

D7.3 Report on the SHOTPROS demonstration at the final conference



Task	D7.3
Task Lead	CAMPUS VESTA
Related work package	WP7
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Dissemination level	PUBLIC
Due submission date	30.09.2022
Actual submission	30.09.2022
Project number	833672
Instrument	RIA
Start date of project	01.05.2019
Duration	42 months
Version log	V1.0

Versions

Vers.	Date	Author	Description
V0.1	20.06.22	Birgit Harthum (USE) Valerie Schlagenhaufen (USE) Maaike van de Vorst (VESTA)	Template and structure creation
V0.2	14.07.2022	Maaike van de Vorst (VESTA)	Updated structure, added information on section 1 and 2 Added appendixes I and II
V0.3	06.09.2022	Maaike van de Vorst (VESTA)	First Draft, prior to Conference
V0.4	20.09.2022	Gunther Dauwen (VESTA) Maaike van de Vorst (VESTA)	Second draft, following Conference
V0.5	26/09/2022	Birgit Harthum (USE)	Feedback & Review
V0.6	27/09/2022	Günther Dauwen (VESTA)	Incorporation of Feedback
V1.0	29/09/2022	Valerie Schlagenhaufen (USE) Gerhard Helletzgruber (USE)	Final formatting & upload

List of Acronyms and Abbreviations

Acronym / Abbreviation	
CSI	Crime Scene Investigation
DMA	Decision making and acting
DMA-SR	Decision making and acting under stress and in high-risk situations
EUCB	EU Clearing Board for Innovation
FT/FTs	Field trial/s
HF	Human factor
LEA	Law Enforcement Agency
SMARTEU	Scottish Multi-Agency Resilience Training & Exercise Unit
VR	Virtual Reality
VRPN	Virtual Reality and Police Network
WP	Work Package
XR	Extended Reality
SHOTPROS Partners:	
AIT	Austrian Institute of Technology GmbH
BP	LEA Partner – Berlin Police
KUL	Katholieke Universiteit Leuven
LAFP NRW	LEA Partner – Police NRW (Landesamt für Aus- und Fortbildung)
NCCN	LEA Partner – National Crisis Center Belgium
NPN	LEA Partner – National Police of the Netherlands (Amsterdam)
RMIA	LEA Partner – Romanian Ministry of Internal Affairs
RL	RE-liON Group B.V.
SPA	LEA Partner – Swedish Police Authority
UHEI	Universität Heidelberg
USE	USECON The Usability Consultants GmbH
VESTA	Campus Vesta
VUA	Vrije Universiteit Amsterdam

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Executive summary

Deliverable D7.3 reports on the SHOTPROS Demonstration at the final conference and describes the final event at the end of the 3,5 years Horizon 2020 project **SHOTPROS: A Human Factors Based (VR) Training Framework for Decision-Making and Acting (DMA) Capabilities under Stress and in High-Risk Situation for European Law Enforcement Agencies (LEAs)**.

As the project was very user-oriented from the beginning, a hands-on final conference combining technology, research and end user interests was the final step for this project. Presenting the outcomes of the project as well as experiences from other similar or complementary projects or organisations was a clear aim of the SHOTPROS final conference. The conference was also the official kick-off event of the VR and Police Network (see D8.9) established through the course of the project.

A **pre-event on the 13th of September 2022**, hosting the final field trial of the project with the Belgium Police (after a series of 5 FTs all over Europe in Spring 2022 – see D7.2) and a **press** event for **media** and **VIPs** like the Belgian Minister of Internal Affairs, marked the beginning of the final conference. The main conference was executed as a **two-day event (14 & 15 September 2022)** full of talks and interaction amongst LEAs, police representatives, policy makers in the security context, research and technology participants from 17 European countries. Over 130 people participated in the interactive workshops and followed presentations by more than 25 speakers and 66 people tried out the SHOTPROS VR solution and the experimental environment of the project in person as part of the SHOTPROS technology results presentation.

Each day started with welcome words and key notes from higher management in the training and law enforcement industry like the CEO of Campus Vesta or the governor of the province of Antwerp or a representative of the European Commission, Directorate-General for migration and home affairs, etc. On the first day, after the keynotes, also a general SHOTPROS overview described the intention and execution of the project to the audience. This block was followed by parallel sessions in 2 groups focusing on the SHOTPROS results (technical innovation & training framework and DMA model) as well as experiences from other projects or organisations with VR (Scottish Multi-Agency Resilience Training & Exercise Unit - SMARTEU, MED1stMR as a complimentary training approach in the medical context and the usage of VR in the CSI context). The afternoon was dominated by a panel discussion on challenges and opportunities in the VR police training context and brought a lively discussion

with experts and interested participants. As another goal of SHOTPROS is to establish a VR and Police network for knowledge exchange and many actions in this direction were already undertaken during the project, the evening of the first day marked the official starting point of this network. During this kick-off, the network goals were presented, and the next steps discussed.

The second conference day started with welcome words and keynote speeches from (other) experts like the Chief Innovation Officer of the Belgian Federal Police or a representative from the network XR4Europe. The parallel sessions focused on project results (ethics, policy-maker toolkit and multisensory integration in VR training) and delivered insights into other organisations using or dealing with VR (Austrian Training Academy hands-on experiences, an overview on measurement in the VR and news from technology in the LEA field). After this morning of information, the afternoon started with 3 parallel interactive workshop sessions on the future of VR in police training regarding the network, needs & requirements as well as challenges in organisations introducing technology. The results of the workshops were then summarised for the audience by SHOTPROS representatives, who also resumed the project and gave insights on the future, which closed the conference.

In parallel to this program of knowledge and experience exchange, the participants also had the opportunity to try out the SHOTPROS VR solution developed during the last 3,5 years, hosted by an international team of SHOTPROS VR Police trainers (Belgium Police, Swedish Police, Dutch police and the police of North Rhineland Westphalia). This offered real insights into VR for participants and the project consortium received additional and final input on the technology solution.

Based on a qualitative and quantitative analysis of all the results of the questionnaire, our participants highly appreciated to see and experience the SHOTPROS results. They acknowledged that the Conference was organised in a very professional and satisfactory way and that there is a lot of enthusiasm to be active in the VRPN.

1 Added value

1.1 Relation to the SHOTPROS Work packages (WPs)

WP7 represents the **final sequences of the SHOTPROS project, including the field trials (see D7.1 – D7.2) and the generation of final results and impacts (see D7.4 – D7.7)**. Based on the end user requirements (WP2), a scientific model of decision making and acting under stress and in high risk (DMA-SR, see D3.2) was created in WP3 as well as a first VR Training curriculum (see D3.3) and the SHOTPROS VR solution (see WP5). Those preliminary results were further investigated in the HF studies (WP6) and success factors for VR training, scenarios and features were identified in WP4. Based on the validated outcomes, the field trials (see D7.1 and D7.2) were conducted to further test and improve the project results. The generated know-how from the FTs will feed into the **final results and impacts of the SHOTPROS project (see D7.4- D7.7)**.

The final conference, as reported in the present document, marks the end of the field trial implementation phase and is the last opportunity to collect and evaluate inputs within the project. Parallel to the conference, the final field trial also has taken place with the aim to showcase and demonstrate the project results to relevant stakeholders from different areas.

1.2 D7.3 is informed by the following deliverables

	How did these deliverables influence D7.3 ?
D1.4	D1.4 describes the process of end user management within SHOTPROS . As the FTs are only possible with end user involvement, this deliverable built the base for the interaction process with LEA partners and other invited end users as network members, interested end users, advisors and other stakeholders.
D5.1	The SHOTPROS VR architecture provided input for the set-up of the training solution and the showcase throughout the FTs.
D5.3	D5.3 describes the scenarios developed by the technical partner together with the LEA partners for the FTs. These scenarios were also used for the SHOTPROS final demonstration at the final conference.

All (scientific) deliverables	All relevant results of the SHOTPROS project were presented at the final conference and therefore influenced the present deliverable D7.3.
D7.2	This deliverable analysed the results of the FTs and therefore feeds into the final deliverable D7.3 (Report on the demonstration during Final Conference)

Table 1: Deliverables informing this deliverable

1.3 D7.3 consequently feeds into the following deliverables

How does D7.3 influence other deliverables within SHOTPROS	
D8.5	This Policy-maker toolkit will be influenced by the management and policy-maker feedback gathered at the final conference. The discussions, but also the challenges faced by a decision maker, which were part of many interactions on the side of the training field during all FTs, will provide relevant input to upcoming (inexperienced) LEA organisations that want to implement VR training in their didactics.
D8.9	The large media coverage and intensive communication and dissemination work accompanying the final conference will be reported in the Report on dissemination activities including 'VR Police Training network' .
D8.11	Deliverable 8.11 covers the detailed proceedings of the conference and is therefore influenced by the description of D7.3

Table 2 Deliverables influenced by this deliverable

1.4 Relation to the SHOTPROS objectives

There is a clear relation between all 5 SHOTPROS objectives and the final conference, since on the one hand, the results of the project are disseminated at the event and on the other hand, the final feedback that is collected there, contributes to the objectives.

The **HF model** (objective 1) will be presented in its validated version, the **final VR training environment** (objective 2) is utilised for showcasing and try-out sessions. The **final training framework and curriculum** (objective 3) and the **guidelines for VR training** (objective 4) were presented and on-site collected feedback from stakeholders is subsequently incorporated into the final deliverables D7.4 - D7.7.

The conference is the final step to raise **public awareness** on the relevance of VR police training and channels VR at the final event. All relevant stakeholders from SHOTPROS LEA partners, the VR and Police Network, policy-makers and many LEA contacts that were established during the project were brought together at the SHOTPROS final conference. The event also represented the official kick-off for the **establishment of a European VR police network** and by this meets objective 5.

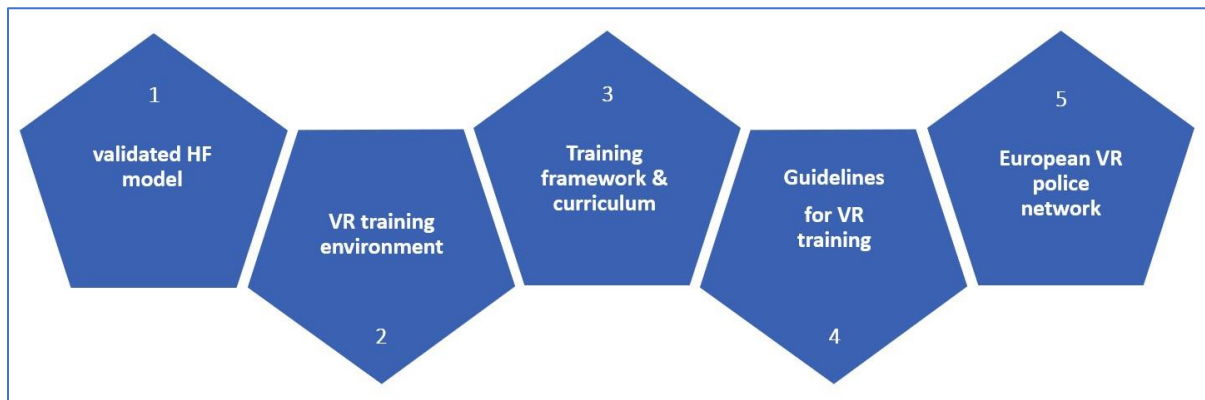


Figure 1: The 5 SHOTPROS Objectives

2 Introduction

This deliverable covers how the demonstration at the final conference was organised (following the plan established in D7.2), what was presented and why, the stakeholders that attended, the feedback of these stakeholders and an evaluation of the conference.

After more than 3 years of researching, developing and evaluating the topic of virtual reality (VR) training for the police, the results were presented in the SHOTPROS final conference “**VR for Police: Drive the police into the future**” on the premises of CAMPUS Vesta in Ranst, Belgium, in September 2022. Table 3 shows the objectives of the conference, and how they were materialised during the conference.

Table 3: Objectives of the conference

Objective	Materialisation at the conference
Showcase VR solution & training environment	Overview on SHOTPROS as one of the keynotes on the first day including a video of the results Observation room for VR training VR try-out options for participants of both, the full body suit solution and the experimental solution
Evaluate VR	Final evaluation after try-outs at conference (see D7.4-D7.7) Results of panel discussion and workshops at the conference with LEA insights from participants Feedback to the conference and try-outs
Presenting SHOTPROS results	VR try-out slots Conference tracks (keynotes, parallel sessions etc.)
VRPN	Official kick-off on day 1 Discussion in Workshop on day 2 Conclusions on day 2 (“the future is the network”)
Synergies with related projects	Project MED1stMR (similar content, but another discipline)

	<p>VR applications in CSI (VR technology in another context)</p> <p>Insights from XR projects at TNO</p> <p>Insights from XR4Europe network</p> <p>Insights from research projects at the EU</p> <p>Insights from representatives of the EUCB</p>
<p>Presenting Policy-Maker Toolkit</p>	<p>As part of the parallel sessions</p>
<p>Dissemination</p>	<p>This conference supported the SHOTPROS project dissemination by firstly focusing on the results of the SHOTPROS project during the conference, having many speakers mentioning these results but also by demonstrating the innovative technology solution to the participants.</p> <p>To further enhance the awareness factor of the topic, a press conference a day prior to the event including VIPs from the LEA (Belgian Ministry of Interior) sector was set up to highlight the dissemination aspect</p>
<p>Exploitation</p>	<p>The SHOTPROS partners presented their results and future plans in dedicated sessions with a focus on the tangible technology which will be exploited after the completion of the project</p>
<p>Networking</p>	<p>The conference included, besides the content and discussion options throughout the whole duration, additional options to network in smaller groups</p>

3 SHOTPROS final conference report

3.1 Preparation and planning

The conference took place at the premises of Campus VESTA, one of the dedicated hosting partners: VESTA, NCCN and KUL, all located in Belgium to make use of synergies to organise the conference and to be able to jointly convince the Belgian Minister of the Interior to visit the conference. Together with the coordinator USE, the plan established in D7.2 was step by step set into action. To do this, the objectives of the conference, budgeting and work allocation were discussed. Following this, a kick off meeting between VESTA, KUL, NCCN and USE decided to put forward a single conference scenario and a connected budget. Throughout the fall 2021 and the Spring of 2022 (especially with the knowledge from all FTs) very regular meetings were held to discuss the progress in the preparations ahead of the final conference. It was finally decided to organise a **two-day conference**, to be organised **Wednesday 14 & Thursday 15 September 2022** and defined under the scope of: “**VR for Police, we drive the police into the future**”. It was always the main objective to highlight **all SHOTPROS results** and focusing mainly on the end user relevant output like the **DMA-SR training framework**, **the policy-maker toolkit** and **the VR training solution**.

In parallel the planning for the VIP and media conference on 13th of September was executed. This pre-event was primarily set up for dissemination reasons and should raise awareness for the topic and the event.

3.2 Set-up

Together with the technology partner RL, the **Campus Vesta sports hall** (see Figure 1) plus the necessary **adjacent observation room** with big windows, overlooking the sports hall, was reserved to be able to execute the VR try-out sessions. A separate area to try out the experimental VR set-up was included. Furthermore, a **SHOTPROS control room** on the first

floor with a view on the VR was prepared as a conference office for SHOTPROS conference staff only.



Figure 1: Sports hall for VR demo at the SHOTPROS final conference

For the workshops and parallel sessions, the participants were split up in 2 groups. Those smaller groups enhanced the interaction character of the conference (see Figure 2). It also allowed from a logistic point of view that a guided tour around Campus VESTA could be offered on day 1 for group one and on day 2 for group two. All sessions were moderated and dedicated time-keepers ensured that the schedule was followed.



Figure 2: Workshops and parallel sessions in smaller groups

3.3 Practical organisation

Hotel reservation: A contingency of hotel rooms was blocked for the conference guests with a fixed price.

Transport: A shuttle service from the hotels to Campus VESTA and back was provided for the two conference days.

Catering: The organisers ordered a catering for coffee and lunch breaks on both conference days. Also, a networking dinner was organised allowing the many different delegations to get acquainted with each other.

3.4 Content planning and execution

For content planning of the conference, it was important to always bear in mind the goals of the conference and the target audiences. Our aim is to intertwine two streams: practitioners on the one hand (LEA organisations and their representatives) and research and technology on the other hand. Following this, the program was set up with multiple different features like

described below. All speakers were then carefully chosen to represent both practitioners as well as researchers. In the following chapters a description of the conference components and its allocation throughout the days is given. The detailed final program can be found in the appendix. A specific description of the conference content is reported in D8.11.

3.4.1 Keynotes

To show the importance of the topic within the LEA sector, the focus on the first day was to show the importance of innovation in the police and combine this with information on the research background of the funding by the EC and an overview on the project results. All keynotes were situated in the Aula of the venue, to have all participants in the same room.

- Welcome word “**Multi-disciplinary training and innovation**”
Pieter Van Turnhout, CEO of Campus Vesta
- Opening speech “**Police training and innovation**”
Cathy Berx, Governor of the Province of Antwerp
- **Role of practitioners in the EU research and innovation projects**
Sebastian Serwiak, European Commission, Directorate-General for Migration and Home Affairs, Unit F2 - Innovation and Security Research
- **SHOTPROS – a journey through VR police training: overview on the project results**
Markus Murtinger, SHOTPROS coordinator, USECON GmbH

The second day set an even more detailed focus on end users and was enhanced with XR4Europe on community and technology:

- Welcome word “**Virtual reality Police Network**”
Wendy van den Branden, Director of Police Training and European Projects, Vesta
- **Innovation through VR/XR for police**
Kris D’Hoore, Chief Innovation Officer of the Belgian Federal Police
- **How to integrate VR in police training? Getting Started.**
Anja Wagner, LAFP North Rhine-Westphalia, Germany
- **Overview of objectives and current activities of XR4Europe**
Alain Gallez, Managing Director XR4Europe

3.4.2 Parallel sessions

After the welcome words and keynote speakers, the participants were split up into two groups to enable a more intensive exchange in the Q&A sessions at the end of each presentation. This enhanced the options of multidisciplinary exchange (LEA, research and technology in the same room) to sharpen the view on each other's needs. On both days the presentations were a mix of SHOTPROS results and additional information from either project advisors (e.g. SMARTEU or SIAK Austria) or other projects with similar technology but in another context (MED1stMR) or input from other research institutions (like TNO Netherlands) on the VR technology.

Aula A – Group 1	Aula B – Group 2
SHOTPROS innovations Chris Haarmeijer, RE-IION Helmut Schrom-Feiertag, AIT - Austrian Institute of Technology	VR applications in a multi-disciplinary context Douglas Stirling, SMARTEU (Scottish Multi-Agency Resilience Training & Exercise Unit)
Human-factor-based training framework for VR police training Vana Hutter, Vrije Universiteit Amsterdam & Ortwin Maetzing and Alexander Schäfer, LAFP Police North Rhine-Westphalia, Germany	MED1stMR – mixed reality in the field of medical first responders Georg Regal, AIT – Austrian Institute of Technology Pedro Duque, PLUX Biosignals
	VR and XR applications for CSI, reconstruction, presentation, training and education Philip Enaström, Swedish National Forensic Centre

Figure 3: Parallel sessions on day 1 of the SHOTPROS final conference

Aula A – Group 2	Aula B – Group 1
The potential of scenario-based police training in VR to improve officers' attention Marie-Ottillie Frenkel, University of Heidelberg	Plug & play VR applications for police training Ronald Maringer, SIAK - Austrian Police Academy
"Materializing the Virtual: The contextual impact of multi-sensory experiences in VR." Jakob Uhl, AIT – Austrian Institute of Technology	Reflections on ethics in a VR context Emma Jaspert, KU Leuven
The policy-maker toolkit: How to introduce VR into a police organisation Valerie Schlagenhafen, USECON GmbH	VR and XR platforms to measure the effect of cognitive and physical enhancement technologies Olaf Binsch, TNO Netherlands

Figure 4: Figure 1: Parallel sessions on day 2 of the SHOTPROS final conference

3.4.3 Workshops and Panel discussion

On the first day, a panel discussion with experts on different points of view on VR and the future was held after the parallel sessions. The audience had the chance to vote if they agree/disagree with the statements which enhanced the overall interaction. On day two after the first set of parallel sessions, the participants could choose between 3 interactive workshops on different VR related content:

- **Creating future synergies** - How to get the most out of the VR & Police Network?
- **Need & requirements** - for the future implementation of VR in police organisations
- **Challenges in the use of VR in police organisations** – what are obstacles and how can we overcome them?

3.4.4 VR and Police Network (VRPN) Kick-Off & Closing words

The aim was to conclude every conference day with a view to the future. As the project has shown that VR is an effective training tool for LEAs, it is important to focus on the continuation of the topic. On the first day a very important step to fulfil this aim was done by introducing the VRPN to a broader audience (see Figure 5) and emphasise the importance of a lively community. The VRPN and its goals were presented and additional members were recruited.

On day two this focus continued in one of the workshops and was also highlighted in the conference closing words by SHOTPROS representatives.



Figure 5: VRPN presentation on day 1

3.4.5 VR Showcase & VR Demo

Parallel to the different presentations, it was crucial for us to enable the participants to experience VR technology themselves and try out one of the tangible results of SHOTPROS, the SHOTPROS VR solution in a VR demo track (see Figure 6). An international SHOTPROS VR trainer team guided the conference participants through a tutorial and training session to let them experience scenario-based VR police training themselves.



Figure 6: VR demo and showcase

3.4.6 Networking activities

Coffee Breaks, lunch, reception and the networking dinner, marked important **networking** options within the LEA organisations but also served to mix the disciplines of research, technology, practitioners and project partners and enhance the exchange on their different views.

3.5 Planning of conference materials

The materials for the final conference were developed and distributed according to the dissemination plan (see D8.1) and reported in D8.4. This material includes, amongst others (see Figure 7):

- **Conference folder** with the program, a leaflet on SHOTPROS, a leaflet on the results of SHOTPROS, a leaflet on the Policy-maker toolkit and a factsheet on Campus Vesta

- **Conference banner** of 4x2 meters that functioned as **selfie wall** and thereby increased the social media communication of the participants
- **Roll-ups and banners** were developed and placed in the rooms to underline the tagline of the conference: **VR and Police: Drive the police into the Future.**
- **Conference badge** with SHOTPROS and VRPN logo and name that the participants had to wear to allow networking
- **Goodie bags** were handed out with the folders, leaflets, a drink bottle, a notepad and a pen



Figure 7: Goodie bag and content - bottle, pen, notepad, leaflets and the conference folder

In the sports hall we also presented the **flags from our 6 partners and the EU flag** and during the demo the international team of trainers, all in their specific uniforms, embodied the **European spirit of cooperation** which has led this project to its success. A **photo booth** built into a police traffic speed camera was operational to provide all VR trainees to have a photo in smart suit.

3.6 Budget planning

The budget of the final conference was drafted in the beginning of the planning process. It was gradually refined with specific offers gathered by the organising partners. Travel cost and hotel cost were paid by the participants or the organisations they represent except for invited external speakers which have been covered by the SHOTPROS budget of the hosting organisations.

3.7 Participants and invitations

The target audience as defined in the GA was *“a larger audience of LEAs (partners and others), policy-makers, police training and education organisations and all other stakeholders who are interested in and might benefit from the innovative SHOTPROS results.”* Through the course of the project, many contacts in this area were made and gathered. In addition to that, further sources (newsletter announcements with other projects like the ENLETS community (enlets.eu) or the usage of European mail lists or internal SHOTPROS options like social media or website announcements) were used to invite suitable and interested participants. Over 200 email invitations were sent out (including the program) and over 100 participants finally joined the conference (plus SHOTPROS partner participants).

Prospective participants were asked to fill out a registration form (see appendix II) with their country of origin, name, function and organisation. This helped to organise the practical components like shuttles or the allocation for VR demo try-outs.

3.8 Showcase and VR demo

3.8.1 Set up

Following 5 successful FTs (see D7.3), it was decided to create two separate training pitches to be able to conduct the final showcasing and trainings for the conference participants. For internal preparation (train-the trainer, testing etc.), the SHOTPROS VR solution was set up in the sports hall already one day in advance.

The set-up of the experimental VR environment was done in a separate room. In this room, the training pitch was separated from the public area and a big screen was placed to allow observers to see in which environment or scenario the trainee is operating.

For the VIP event and press conference on 13th of September 2022, prior to the SHOTPROS final conference, an observation room for VIPs on the first floor with a big window directly on

the training pitch and a second screen (streaming the in- and the after-action view of the system – see D7.6) was set up. This offered the guests an even better visual and audio experience but at the same time not interfering the training sessions at the pitch. A clear separation of training and dissemination work facilitated the lively exchange with the VIPs and press without disturbing the training, which resembled professional training set-ups.

3.8.2 Preparation, organisation and execution

In the registration form, all participants had to indicate if they wanted to try out the system. Priority was given to external participants who had never tried the system before, especially those with law enforcement background. The participants received their allocated slot via email prior to the conference and during conference, organisation committee members made sure people find their slot in time and on the right location.

Civilians got the opportunity to try the tutorial scenario to learn how to move in the VR, how to open doors and find and pick up objects. The groups with police background were provided with a FT scenario with medium stress level and no active shooting.

4 Virtual Reality and Police Network (VRPN)

The VR and Police Network that was established during the 3 ½ years of SHOTPROS got very good feedback during and after the final conference. Many new network members were gathered at the conference and the participants suggested future-oriented strategies for further networking activities.

“The SHOTPROS project built an interesting network of XR/VR practitioners and interested partners. The Triple Helix approach resulted in a diverse group from the law enforcement, academic and private sector world. This is a first interesting step in connecting to other existing networks that are joining forces to work on XR solutions.”

(Kris D’hoore, chief innovation Belgian Federal police)

The results of the network-related workshops and the dedicated network kick-off and dinner will be reported in D8.9 Dissemination report.

5 Press conference and VIP day

On the 13th of September, a press conference and VIP day was organised to showcase the SHOTPROS results and VR solution to the media but also to policy-makers, high-level guests and the media.

Table 4: Schedule of the VIP and press conference day

Start	End	What?
8h	9h	Briefing trainer teams
9h	10h	Train the trainer workshop
10	11h	Start practising scenarios and demo
11h	12h	Demo presentation - filming by Belgian TV stations RTL, RTBF and ATV
11H	12h00	General repetition DEMO
12h00	12h30	Lunch trainers
12h30	13h00	DEMO team puts suits on, gets calibrated and ready for training
11h30	12h30	Pick up VIPs at Lier station for Press conference
13h	14h30	<p>Press conference with the Belgian Minister of the interior and the Governor of the Province of Antwerp on the training pitch. During the Press event another trainee is put in a smart suit to show to press and public how this is done.</p> <p>Speakers: CEO Campus Vesta, SHOTPROS representatives to present results, the Governor and Minister.</p> <p>Questions by the Press were answered individually.</p>
13h20	13h55	DEMO: Minister and governor and VIPs follow the demo from an extra room while eating and networking. (Filmed by VRT and VTM)

13h55	14h30	Minister and governor received explanation by research representatives on the experimental VR environment (after that: departure of the minister)
14h	15h	VR solution try outs by the press
15	16h30	Police training team Campus Vesta (6pers) – final field trials
16h30	18h00	Training team Campus Vesta (10pers)



Figure 8: Speech from the Belgian Minister of Interior (left) and the governor of Antwerp (right) at the VIP day



Figure 9: Belgian Minister of Interior at the VR try-out with the experimental system

6 Evaluation FT session Belgian Police

At the end of the press & VIP day, the Belgian Police also tried out the system with 16 participants as the final SHOTPROS field trial (see D7.2). To get final input on the SHOTPROS VR solution, all participants were asked to fill out a questionnaire with their experience of the VR demo. The preliminary analysis of the results shows a high acceptance and quality of experience amongst the respondents.

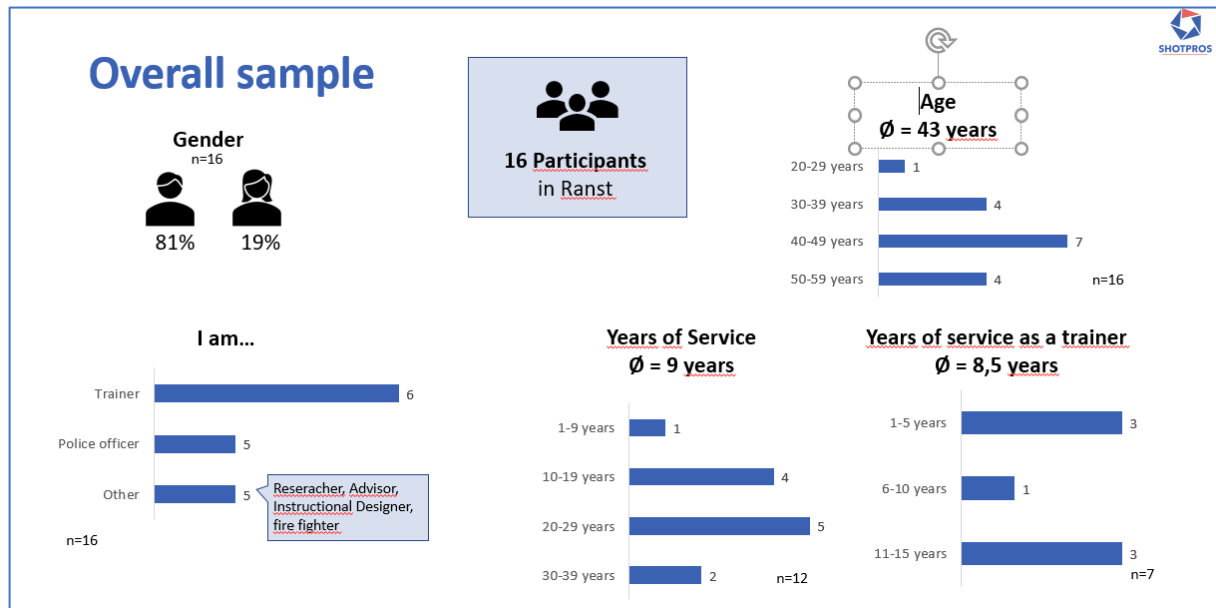


Figure 10: Overview on the results of the VR try-outs in Ranst

Half of the participants evaluated the system as “easy to use”, all participants to some degree evaluated that it was easy for them to learn how to operate the system. 63% of the participants felt immersed into the system and 44% declared that they could move naturally in the system. 87% of participants could easily orient themselves in the VR. Almost all participants see VR training as a good addition to normal police training (only 44% believes VR training is better than normal training). In conclusion 88% of our participants feel VR to be a useful training tool for police.

The overall quality of experience is good for 93% of the participants and the rest rates it as excellent.

Of all participants 88% is willing to use a VR system in the future, mainly because 94% are convinced that they can learn things that will be useful in future operations and because 82% is convinced that they can cope better with similar situations (as the ones trained) in the

future. For a bit more than half of the participants using this VR systems helps to clearer see your own (and others’) vulnerabilities. For 82% of the participants, it helps to better understand critical situations. The behaviour in the VR system of people is only evaluated as realistic by 31% of the participants and the handling of objects in VR scores even lower with only 13% feeling this as realistic. The scenarios as such are deemed realistic by 88% of the participants. Guidelines on these results can be found in D7.6.

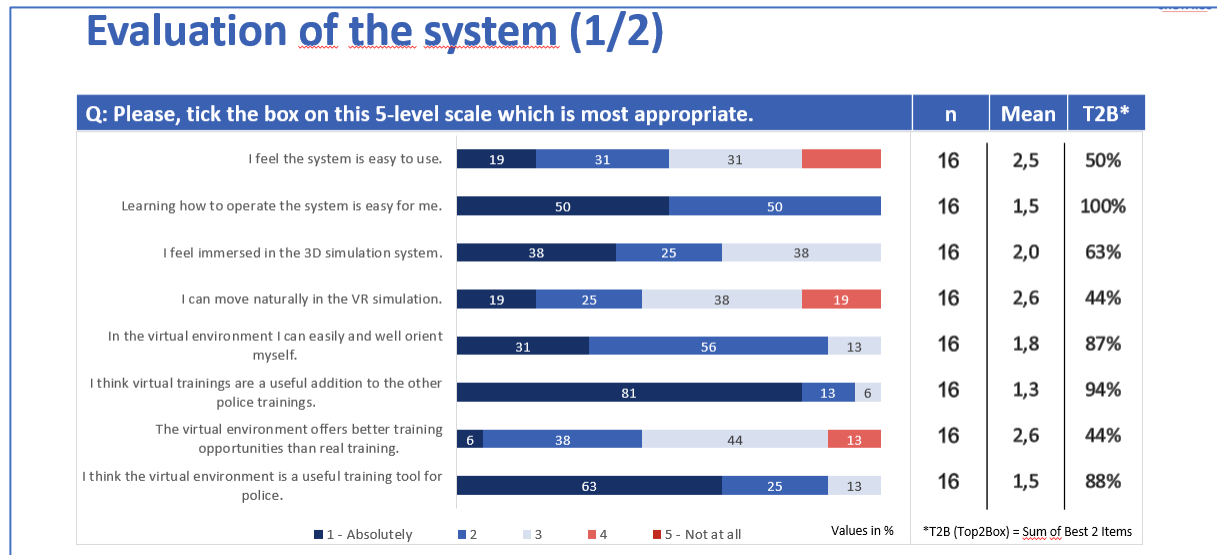


Figure 11: Evaluation of the VR system 1/2

Evaluation of the system (2/2)

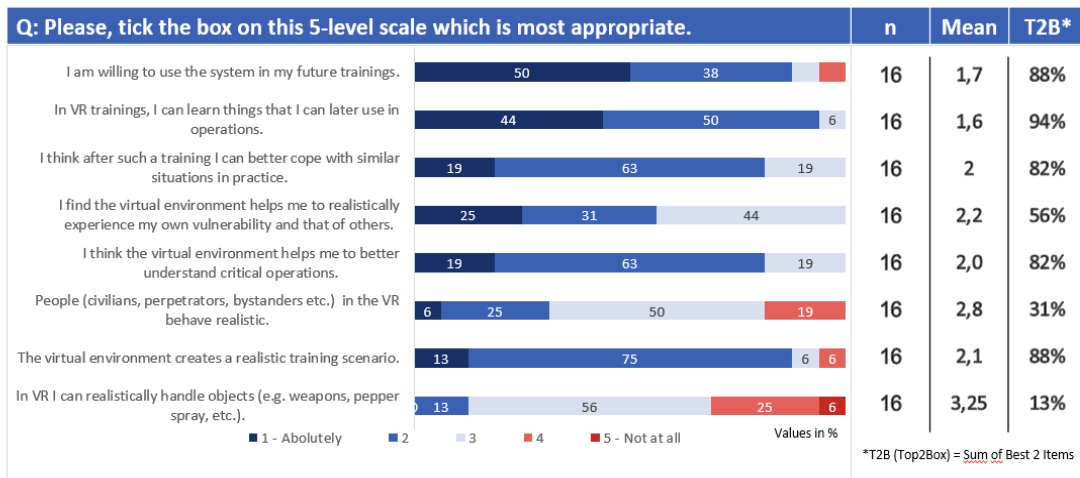


Figure 12: Evaluation of the VR system 2/2

On the training objectives: 84 % assesses that different forms of communication can be successfully used in VR; 92% deems the VR tool good for situational training and tactical training; also 85% feels sufficient safety guarantees with the VR scenarios and 69% feels the VR tool can enhance their psychological competency.

Training objectives (1/2)

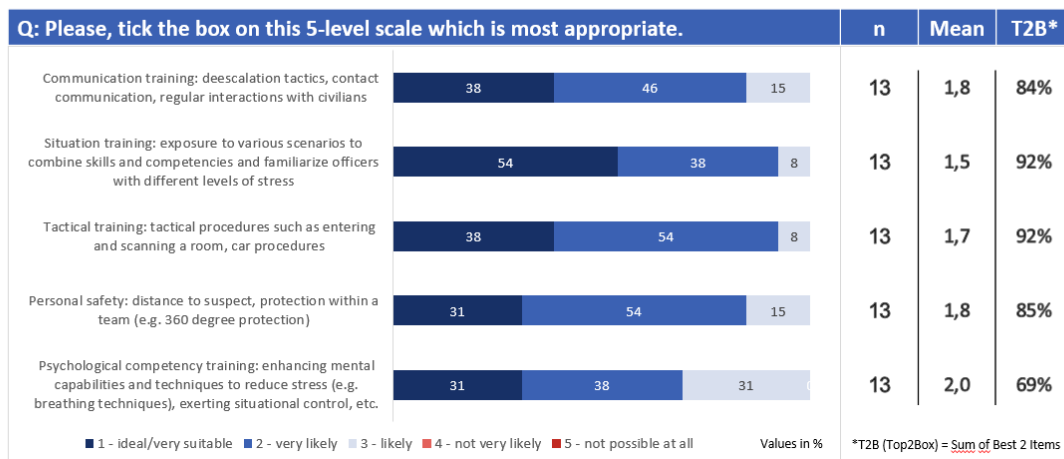


Figure 13: Training objectives 1/2

In 69% of the cases participants evaluate the VR system as helpful in recognizing suspicious behaviour and acting upon it. In 61% of the cases, participants feel that scenarios can be used to train regulations/legislation. Shooting, combat training and physical training are deemed by a majority as training areas where VR is not useful.

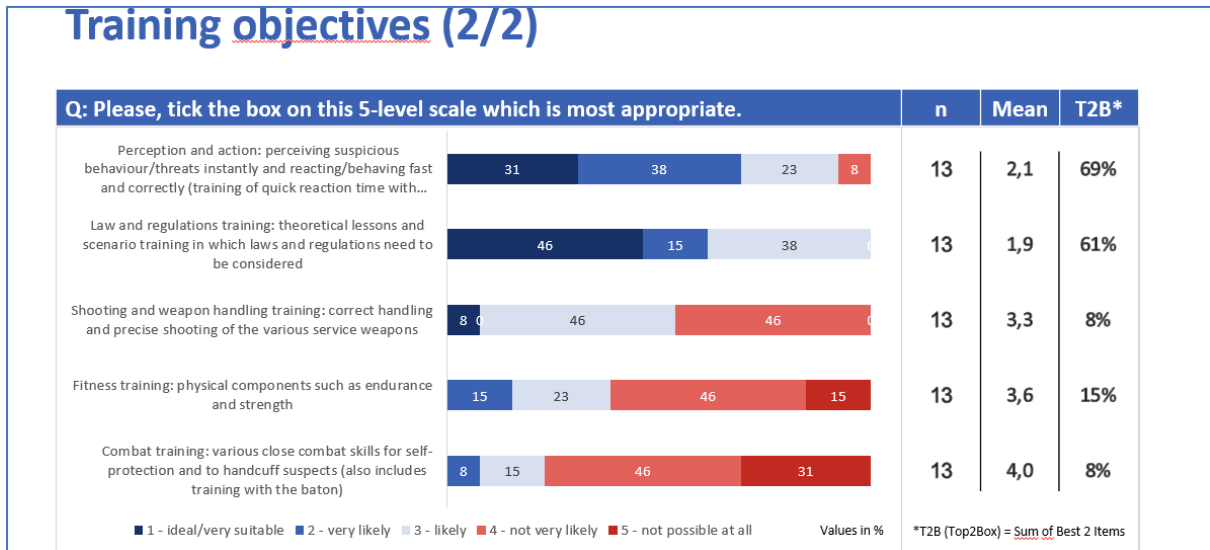


Figure 14: Training objectives 2/2

7 Dissemination and Communication

The dissemination and communication efforts at the final conference were aligned with the overall strategy outlined in D8.1. A more detailed report of the media coverage of the final conference is included in the D8.9 Dissemination Report V2.

In total, 5 camera teams attended the VIP demo and press conference on 13th of September 2022 to collect video material about the SHOTPROS final conference and VR training that was developed. The table below provides an overview of the media coverage.

Another aspect of dissemination and awareness raising was the social media coverage by many participants of the final conference. The prepared selfie-wall even enhanced this approach. A clippings report will be covered in D8.9.

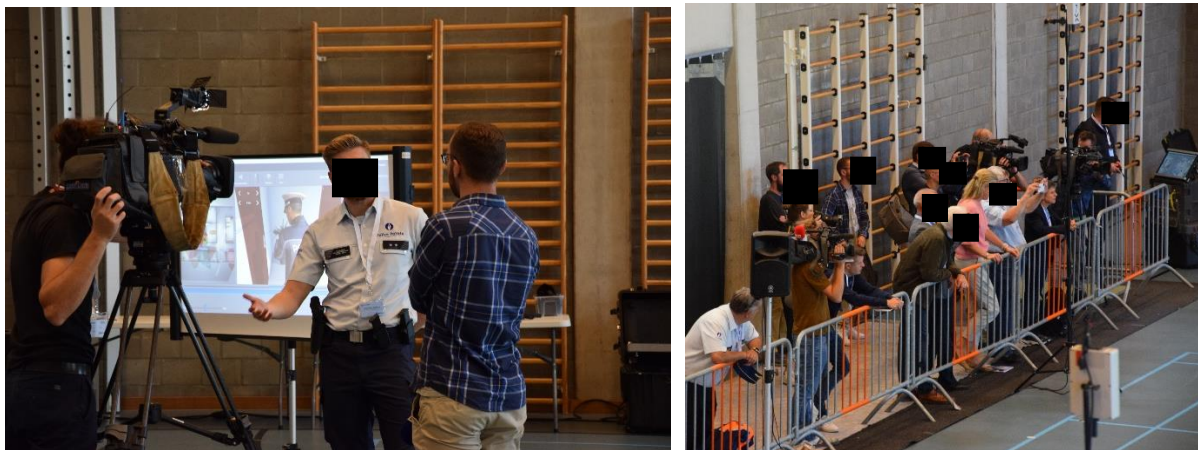


Figure 15: Media and press at the VIP and press conference day

Table 5: Media coverage of the final conference

TV channel	Short description	Broadcast date	Link to report
VRT Flemish public TV broadcast	Officers can train specific action with VR visors. The training in VR allows to train much more scenarios than is possible in traditional training with role-players. Or the VR scenarios replace exercise scenarios that are too expensive or too complicated to train in real life. VR was already used before in policing but this application, a European cooperation with other member states involved, is far reaching.	19h evening news of Tuesday 13 th of September (1'35")	Link
ATV/GvA Antwerp regional TV	In this project police organisations of 6 countries worked for 3,5 years. The advantage of this VR training is that the police can, in very flexible and quick way, change the training scenario, as much as they like, train it as many times as they like. More importantly, in the smart suits that they wear are sensors included, these sensors are registering what the police officer is doing and how they react to the situation.	news loop all day long on 13th of September (1'48") + article in newspaper	Link
RTBF Francophone public TV Belgium	An extra-ordinary police training, supported by virtual reality has been presented today in the region of Antwerp. The system in fact allows, to create realistic scenarios and it was to say the least surprising. No, It is no game. The aim is not to do a call of duty. It is a police training in VR where we train scenarios of interventions that were done in real life and where we can confront officers and train them how to efficiently deal with this situation.	news 19h on 13th of September 2022 (2'26")	Link

VTM Flemish Commercial TV	Police officers are arresting a man who was hiding with a gun in a building. Normally the police would train this with role players and actors in a disused building but now they train it in the sports hall of the training center in a 3D world. They can see through their VR vizors and feel with the smart suit.	not broadcasted but provided to us MP4 (2'21'')	for internal use only
ITDaily online newspaper	Title of the article: Belgian police uses VR to train under stressful circumstances	Online article	Link
Antwerps persbureau regional press agency Antwerp	Title of the article: Brand new VR tool for police training for European police presented	Online article	Link
Antwerp Governor Cathy Berx	Full speech of the Governor in Dutch	Speech	Link
Le Vif Magazine	The Belgian police is presenting training in VR.	Online article	Link
Knack most read weekly magazine in Belgium	Title of the article: Belgian police simulates real situations with VR	Online article	Link

Grenz Echo	<p>Polizei: Trainingsprogramm in virtueller Realität</p> <p>Auf dem Campus Vesta in Ranst (Provinz Antwerpen), hat die belgische Polizei eine Präsentation in virtueller Realität (VR) durchgeführt. Die zweitägige Konferenz auf dem Campus Vesta ist Teil des europäischen Schulungsprogramms „Shotpros“. Shotpros analysiert den Einfluss eines psychologischen Kontextes auf das Verhalten und die Entscheidungen von Polizisten in Stresssituationen, wie die Polizei zu dieser Initiative mitteilte. (belga/kupo)</p>	Offline article	-
Newsletter of the Belgian Crisis center		newsletter	Link

8 Evaluation of the SHOTPROS final conference

The feedback of participating stakeholders presented below, was collected during the conference. Multiple **QR codes** were spread around the location of the conference and the participants were encouraged to scan the QR code. This encouragement was done both via signs above the codes as well as a mention in the final session. On top of that, all participants were sent an email after the conference with the QR code and **link to the evaluation**.

8.1 Evaluation form

An online questionnaire (see Appendix III) was provided to all conference participants during and after the conference to gather their feedback and evaluate the conference and the SHOTPROS results. It was decided that the evaluation form of the demo and conference covers the following topics:

- Satisfaction with the conference,
- Policy and VR training
- Virtual Reality Police Network
- VR training

8.2 Results of evaluation forms

Since the final conference lasted two days and these learning and networking days were preceded with an extra day, our SHOTPROS events lasted in total 3 days. In total we had over those **3 days, 196 unique participants**.

On Tuesday 13th of September, the main aim was to brief all **14 VR trainers**, originating from 4 different LEAs from 4 different EU member states (BE, SE, NL and DE). The team leaders explained the system to the 2 trainers who had not used the SHOTPROS VR system before, and they had the opportunity to try on the smart vests and to run some scenarios. Then an **international demo team** was composed, and they started rehearsing the demo scenario.

In total **10 members of the press** attended the press conference, including a journalist from BELGA (the Belgian national press agency) and a Specialist journalist from Polizei, Verkehr und Technik.

Immediately after the press conference, a demo of the apartment scenario was presented to the **13 honourable guests** (VIPs and special guests). About **30 people from the SHOTPROS**

team and Campus Vesta observed these mediatised events and they saw also the minister and the governor try-out the experimental SHOTPROS system Dragonfly.

Following the end of these public relations events, **16 trainees** had a VR training to conclude the day.

113 external participants took part in the two-day conference. Almost all participants followed the sessions of the two days.

8.3 Demographics of the participants

Representatives from all 13 SHOTPROS consortium partners were present at this final event of our SHOTPROS project.

Overall seen - from a geographical perspective, our participants came from 17 different countries of which 14 from the EU: **Belgium, The Netherlands and Germany** were very well represented in view of the location of Campus VESTA. But we also had participants from **Austria, Denmark, France, Grand Duchy of Luxembourg, Italy, Latvia, Malta, Poland, Portugal, Romania and Sweden.** From outside the EU we also had delegations from the **Iceland, Norway and the UK.**

Furthermore, there were **delegates from 22 other than SHOTPROS partner LEAs or police training centers and other police organisations** present:

- The police liaison officer to the Antwerp governor
- The Bavarian police
- The Bundeskriminalamt from Germany
- Representatives of 7 Belgian local policing zones
- Bundespolizei from Germany
- The Danish National Police academy
- Hessen State Police, Hochschule für öffentliche Management und Sicherheit (University of Applied Sciences)
- Icelandic Police Training and Professional Development Center
- Italian Carabinieri
- EUROPOL
- Federal border police Germany
- FRONTEX
- The Malta police force
- The Norwegian Police University College

- Hochschule der Polizei Rheinland-Pfalz Germany
- PAULO, the Multi-disciplinary training centre for Police, firefighters and Medical First responders of the Belgian province of East-Flanders
- Riga (Latvia) municipal police
- Police Scotland
- Sicherheitsakademie (SIAK) from Austria
- Representatives of SMARTEU, **the Scottish Multi-Agency Resilience Training & Exercise Unit**
- UK home office
- The UK NPPC or National police chiefs’ council

It is also worth to note that two of our participants are the **national contact point for the EUCB, the EU clearing board for innovation (EUROPOL)**.

To conclude our list, we also had **research delegates** from all our consortium partners AIT, KUL, VUA and UHEI and from the **Alternative Energies and Atomic Energy Commission (CEA)** from France, from **Innovations for safety and security** in the Netherlands (TNO) and from the Albert-Ludwigs-University of Freiburg.

And we had 5 representatives and operators of our technology partner RE-liON and a speaker from PLUX wireless Biosignals (related to the MED1stMR project).

We had **several high-ranking officials** but most of the delegates had a **wide range of practical (boots on the ground) police experience**, mainly in the domain of police training. We visualised this with some word clouds.

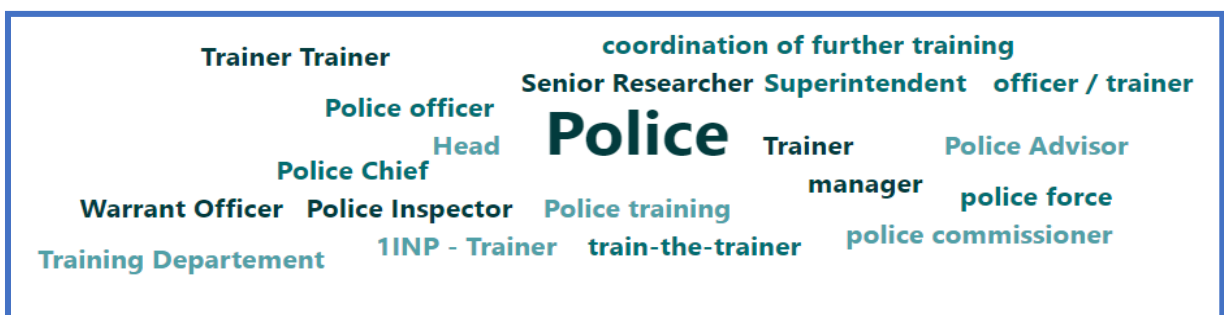


Figure 16: Word cloud on the question: What is your rank/function within your organisation?

From the **113 participants (and 14 VR trainers)**, so far **47 (or 37%)** responded to our request to participate in the evaluation.

Only 7 (or 15 %) of the respondents indicated to have no prior experience with VR, 6 respondents (or 13%) indicate to only have a limited experience with VR and 72% answered with YES to the question: Do you have experience with VR?

8.3.1 Satisfaction with the conference

In a series of 9 questions, we probed our participants about the conference to try and establish if (and if so why) they were satisfied with the conference.

In a general question, **88 % indicated “to be overall very satisfied with the conference”**. No less than 40% of the participants gave a maximum satisfaction score of 10.

Also 95% of the responses indicated that **“the conference was well organised”**. No less than 62% of the respondents gave the maximum score of 10.

On the open question: **“Which session was the most useful/interesting for you?”** A variety of answers almost covered every topic in the conference agenda. Several people specifically answered everything. Several other underlined the importance of networking and several others also found the VR try-outs the most interesting. Looking at the geographical spread of our participants and the myriad of different police backgrounds they represented, it was a wise decision to bring a broad menu of topics to our delegates, and they liked it.

On the open question: **“What was the main result of this conference for you?”** Again, a multitude of answers were given. But over 46 % of our participants mentioned the word **NETWORKING. Knowledge exchange** was certainly a best second in the series of answers. Since the answers are quite enlightening and revealing I quote some below:

- “VR is ready for police training”
- “This SHOTPROS VR training system works for high-risk situations”
- “I am surprised that the VR system for Police has progressed so much”
- “The Belgian Minister of the interior saying: I will mention the SHOTPROS results in the next EU security summit”
- “I got a clear picture on how to go on now back home”
- “VR is the future of police training”
- “The enthusiasm of the end users”

Of all participants **“78% couldn’t think of anything missing in the conference agenda”**. The 10 participants (22%) that did miss something described that as: **“more financial and technical details, pros and cons of different technologies and more science-based studies”**.

8.3.2 Policy on VR training

We presented 3 questions to our participants on VR and policy making. The first question probed **“if the Policy-maker toolkit we developed was useful?”**

In 81% of the cases the answer was YES, the few people saying “no” were in almost all cases researchers indicating to be less involved in policy making.

A very broad open question: **“What policy implications do you see for your organisation if you already work/want to start working with VR?”** Resulted in a diverse set of answers with some clustered responses listed below:

- Disseminate the results to our hierarchy in order to convince them
- We need facts about the need, we need to justify the cost
- The different legal contexts (even) in the EU, data protection and ethics
- Balance VR training with real life training, extend the use in different police contexts

8.3.3 VRPN

The blunt question: **“Would you be interested in becoming a member of VRPN?”** was answered in a positive way by 81% of the participants, the negative answers came mostly from representatives from non-police organisations. On the reasons “why not?”, most answered that it was not up to them to decide (but their hierarchy).

On the question: “What would you like to see the VRPN do?” Contacts, information exchange on scenarios and implementation, etc. Below you can see a word cloud, visualising the answer.



Figure 17: Word cloud “What would you like to see the VRPN do?”

On the question: **“What are the most obvious obstacles to overcome for the VRPN?”** certainly a lack of time, money and coordination was central in the answers. As well the need to

convince the hierarchy and the fact that there are already many working groups and networks around. European diversity and lack of trust were formulated as potential obstacles as well.

On the question: **“Did you make any new networking connections during this conference?”** all participants said yes. This event was for 100% a NETWORK event.

On the question: **“Did you renew any existing networking connections?”** only 5 participants said NO. If you combine the answers of these two last questions, it proves not only that this was a successful networking event, but that it brought also together a lot of usual suspects in the VR police world (who renewed their contacts) AND that also a lot of new people were brought to the table (who gained a lot of new contacts).

8.3.4 VR training

We also introduced 6 questions on VR training in the evaluation.

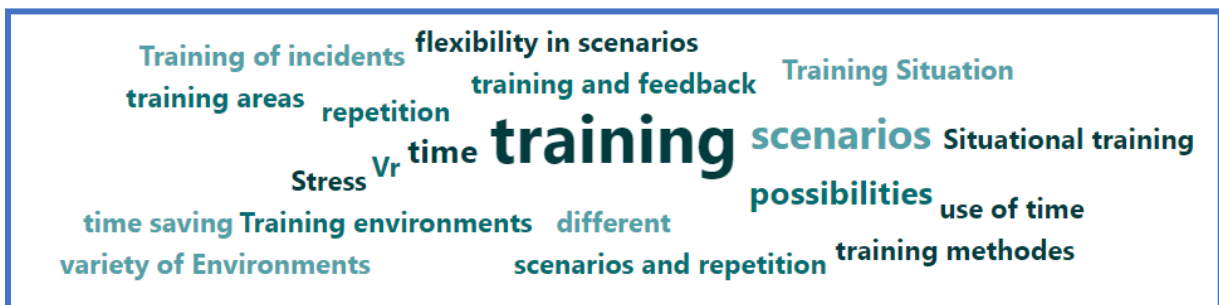


Figure 18: Word cloud on VR training questions

On the first question: **“What aspect of VR training is most appealing?”** we show you again a visualisation of the answers.

On the second question: **“What aspect of VR training is least appealing?”** most participants referred to: cyber sickness and the complex and lengthy set up.

On the third question: **“Did your view on VR training change because of this conference?”** 64% said no. On the question why? Most of the people whose mind did not change are already working with VR or call themselves a fan. The ones that said yes are new to the VR experience and indicated that the information presented convinced them.

On the 5th question: “Would you want to implement VR training in your own organisation after this conference?” Only Two said no, a few marked non applicable (mostly researcher), some said yes if we can pay for it or if our hierarchy decides to do so (or conditionally yes). Half of the participants said yes or yes we already use it.

As last question: “Has this conference changed your opinion on the implementation of VR training in your own organisation” more than 60% says no, (some not applicable), while 19% says YES!

In the ultimate open question “DO you have questions or suggestions?” the organisers received **compliments for the professional conduction of the conference**, some hope to see VRPN to be a success and in order to do so more stakeholders should be involved.

8.4 Testimonials on conference and VR try-outs

Following the Conference, we received some informal feedback and some formal feedback via the evaluation forms (see above). We asked some people who had given us some informal feedback to agree in formalising this for the purpose of this report. Since our participants, although mostly from LEAs with a police background, were very diverse we tried to present in this report some representative samples of these formalised feedback.

1. *“For me as superintendent at the Police training Department of the Icelandic National Police Commissioner office, it was impressive to be welcomed in the multi-disciplinary training centre of Campus VESTA and to take note of all the results of the SHOTPROS project in connection with VR and police training. I was also given the chance to try out the VR system. **My impression of the VR system was more than I could ever imagined for, and the experience was very informative and instructive. I see that the training in Police work and tactics is taking a huge jump with this technology and the possibilities are almost endless.***

In the conference, I learned a lot about the potential future use of VR in our policing work in Iceland. That will not be for the immediate future, but the contacts made at Conference will proof to be very useful.”

(Gudmundur Asgeirsson)

2. *“Virtual reality is a technology still under development but with a lot of potential, especially in the field of training. Over the course of the project, researchers, psychologists and police officers worked together to devise **a system fitting the specific needs of LEAs and demonstrated that VR indeed is a very good option to complement traditional training courses.**”*

(Jérémy Kespite – Innovation Liaison officer Innovation lab, Europol)

3. *“After all, the mental aspect, the mental strategy, plays a major role during stressful police interventions. A much bigger role even than most people think. Correctly assessing an unknown, uncertain situation and then acting accordingly is of vital importance to police officers. Police violence, after all, should always be a last resort. If we can avoid it, we shouldn’t doubt it for a second. I am convinced that the SHOTPROS project will better prepare our police officers for stressful situations. Not only in our country, but also in the other European countries where this project is being rolled out in Police training.*

As the Belgian Minister of the Interior, I will point out the tangible results of this SHOTPROS project to my 26 colleagues in the upcoming EU security summit.”

(Belgian Minister of the interior Annelies Verlinden)

4. *“Every day police officers find themselves in dangerous situations. Sometimes they are faced with major dilemmas and they have to decide in a matter of seconds. Where others step back, police officers step forward, for the safety of others.*

How can these dangerous situations be trained in a safe environment? SHOTPROS offers us (Dutch Police Academy) through thorough research frameworks for practical training for decision-making and acting under stress in high-risk situations. This is to improve the performance of our police officers and to increase their mental strength. These frameworks can already be applied in today's police education.

Our vision for VR is to be able to do training, place and time independent and in an authentic context. SHOTPROS has given us extra insights into this and a network to share and to further develop this knowledge.”

(Giny Verschoor, Innovation department, Dutch Police Academy)

5. *“A big praise goes from my side to the organizers as well as to the members and developers of this SHOTPROS project. Amazing what everyone involved has accomplished in their respective fields.*

Before the conference I had little idea about the progress of the project and the VR technology in connection with police training.

During the conference, however, I quickly realized that in recent years VR technology has been developed to the point where it can now be used as an addition to normal police training.

The conference and the results achieved over the last years exceeded by far my expectations. Keep up the good work and take this technology to another level of evolution!”

(Patrick STRAUCH, Police Grand-Ducale Luxembourg)

- 6. “The final SHOTPROS conference completely reinforced and underlined the fantastic development of an innovative training product, underpinned by the science of human factors and their impact of persons’ ability to make informed and sound decisions at times of crisis. This success was down to the ‘partnership’ of all involved throughout the whole project, which was clear to see at the interaction and comradery shown at the final conference. It was clear that all partners across the disciplines were working shoulder to shoulder towards common goals, showing a great use of their listening skills.*

The accomplishments of the project, including the desire to establish a VR Network, further supports SMARTEU’s ethos of working in partnership. The final conference has again provided me with evidence of the benefits that can be achieved through joint working and physical evidence of the impact of the VR training was brought home. Our team members were able to try the system themselves and this in turn has led them to ‘sell’ VR and the Project SHOTPROS to their peers. This is the best kind of advertising and further supports my position encouraging partnerships beyond the sector of emergency services, to find solutions to our problems.”

(Douglas Stirling, SMARTEU – UK Scotland, member of the SHOTPROS advisory board)

9 Conclusion and outlook

The SHOTPROS final conference was a successful highlight event at the end of 3 ½ years of project. The consortium collaboratively used this opportunity to disseminate the project results to a broader audience of stakeholders and to establish and strengthen contacts beyond the partner organisations. Thereby, a much higher impact and potential uptake of the results by European law enforcement agencies can be ensured.

This large network will be canalised in the VRPN to ensure further exchange, events and potential follow-up projects after the end of SHOTPROS.

Some interesting statistics to bring under your attention in this conclusion:

- In 2019 SHOTPROS started with 6 LEAs, who jointly have 250.000 police officers to maintain the public order and guarantee the safety of 60 million citizens
- In 2022 we close this project with a final conference with 18 LEAs (X3), who jointly have 825.000 police officers (X3) to maintain the public order and guarantee the safety of 233 million citizens (X3)

The significance of these statistics are as simple as impressive: SHOTPROS managed to achieve the goals it set out at the start and managed to amplify the reach of our results and dissemination with a factor 3.



Figure 19: Group picture of the SHOTPROS final conference participants

Appendix I: conference program

The image shows the cover of the conference program. At the top, there are blue and white diagonal stripes. Below this, the SHOTPROS logo is displayed in blue. The main title "FINAL CONFERENCE" is written in large, bold, blue capital letters. Underneath the title, the text "VR FOR POLICE" and "Drive the police into the future" is written in a smaller, blue font. In the bottom left corner, a blue circular badge contains the text "14. & 15. SEPTEMBER 2022" in white. In the bottom right corner, there is a photograph of a person wearing a VR headset and a camera rig, interacting with another person who is also wearing a VR headset. The background of the cover is a light gray color.



Organising and hosting partners:



SHOTPROS - FINAL CONFERENCE

VR for Police: Drive the police into the future

14 & 15 September 2022

CampusVesta, Oostmalsesteenweg 75, 2520 Ranst, Belgium

The SHOTPROS consortium and the VR & Police Network (VRPN) are pleased to invite you to our project's final conference on "VR for Police: Drive the police into the future"!

Now, as the SHOTPROS project is approaching its end, we are happy to share with you our results and outlooks on the topic of VR police training and beyond. Experience exciting and



innovative talks and try-out sessions with a program for police organisations and other stakeholders



in the policing context. The aim of the two days is to engage police practitioners, researchers, policy-makers, technology developers and others in sharing their results, experiences, visions and innovations in the broad field of virtual reality in the context of policing on a European level. We aim to create long-term collaborations and synergies for the further implementation of VR in police contexts in Europe. "Alone we go faster, but together we go further".

info@vrandpolice.eu

ABOUT US

SHOTPROS (www.shotpros.eu), a EU funded Horizon 2020 project, started in 2019 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 in order to design better training for police officers to improve DMA Performance. But it's not only the technology and research that make a project great – it's also the people and the network. Therefore, the "VR & Police Network" was established in 2020 as part of the SHOTPROS project to enhance knowledge acquisition and exchange within the police and law enforcement community (www.vrandpolice.eu). The conference marks the official kick-off event of the VR & Police Network, which aims to become a platform to bring together all stakeholders interested in or working with VR within police organisations.

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Organising and hosting partners:


DAY 1 - Wednesday 14 September 2022
info@vrandpolice.eu

Group 1	7:30	Bus shuttle from the hotel(s) for group 1	EXPERIENCE VR: Throughout the day, participants can experience and try out the SHOTPROS VR training solutions.
Group 1	7:50	Guided tour on Campus Vesta for group 1	
Group 2	8:20	Bus shuttle from the hotel(s) for group 2	
	8:50	Registration & assembly Aula A	If you have registered and places were available, please check the dedicated slot
START for ALL Aula A	9:15	Welcome word "Multi-disciplinary training and innovation" <i>Pieter Van Turnhout, CEO of Campus Vesta</i>	
	9:20	Opening speech "Police training: changing times and changing needs." <i>Cathy Berx, Governor of the Province of Antwerp</i>	
	9:40	Role of practitioners in the EU research and innovation projects <i>Sebastian Serwiak, European Commission, Directorate-General for Migration and Home Affairs, Unit F2 - Innovation and Security Research</i>	
	10:00	SHOTPROS – a journey through VR police training: an overview of the project results <i>Markus Murtinger, SHOTPROS coordinator, USECON GmbH</i>	
	10:30	Coffee break & split into 2 rooms (according to the group)	
Parallel sessions - NOTE: Both tracks will be repeated in the afternoon so all participants can join all talks			
		Aula A – Group 1	Aula B – Group 2
Split in group 1 & 2	11:00	SHOTPROS innovations <i>Chris Haarmeijer, RE-liON</i> <i>Helmut Schrom-Feiertag, AIT - Austrian Institute of Technology</i>	VR applications in a multi-disciplinary context <i>Douglas Stirling, SMARTEU (Scottish Multi-Agency Resilience Training & Exercise Unit)</i>
	11:30	Human-factor-based training framework for VR police training <i>Vana Hutter, Vrije Universiteit Amsterdam & Ortwin Maetzing and Alexander Schäfer, LAFP Police North Rhine-Westphalia, Germany</i>	MED1stMR – mixed reality in the field of medical first responders <i>Georg Regal, AIT – Austrian Institute of Technology</i> <i>Pedro Duque, PLUX Biosignals</i>
	12:00		VR and XR applications for CSI, reconstruction, presentation, training and education <i>Philip Engström, Swedish National Forensic Centre</i>
ALL	12:30	Networking lunch <i>both groups</i>	

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Organising and hosting partners:



Parallel sessions - NOTE: inverted program of the morning slots, so that all participants can join all talks

	<i>Aula A – Group 1</i>	<i>Aula B – Group 2</i>
Split in groups 1 & 2	14:00 VR applications in a multi-disciplinary context <i>Douglas Stirling, SMARTEU (Scottish Multi-Agency Resilience Training & Exercise Unit)</i>	SHOTPROS innovations <i>Chris Haarmeijer, RE-liON Helmut Schrom-Feiertag, AIT - Austrian Institute of Technology</i>
	14:30 MED1stMR – mixed reality in the field of medical first responders <i>Georg Regal, AIT – Austrian Institute of Technology Pedro Duque, PLUX Biosignals</i>	
	15:00 VR and XR applications for CSI, reconstruction, presentation, training and education <i>Philip Engström, Swedish National Forensic Centre</i>	
ALL	15:30	Coffee break both groups
ALL Aula A	16:00	Panel discussion with experts: VR in the police context – challenges and opportunities for the future <i>Moderator: Geert Vervaeke, KU Leuven</i> Panel: <i>Douglas Stirling, Head of Unit SMARTEU, Scotland, UK Giny Verschoor, Police Academy The Netherlands Jérémy Kespote, Liaison officer Innovation lab, Europol</i>
	17:00	Official VR & police network kick-off - presentation Get all information on the future of the VRP-Network
		Networking reception & dinner
	18:00	VR & Police Network – the future of VR in the police Networking for all incl. an outlook on the 2023 event in Vienna
	20:30 & 21:30	Shuttle to the hotel(s)

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Organising and hosting partners:


DAY 2 - Thursday 15 September 2022
info@vrandpolice.eu

Group 2	7:30	Bus shuttle from the hotel(s) for group 2	EXPERIENCE VR: Throughout the day, participants can experience and try out the SHOTPROS VR training solutions. If you have registered and places were available, please check the dedicated slot
Group 2	7:50	Guided tour on Campus Vesta for group 2	
Group 1	8:20	Bus shuttle from the hotel(s) for group 1	
START for ALL Aula A	9:15	Welcome word "Virtual reality police network" <i>Wendy van den Branden, Director of Police Training and European Projects, Campus Vesta</i>	
	9:20	eXtended innovation becomes reality for police <i>Kris D'hoore, Chief Innovation Officer of the Belgian Federal Police</i>	
	9:45	How to integrate VR in police training? Getting started. <i>Anja Wagner, LAFP - Police North Rhine-Westphalia, Germany</i>	
	10:10	Overview of objectives and current activities of XR4Europe <i>Alain Gallez, Managing Director XR4Europe</i>	
	10:30	Coffee break & split into 2 rooms (according to your group)	
	Parallel sessions - NOTE: Both tracks will be repeated in the afternoon so all participants can join all talks		
Split in groups 1 & 2	11:00	Aula A – Group 2	Aula B – Group 1
		The potential of scenario-based VR police training to improve officers' performance <i>Marie-Ottilie Frenkel, University of Heidelberg</i>	Plug & play VR applications for police training <i>Ronald Maringer, SIAK - Austrian Police Academy</i>
		"Materializing the Virtual: The contextual impact of multi-sensory experiences in VR." <i>Jakob Uhl, AIT – Austrian Institute of Technology</i>	Reflections on ethics in a VR context <i>Emma Jaspaert, KU Leuven</i>
12:00	The policy-maker toolkit: How to introduce VR into a police organisation <i>Valerie Schlagenhaufen, USECON GmbH</i>	VR and XR platforms to measure the effect of cognitive and physical enhancement technologies <i>Olaf Binsch, TNO Netherlands</i>	
ALL	12:30	Networking lunch both groups	

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Organising and hosting partners:



Split into 3 rooms	13:30	Parallel interactive workshop sessions – choose one workshop			
		Aula A	Aula B	Room 03A09 (3 rd floor)	
		<p>Workshop 1 Creating future synergies How to get the most out of the VR & Police Network?</p> <p><i>Interactive workshop hosted by Günther Dauwen, Campus Vesta & Alexander Schäfer, LAFP Police North Rhine-Westphalia, Germany</i></p>	<p>Workshop 2 Need & requirements for the future implementation of VR in police organisations</p> <p><i>Interactive workshop hosted by Emma Jaspaert, KU Leuven & Hans Pieren, Police Amsterdam</i></p>	<p>Workshop 3 Challenges in the use of VR in police organisations What are obstacles and how can we overcome them?</p> <p><i>Interactive workshop hosted by Nino van Impe, NCCN & Gregory Marcus, Police Belgium</i></p>	
ALL	14:30	Coffee Break & split into 2 rooms (according to your group)			
Split in groups 1 & 2	<i>Parallel sessions - NOTE: inverted program of the morning slots, so that all participants can join all talks</i>				
		Aula A – Group 2		Aula B – Group 1	
	15:00	<p>Plug & play VR applications for police training <i>Ronald Maringer, SIAK - Austrian Police Academy</i></p>		<p>The potential of scenario-based VR police training to improve officers' performance <i>Marie-Ottillie Frenkel, University of Heidelberg</i></p>	
	15:30	<p>Reflections on ethics in a VR context <i>Emma Jaspaert, KU Leuven</i></p>		<p>"Materializing the Virtual: The contextual impact of multi-sensory experiences in VR." <i>Jakob Uhl, AIT – Austrian Institute of Technology</i></p>	
	16:00	<p>VR and XR platforms to measure the effect of cognitive and physical enhancement technologies <i>Olaf Binsch, TNO Netherlands</i></p>		<p>The policy-maker toolkit: How to introduce VR into a police organisation <i>Valerie Schlagenhafen, USECON GmbH</i></p>	
ALL Aula A	16:30	Assembly back in Aula A			
	16:45	<p>The future of VR in police organisations: Results of the workshops & review of the conference <i>The hosts from the workshops present the results followed by a final discussion with Markus Murtinger, SHOTPROS coordinator, USECON GmbH</i></p>			
	17:30	Farewell & shuttle to the hotel(s) or train station Lier			

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Organising and hosting partners:



Practical information

 CONTACT: info@vrandpolice.eu

1. Participation in the SHOTPROS Conference

First of all, we, the SHOTPROS organisers of this FINAL Conference, would like to thank you for registering to our event and to actively participate to *"drive the Police into the future"*. Participation in the conference is free of charge (including coffee breaks, lunches and the networking reception dinner).

At conference registration on site, you will receive the program, a name badge and a goodie bag. We will ask you as well to choose in which interactive workshop (Thursday 13.30) you would like to participate.

As the event is technology and research driven with insights from the police field, we don't provide a dress code for our guests, uniforms are welcome, but civilian is fine too.

A selfie corner is placed at the venue for all participants – Feel free to use it to promote the event via social media with the official hashtags #SHOTPROS #VRandPOLICE and/or #VR #VirtualReality #Police #Training #VRPN. Tag our social media accounts: @SHOTPROS & @VRandPolice

The SHOTPROS Consortium wish you a great time. Contact: info@vrandpolice.eu

2. Traveling from home to your designated hotel.

- Traveling by plane:

If you arrive at Brussels-Zaventem, national airport, you can take a train to Lier (if you stay in B-INN) or Herentals (if you stay in Aldhem) at the airport (level -2).

If you arrive at Brussels South Charleroi airport, you can take an airport bus shuttle to Brussels south railway station (Gare du Midi) from where you can take a train to Lier (B-INN) or Herentals (Aldhem).

If you arrive at Antwerp-Deurne airport you take a taxi to Antwerp-Berchem railway station where you take the train to Lier (B-INN) or Herentals (Aldhem).

- Traveling by train: International trains will bring you to Brussels Midi or Antwerp Central, from there you take a train to Lier (B-INN) or Herentals (Aldhem).

- Traveling by car: For those driving on the conference days directly to Campus VESTA: Take exit 19 on the E313 motorway (Antwerp – Hasselt – Liège) and follow the N14 South for 5 km, your destination is on the right. Parking is available for free at Campus Vesta.



Address Campus VESTA:
Oostmalsesteenweg 75, 2520 Ranst

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Organising and hosting partners:



3. Hotel accommodation

A free shuttle service from these hotels is provided to get to the conference location in the morning and back in the evening:

[Best Western Plus Hotel Aldhem](#)
 Jagersdreef 1, 2280 Grobbendonk
info@aldhem.be

[B-INN Hotel](#)
 Aarschotsesteenweg, 2500 Lier
info@b-inn-lier.be

For the guests that chose to reserve in another hotel, or guests that missed the shuttle bus, we advise you to take a taxi to Campus VESTA.

Taxi company Budts Lier <https://www.taxibudtslier.be> , Tel: +32 3 480 35 04 - The organisers will not refund your taxi costs.

4. 2 Groups for the conference & pick-up from the hotel

For the both conference days Campus Vesta organises shuttles from Aldhem hotel and from B-INN hotel to Campus Vesta. You will be informed by email of the organiser in which group you are. If a bus is missed, please use a taxi.

	Group 1	Group 2
Pick-up time day 1 – Wed, Sept 14th	07:30	08:20
Pick-up time day 2 – Thu, Sept 15th	08:20	07:30

During conference, we will organise parallel session for group 1 and Group 2 and in the afternoon, we mirror the content, and the same speakers will do their presentations for the other group. This way we can work with a smaller group which will enhance your interactive participation and at the same time, every participant will get the same content, and no needs to choose a slot. Starting and closing slots are combined.

VR try-outs

If you registered for a VR try-out at the registration and there were enough slots available (first come, first serve principle), you will receive your timeslot for the trial from the organisers by email. Please do bring a spare shirt on the day of the try-out since training might be exhausting.

In room DOJO 1 we will have the compact and experimental VR system (Oculus) available and participants can try out the system without prior reservation.



Organising and hosting partners:



5. General rules at the conference venue

- Please, wear your name badge at all times (except during VR try-out)
- Those who come by car to Campus Vesta, the speed limit on our campus is 30 km/h
- Campus Vesta is a non-smoking area, except a smoking area in front of the main building
- Toilets can be found between Aula A and the VR try-out in the sports hall
- In case of an alarm and evacuation (a voice in Dutch requesting to leave the building), leave via the main entrance and gather at the gathering point on the parking lot in front of the building
- Photo policy: Please, don't picture the face of police officers nor the police trainees on campus and don't make pictures of weapons or cameras or anything that reveals security details

6. FREE WIFI

There is a WIFI network in Campus Vesta called HOTSPOT_PA. This network can be used freely without password. You have to accept the terms and conditions of the WIFI network every day to use the network.

7. Covid regulations

For Belgium there are no specific or supplementary COVID-rules in place. Facemasks are only obligatory in pharmacies, hospitals and at doctors. Also, in public transport there is no longer an obligation to wear facemasks. It is though advisable to wear a facemask in busy places. For participants who feel unwell or show symptoms of a possible Covid infection during our event, we will provide a self-test at Campus Vesta.

More info: <https://reopen.europa.eu/en/map/BEL/7001>

8. Contact details organisers

General Coordination	Günther Dauwen	0032/ 474 533561
Campus Vesta	Reception Desk Campus	0032/ 3 2051950
Coordination Speakers	Emma Jaspaert	0032/ 478 446366
Coordination Admin and Catering	Nathalie Jacobs	0032/ 498 505497
Coordination VR try-outs	Werner Bemus	0032/ 476 341351
Coordination logistics/transport	Stephan Thys	0032/ 479 650239
Coordination registration conference	Agnes Jodkowski	0043/6506428096
Coordination Press Campus Vesta	Sabine Deman	0032/478 770463
Covid alert	Bavo Cauwenberghs	0032/ 3 2051950

For all emergencies: call first to Campus VESTA reception desk 0032/ 3 2051950 or Günther Dauwen 0032/ 474 533561 or if not reachable use the EU emergency number 112.

Appendix II: registration form

FINAL CONFERENCE SHOTPROS

VR and Police: Drive the Police into the future
@Campus Vesta 14-15 September 2022

„This is the registration form for the final conference hosted by the SHOTPROS (www.shotpros.eu) project and the VR & Police Network (www.vrandpolice.eu). Please fill out the form if you are interested in attending the conference – we will process the registration within 3-5 business days and send you a confirmation mail“. It takes an approximate 8 min. to fill out this Registration form.

...

* Vereist

1. First Name? *
2. Last Name? *
3. Organisation? *
4. What is your function? *
5. Country *
6. E-mail address? *
7. Mobile Phone number? *

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8. Participation Conference Day 1 on 14/9 + LUNCH? *

- Yes
 No

9. Participation in Conference Networking DINNER (14/9)? *

- Yes
 No

10. Participation Conference Day 2 on 15/9 + LUNCH? *

- Yes
 No

11. Arrival date?



12. Arrival hour?

13. Departure date?



14. Departure hour?

15. Mode of transportation? *

16. Do you need a shuttle service to bring you from the train station to the Hotel at arrival in Lier and to return you to the station for your return home? *

- Yes
 No

17. Do you need a shuttle service to bring you from the Hotel to Campus Vesta and back? *

- Yes
 No

18. I want to try out the SHOTPROS VR solution myself? [Limited time slots available – we will inform you on your option] *

Yes

No

19. I acknowledge that I will book a hotelroom and pay for the suggested accomodation? *

Yes

No

20. Hotel where you will stay?

21. Do you have dietary remarks? Please specify.

23. I AUTHORIZE THAT SHOTPROS CAN USE MY DATA FOR THE PURPOSE OF THIS CONFERENCE ONLY? *

Yes

No

U kunt een exemplaar van uw antwoord na verzenden afdrukken

Geef nooit uw wachtwoord. [Misbruik melden](#)

Figure 20: Final conference – online registration form for participants

Appendix III Evaluation Questionnaire

Questionnaire FINAL CONFERENCE

Informed consent:

The SHOTPROS consortium has access to the results of this evaluation. This questionnaire will be used to evaluate the entire SHOTPROS conference from the 14th -15th of September. Your answers will be analysed anonymously and be used cumulatively in final reporting documents of the SHOTPROS project. All of your answers will remain anonymous.

Please note that this questionnaire concerns the conference, and not the VR system used. This is analysed in a separate evaluation.

I understand and agree

I do not understand and/or I do not agree (this will close the survey)

Demographics

This section will ask some of your demographics. Please note that this information will be anonymised.

1. What is your organisation?

Open

2. What is your rank/function within your organisation?

Open

3. Do you have experience with VR?

Open

4. What is your main area of expertise?

Open

Satisfaction with the conference

Rate the following statements on a scale from 1 (completely disagree) to 10 (completely agree)

5. I am overall satisfied with this conference

1-10

6. The conference was well-organised

1-10

7. Which session was the most useful/ interesting for you?

Open

8. What was the main result of this conference for you?

Open

9. Was there any information missing in this conference?

a. Yes → to 13

b. No → to 14

10. What information was missing?

Policy on VR training

11. Is the policy-maker toolkit useful for your organisation?

a. Yes

b. No

12. Why (not?)

Open

13. What policy implications do you see for your organisation if you already work/ want to start working with VR?

Open

Virtual Reality Police Network

During the conference, you have been able to get to know the Virtual Reality Police Network (VRPN). Please answer the questions below (these answers will not be taken as any official commitment, but we would like to know your opinion)

14. Would you be interested in becoming a member of VRPN?

a. Yes

b. No

15. Why (not?)

16. What would you like to see the VRPN do?

Open

17. What are the most obvious obstacles to overcome for the VRPN?

Open

18. Did you make any new networking connections during this conference?

Open

19. Did you renew any existing networking connections?

Open

20. Can we contact you for information with regards to the VRPN, if yes, please write down your email address.

Open

VR training

21. What aspect of VR training is most appealing?

Open

22. What aspect of VR training is least appealing?

Open

23. Did your view on VR training change because of this conference?

Open

24. Why (not)?

Open

25. Would you want to implement VR training in your own organisation after this conference?

Open

26. Has this conference changed your opinion on the implementation of VR training in your own organisation?

Open

Thank you!

Thank you for completing this survey!

27. Please let us know if you have any other questions/ suggestions

Open