

# **UniContractAI – Force Majeure Intelligence Engine**

# UniContractAI: Executive Summary & Key Metrics

UniContractAI transforms Force Majeure risk management from reactive legal review to real-time, AI-driven portfolio intelligence.

## Contract Under Analysis

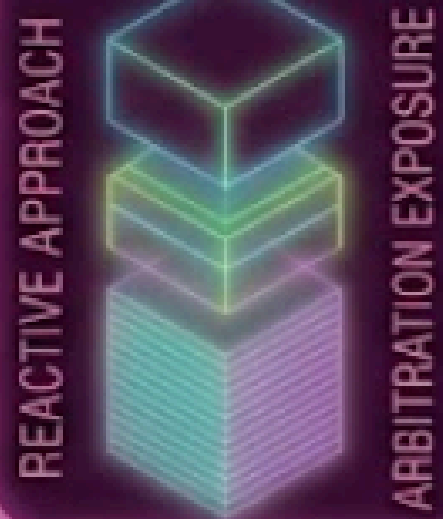


- Contract Name: Taiwan Advanced Semiconductor Fab EPC Contract
- Contract Value: \$1.5B
- Location: Hsinchu, Taiwan
- Dispute Forum: ICC Arbitration, Singapore



CONTRACT UNDER ANALYSIS

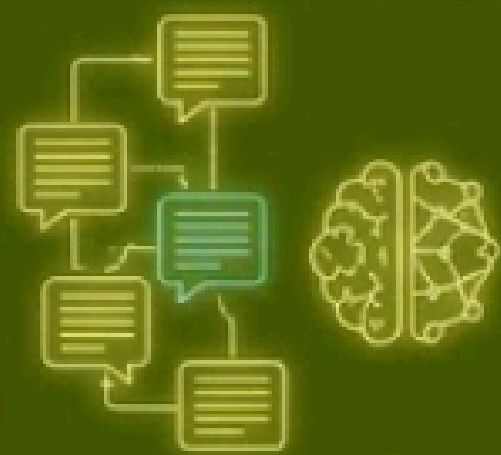
## Key Metric Value Analysis



Metric	Value
Force Majeure invocation probability	96%
Chance clause gets triggered	55% (weak clause)
Expected financial loss	\$714.7M (0.5x contract value)
FM event coverage	12/14 (86%) – 2 uncovered
War risk score	80% (HIGH)



## Top 5 Risk Drivers



- Factory shutdown – 83%
- Telecom disruption – 79%
- Power grid failure – 72%
- Transport shutdown – 71%
- Cyber warfare – 70%



MULTI-STATE BAR

FORECAST GAUGES

DATA R31.PNG

## Strategic Takeaway

STRATEGIC TAKEAWAY



- Sretwork of GNN-like Automated Resilience
- \$1.5B contract 96% invocation probability – immediate action required.

SIMULATION OUTCOMES TIMELINE RISKS FORECAST FLUIDITY UNSTABLE WINDOWS

EMBEDDINGS

UNIFIED EXECUTION

# UniContractAI: Executive Summary & Key Metrics

FINAL POSITIONING: UNIFIED STRATEGIC MEMORY IS NOT CLM; IT IS AI-POWERED RELATIONSHIP & RISK OPTIMIZATION

## CONTRACT UNDER ANALYSIS

**CONTRACT UNDER ANALYSIS**

Taiwan Advanced Semiconductor Fab  
 Value: \$1.5B — EPC Contract  
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## KEY METRIC VALUE ANALYSIS

**KEY METRIC VALUE ANALYSIS**

UNIQUE CONTRACT 1      UNIQUE CONTRACT 2

COMPARATIVE ANALYTICS

Force Majeure invocation probability	96%
Chance clause gets triggered	55% (weak clause)
Expected financial loss	\$714.7M (0.5x contract value)
FM event coverage	12/14 (86%) – 2 uncovered
War risk score	80% (HIGH)

## TOP 5 RISK DRIVERS

**TOP 5 CORRECTED RISK DRIVERS**

SIMULATION OUTCOMES

- Factory shutdown – 83%
- Telecom disruption – 79%
- Power grid failure – 72%
- Transport shutdown – 71%
- Cyber warfare – 70%

FORECAST FLUIDITY

UNSTABLE WINDOWS

CYBER

FORECAST FLUIDITY

## STRATEGIC TAKEAWAY

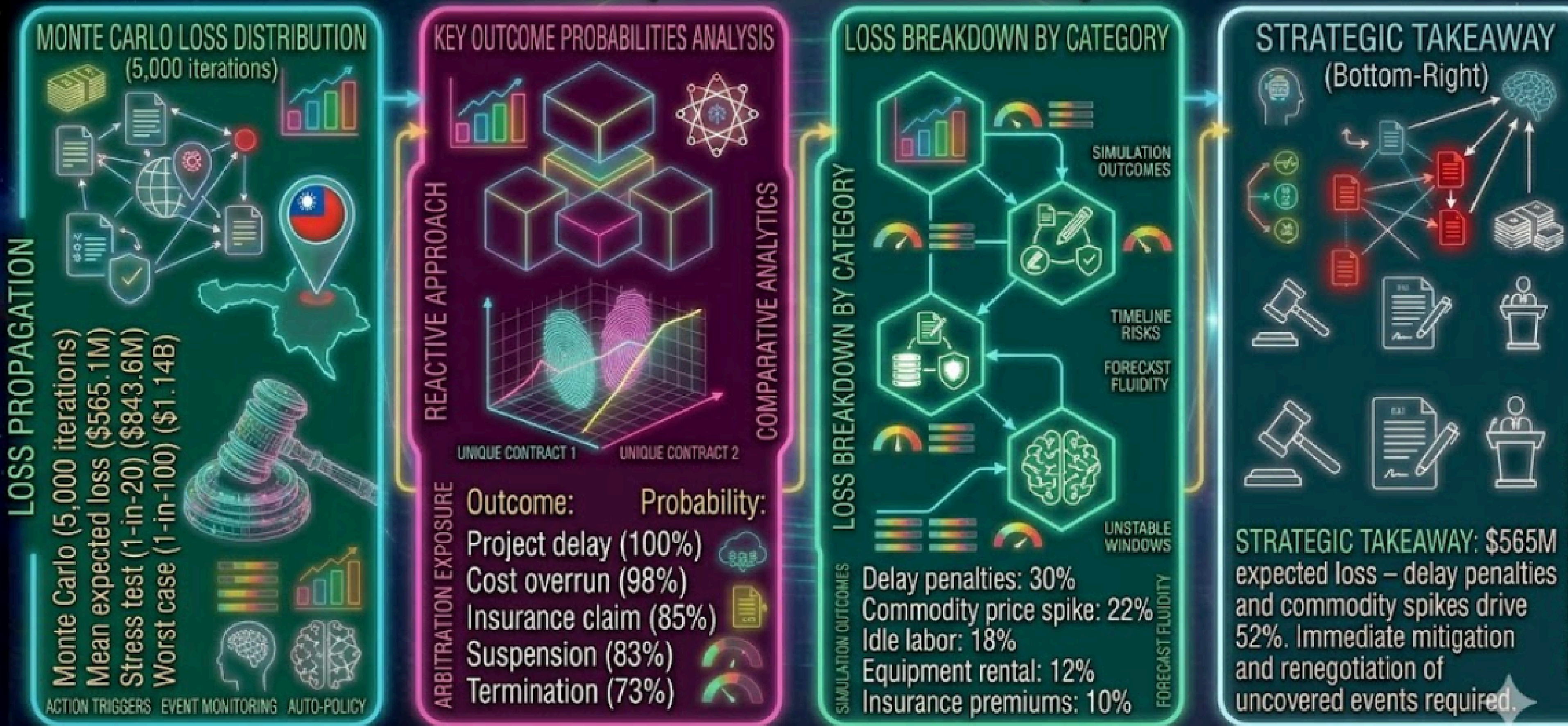
**STRATEGIC TAKEAWAY**

- AI-powered state-action mapping via RLHF
- Identify optimal redline scenarios (+1.2 Expected Reward)
- Forecast cascading influence of clause shifts (e.g., on Force Majeure Propagation)
- Continuous risk modeling for automated mitigation

**STRATEGIC TAKEAWAY: \$1.5B contract value with a 96% invocation probability—immediate mitigation and renegotiation of uncovered events required.**

# UniContractAI: Monte Carlo Loss Distribution & Outcome Probabilities

## Slide 3: Comprehensive Monte Carlo Analysis

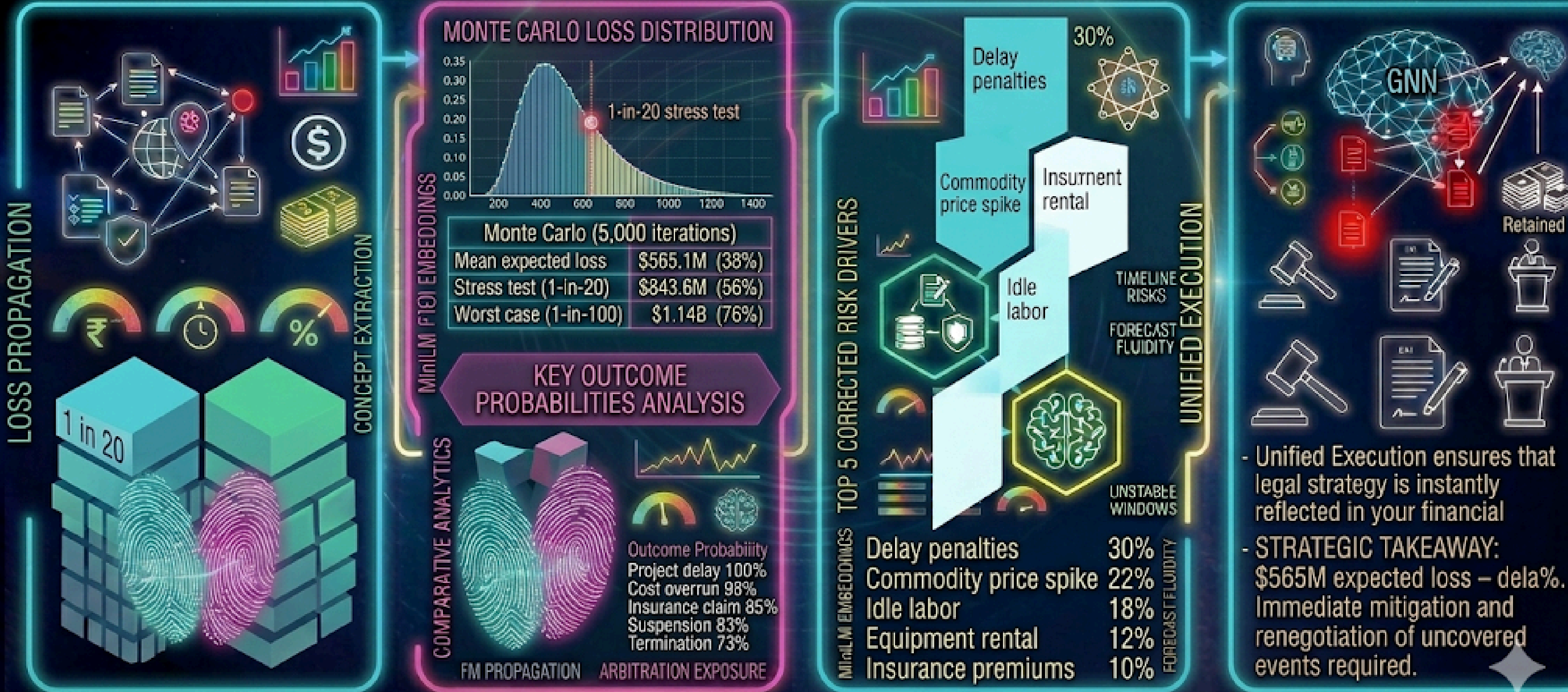


# UniContractAI: Clause Gap Analysis & Benchmark

## DYNAMIC CLAUSE GAP & BENCHMARK ANALYTICS

### MONTE CARLO LOSS DISTRIBUTION & OUTCOME PROBABILITIES

### LOSS BREAKDOWN & STRATEGIC TAKEAWAY



**FINAL POSITIONING: UNIFIED STRATEGIC MEMORY IS NOT CLM: IT IS AI-POWERED RELATIONSHIP & RISK OPTIMIZATION**

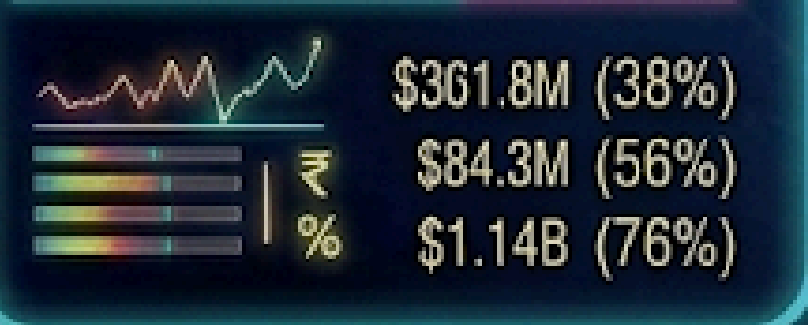
# UniContractAI: War & Geopolitical Risk + Live Terminal

## War & Geopolitical Risk Analysis

LOSS PROPAGATION



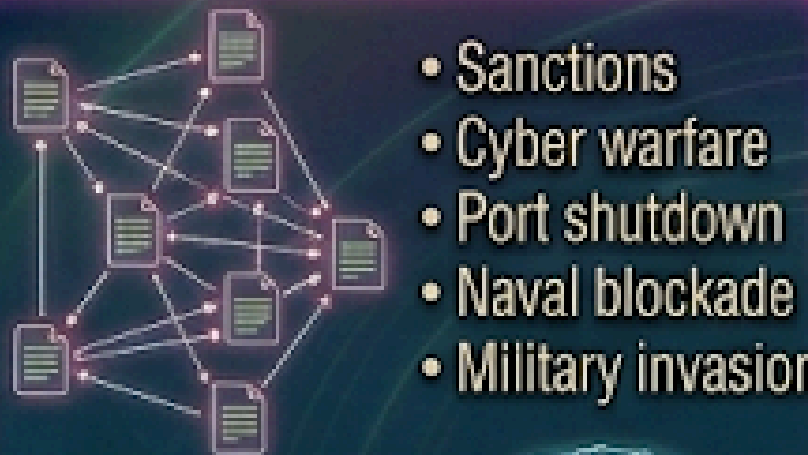
Metric	Value
War risk score	80% (HIGH)
Expected loss (war)	\$301.8M
Worst case (war)	\$724.4M
Global War Index (GWI)	77%



CONCEPT EXTRACTION

## Top Geopolitical Threats

MINI LM F10J EMBEDDINGS



- Sanctions
- Cyber warfare
- Port shutdown
- Naval blockade
- Military invasion

- Sanctions
- Cyber warfare
- Naval blockade your invasion



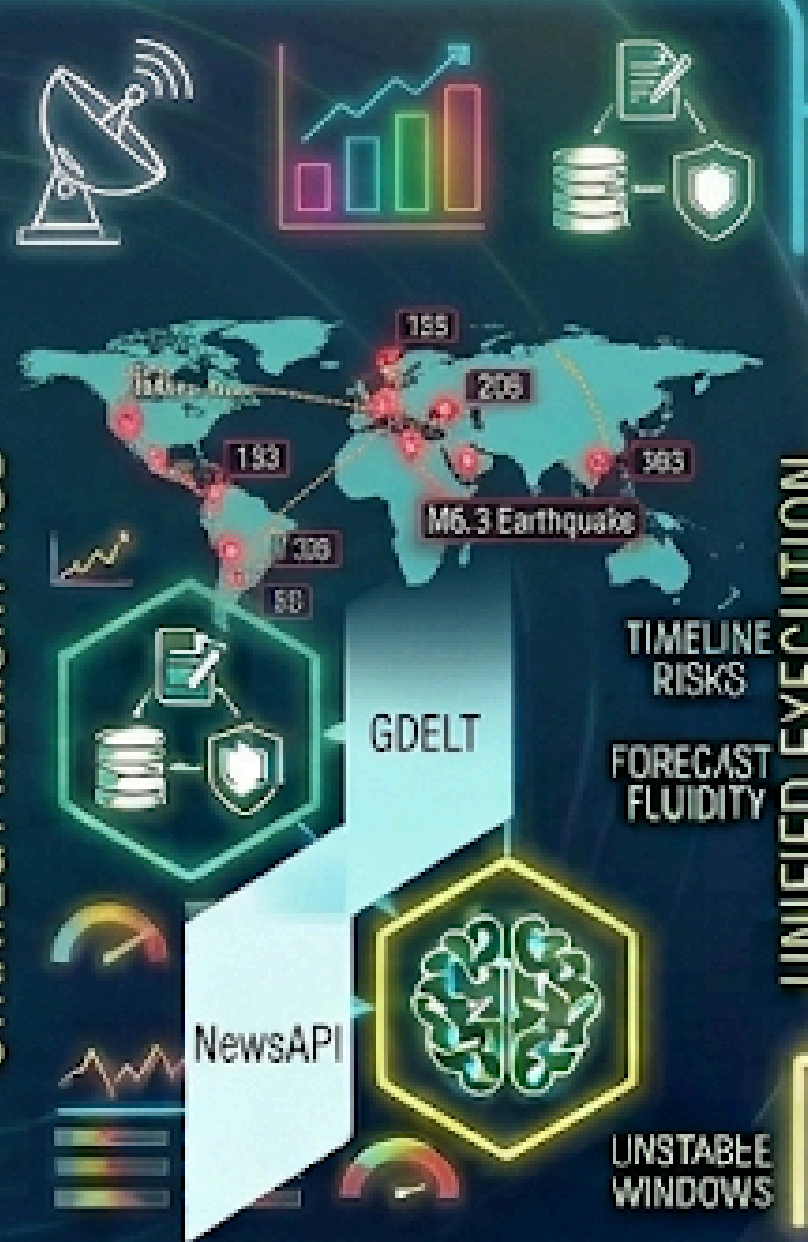
COMPARATIVE ANALYTICS



FM PROPAGATION ARBITRATION EXPOSURE

## Live Terminal – Real-Time Monitoring

STRATEGY MEMORY HUB



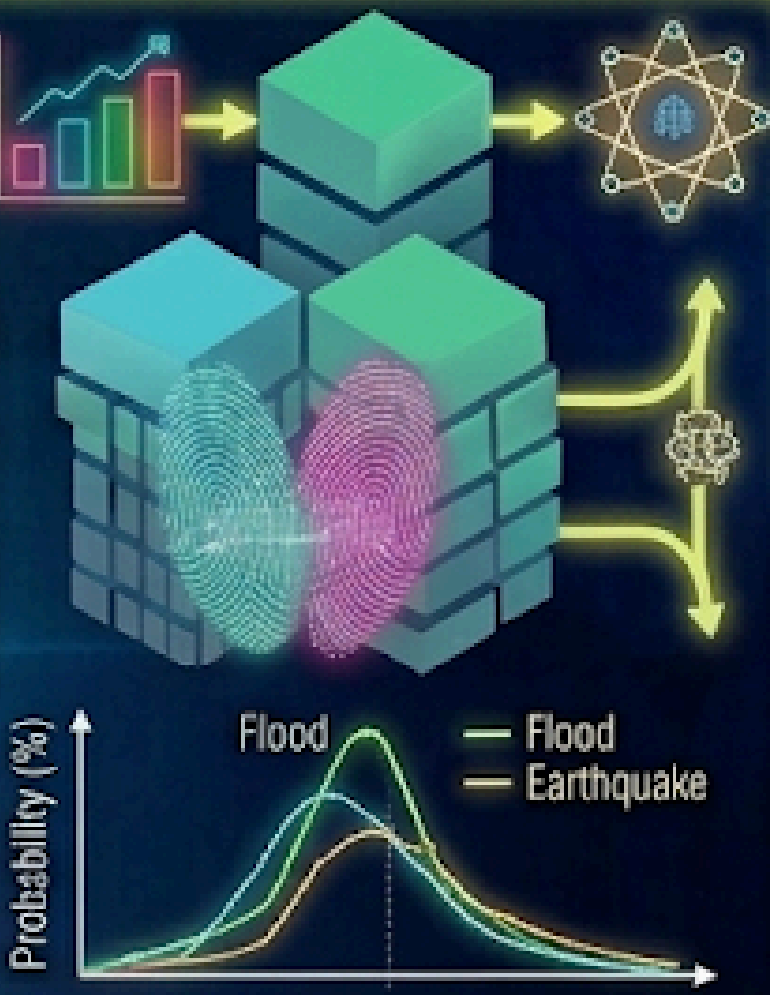
MINI LM EMBEDDINGS

Data sources: GDELT · USGS · ReliefWeb · NewsAPI

Live event: M6.3 Earthquake – Global risk map: 19 high-risk areas

## Dynamic Bayesian Prior Update

SIMULATION OUTCOMES



Live events fetched: 1 | Nodes boosted: 1 of 35

- Flood: 14% base → 32.7% live (+18.7 pp)
- STRATEGIC TAKEAWAY: Real-time geopolitics + Bayesian updates automatically shift risk models.

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# UniContractAI: 4-Stage Bayesian Risk Cascade

## Stage 1: Bayesian Node Propagation

**LOSS PROPAGATION**

**CONCEPT EXTRACTION**

Monte Carlo (5,000 iterations)	Value
Mean expected loss	\$565.1M (38%)
Stress test (1-in-20)	\$843.6M (56%)
Worst case (1-in-100)	\$1.14B (76%)

	\$561.8M (38%)
	\$84.3M (56%)
	\$1.14B (76%)

## STAGE 2: OPERATIONAL DISRUPTIONS

**MINI LM EMBEDDINGS**

- Trade Sanctions (20%)
- Port closure (18%)
- Transport shutdown (17%)
- Global War Index (GWI)

**ACTION TRIGGERS**

**EVENT MONITORING**

**AUTO-POLICY**

**COMPARATIVE ANALYTICS**

Metric	Value
Cascade amplifier:	5.36x
Cascade amplifier:	5.36x (Stage 1 → Stage 4 risk multiplication)
Active risk nodes:	23 (above 40% probability)

## Stage 3: Supply Chain Impacts

**STAGE 3: SUPPLY REACTIVE APPROACH**

**Trend**

**News**

**TIMELINE RISKS**

**FORECAST FLUIDITY**

**ARBITRATION EXPOSURE**

**SUPPLIER RISK HETMAP**

**MINI LM EMBEDDINGS**

Probability

Live Probability

**SANCTIONS PROPAGATION (20%)**

**SHUTDOWN PROBABILITY (31%)**

**FORECAST FLUIDITY**

## Stage 4: Contract Outcomes & GNN-Powered Mitigation

**COMPARATIVE ANALYTICS**

- Trade Sanctions (20%) → Factory Shutdown (31%) → Manufacturing Delay (62%) → Project Delay (90%)
- Force Majeure Knowledge Graph: 47 Nodes | 76 Edges
- Causal Edges: War → Port Closure (85%), War → Transport Shutdown (80%)

**GNN**

**Retained**

- AI-powered state-action mapping via RLHF
- Identify optimal redline scenarios (+1.2 Expected Reward)
- Forecast cascading influence of clause shifts (e.g., on Force Majeure Propagation)
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**STRATEGIC TAKEAWAY:** Risk amplifies >5x from root events to final outcomes—the cascade reveals critical leverage points for intervention.

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# UniContractAI: Clause Gap Analysis & Benchmark

Digital Twin – Real-Time Contract Mirror

DYNAMIC CLAUSE GAP & BENCHMARK ANALYTICS  
Multi-Agent Negotiation Simulation (Baseline risk: 93.0%)

Digital Twin + Multi-Agent Negotiation + Clause Optimizer = Up to \$16M Savings

LOSS PROPAGATION

CONCEPT EXTRACTION

MINI(FI) EMBEDDINGS

COMPARATIVE ANALYTICS

STAGE 3: SUPPLY REACTIVE APPROACH

ARBITRATION EXPOSURE

COMPARATIVE ANALYTICS



- Twin ID: twin\_new\_0510
- Industry: Energy (Taiwan)
- Health Score: 44/100 (AT RISK)
- FM Invocation risk: 85%
- Project delay risk: 93%
- Expected loss: \$600.8M (40.1%)
- Stress test: \$891.2M

**ACTION TRIGGERS**

Agent	Tolerance	Position
Buyer	30%	Maximize FM coverage
Seller	70%	Limit FM obligations
Insurer	40%	Define clear triggers

**EVENT MONITORING**

**AUTO-POLICY**

**COMPARATIVE ANALYTICS**

Agent	Tolerance	Position
Buyer	30%	Maximize FM coverage
Seller	70%	Limit FM obligations

Results: 55% → 65% FM strength  
+10% improvement  
Consensus in 2 rounds

**STAGE 3: SUPPLY REACTIVE APPROACH**

**News**

**Trend**

**Supplier Risk Heatmap**

**Sanctions Propagation (20%)**

**Shutdown Probability (\$1%)**

**Forecast Fluidity**

**Timeline Risks**

**Forecast Fluidity**

**ARBITRATION EXPOSURE**

**Retained**

**Comparative Analytics**

- Trade Sanctions (20%) → Factory Shutdown (31%) → Manufacturing Delay (62%) → Project Delay (90%)
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**GNN**

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**STRATEGIC TAKEAWAY: Digital twin + multi-agent negotiation + clause optimizer = up to \$16M savings.**

FINAL POSITIONING: UNIFIED STRATEGIC MEMORY IS NOT CLM: IT IS AI-POWERED RELATIONSHIP & RISK OPTIMIZATION

