NATHAN A. SCHOENKIN FBCI

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AI Transformation & Operational Resilience Leader

Governed, working AI — grounded in ~15 years of operational resilience, crisis management and business continuity across regulated, global organisations

AI transformation and operational-resilience leader with ~15 years structuring and delivering technology, risk and crisis-management programmes across global biopharma, financial-market oversight and U.S. critical infrastructure. A proven crisis leader — Incident Commander on national activations including the **Colonial Pipeline** cyber breach, **Merrimack Valley** gas explosions, the **Aliso Canyon** gas-storage emergency and **Hurricane Maria** — who designs ISO 22301 / 22361-aligned resilience and crisis frameworks, runs exercises from tactical staff through executive level, and embeds a culture of preparedness across thousands of employees. At AstraZeneca, leads AI transformation within the Oncology R&D resilience function and partners with the Enterprise AI team, Technology Governance, Legal and Information Security to operationalise AI governance across a 10,000-employee organisation — building, in daily customer-driven sprints, a proof-of-concept enterprise AI governance platform designed to classify AI submissions against the EU AI Act and internal frameworks. Has conceived and built **more than eight AI applications**, four now in active in-house development; independently built and shipped an AI compliance platform navigating the EU AI Act, GDPR and DORA, and **OpRes Horizon** (live at opres.structuredresilience.app), a public regulatory-intelligence platform mapping operational-resilience and crisis-management regulation across 90+ countries. Fellow of the Business Continuity Institute, SIG Leader of the BCI Operational Resilience SIG and committee member of the BCI AI SIG; dual U.S./French citizen, fluent English, intermediate French.

CORE COMPETENCIES

AI Strategy, Roadmap & Use-Case Portfolio	Operational Resilience (ISO 22301 / 22361)
AI Governance & Responsible-Use Frameworks	Crisis Management & Incident Command
Rapid Proof-of-Concept → Production Delivery	Business Impact Analysis & Dependency Mapping
Multi-Agent LLM Architecture (Gemini · Mistral · Claude)	Exercises, Tabletops & After-Action Reviews
EU AI Act, GDPR, DORA & NIS2 Operationalisation	Cyber-OT / SCADA Security & Critical Infrastructure
Adoption, Acculturation & Training	Emerging-Risk & OSINT Horizon Scanning

CAREER EXPERIENCE

Associate Director, Business Continuity & Crisis Management — 2023 – Present

AstraZeneca, Oncology R&D, Gaithersburg, MD (Global Remit) · North America · Europe · Asia

Lead AI transformation within the resilience function and operational resilience for a 10,000-employee R&D organisation. Partner with the Enterprise AI team, Technology Governance, IT, Legal, Information Security and Data Engineering to operationalise AI governance; act as de facto product owner for internally developed AI applications across their full lifecycle.

AI Governance, Risk Classification & Approval Workflows

- Lead daily customer-driven sprints building a **proof-of-concept enterprise AI governance platform** with the Enterprise AI team — designed to evaluate AI submissions against the EU AI Act and internal frameworks. A deterministic classification layer routes each submission to a fast-track or full-assessment lane; a multi-agent pipeline then scores it, with human reviewers retaining final authority on higher-risk tiers and every agent call and decision logged and exportable for audit. Currently in assessment and iteration with the relevant teams; not yet approved for use.
- Designed the platform's approval workflow, documentation requirements and lifecycle checkpoints, anticipating **EU AI Act high-risk classification** guidance (Article 6) — realistic failure mode, not commercial label, determines classification.

- Conceived and built a **model-drift analysis pipeline** (proof-of-concept) that measures divergence across the runs of internal multi-agent pipelines and generates targeted refinement recommendations — already used to improve several pipelines — operationalising the EU AI Act's post-deployment monitoring obligation.
- Currently workshopping enterprise-wide **AI bias and fairness monitoring** with the Enterprise AI team — critical in pharma, where biased outputs can affect patient selection and clinical decision support.
- Led the first enterprise-wide **GenAI emerging-risks scan** across the 10,000-employee organisation, establishing proactive data-governance and responsible-use protocols and translating findings into internal policy for Legal, IT and business leadership.

AI Use-Case Portfolio, PoC-to-Production & Delivery

- Conceived and built **more than eight AI applications** across enterprise, governance and productivity domains; four are now in active in-house development, demonstrating the path from rapid proof-of-concept toward production.
- Co-developed in **24 hours** with the Enterprise AI team a multi-agent AI grant & tax-incentive search platform that autonomously identifies grants and tax credits applicable to internal AI projects worldwide, with a no-code admin layer where natural-language feedback becomes RAG-stored rules. Demoed up to CFO level.
- Built and deployed independently an **AI compliance platform** navigating the EU AI Act, GDPR and DORA — a centralised AI project register, automated risk classification and a multi-agent LLM pipeline grounded by RAG in the authoritative regulatory text, so new guidance is operationalised by document upload rather than retraining.
- Built and deployed independently **OpRes Horizon** (live at opres.structuredresilience.app) — a public regulatory-intelligence platform mapping operational-resilience and crisis-management regulation across **90+ countries and 8 industry sectors**. A 3-agent, 3-stage AI pipeline (Mistral search → Claude synthesis) produces board-level country profiles with a 0–4 regulatory-intensity score, an executive landscape narrative, sector-specific briefings, a live "Most Regulated" league table, and fully bilingual EN/FR output with Word export — directly bridging my AI delivery with my operational-resilience domain.
- Conceived, built and presented to IT a **multi-agent crisis-exercise generation platform** (Gemini scenario generation → Mistral adversarial red-team → Claude content), with a custom Mistral agent monitoring reputable news to inject real-world events; now in the final stages of internal development following formal approval. Mistral routing chosen for European data sovereignty.
- Built independently a six-agent **clinical-trial supply-intelligence proof-of-concept** (React/TypeScript, Express/Node, Google Cloud Run) with an audit-first architecture — no AI output triggers automated action; every decision routes through human review.

Adoption, Acculturation & Enablement

- Designed and delivered structured internal training from prompting fundamentals through building Microsoft **Copilot Studio agents**; deployed a Copilot Studio crisis agent globally across AstraZeneca.
- Mentored a non-technical colleague to independently build a globally deployed Power Application; built a Power Platform application at **>90% first-deployment adoption across three continents** as the standardised gateway for critical-process data.

Operational Resilience & Crisis Management

- Lead an **ISO 22301 / ISO 22361-aligned** resilience and crisis-management programme across global laboratories and clinical manufacturing (GMP, including QA/QC for cell therapy and oncology); identify and prioritise Important Business Services, run business-impact analyses and map upstream/downstream and OT dependencies. Launched and now govern the business-continuity programme for AstraZeneca Japan R&D.
- Established a steering committee of **Senior Vice Presidents** as the governance body for the Oncology R&D resilience programme; secured executive approval of a continuity framework that explicitly maps to **NIS2 Article 21**, with gaps tracked on the resilience roadmap.
- Designed and facilitated **tabletop exercises of increasing complexity** — GPS outage, vivarium disease-spread, wastewater-tank failure and active-assailant leadership scenarios — using time-boxed injects, decision logs and escalation thresholds; built and run a five-year "crawl, walk, run" exercise programme end-to-end, translating findings into runbook updates and owner-assigned actions tracked to closure.
- Provide **second-line assurance** on security- and sûreté-led exercises (active-assailant and site-security scenarios) and concise governance reporting for senior leadership; engaged a third-party auditor and implemented recommendations, with one strategic-site crisis plan rated highly effective.

- Built a **GIS dashboard** overlaying active clinical-trial sites with multi-threat feeds, enabling proactive resilience decisions during the Middle East conflict; strengthened third-party and supply-chain resilience through dual-sourcing of critical supplies and stronger DR provisions in vendor contracts (recovery across AWS availability zones).
- Pioneered the **“Resource MTPD”** concept, uncoupling recovery-time targets from supporting resources and averting multi-million-dollar capital expenditure on single-point-of-failure infrastructure.
- Manage and mentor on-site and matrixed staff across crisis-management and business-continuity disciplines. **SIG Leader, BCI Operational Resilience SIG; Committee Member, BCI AI SIG.** BCI World 2024 presenter (cross-sector exercising); 2025 panel moderator (psychological safety for crisis managers).

Business Continuity Program Manager — 2022 – 2023

Financial Industry Regulatory Authority (FINRA), Corporate Risk Management · Rockville, MD

Led the overhaul of FINRA's business-continuity guidance and crisis-response protocols for U.S. financial-market operations housing data for 100M+ accounts; internal consultant across Technology, Market Operations, HR, Risk, Communications and Information Security.

- Steered the **Business Continuity & Operational Resilience Steering Committee** across senior leaders from Technology, Market Operations, HR, Facilities, Communications and Risk — setting cadence, agenda and tracked decisions; ran ~10 executive “BC Roadshows” and converted findings into control self-assessments and action plans tracked to closure.
- Directed improvements to the crisis-management framework and designed and facilitated executive exercises — **active-shooter, cyber-ransom and prolonged-power-failure** scenarios — translating outcomes into board-level proposals.
- Led an **integrated security-monitoring cell** during a reputational and physical-security event, coordinating internal communications, physical-security signals and social-media monitoring into a single executive risk view (sûreté/sécurité coordination alongside continuity).
- Developed cyber-incident playbooks integrating IT recovery with business-continuity actions; authored the enterprise risk library and ransomware response plan; delivered second-line assurance on the Consolidated Audit Trail BCP.
- Conducted **black-swan market-risk assessments** before the Russian invasion of Ukraine, including NATO-territory escalation analysis and cyber-risk exposure to international partners.
- Stood up an OSINT threat-monitoring feed and an ArcGIS people-accountability dashboard; managed emergency-notification SaaS (SLA validation), ran vendor scans and API-fit evaluations for third-party risk SaaS, and led matrixed staff across BC plans, emerging-risk databases and mitigation strategies.

Senior Resilience Engineer · General Engineer · Emergency Support Specialist — 2012 – 2022

U.S. DOT — Pipeline & Hazardous Materials Safety Administration (PHMSA) · Washington, DC

A decade of progressive responsibility leading PHMSA's continuity, crisis and resilience portfolio across U.S. critical energy infrastructure — technical lead on national energy incidents, cyber-security lead for pipeline SCADA/OT systems, and intergovernmental coordinator — while turning manual federal processes into working software. Managed ~$1.5M in R&D and professional-services contracts (Contracting Officer Representative, Level 2). The crisis and technical foundation the later AI work builds on.

Incident Command & National-Scale Crisis Response

- **Deputy Incident Commander** during the Merrimack Valley gas explosions (2018): recalled staff after hours, stood up a crisis cell, established operating rhythm and issued tailored situation reports to DOT, Congress and the White House while managing concurrent hurricane hand-offs.
- Federal response cell for the **Colonial Pipeline cyber breach** (2021): translated technical outage data into operational-impact scenarios, mapped state-level dependencies and framed allocation, prioritisation and public-messaging decisions for interagency leaders.
- Federal focal point through the **Aliso Canyon** gas-storage emergency (2015–16): directed a cross-agency team, briefed the Secretary of Transportation and White House weekly, and authored the after-action report that guided new safety measures.
- Coordinated with the U.S. Army Corps of Engineers and generator vendors during **Hurricane Maria** to restore power to defence-critical pipeline infrastructure.

Operational Resilience, Security & Regulatory Design

- Co-authored legislation with **digital-operational-resilience provisions mirroring DORA** — risk management, mandatory incident reporting, information-sharing and mandated exercises.
- Authored the Federal Register Advisory Bulletin *"Safeguarding and Securing Pipelines from Unauthorized Access,"* translating physical-security (sûreté) risk findings into authoritative regulatory guidance.
- Office of Pipeline Safety **Cyber-OT subject-matter expert** and TSA liaison: developed SCADA/OT vulnerability inspection documentation and a voluntary cyber-assessment rubric for pipeline operators.
- Developed Administration-level **COOP and Devolution plans**, led the agency test-and-exercise programme and managed the backup-network site for rapid restart of critical pipeline operations.

Emerging Risk, Cyber-OT & Horizon Scanning

- Built catalogues of emerging risks (EMP/geomagnetic disturbance, cyber-OT, geohazards) via OSINT horizon scanning; produced ransomware, extreme-weather and supply-chain briefings for senior government leadership including White House staff.
- Coordinated EMP/GMD research with the Department of Energy and three National Laboratories and a seismic-vulnerability assessment with the USGS; participated in **DARPA RADICS** Exercise 6, conducting black-start grid recovery after a simulated cyber-attack.

Engagement, Leadership & Mentoring

- Led PHMSA's **crisis-management restructuring** — proposing elevation of the emergency-management / business-continuity function, redefining roles and responsibilities, and training internal staff and interagency partners on the new response framework.
- Represented PHMSA on the Energy Government Coordinating Council and Oil & Natural Gas Subsector Coordinating Council, liaising with Senior Executive Service officials and DHS, DOE, TSA and DOD on national resilience priorities.
- Champion of the **Public-Private Analytic Exchange Program** across two years, directly leading multidisciplinary teams of 12 senior public- and private-sector leaders and briefing top government officials; managed and mentored staff on redaction of information critical to public safety and national energy security.

Technology & Innovation

- Designed and built a **SharePoint workflow** that digitised the federal oil-spill-response-plan review process (49 CFR Part 194): a three-stage routing engine adopted for 99% of national reviews and used for five years — a precursor to today's low-code work.
- Pioneered predictive geospatial (ArcGIS) modelling, fusing National Weather Service forecasts with pipeline-infrastructure data to pre-position federal resources; built a real-time COVID-19 operational dashboard and coordinated FEMA PPE distribution to pipeline operators nationwide.

AI APPLICATION PORTFOLIO

Built with multi-agent pipelines (Google Gemini, Mistral AI, Anthropic Claude) and AI-assisted development environments. Tools built within AstraZeneca are described by capability; independently built products are named.

- **Enterprise AI governance & risk-assessment platform** (AstraZeneca, proof-of-concept in assessment) — tiered EU AI Act classification, multi-agent assessment, human-in-the-loop, full audit trail, drift monitoring.
- **AI grant & incentive search platform** (AstraZeneca, with the Enterprise AI team) — multi-agent web search with a no-code feedback layer; built in 24h, demoed to CFO.
- **Crisis & continuity exercise builder** (AstraZeneca, approved internal PoC) — multi-LLM scenario, document and PowerPoint generation.
- **OpRes Horizon** — independently built public regulatory-intelligence platform mapping operational-resilience & crisis-management regulation across 90+ countries and 8 sectors; 3-agent / 3-stage pipeline, 0–4 regulatory-intensity ranking, live "Most Regulated" league table, bilingual EN/FR. Live at opres.structuredresilience.app.
- **ReguCheck Nexus** — independently built AI-compliance platform (EU AI Act, GDPR, DORA).
- **Horizon ClinOps** — independently built clinical-trial supply-intelligence platform, audit-first multi-agent architecture.
- **Legal Horizon** — multi-jurisdiction legal & regulatory horizon-scanning.
- **Crisis Compass** — AI crisis-management hub with jurisdictional reporting logic.
- **Monde Français** — CEFR-tracked French-learning ecosystem (consumer-grade range).

EDUCATION & CREDENTIALS

- M.S., Engineering Management (Crisis, Emergency & Risk Management) — The George Washington University
- B.S., Mechanical Engineering — University of Maryland, College Park
- Fellow of the Business Continuity Institute (FBCI) — highest grade of BCI membership

TECHNICAL PROFICIENCIES

AI & Development: Multi-agent LLM orchestration (Gemini, Mistral, Claude), Microsoft Copilot Studio, AI-assisted development (Claude Code, Google AI Studio, Mistral Vibe CLI), prompt engineering, React/TypeScript, Node/Express, RAG pipelines, Power Platform (PowerApps, Power Automate, Power BI, PowerFx)

Data & Visualisation: ArcGIS (geospatial dashboards, predictive models), Power BI, Excel (advanced)

Frameworks & Regulation: EU AI Act, GDPR, DORA, NIS2, ISO 22301 / 22361, NIST AI RMF, ISO 42001 (awareness)

Languages: English (native), French (intermediate, actively developing). Dual U.S. / French citizen.