Evidence-Informed Innovations in Public Safety Using Immersive Spatial Technologies

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Centre for Public Safety Applied Research

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Projects and Partners

Decision-Making Abilities in Police Applicants (DMA)	Spatially Interactive Panorama (SIP)	Self-efficacy in Firearms Training (SFT)
• Virtual reality experience with character interaction	• Immersive projection environment	• Virtual reality tangible firearm training
• 8 public safety partners	• 2 community partners	• 1 partner

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What are we aiming to understand and accomplish?

Our Focus

- **Goal:** Design media experiences that foster authentic interaction and behaviour

Key Question

- How do individuals show their skills and competencies during training and evaluation?

Current Challenge

- Existing evaluation methods fall short in capturing these competencies effectively

Working Hypothesis

- We believe new immersive technology approaches can better assess authentic engagement and skill demonstration

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What can we do better?

Recruitment & Evaluation

- Traditional methods relying on subjective recall may not accurately reflect real-time responses to situations

Training

- Immersive digital environments offer adaptable scenarios for both skill development and assessment, supporting proactive learning and targeted remediation

Core Competency Development

- Communication and observation are vital for public safety personnel, yet opportunities for authentic practice remain limited

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What are the benefits?

Organizational & Personal Fit

- Align roles with individual values and organizational culture

Cost, Time, & Public Perception

- Improve efficiency, reduce expenses, and enhance reputation

Access to Experience

- Leverage internal knowledge and expertise

Evaluating New Approaches

- Test and refine innovative methods for better outcomes

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What are the key takeaways, insights, & findings?

Diverse Input: Insights gathered from experienced officers, subject matter experts, developers, and criminal justice students

Core Findings: Immersion, interaction, authenticity, and assessment emerged as critical elements

Methodology: Embedded surveys (qualitative & quantitative), researcher journals, and interaction logs

Learning Environment: Focused, immersive training supported skill development and evaluation

Authentic Engagement: Participants showed high levels of natural interaction; unscripted dialogue led to emergent, realistic narratives

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How can others replicate this work?

Be Strategic: Select scenarios carefully to ensure relevance and balance in training and evaluation (heavy focus on use of force with other tools)

Evidence-Informed Practice: Use research findings to guide public safety improvements

Collaborative Design: Partner-driven co-created scenarios and defined competencies

Stay Connected: Reach out to us to explore partnerships or share insights

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Questions & Contact Information

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