VR POLICE TRAINING

Horizon 2020 European Research

SHOTPROS

42 months project in a nutshell: VR training increases the decision-making and acting performance of police officers, which will lead to better and more correct decisions in the field.

VR training on decision making and acting for European police officers

TRAIN * DECIDE * ACT

SHOTPROS aimed to investigate the influence of psychological and contextual human factors on the behaviour of decision-making and acting (DMA) of European police officers under stress and in high-risk operational situations, to design better training for police officers and to improve DMA performance. The aim was to find out how training in virtual reality (VR) should be designed so that "first responder" police officers can make optimal decisions even under stress.

FRAMEWORK

Scientifically validated training framework based on human factors for decision-making and acting.

Guidelines on what to consider in VR training preparation, execution and feedback.

VR SOLUTION

Scenario designer for adaptions and VR training environment for decision making and acting with realistic tactical belt equipment.
Stress measurement and evidence-based feedback options in an after-action review.

INTRODUCTION

Policy-Maker Toolkit with a step-by-step guide on how to introduce VR technology into European law enforcement agencies, considering processes, call for tender, requirements phases and internal communication and awareness raising.

CONTACT

murtinger@usecon.com
schlagenhaufen@usecon.com
gunther.dauwen@campusvesta.be

INFORMATION

www.shotpros.eu
www.vrandpolice.eu

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VR POLICE SCENARIO TRAINING

TRAIN ANYTHING ANYTIME ANYWHERE

Improved performance

NEED FOR TRAINING

First responder police officers are increasingly involved in threatening situations and need to be better prepared for unpredictable situations.

RESEARCH MODEL

Stress is the individual emotional response to a situation that is perceived as threatening (imbalance of perceived demands and perceived capabilities). This represents a change in attention and leads to suboptimal decision-making and acting. Human factors influence perception.

VR TRAINING

To train uncertain and complex events, VR seems to be highly effective and to learn from experiences. It enables police officers to focus on task-relevant input in stressful situations. Human factors (personal, contextual, organisational or societal) help to create variable and realistic VR training for different stress situations. LEA organisations are aware of digital transformation in general and VR technology in special, but like many others, they face many challenges. SHOTPROS delivers know-how for them.

ADVANTAGES OF VR TRAINING

01 **FLEXIBLE**

Easy set-up, no close down of locations, change scenario anytime (from domestic violence to terror), same conditions for all trainees, interruptions possible anytime

02 **RESOURCE-SAVING**

Time, money, people, space, material: no props or rooms to be prepared; fewer people involved,
no time-consuming filming and evaluation

03 **SCENARIO OPTIONS**

Real-time adaptions of infinite environments (real-world places possible); train the un-trainable (e.g. vulnerable groups)

04 **SAFETY**

Threatening situations can be trained in a safe environment

05 **STRESS & PERFORMANCE MEASUREMENT**

Reaction to trainee's state (avatar behaviour, flow of the scenario, stress-inducing factors etc.), comparability

06 **AFTER-ACTION REVIEW**

Evidence- and data-based feedback and debriefing, pre-defined KPIs, variable views, model-learning

4 SHOTPROS innovation AREAS

TECHNOLOGY SOLUTION

Free Movement
Smart Vests
Tactical Belt
Outdoor/mobile
Scenario-design

TRAINING FRAMEWORK

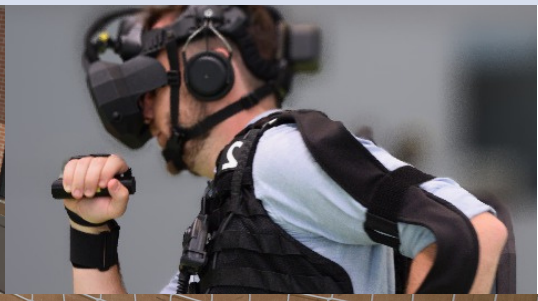
Model
Curriculum
Guidelines
Scenarios
Policy-Maker Toolkit

IN-ACTION MONITORING

Stress measurement
Real-time steering
& additional senses
Role player / NPC
behaviour
Realism

AFTER-ACTION REVIEW

Re-Play
Change perspectives
Evidence-based
feedback
Performance
indicators



TRAINING PHASES

PREPARATION

- Training objectives
- Environment (location)
- Scenario
- Avatars
- Flow

EXECUTION

- In-action monitoring
- Change of perspectives
- Stress & performance measurement
- Real-time steering
- Adaptions depending on trainee's needs

REVIEW

- After-action
- Re-Play
- Any views
- Model learning experience-based
- Performance visualisation (KPIs)

SHOTPROS

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22 STUDIES
6 FIELD TRIALS
+4500 PARTICIPANTS
1 FINAL CONFERENCE
1 NETWORK

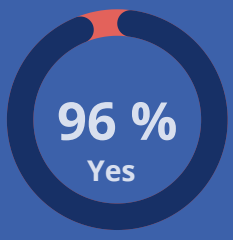
USER CENTERED TRAINING

CRITERIA for VR TRAINING

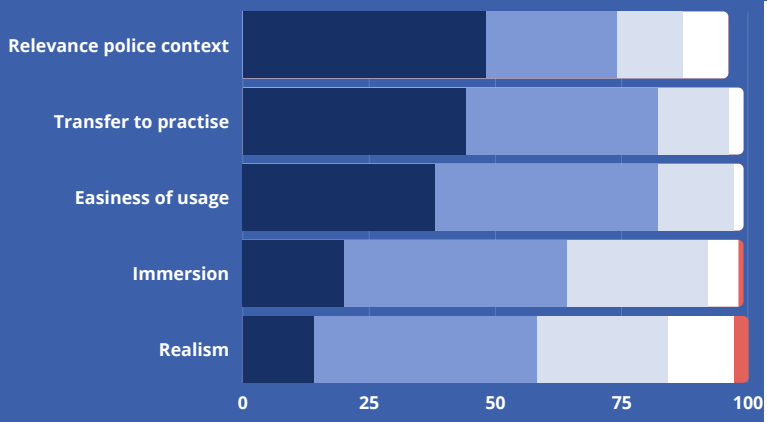
- Clear assignment
- Training instruction
- Well-designed practice situation
- Model learning
- Variation and differentiation
- Self-Management of the learning process
- Feedback

END USER FEEDBACK

Could you imagine, using VR in police training?



What applies most for VR police training?



13 PARTNERS
7 COUNTRIES
42 MONTHS

COORDINATOR

USECON

RESEARCH

VU VRIJE UNIVERSITEIT AMSTERDAM

AIT AUSTRIAN INSTITUTE OF TECHNOLOGY

UNIVERSITÄT HEIDELBERG ZUKUNFT SEIT 1386

KU LEUVEN

TECHNOLOGY

RE-liON

LAW ENFORCEMENT & FIELD KNOW HOW

POLITIE

POLIZEI Nordrhein-Westfalen

POLIZEI BERLIN

Polisen

GUVERNUL ROMÂNIEI

CAMPUS VESTA

Crisiscentrum Centre de Crise