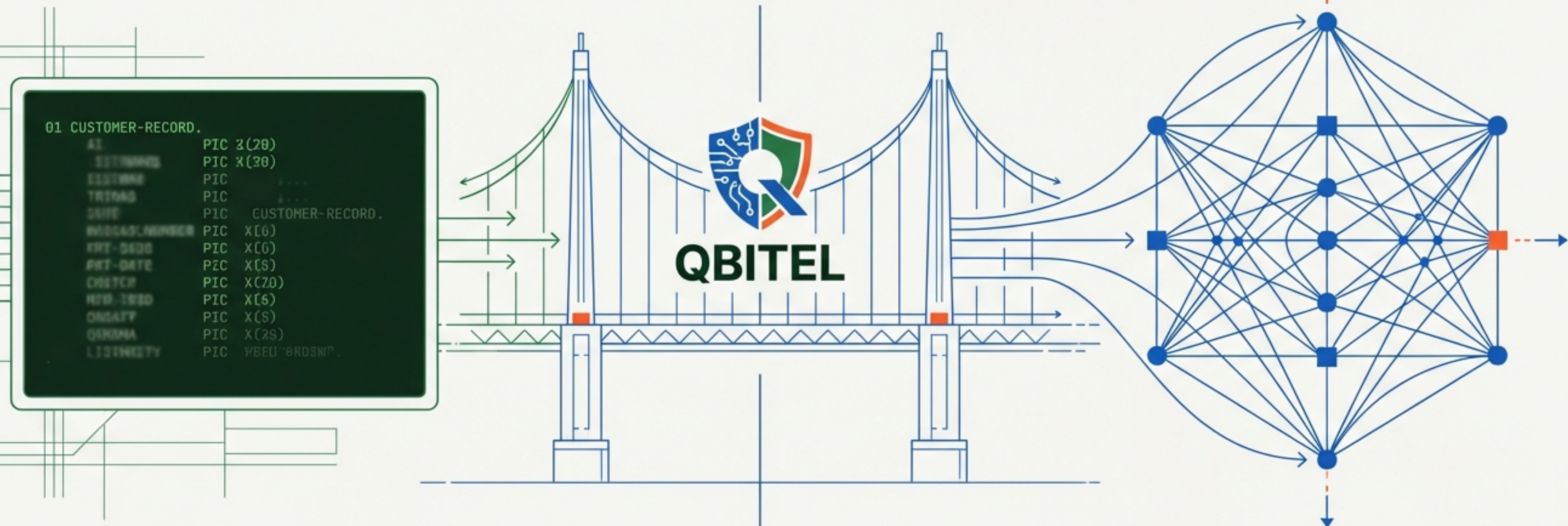


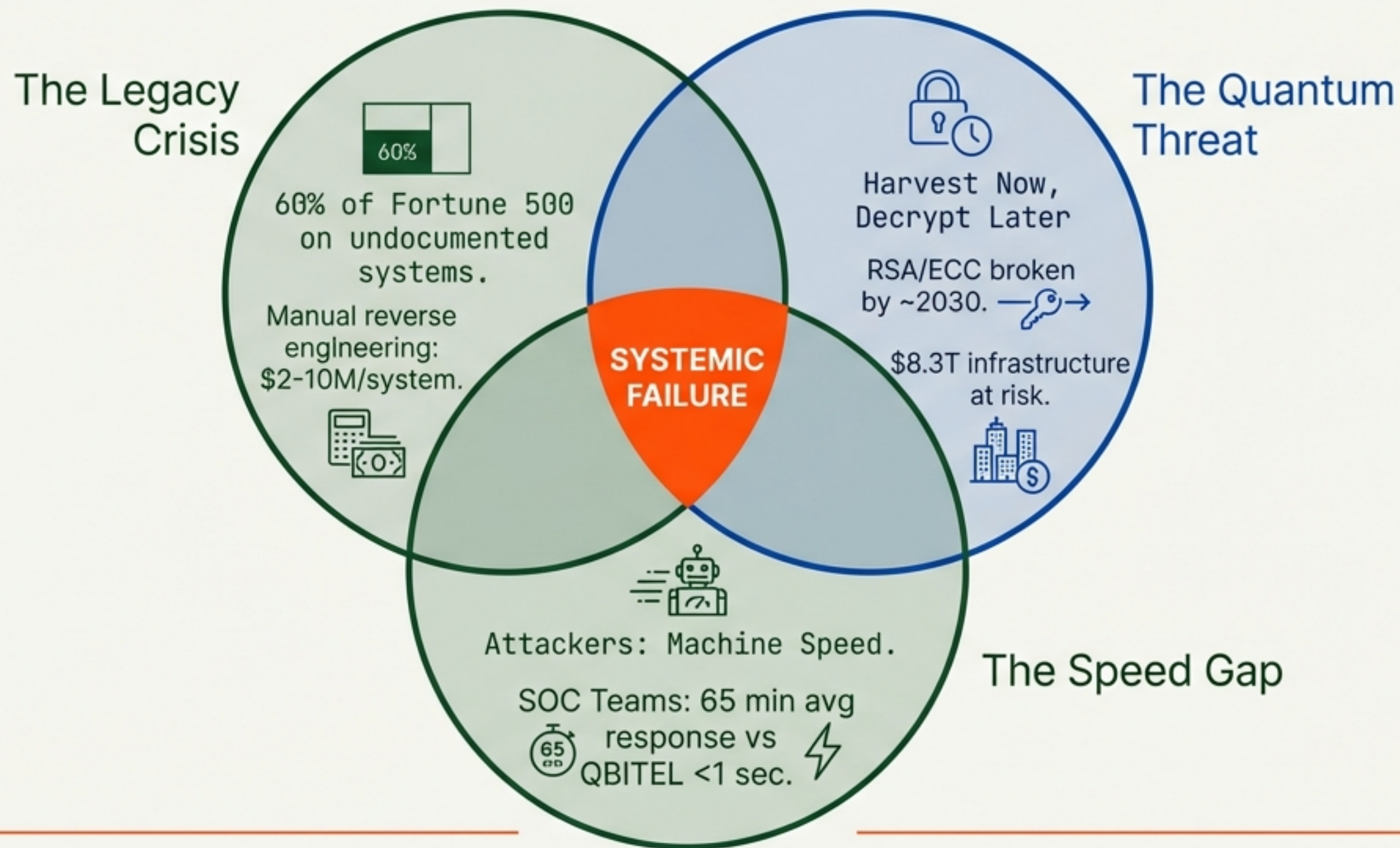
QBITEL Bridge: The Quantum-Safe Future for Legacy Systems

Discover. Protect. Defend. Autonomously.



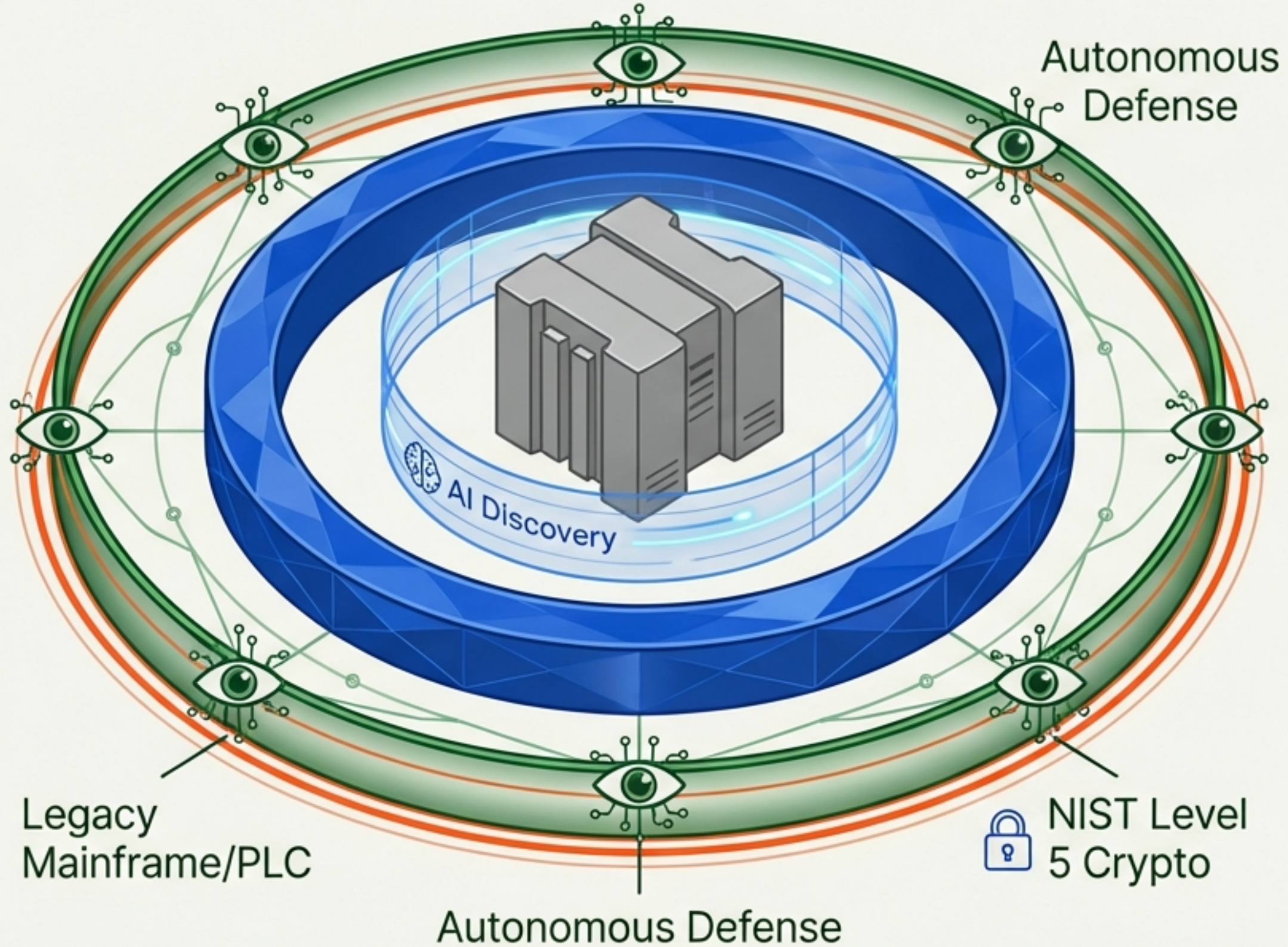
The only platform for AI-powered, quantum-safe modernization.

Three Fatal Weaknesses Converging on the Global 2000



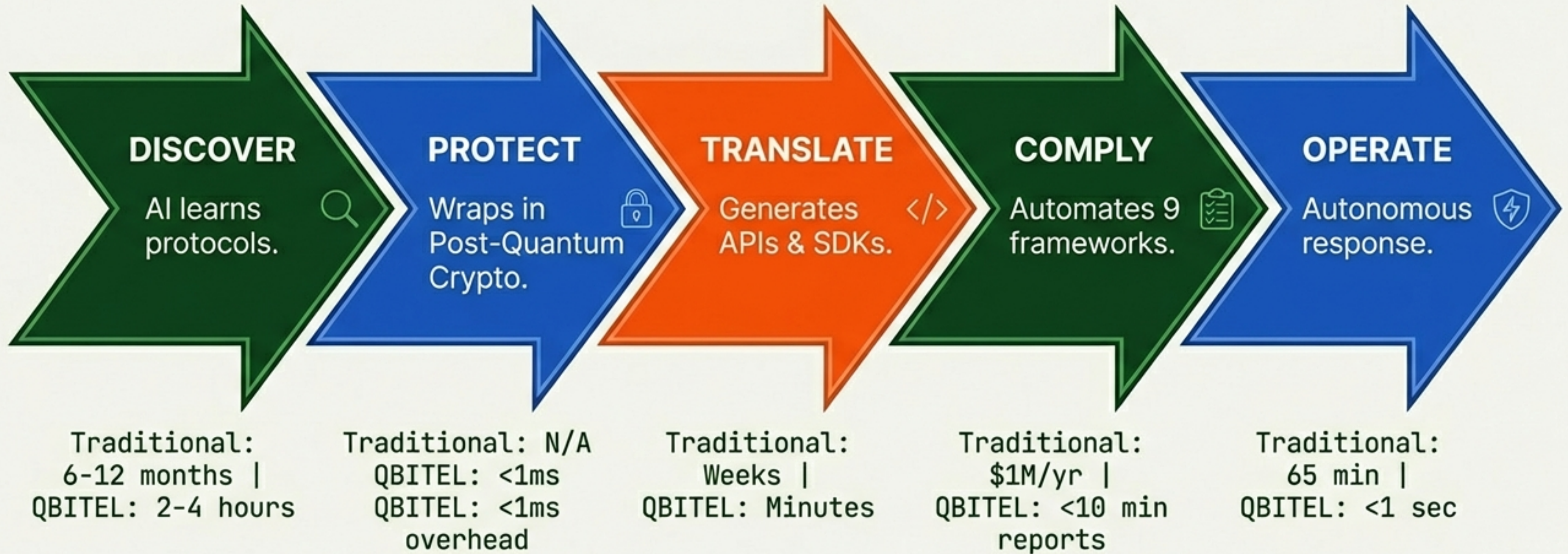
Manual modernization is too slow. Traditional security is too reactive.
The status quo is existential risk.

A Paradigm Shift: AI-Powered, Quantum-Safe Modernization



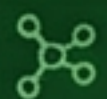
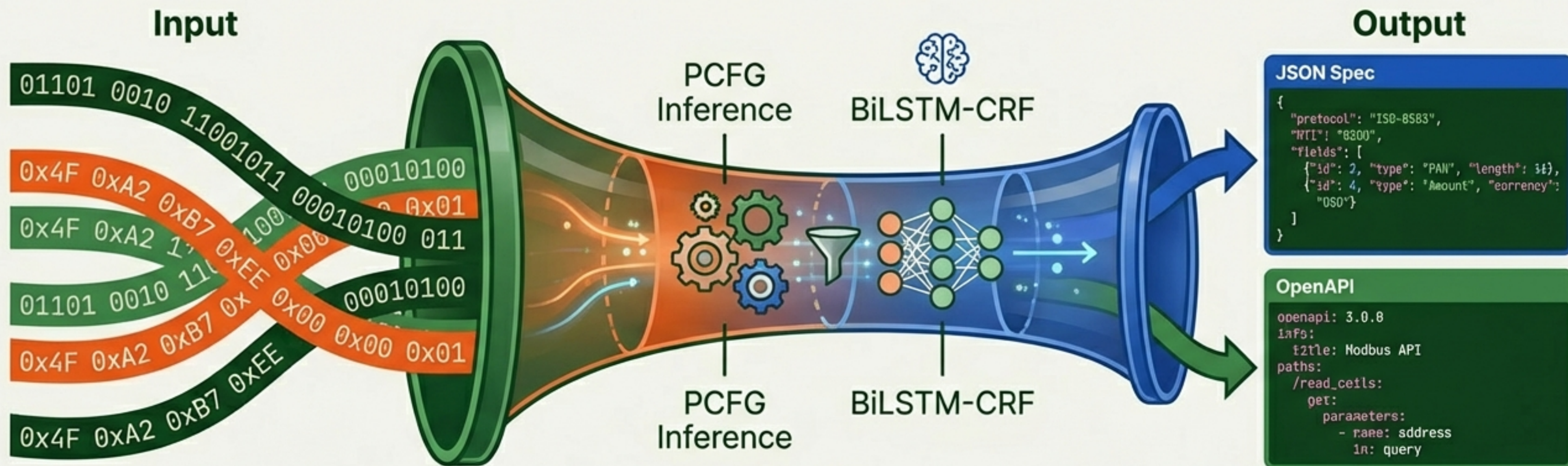
- ✓ **1. No Rip-and-Replace:** Works on COBOL mainframes, SCADA PLCs, and medical devices.
- ✓ **2. Zero Downtime:** Passive network-layer deployment.
- ✓ **3. Air-Gapped Ready:** Fully autonomous on-premise LLM (Ollama). No cloud dependency.

From 'Black Box' to 'Fort Knox' in Five Automated Steps



The Legacy Whisperer: AI Protocol Discovery

Reverse-engineering unknown protocols from raw network traffic with 89%+ accuracy.



Methodology:

Probabilistic Context-Free Grammar +
Deep Learning.



Performance:

Discovers ISO-8583, Modbus, COBOL in
2-4 hours. 10,000 msg/sec throughput.

NIST Level 5 Protection. Available Today.

Protecting against the “Harvest Now, Decrypt Later” threat and the 2030 Quantum Cliff.

Present



Adversaries
Harvesting Data

QBITEL PQC Shield



2030
Quantum Cliff

RSA/ECC
Encryption Broken

Tech Stack

Key Encapsulation:
ML-KEM (Kyber-1024)
Signatures:
ML-DSA (Dilithium-5)

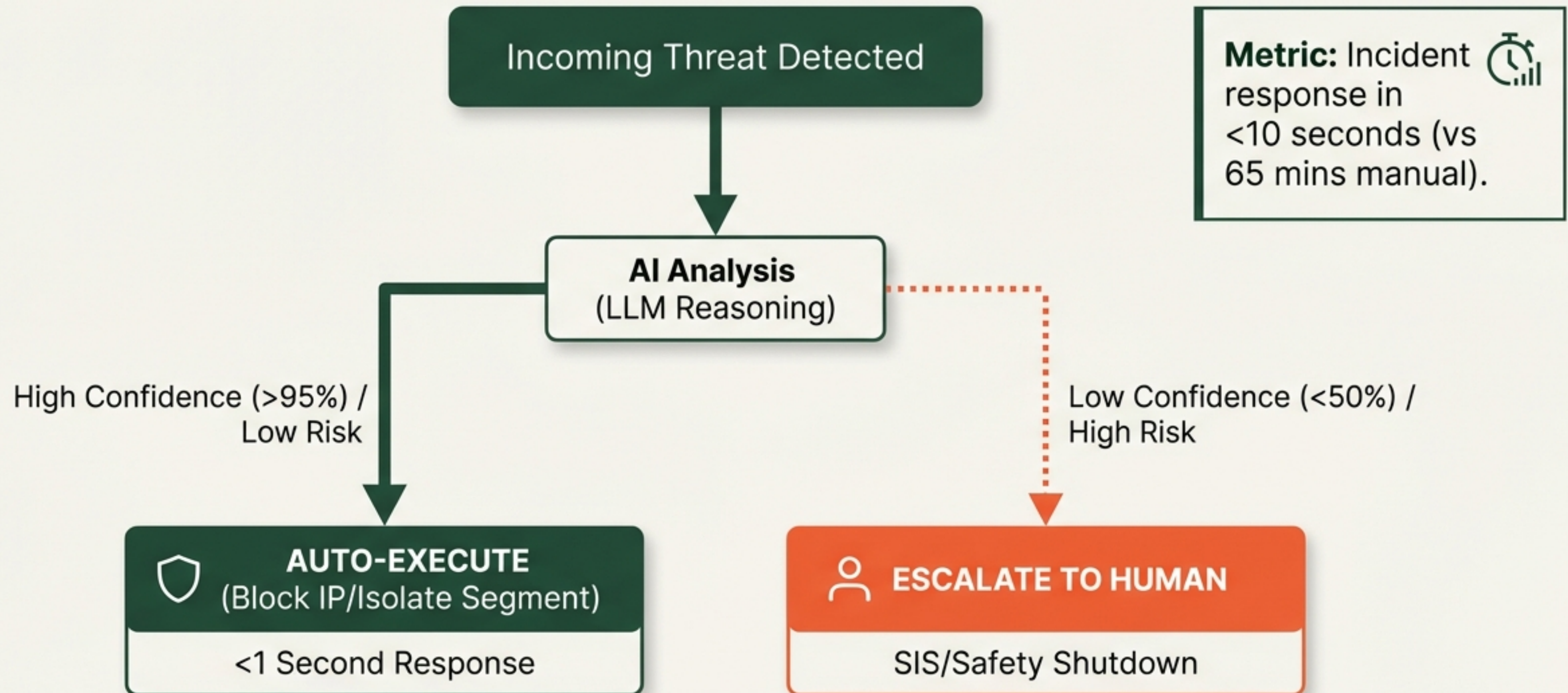
Domain Optimization

Banking: 10K+ TPS
Healthcare: 64KB RAM devices
Aviation: 600bps bandwidth

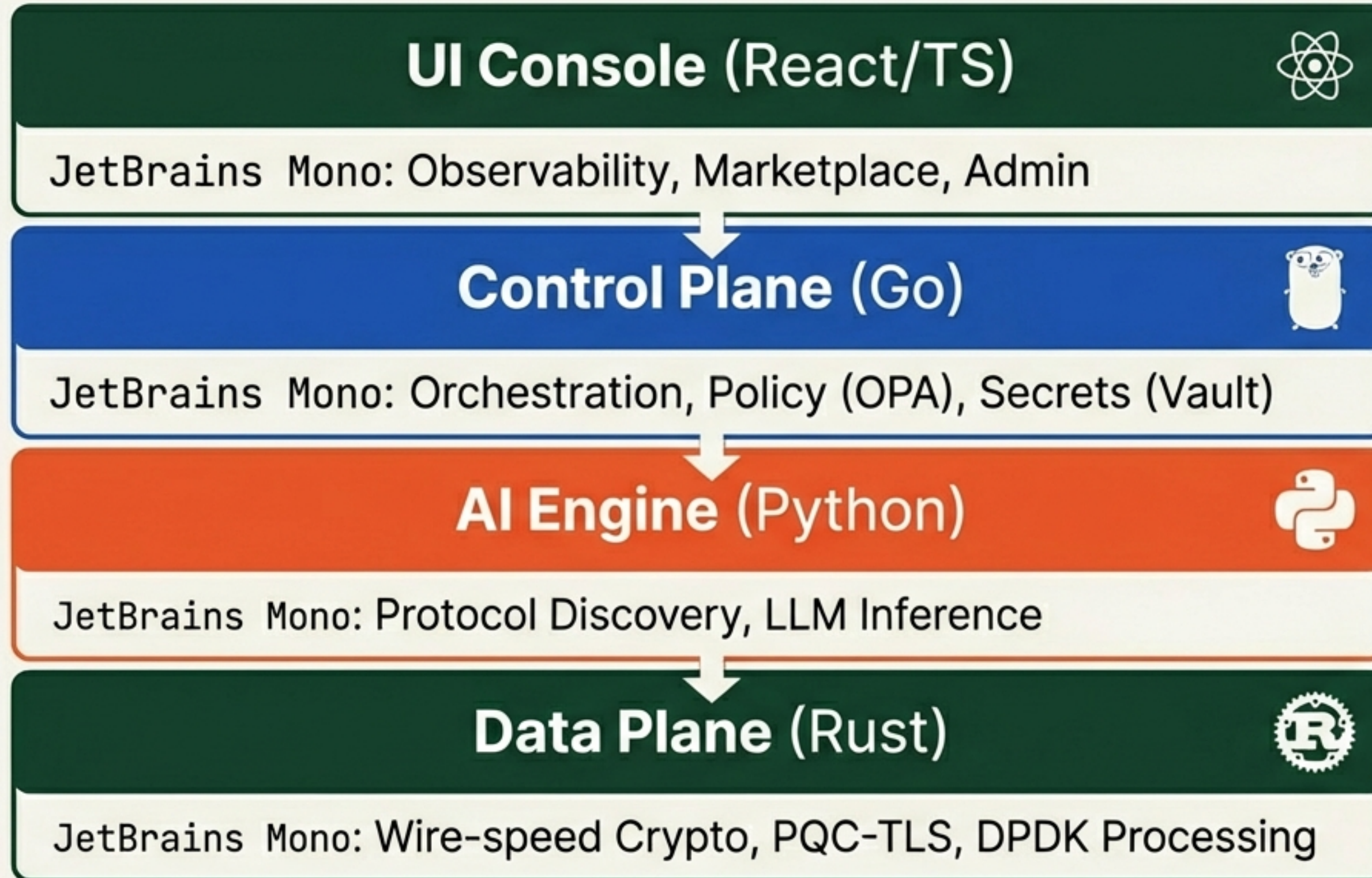
<1ms
Encryption
Overhead

Machine-Speed Defense for Machine-Speed Attacks

Moving from Playbooks to Reasoning. 78% Autonomous Decisions.



Four-Layer Polyglot Architecture



Air-Gapped Deployment:

Runs strictly on-premise (Ollama Llama 3.2). Critical for Defense & Infra.

A Complete Ecosystem for Modernization



Translation
Studio



Agentic AI
Security



AI Protocol
Discovery

The Protocol Marketplace

The “App Store” for legacy systems.
1,000+ pre-built adapters
(Banking, SCADA, Healthcare).
70/30 creator revenue split.



Agentic AI
Security



Compliance
Engine



Zero Trust
Architecture



Threat
Intelligence



Post-Quantum
Crypto

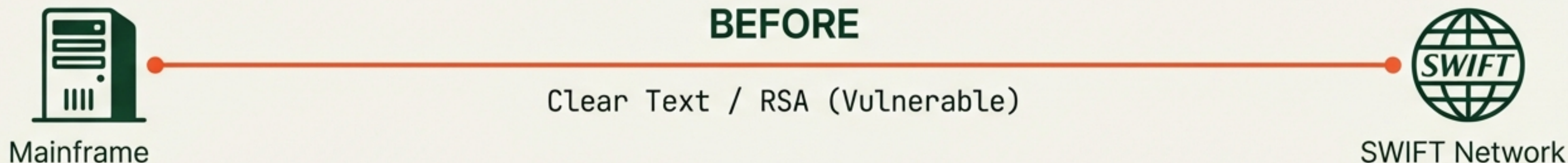


Cloud-Native
Security

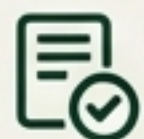
Industry Focus: Banking & Finance

Protecting the \$10T Daily Transaction Layer

BEFORE



AFTER



Compliance: PCI-DSS
4.0 & DORA in
minutes.



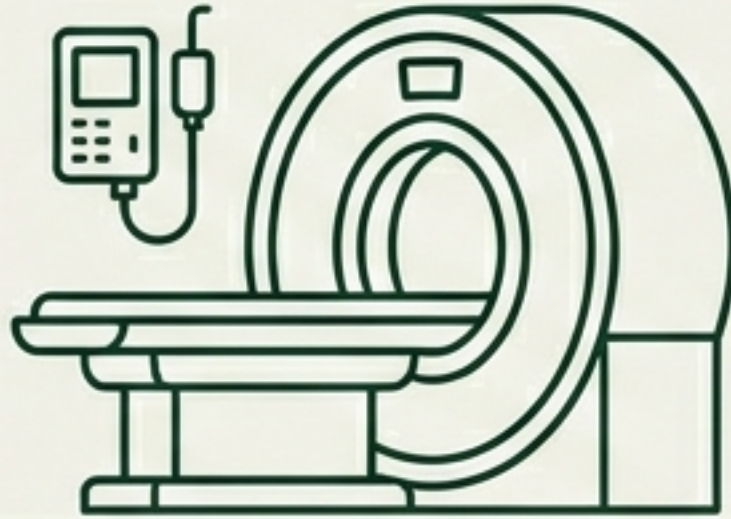
Latency: Real-time
Fraud Detection with
<50ms impact.



Target: ISO-8583,
SWIFT, FIX protocols.

Securing Life-Critical Systems: Healthcare & Infrastructure

Healthcare



Problem:

- 64KB RAM, unpatchable, FDA locked.

Solution:

- Non-invasive network wrapping.
- Zero FDA filing needed.



Critical Infrastructure

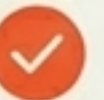


Problem:

- SCADA/PLC requires $<1\text{ms}$ latency.

Solution:

- Passive deployment. Authenticates Modbus/DNP3 with $<1\text{ms}$ overhead.
- Zero Downtime.



Compliance & Governance: Audit-Ready in 10 Minutes

98% Audit Pass Rate

✓ SOC 2 Type II

✓ GDPR

✓ NERC CIP
NIST 800-53

✓ HIPAA

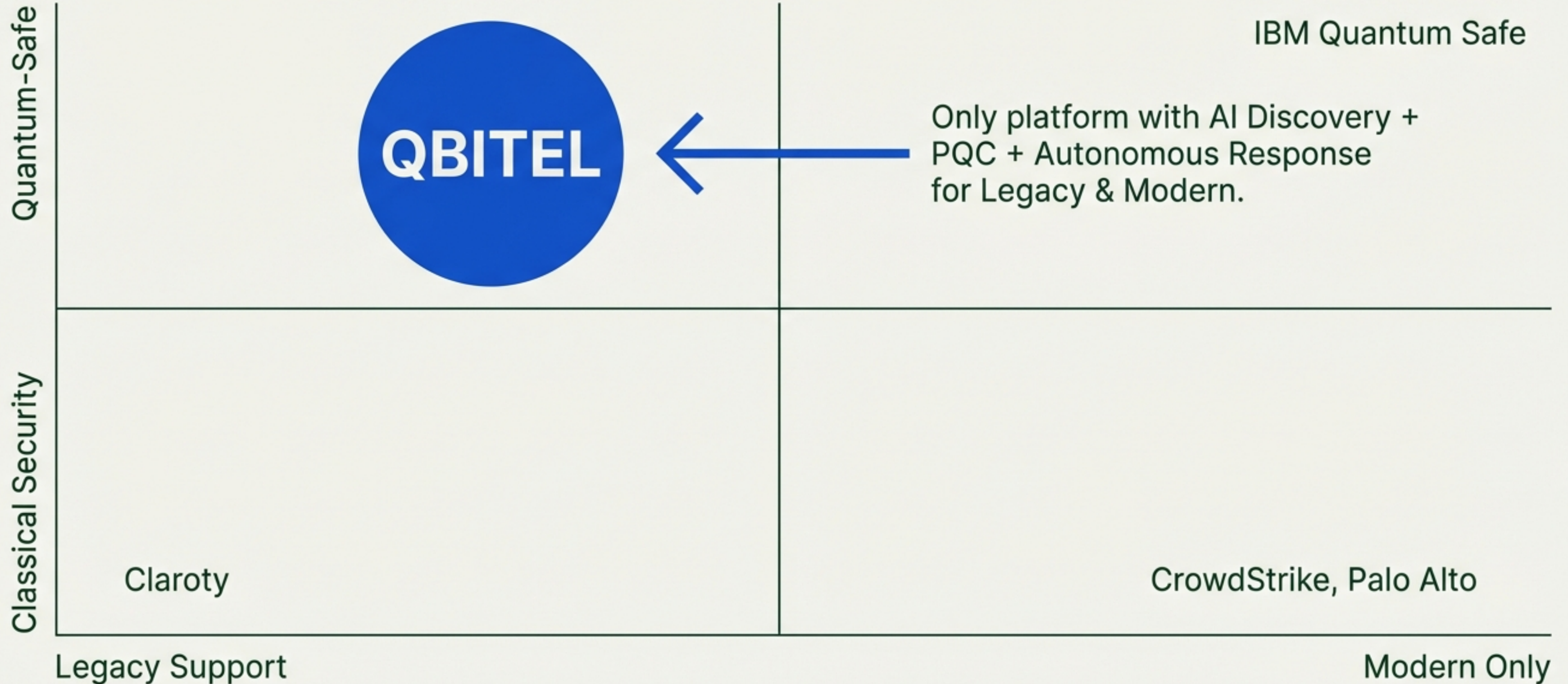
✓ PCI-DSS 4.0

✓ NERC CIP
NIST 800-53

Mechanism:

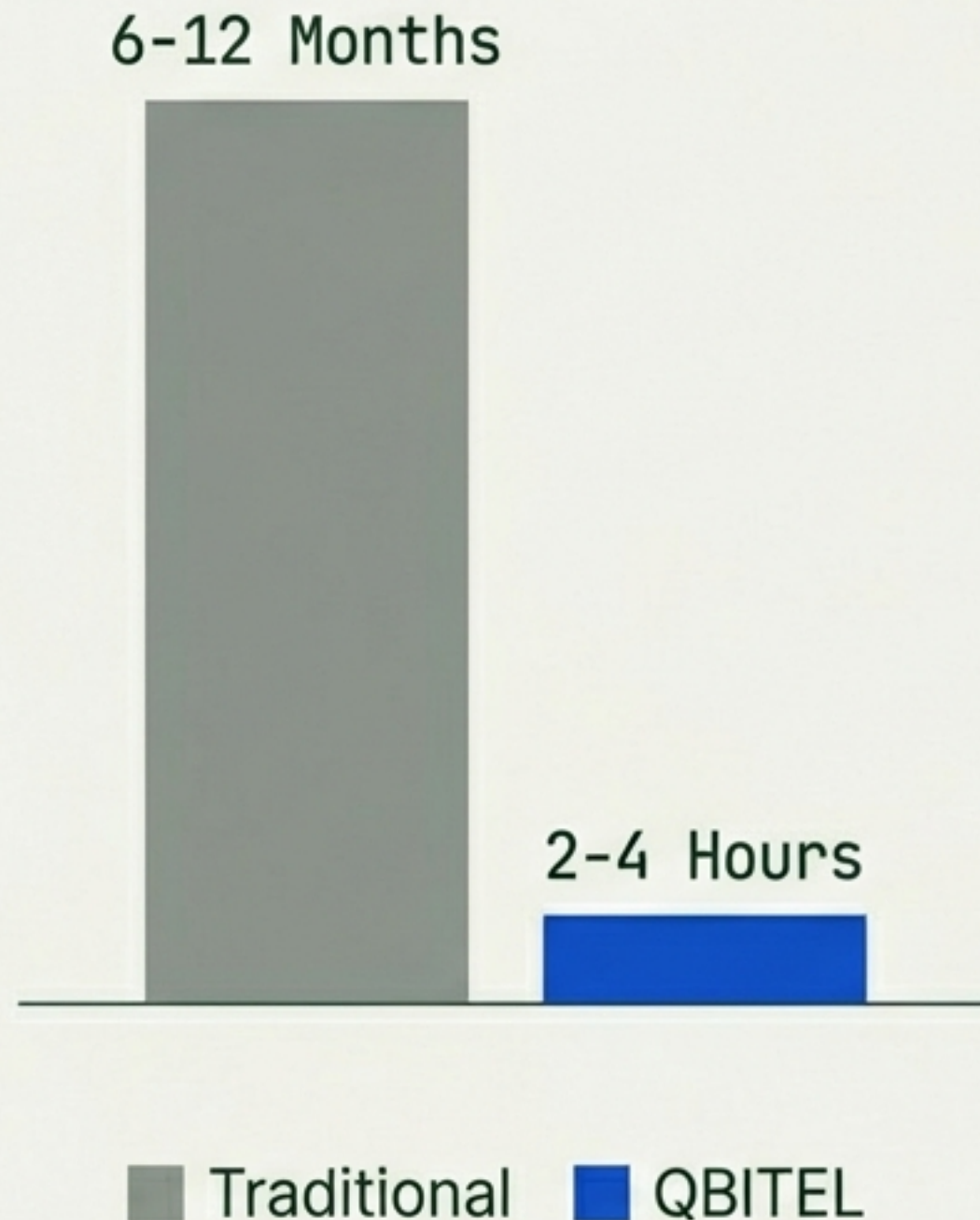
Automated evidence
gathering +
Blockchain-backed
immutable audit
trails.

A Category of One

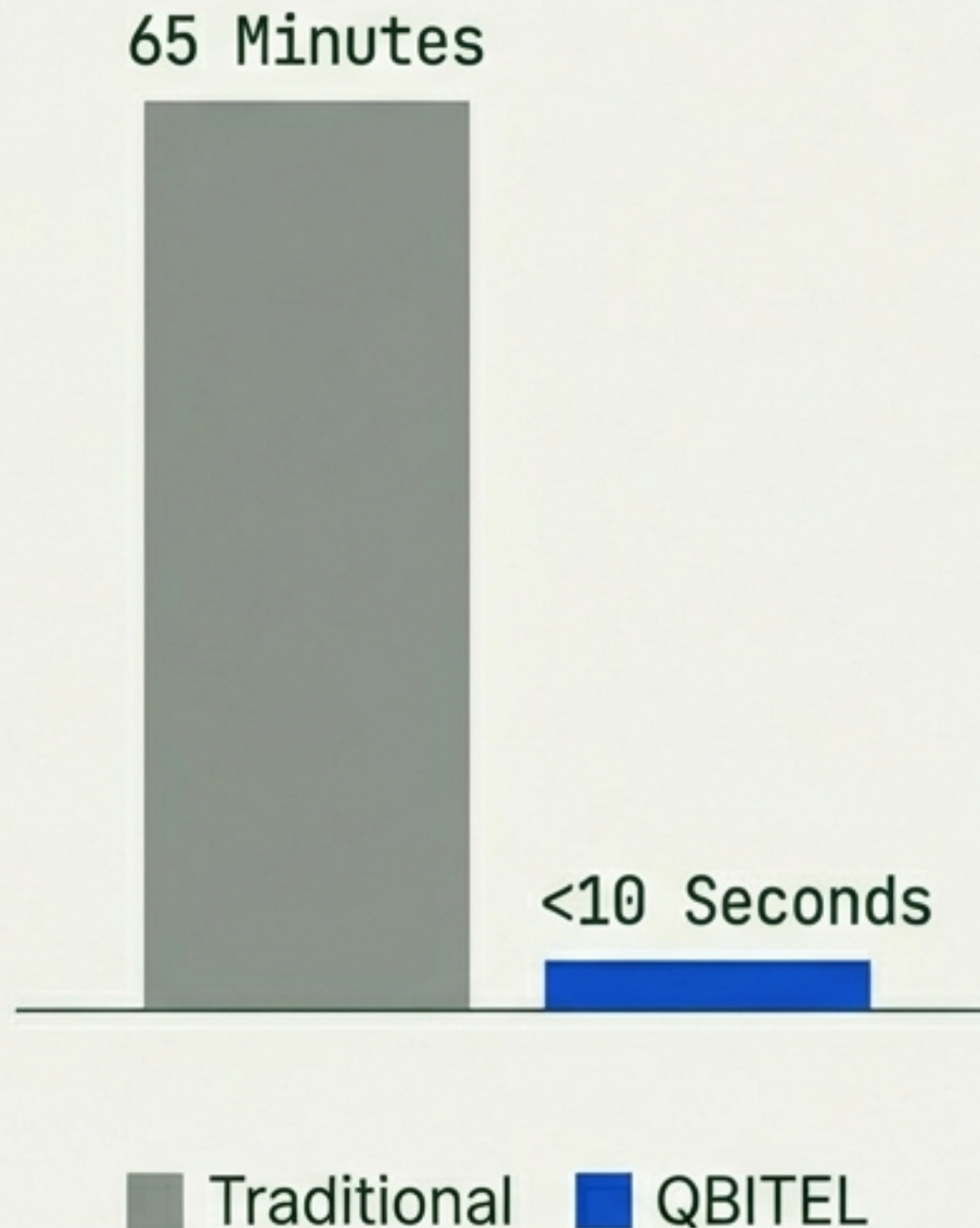


The Cost of Doing Nothing vs. The Value of QBITEL

Protocol Discovery Time



Incident Response Time



Modernization Cost



Secure Your Legacy. Future-Proof Your World.

Open Source Core (Apache 2.0)
Enterprise Support & SLAs
Air-Gapped Ready

Assess your Quantum Risk in 2 days.

GitHub
Repository



QBITEL

enterprise@qbitel.com | bridge.qbitel.com