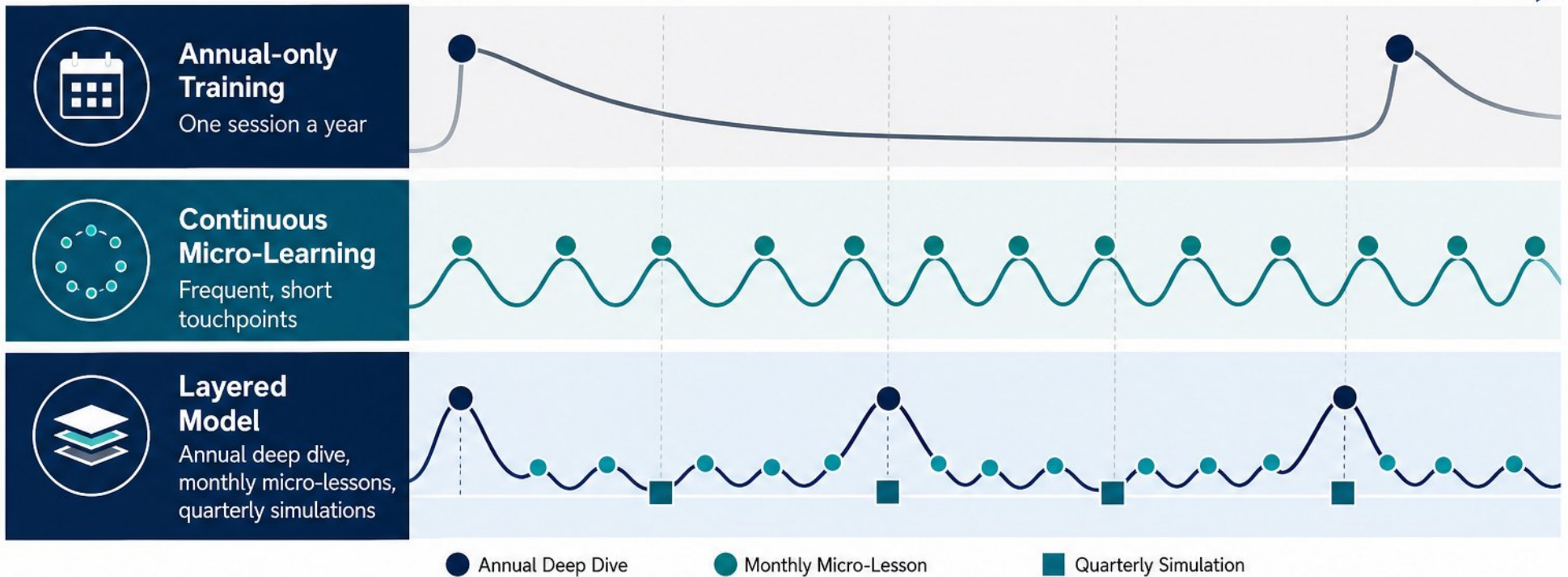


HUMAN RISK GAUGE



Continuous vs. Periodic Training Models

TRAINING APPROACHES OVER A 12-MONTH SPAN



Annual-only training: weakest model, memory decays before next session



Continuous micro-learning: short, frequent touchpoints build retention and habits



Layered model: annual deep dive, monthly micro-lessons, quarterly simulations



Just-in-time correction after simulation failures converts mistakes into learning



Match model to culture, resources, and platform capability

Recommended Cadence by Audience and Role

	General employees	● General employees: onboarding + annual training + monthly or quarterly reinforcement
	High-risk roles (exec, finance, IT)	● High-risk roles (exec, finance, IT): monthly simulations + deeper role-specific content
	New hires, contractors, third parties	● New hires, contractors, third parties: training before system access
	Department classification and targeting	● Use maturity models to classify departments and target high-risk groups



Measuring What Frequency Achieves



- Track phishing click and credential submission rates over time



- Monitor reporting rates, time-to-report, and repeat offender trends



- Resilience ratio = reporting rate ÷ failure rate; above 3:1 signals strong culture



- Use data to adjust cadence: raise frequency when risk rises



- Benchmark context: 33.2% baseline PPP → 4.2% after 12 months continuous training

Monitoring Panel



Phishing Click
Rate



Reporting
Rate



Detection Culture
(Resilience)



Time-to-Report

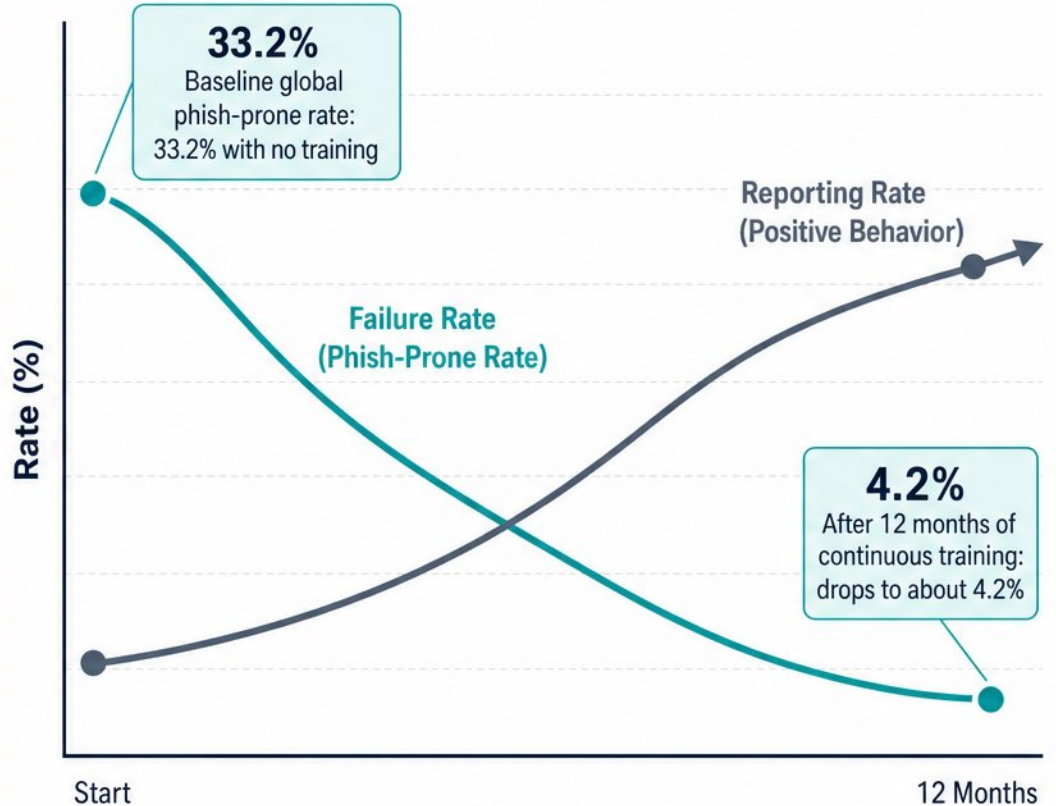


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Common Metrics and Benchmark Pitfalls



Behavior Change Over Time



Baseline global phish-prone rate: 33.2% with no training



After 12 months of continuous training: drops to about 4.2%



Benchmarks vary by simulation difficulty and program maturity



Normalize difficulty and maturity before comparing across organizations



Pair failure rate with reporting rate to reveal real behavior change



2026 target band: 2-5% failure rate in highly mature programs



Reporting rate is the stronger signal of a healthy detection culture

Avoiding Fatigue and Over-Training



- Watch for fatigue signals: declining voluntary completion, rising simulation failures, low engagement



- Rotate formats: micro-videos, interactive scenarios, live briefings, simulation debriefs, gamification



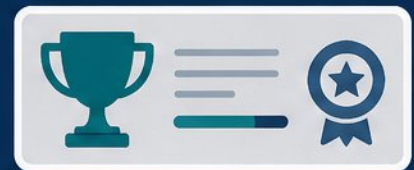
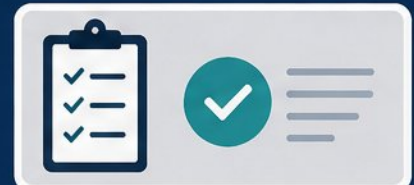
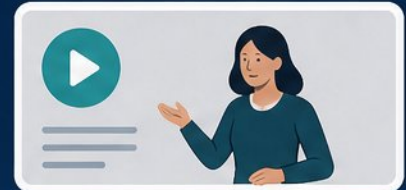
- Short, spaced sessions beat long modules and lower cognitive load



- Relevance beats repetition: role-based, context-aware, behavior-triggered training reduces fatigue



- Generic frequency cuts fail; targeted content prevents burnout without weakening coverage



Designing the Training Cadence



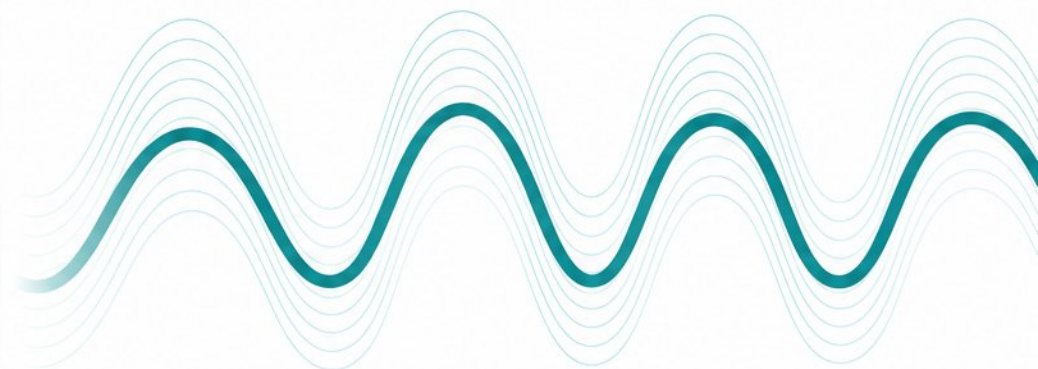
- - Annual baseline plus quarterly or monthly reinforcement across the year
- - Layer event-driven training: incidents, phishing waves, policy changes, new threats
- - Document frequency rationale, delivery methods, and content refresh cycles
- - Sample calendar: monthly simulations, bi-weekly micro-learning, role-based deep dives
- - Keep themes fresh and mapped to roles, not one large annual block

Building a Defensible Training Calendar

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
THEME	New Year Security Mindset	Phishing Awareness	Data Protection	Secure Remote Work	Identity Security	Data Privacy	Summer Travel Security	Cloud Security	Secure Workplace	Cybersecurity Awareness Month	Holiday Scams	Year-End Security Review
SIMULATIONS	●		●		●		●		●		●	
MICRO-LEARNING SPRINTS	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
COMPLIANCE MILESTONES	◆			◆			◆			◆		◆

 Monthly Theme
  Simulation Exercise
  Micro-Learning Sprints
  Compliance Milestone

-  Build a 12-month calendar with monthly themes, simulations, and micro-learning
-  Map quarterly role-based deep dives to your highest-risk groups
-  Align the schedule with compliance deadlines and Cybersecurity Awareness Month
-  Sync themes to seasonal threats and world or regional events
-  Document how frequency links to risk assessment and regulatory requirements
-  Use the calendar to show leadership and auditors a proactive, continuous program



REINFORCEMENT RHYTHM

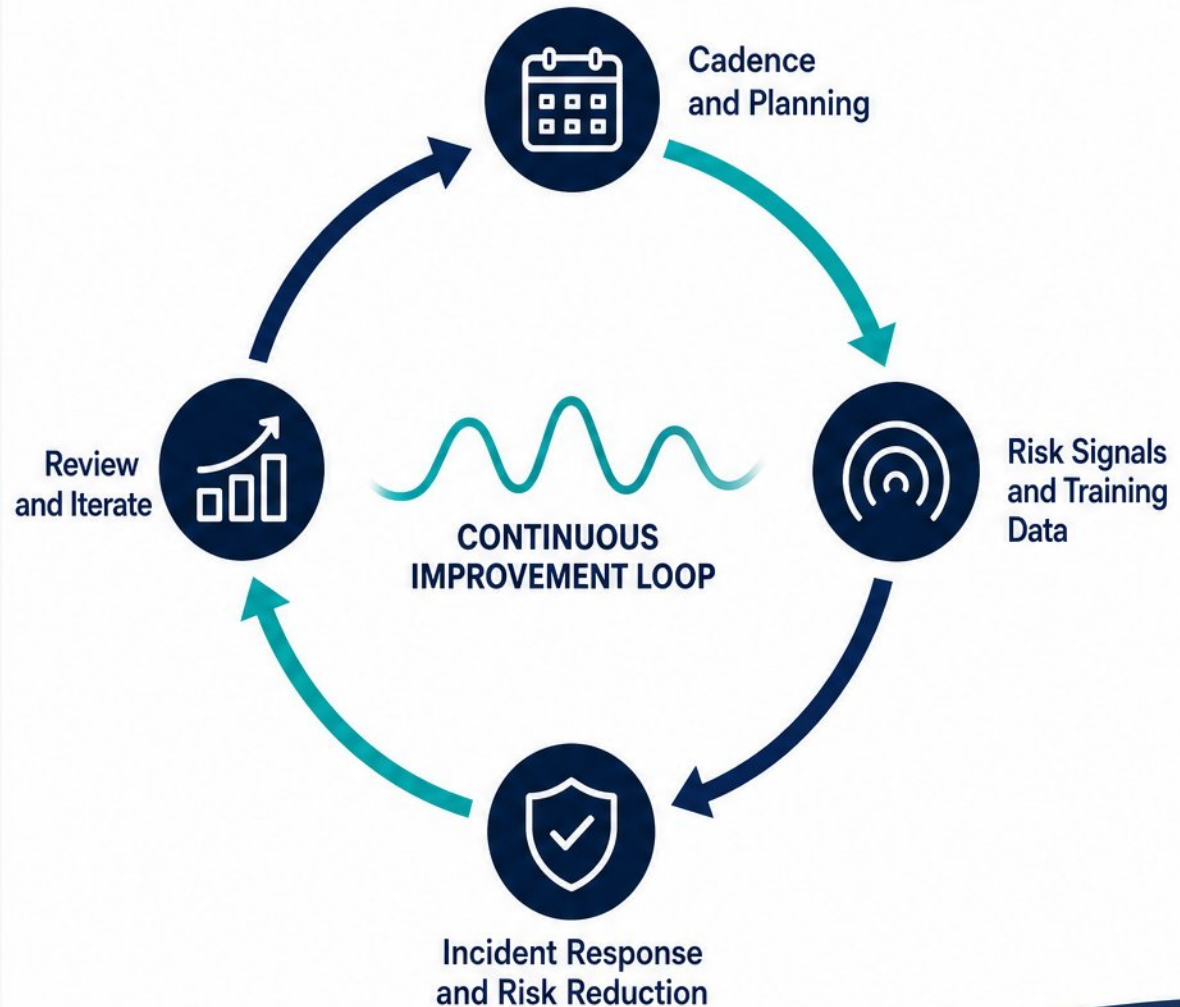
Decision Framework for Choosing the Right Frequency



- ✓ - Assess risk profile, constraints, targets, and pilot before scaling
- ✓ - Budget, staffing, tooling, and learner capacity shape cadence choice
- ✓ - Start with high-risk groups, expand enterprise-wide over 60-90 days
- ✓ - Re-evaluate quarterly using data, incidents, and business changes
- ✓ - Adjust frequency based on evidence, not assumptions

Action Plan and Continuous Improvement

- ✓ - Convert chosen cadence into owners, deadlines, and resources
- ✓ - Review quarterly: click rates, reporting, retention, fatigue signals
- ✓ - Link training data to incident response and risk reduction
- ✓ - Iterate based on evidence: raise frequency where risk is high
- ✓ - Fix ineffective content before adding more volume



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