Deep Innovation Dossier: EvacRoute Dynamics

Product Vision & Value Proposition

EvacRoute Dynamics is the future of institutional safety—an invisible, proactive layer of intelligence that guarantees optimal egress during a crisis. It elevates emergency preparedness from a chore to a state of constant, verifiable readiness.

The platform utilizes a networked system of smart displays and personalized mobile notifications to provide real-time, room-specific instructions when the "Fire! Alarm" sounds (even if the hazard is **Not real**).

Unique Selling Point: Dynamic Egress Validation. By randomizing assembly points and blocking simulated routes, the system tests the viability of the entire safety infrastructure, ensuring employees and students can fluidly adapt to unexpected obstructions.

The product delivers **unprecedented fidelity** in safety training, offering facility managers post-drill data that quantifies route efficiency, travel times, and compliance rates, moving beyond subjective clipboard observations.

Aspirational Goal: To make predictable evacuation routes obsolete, ensuring that in a true emergency, every individual knows the safest, quickest path, regardless of conditions.

Consumer & Market Impact

Primary Persona 1: The Corporate Safety Officer (CSO). Pain Point: Liability risk and inability to quantitatively prove evacuation readiness across complex, multi-floor campuses. **Impact:** EvacRoute provides validated compliance records and audit-ready data, significantly reducing legal exposure. Testimonial: “Finally, we can move beyond checking boxes. This gives us irrefutable proof of safety readiness.”

Primary Persona 2: The University Facilities Manager. Pain Point: High turnover of residents/staff and the danger of thousands defaulting to the nearest, often bottlenecked, exit. **Impact:** Ensures safe flow management across diverse buildings (dorms, labs, lecture halls) by dynamically load-balancing evacuation traffic. Testimonial: “The ability to test every secondary route without disrupting operations is transformative.”

Non-Obvious Persona 3: Insurance Underwriters & Risk Assessors. Pain Point: Quantifying and modeling risk exposure for clients based on theoretical safety plans. **Impact:** EvacRoute data becomes a powerful tool for premiums and risk scoring, favoring facilities that deploy the system due to verifiable, superior safety management. Testimonial: “This shifts risk assessment from historical data to real-time performance metrics.”

Early Use Cases: High-compliance sectors such as manufacturing plants, large technology campuses, and healthcare facilities (Hospitals) where rapid, adaptable evacuation is critical.

Feasibility Assessment

NASA’s Technology Readiness Level (TRL): Measures how mature a core technology is, from basic principles (TRL 1) to flight-proven systems (TRL 9).

TRL 6: System Subsystem Model or Prototype Demonstration in a Relevant Environment.

Explanation: The core components (dynamic routing algorithms, networked digital signage, mobile notification integration) exist and have been tested individually. A functional prototype demonstrating the dynamic instruction change and tracking capability has been built, integrating existing IoT infrastructure, but not yet fully scaled or validated in a live, full-scale corporate environment.

Next Stage (TRL 7): System prototype demonstration in an operational environment (e.g., a pilot program run across a single floor of a client’s facility during an actual scheduled drill).

KTH Innovation’s Business Readiness Level (BRL): Measures how ready the business concept and commercial model are to enter the market.

BRL 4: Validated Problem/Solution Fit with Preliminary Market Analysis.

Explanation: The market need (moving beyond passive compliance, reducing liability, need for data-driven safety) is clearly articulated and confirmed by initial interviews with target CSOs and facility managers. A preliminary business model (SaaS subscription based on facility size/complexity) has been drafted, but pricing tiers and scalability assumptions require validation.

Next Stage (BRL 5): Validated Business Model with initial commercialization strategy and a defined funding plan to support market entry.

Prototyping & Testing Roadmap

Phase 1: Minimum Viable Platform (MVP) Development (0–6 Months). Focus on core dynamic routing logic, a facility mapping interface (digital twin creation), and developing the mobile application necessary for personalized instructions and post-drill reporting.

Phase 2: Closed Beta Field Trials (7–12 Months). Deploy the MVP in two distinct environments (e.g., a corporate office and a university dorm). Test scenarios involving randomized 'blocked' routes and diverse assembly points. Collect quantitative data on path adherence, total evacuation time, and system latency.

Phase 3: Iterative Refinements & Feature Expansion (13–18 Months). Refine algorithms based on bottleneck analysis. Integrate crucial B2B features like mandatory compliance reporting export functionality and API hooks for existing HR/facility management systems. Simultaneously, validate the SaaS pricing model through early-adopter contracts.

Phase 4: Open Pilot Program (19–24 Months). Scale deployment across 5–10 paying pilot facilities in target high-compliance sectors. Focus on optimizing the installation and onboarding process (reducing deployment time). Begin marketing preparation, leveraging success stories and compliance data from the pilot sites.

Strategic Launch & Market Integration

Launch Strategy: B2B Enterprise Focus. Prioritize securing anchor clients in sectors with the highest regulatory burden and liability (e.g., aerospace manufacturing, large tech companies). This establishes immediate credibility and high Annual Recurring Revenue (ARR).

Strategic Partnerships: Integrate EvacRoute Dynamics with major existing facility management (FM) software providers (e.g., specialized GIS mapping tools or building automation systems). Becoming a seamless safety module within these incumbent platforms drastically lowers friction for adoption.

Pilot Incentives: Offer significant deployment and subscription discounts to the first 5-7 large clients who agree to co-develop success metrics and act as verified case studies for future sales collateral.

Macrotrend Alignment: EvacRoute aligns perfectly with the burgeoning trend of **Smart and Resilient Infrastructure**. As buildings become increasingly 'smart' (IoT sensors, networked controls), safety systems must also evolve from static maps to dynamic, adaptive intelligence. This positions the platform as essential technology for future-proofing corporate real estate and satisfying increasingly rigorous insurance standards for organizational **Resilience**.

Distribution Channels: Primarily Direct-to-Client (D2C) B2B sales initially, managed by specialized safety consultants, followed by channel partnerships with global security integration firms.

Momentum Signal: EvacRoute Dynamics is positioned to become the industry standard for emergency training auditability and adaptive safety planning.

Next Step: Secure initial seed funding to develop the full TRL 6 prototype and recruit a dedicated Head of Facility Compliance to finalize the BRL 4 business model validation.