

AI SKILL LAB

Building a Modern Simulation & Training
Platform for Emergency Dispatch

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EXECUTIVE SUMMARY

OBJECTIVE

Build a scalable SaaS simulation platform that modernized emergency dispatch training while leveraging legacy ProQA infrastructure.



KEY OUTCOMES

- Launched AI-powered simulation training across Medical, Fire, and Police
- Reduced barriers to dispatcher training and preparedness
- Enabled rapid protocol-aligned scenario creation
- Achieved measurable readiness improvements before live call-taking



CORE TRADEOFFS

- Speed to market vs. long-term architecture
- Simplified scoring vs. full QA parity
- Legacy ProQA 5 integration vs. waiting for ProQA 7
- SSO Authentication vs. simplified login creation
- Agency Content Creation vs. SME Governed

INDUSTRY CONTEXT



TRAINING CHALLENGES

- 4–6 months typical onboarding timeline
- Significant staffing resources for coaching
- Highly structured protocol compliance under pressure



MARKET PRESSURE

- AI Simulation products already in market
- Existing solutions lacked scalability and alignment to ProQA workflows
- Customers expected remote, scalable training



PROBLEM STATEMENT

CUSTOMER PROBLEMS

- Training environments lacked realism
- Agencies struggled to scale coaching
- Simulations disconnected from operational workflows
- QA feedback loops were slow and inconsistent
- Multi-discipline support difficult to maintain

BUSINESS PROBLEMS

- Legacy on-prem software architecture
- Simulation capabilities lacked scalability
- Engineering constrained by ProQA 7 modernization
- Competitors already in the simulation market
- Protocol version alignment across products was difficult
- Needed scalable, integrated SaaS training ecosystem

MY ROLE

Product Leadership Responsibilities



PRODUCT STRATEGY

- Defined product vision and MVP strategy
- Determined launch priorities and roadmap
- Balanced investment: AI SkillLab vs. ProQA 7



CUSTOMER DISCOVERY

- Monthly customer feedback sessions
- Shadowed live emergency call takers
- Competitive analysis and industry insights



PRODUCT EXECUTION

- Wrote product requirements for platform
- Defined success metrics and adoption KPIs
- Partnered with engineering, QA, Sales, Marketing, Subject Matter Experts

USER RESEARCH & DISCOVERY



DIRECT ENGAGEMENT

- Monthly customer focus groups
- Shadowed dispatchers inside PSAP environments
- Observed training pain points during onboarding



COMPETITIVE ANALYSIS

- Evaluated competing simulation platforms
- Identified gaps in realism and workflow integration
- Differentiated around actual ProQA workflows



STAKEHOLDER ALIGNMENT

- Worked closely with subject matter experts
- Consolidated findings into exec recommendations



TRADEOFF #1: Build for ProQA 5 or ProQA 7?

WAIT FOR PROQA 7

- Cleaner long-term architecture
- More modern UX foundation
- Significant delay to market
- Lost competitive positioning

UTILIZE PROQA 5

- Faster launch timeline
- Familiar workflow for dispatchers
- Immediate market opportunity
- Required virtualization of on-prem software
- More technical dependencies

DECISION

Chose to utilize ProQA 5-based simulation to accelerate time-to-market while positioning ProQA 7 as the long-term platform strategy.

GAVE UP

Gave up a cleaner long-term architecture and more modern UX foundation — we accepted technical debt via ProQA 5 virtualization to reach market before competitors.

TRADEOFF #2: SCORING MODEL

FULL QA PARITY

- Perfect alignment with QA methodologies
- More granular coaching insights
- Longer implementation timeline
- Greater complexity for MVP
- Increased engineering scope

SIMPLIFIED SCORING

Correct / Not As Scripted / Incorrect / Missed

- Faster delivery
- Easier customer adoption
- Actionable training feedback
- Discrepancies with QA standards

DECISION

Prioritized speed and usability while ensuring scoring still reinforced behavioral coaching outcomes.

GAVE UP

Gave up full parity with QA methodologies and more granular coaching insights — we traded scoring depth for faster delivery and easier adoption.

TRADEOFF #3: AUTHENTICATION

USERNAME & PASSWORD

- Simpler onboarding
- Faster implementation
- Security concerns
- Fragmented user management
- Poor scalability across products

SSO-BASED AUTH

- Centralized identity management
- Improved security and access control
- Shared login ecosystem across products
- Higher implementation complexity
- Additional onboarding considerations

DECISION

Pushed for SSO to support long-term platform scalability and enterprise-grade access control.

GAVE UP

Gave up simpler onboarding and faster initial implementation — we accepted more upfront complexity to build the right security foundation.

TRADEOFF #4: SCENARIO CREATION

AGENCY-BUILT SCENARIOS

- Faster content expansion
- Greater customer flexibility
- Risk of protocol non-compliance
- Inconsistent training quality
- Higher governance complexity

SME-GOVERNED CREATION

- Maintained protocol compliance
- Higher quality and consistency
- Stronger IAED methodology alignment
- Slower content scaling
- Reduced early customer customization

DECISION

Centralized scenario creation with SMEs for protocol integrity, with a governed request process for tenant-specific customization.

GAVE UP

I seriously considered agency-built scenarios — faster content scaling and real customer flexibility were hard to walk away from. I pushed for guardrails that could make it work, but stakeholders had valid governance concerns and the safeguards needed would have delayed our initial rollout too far.

PLATFORM ARCHITECTURE



CORE COMPONENTS

- Thinfinity — ProQA virtualization
- Core Services Logic Engine — simulation workflows
- Azure Speech Services – Structured Scenarios
- ElevenLabs text-to-speech – 10-8 Mode
- Wispr Flow transcription
- QA scoring engine



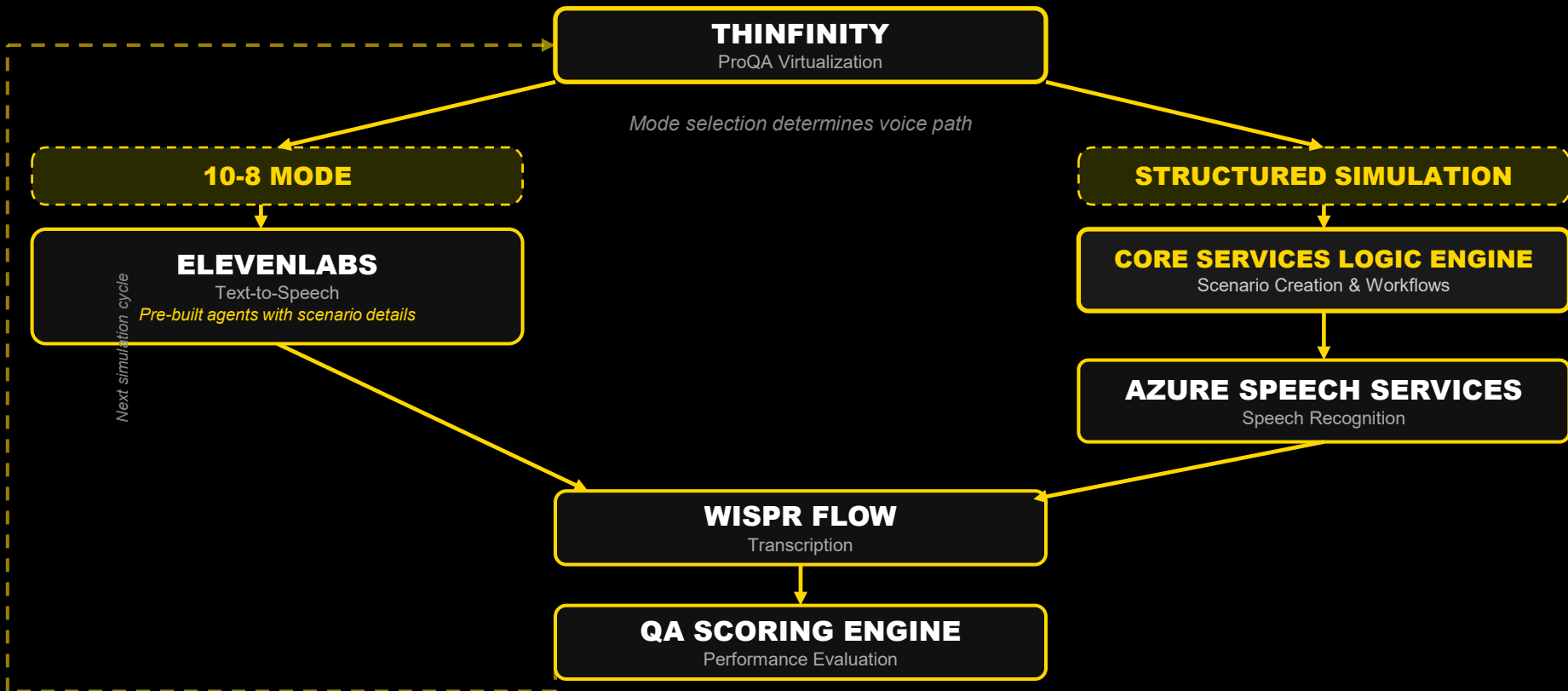
UX CONSIDERATIONS

- Realistic dispatcher workflows required
- Minimize latency between voice and interface
- Role-based transcription editing
- Human-in-the-loop validation support



CHALLENGE: Balancing reliability, realism, and usability across multiple third-party dependencies.

ARCHITECTURE FLOW



10-8 Mode uses pre-built ElevenLabs agents (no Core Services) | Structured Simulation uses Core Services + Azure Speech

CUSTOMER-FOCUSED UX DECISIONS

UX PRINCIPLES



Mirror real-world ProQA workflows



Reduce cognitive load for trainees



Realistic but approachable simulations



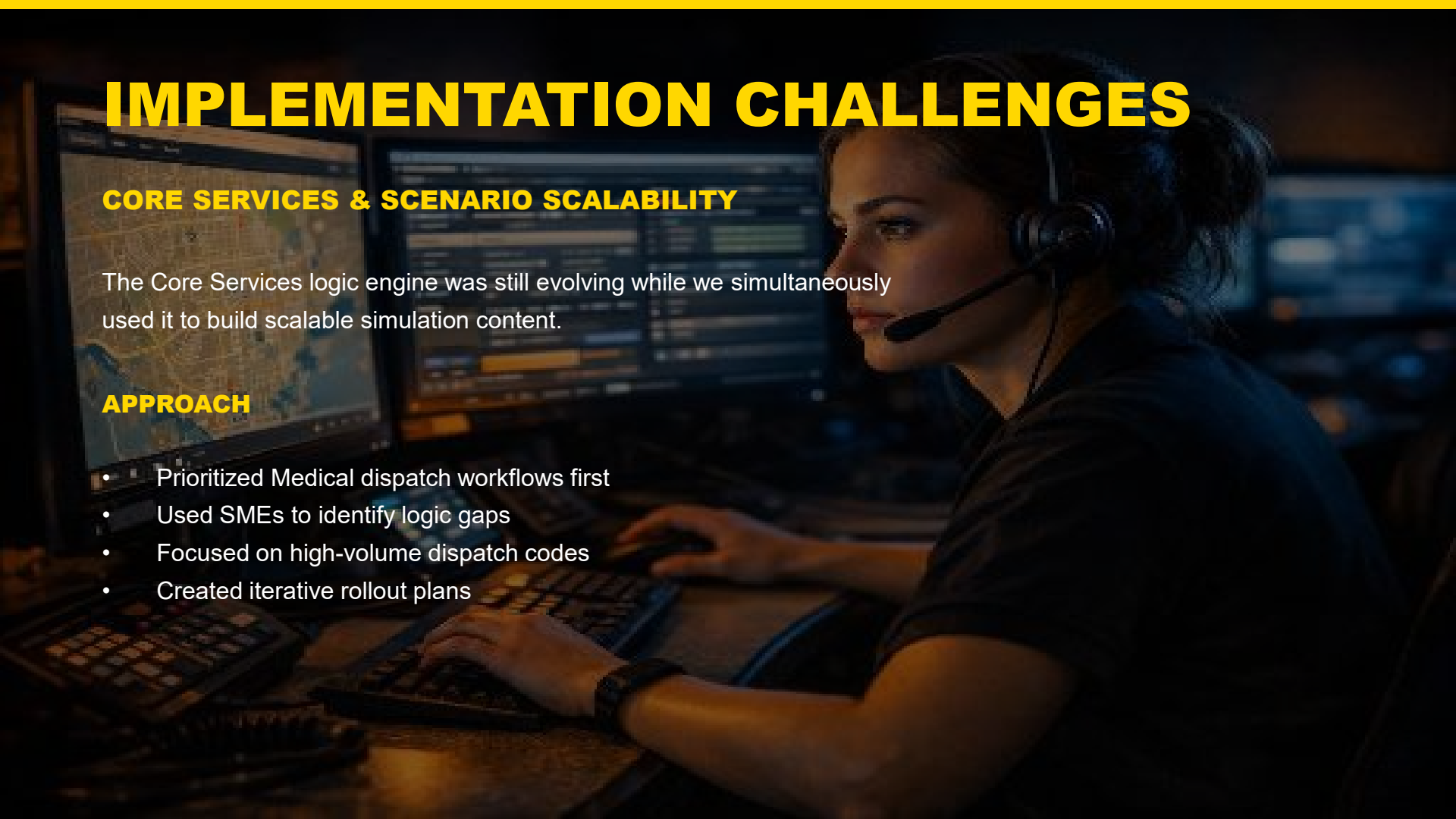
Intuitive coaching workflows

KEY UX FEATURES

- Real-time simulated caller interactions
- Role-based permissions
- Scenario assignment and completion tracking
- Editable transcripts for QA correction
- Performance feedback visibility

VALIDATED THROUGH: Focus groups • Dispatcher observations • SME reviews • Iterative feedback cycles

IMPLEMENTATION CHALLENGES

A woman with dark hair tied back, wearing a headset with a microphone, is seated at a desk in a dimly lit office. She is looking at two computer monitors. The left monitor displays a map, and the right monitor shows a complex interface with various data fields and text. Her hands are on a keyboard. The background is dark with some blurred lights from other monitors.

CORE SERVICES & SCENARIO SCALABILITY

The Core Services logic engine was still evolving while we simultaneously used it to build scalable simulation content.

APPROACH

- Prioritized Medical dispatch workflows first
- Used SMEs to identify logic gaps
- Focused on high-volume dispatch codes
- Created iterative rollout plans

PREDICTED OUTCOMES

What stakeholders defined as success before launch

PRIMARY PRIORITY

Training Quality & Protocol Compliance

- Deliver a simulation experience that mirrors real ProQA 5 dispatch workflows
- Ensure full protocol compliance across all simulation scenarios and disciplines
- Measurably improve dispatcher readiness and reduce onboarding time
- Build coaching visibility so supervisors can track trainee progress before go-live

SECONDARY PRIORITY

Revenue & Profitability

- Establish a viable SaaS revenue stream through simulation licensing
- Demonstrate market demand to justify continued investment
- Revenue was important but not the gating metric — stakeholders accepted a slower path to profitability if training quality was proven first

Success meant proving training quality first — revenue followed from validated outcomes, not the other way around.

OUTCOMES & BUSINESS IMPACT

Ontario Ministry of Health — Hamilton CACC Case Study & Overall Metrics

2,010

Total Simulations
Completed (Hamilton
CACC)

57

Active
Users (Hamilton CACC)

~\$2M

Total ARR Within
First Year for all agencies

96%

Highest Avg
Score

ENGAGEMENT

Avg 35 calls completed per user • Top user: 144 scenarios
Score range: 77% – 96%

EXPANSION

Expanded into Fire (EFD) and Police (EPD)
Multi-discipline ecosystem in one platform

Validated market demand for scalable simulation and preparedness tooling

TRAINING READINESS IMPACT

Training Stage	Typical QA Range
Early Classroom & Simulation	70 – 80%
Floor Training with Coaching	80 – 90%
Cleared for Supervised Live Calls	85 – 90%
High Performing Experienced Dispatcher	92 – 98%

PRODUCT IMPACT

AI SkillLab provided agencies measurable visibility into dispatcher readiness before live deployment.



Coaching effectiveness



Confidence before go-live



Training standardization



Scalability across agencies

KEY LESSONS LEARNED



CX REQUIRES TRADEOFFS

The best long-term solution is not always the best business decision in the moment.



SPEED MATTERS

Launching quickly with strong iteration loops created momentum and customer trust.



MISSION-CRITICAL UX

Reliability, clarity, and workflow familiarity often matter more than visual novelty.



HUMAN-IN-THE-LOOP

In public safety, AI should augment decision-making — not replace human accountability.