

# Unlocking Competitive Advantage in the Age of Intelligent Systems

**SESSION: AI-Driven Entrepreneurship and Innovation**

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# Agenda

- ▶ Professional Highlights
- ▶ AI as a Catalyst for Competitive Edge
- ▶ Founders' Journey
- ▶ The CPD Framework
- ▶ Actionable Roadmap for Secure AI Adoption
- ▶ Q&A

# Professional Highlights

# Expertise and Roles

## Subject Matter Expertise

- Cybersecurity Governance
- Strategic Management of Technologies
- Supply Chain Management

## Roles

- Professor
- Author
- Editor
- Speaker
- Podcastor
- Consultant/Advisor

# Author

THE  
WALL STREET  
JOURNAL.

MIS  
Quarterly



MIT Sloan  
Management Review

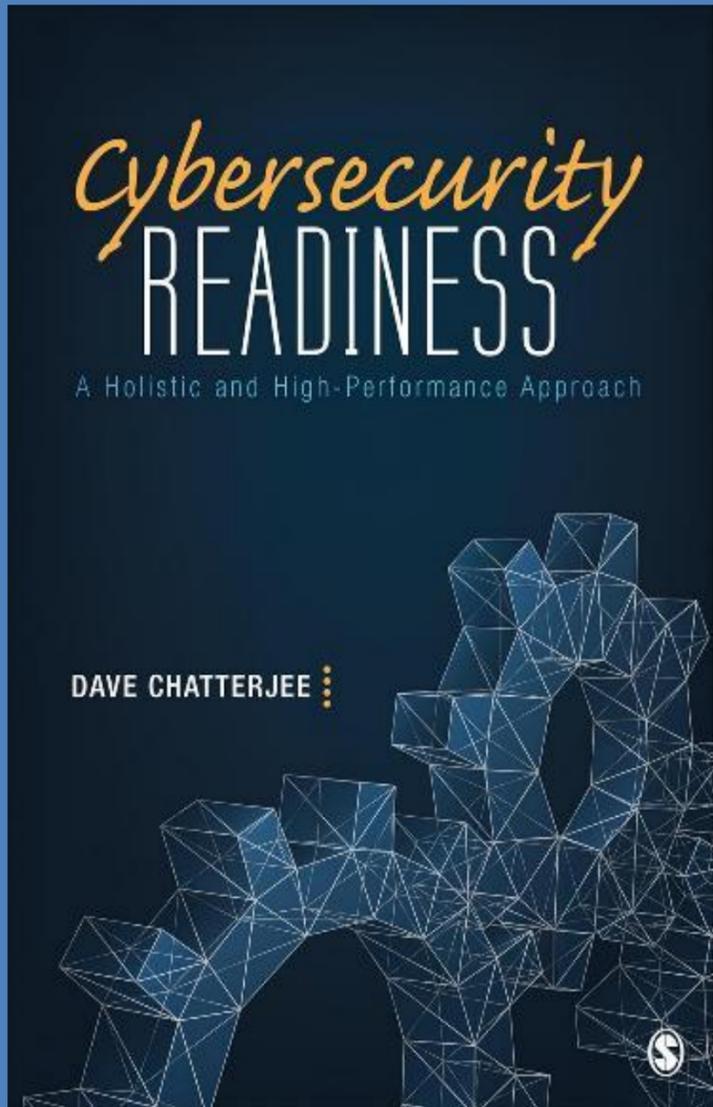


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# Professional Highlights

## Cybersecurity Leadership Council and SWAT Team

### CYBERSECURITY COLLABORATIVE CORPORATE LEADERSHIP COUNCIL



**Joanne Martin**  
Emeritus VP  
IT Risk & CISO  
IBM

**Marc Varner**  
VP & Global CISO  
Yum! Brands: Pizza Hut,  
Taco Bell, KFC

**Malcolm Harkins**  
Chief Security and Trust  
Officer  
Cylance Corp.

**Steve Young**  
Former CISO  
Blue Shield of California,  
Kellogg's

**Catharina "Dd" Budiharto**  
Sr. Director,  
Cybersecurity Architect  
& Data Protection  
Baker Hughes, a GE  
company



**Rich Armour**  
CISO  
General Motors

**Tim Callahan**  
SVP & Global Chief  
Security Officer  
Aflac

**Mike Wilson**  
SVP and Chief Security  
Officer  
Molina Healthcare

**Kim Owen**  
Interim CISO  
ChargePoint, Inc

**Nikolay Chernavsky**  
SVP & CISO  
PennyMac



**Stan Lowe**  
Global CISO  
Zscaler

**Jim O'Conner**  
CISO  
Cargill

**Joe Ellis**  
VP & CISO  
Ryder System, Inc.

**Linda Dawson**  
Former Incident &  
Investigations Mgr.  
3M

**John Bingham**  
Global CISO  
Fiat Chrysler Automobiles



**David Ortiz**  
VP and CISO  
Bed Bath & Beyond

**George Maropakis**  
Sr. Director of Information  
Security  
McDonald's Corporation

**Adam Fletcher**  
CISO  
The Blackstone Group

**Mark J. Viola**  
VP & Global CISO  
Henry Schein, Inc



**Dave Chatterjee**  
World-Renowned Technology  
Thought Leader and Business  
Strategist  
The University of Georgia

**Mario Chiock**  
Fellow and Former Global CISO  
Schlumberger

### CYBERSECURITY COLLABORATIVE COMMUNITY LEADERSHIP COUNCIL



**Kiersten Todt**  
Managing Director  
Cyber Readiness Institute

**Dave Chatterjee**  
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Technology Thought  
Leader and Business  
Strategist  
The University of Georgia

**Daniel Eliot**  
Director of Small  
Business Education  
National Cyber Security  
Alliance

**Laszlo Gonc**  
Co-founder and  
Managing Partner  
Next Era Transformation  
Group

**Teri Takai**  
Executive Director,  
Center for Digital  
Government  
ERepublic



**Leslie Kesselring**  
Founder and President  
Kesselring  
Communications

**Philip Kagan**  
CISO  
Girl Scouts of the USA

**Dan Gorecki**  
AVP, Information  
Security  
Aramark

**Bryan Hurd**  
VP  
Stroz Friedberg, an Aon  
company

**Kimberley Owen**  
Interim CISO  
ChargePoint, Inc



**Juancarlos Martinez**  
VP, Information  
Security Manager  
Columbia Bank

**Mike Dooley**  
Information Security  
Officer  
Viewpoint

**Christopher Veatch**  
Partner  
Perkins Coie LLP

**Jason Edwards**  
Compliance Director -  
Information  
Security/Cyber Security  
USAA

**Griffin Weaver**  
Technology and  
Outsourcing Counsel  
USAA



**Terry Waters**  
Independent  
Consultant  
Waters Advisory

**Layton Holcombe**  
Director of Global  
Cyber Security Talent  
Network  
Access Talent Today, LLC

**Jim Rutt**  
Chief Information  
Officer  
Dana Foundation

# Professional Highlights

## Speaker/Moderator

RSAC Webcast

**A PROACTIVE BEHAVIORAL APPROACH TO CYBER READINESS: INSIGHTS FROM A CLINICAL PSYCHOLOGIST AND A SOCIAL SCIENTIST**



**BEATRICE CADET**  
Cyber Threat Intelligence Manager  
KLM Royal Dutch Airlines



**DAVE CHATTERJEE**  
Visiting Professor, Pratt School of Engineering, Duke University



# AI as a Catalyst for Competitive Edge

# Identity and Access Innovation

- ▶ **Passwordless and device-bound authentication** (Beyond Identity, Badge).
- ▶ **Multi-cloud identity orchestration** (Strata Identity).
- ▶ **Deepfake-resilient verification** (Nametag).

*Goal:* Shrink attack surfaces while creating seamless, trusted user experiences.

➤ Beyond Identity



# Autonomous Cyber Defense

- ▶ **Agentic AI for patching and remediation** (Root, Vicarius).
- ▶ **AI-driven model and data-layer protection** (HiddenLayer, Nightfall).
- ▶ **Autonomous DDoS and behavioral defense** (NETSCOUT, DTEX).

*Goal:* Accelerate detection and response beyond human reaction time.



NETSCOUT.



# AI Trust, Safety & Compliance

- ▶ **Post-quantum and crypto-ready infrastructure (Futurex).**
- ▶ **Data classification and compliance automation (Normalize/Proofpoint).**
- ▶ **Governance dashboards for AI risk oversight (Pangea)**

*Goal:* Ensure that innovation keeps pace with evolving legal and ethical standards.



**proofpoint.**



# Founders' Journey

# Motivations

## ▶ **Firsthand Exposure to Risk:**

- Several founders came from security or identity management backgrounds and had seen how traditional defenses collapsed under new forms of attack.
- Their ventures were born out of a determination to close those gaps—
  - whether that meant eliminating passwords (as in Beyond Identity and Badge);
  - defending AI models from manipulation (HiddenLayer); or
  - authenticating humans in a world of deepfakes (Nametag).

## ▶ **Belief in Trust as a Differentiator:**

- They recognized that trust—once a compliance box—was becoming a market-winning feature.

# Hurdles Encountered

## ▶ **Market Skepticism and Investor Fatigue:**

- Early adopters were cautious about replacing legacy systems with AI-driven defenses.
- Convincing boards and CISOs

## ▶ **Talent and Technical Complexity:**

- Recruiting specialized AI security talent
- Build teams capable of both pioneering new algorithms and translating them into practical, compliant solutions.

## ▶ **Regulatory and Ethical Grey Zones:**

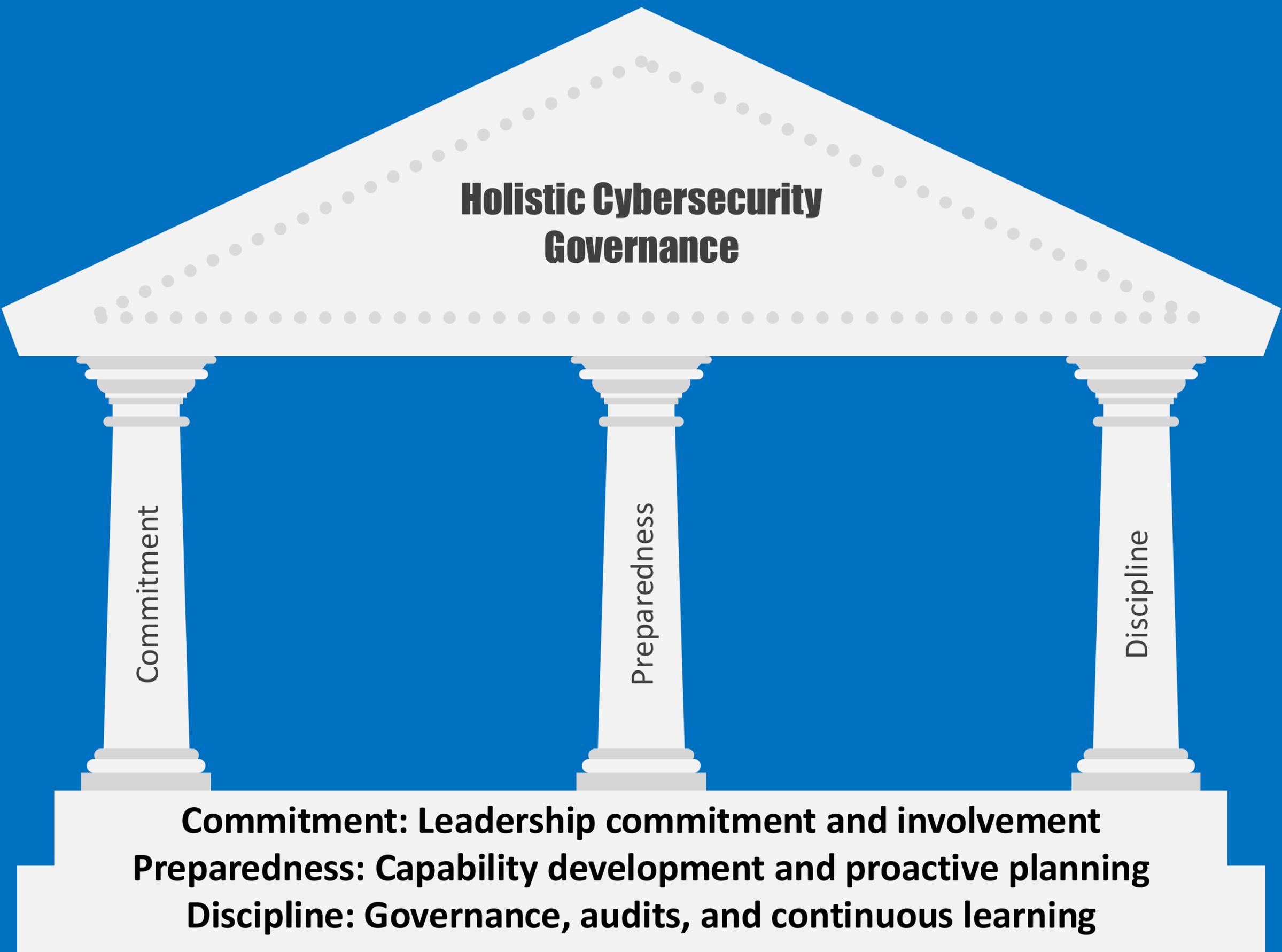
- As AI outpaced existing laws, companies faced ambiguity around privacy, fairness, and liability.
- Had to impose higher ethical standards on themselves

# Overcoming Adversity

- ▶ **Relentless Experimentation**
  - Each setback—failed pilots, funding gaps, regulatory delays—made them even more determined.
- ▶ **Strong Belief and Vision**
  - **Long-term vision: make security an enabler and not an obstacle.**
- ▶ **Strategic Partnerships**
  - Collaborations with cloud providers, cybersecurity firms, and government agencies lent credibility and helped scale adoption.
- ▶ **Transparency and Education:**
  - Founders made openness a strategy—
    - Publishing research;
    - Open-sourcing tools; and
    - Engaging in dialogue with regulators to set new benchmarks for AI safety and accountability.

The background is a dark blue grid of various icons including padlocks, envelopes, a globe, a smartphone, a document, and a laptop. In the center is a large, faint shield logo with a checkered pattern and a central emblem. The main text is enclosed in a thick, light blue border with a white diagonal line crossing it from the bottom right.

# The Commitment-Preparedness-Discipline (CPD) Framework



## Holistic Cybersecurity Governance

Commitment

Preparedness

Discipline

**Commitment: Leadership commitment and involvement**

**Preparedness: Capability development and proactive planning**

**Discipline: Governance, audits, and continuous learning**

# The 'Commitment' Dimension

## Success Factors



# The 'Preparedness' Dimension

## Success Factors

**Respond and Recover**  
Incident Response Capability  
Disaster Recovery Planning

**Preparedness**

**Identify**  
Organizational Role  
Recognition  
Cyber Risk Assessment  
Asset Identification and  
Prioritization

**Detect**  
Detect Anomalies and Events

**Protect**  
Access Control  
Configuration Management  
Securing Clients and Browsers  
Securing Networks  
Managing Removable Media  
Data Security  
Data Backup and Retention  
Asset Maintenance  
Awareness and Training  
Business Continuity Planning

# The 'Discipline' Dimension

## Success Factors



# Actionable Roadmap for Secure AI Adoption

# 1. Commitment – Secure AI Starts at the Top

**Goal: Ensure leadership buy-in, clear governance, and ethical alignment before AI deployment.**

Action Step	Deliverable	Example in Practice
1.1 Executive Alignment	Board-approved AI security charter	A hospital board ratifies an AI governance policy mandating bias testing, explainability, and robust security controls.
1.2 Ethical & Regulatory Commitment	AI ethics code aligned with sector-specific laws (HIPAA, GDPR, etc.)	A financial services firm integrates AI compliance into its enterprise risk management framework
1.3 Budget & Resource Allocation	Dedicated AI security funding and cross-functional team	AI security lead appointed with budget for red-teaming and continuous monitoring tools.

**Checkpoint:** Leadership signs an AI security pledge, making it part of annual strategic objectives.

## 2. Preparedness – Building a Resilient AI Ecosystem

**Goal: Architect, test, and train before deploying AI into critical workflows.**

Action Step	Deliverable	Example in Practice
2.1 Threat Modeling & Risk Assessment	AI-specific threat matrix (data poisoning, adversarial ML, model inversion, prompt injection, etc.)	Pharma R&D lab runs tabletop exercises on model manipulation during drug discovery.
2.2 Secure AI Design	Security-by-design AI architecture with layered defenses	Zero Trust principles applied to AI pipelines (restricted data flows, encrypted model storage).
2.3 Data Protection & Quality	Verified data lineage and integrity controls	Manufacturing AI models use digitally signed sensor data to prevent spoofing.
2.4 Workforce Preparedness	AI-specific security training	Staff learn to detect and report adversarial prompts or suspicious AI outputs.
2.5 Simulation & Testing	Pre-production adversarial testing	Bank uses red teams to simulate fraud attempts exploiting generative AI chatbots.

**Checkpoint:** AI system passes adversarial penetration test and compliance audit before production launch.

### 3. Discipline – Sustaining Security Over Time

**Goal: Maintain vigilance and adaptability as threats evolve.**

Action Step	Deliverable	Example in Practice
3.1 Continuous Monitoring & Anomaly Detection	AI security dashboard with real-time alerts	Healthcare AI tool flags anomalous diagnostic suggestions for human review.
3.2 Model & Data Drift Management	Quarterly retraining with bias and security checks	Insurance AI models are retrained to account for new fraud patterns.
3.3 Incident Response Integration	AI-inclusive IR playbook	Cybersecurity team has specific steps for AI model compromise scenarios.
3.4 Governance Reviews & Audits	Annual AI ethics and compliance review	Independent auditors validate model fairness and robustness.
3.5 Cross-Industry Intelligence Sharing	Membership in AI threat-sharing consortiums	Energy company shares adversarial AI attack indicators with sector peers.

**Checkpoint:** Post-deployment reviews show adherence to security SLAs, minimal bias drift, and timely incident handling.

# Phased Timeline

- ▶ **Phase 1 (0–3 Months): Commitment**
  - Establish governance, security budget, create AI ethics & security charter.
- ▶ **Phase 2 (3–9 Months): Preparedness**
  - Threat model, secure AI design, red-team testing, workforce upskilling.
- ▶ **Phase 3 (Ongoing): Discipline**
  - Deploy continuous monitoring, audits, intelligence sharing, and retraining cycles.

## Key Success Metrics

- ▶ **Governance:** % of AI projects passing pre-deployment security and ethics review.
- ▶ **Resilience:** Mean time to detect/respond to AI incidents.
- ▶ **Compliance:** Audit pass rates for AI-related regulatory requirements.
- ▶ **Trust:** Stakeholder satisfaction with AI transparency and reliability.

# Concluding Thoughts

## Concluding Thoughts

- ▶ AI is both an enabler and a risk amplifier—advantage flows from responsible adoption.
- ▶ Founder journeys reveal how adversity and expertise drive globally relevant innovation.
- ▶ CPD ensures AI is deployed securely, ethically, and at scale.
- ▶ Leaders who integrate trust and resilience into AI strategy will shape the future of competition.

Q&A



# THANK YOU!!

