Immersive technologies: first steps towards making use of virtual and augmented reality

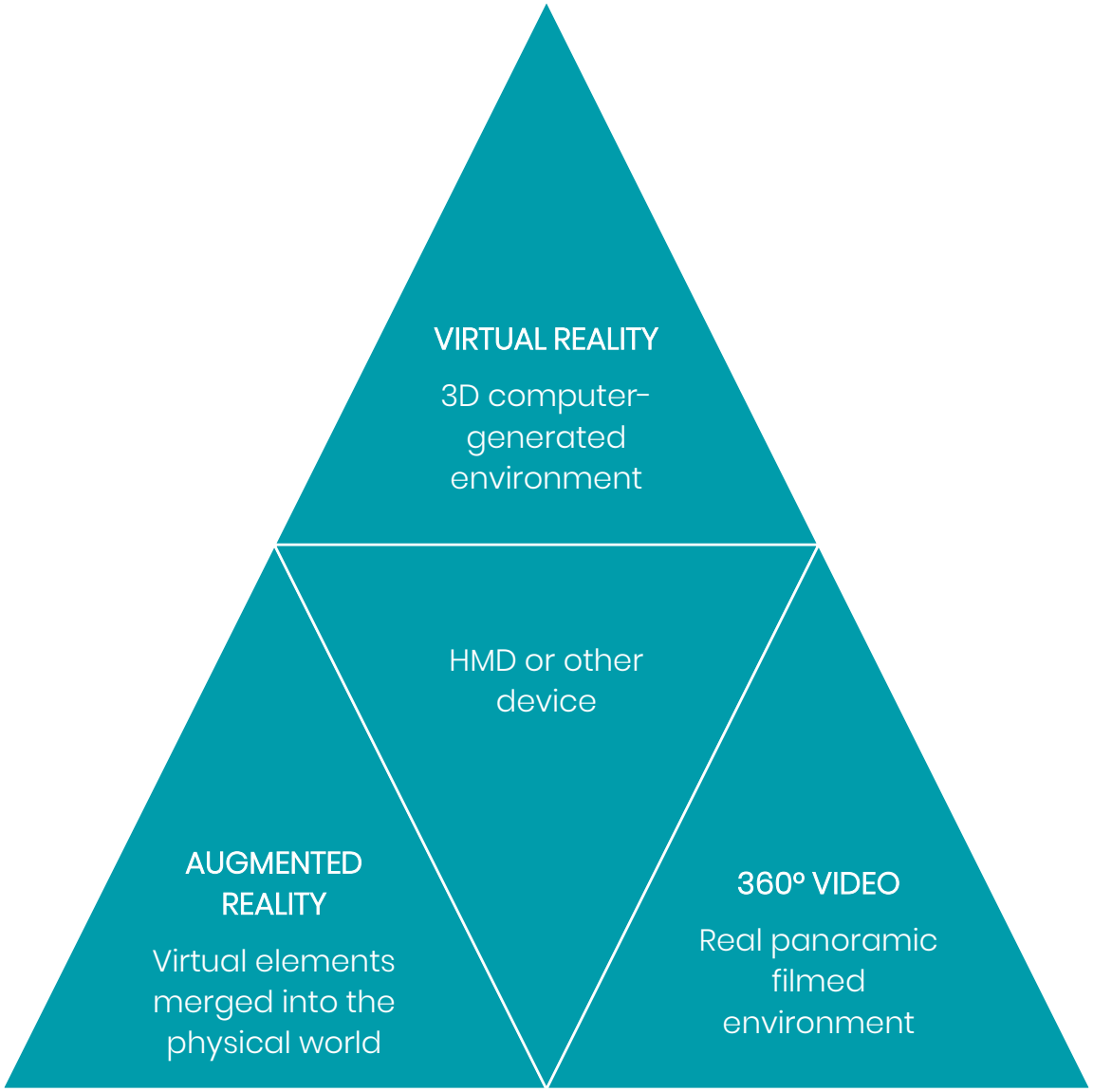
22/11/2022 – EFPA & Vilnius University

Dr. Tom Van Daele

Background on immersive technology
Intervention techniques
Existing solutions

Background

what it is & how it all started



sense of presence

1962 – Sensorama

- Immersive image
- Stereo sound
- Aromas
- Wind
- Vibrations

2020 –
Meta Quest 2

Current use & evidence-base

what & for whom?

Long-standing research on 2 intervention techniques

Exposure therapy specific phobia

Prolonged exposure PTSD

Long-standing research on 2 intervention techniques

But also

Distraction
Hoffman et al. (2019)

Relaxation
Veling et al. (2019)

Psychoeducation
Migoya-Borja et al. (2020)

Behavioral activation
Paul et al. (2020)

Cognition challenging
Serino et al. (2016)

Pain reduction

Mood & anxiety disorders

Depressive symptoms

MDD

Anorexia Nervosa

Existing solutions

what is currently out there?

XR platforms

- Several tools or modules.
- Complete solutions with proprietary hardware.
- Costs may vary (substantially).
- Support frequently included as well.

CleVR

oxfordvr
Immersive technology for mental health

VIRTUO
CUTTING EDGE VR & SIMULATION SOLUTIONS

Psylaris

amelia
virtual care

vrendle

C2 CARE

VRELAX

(YouTube) 360°

- Broad range of freely available experiences.
- Sometimes difficult to find suitable experiences, e.g. fear of heights.
- Easy to use on most HMDs, or even with a smartphone and cheap headset.
- www.e-mentalhealth.be/vr

(YouTube) 360°

e-mental health
@digitalmentalhealth
1.01K subscribers

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VR 360° - Claustrophobia - Old elevator moving doors -...

202K views • 3 years ago

360°

VR 360° – Height – Glass elevator

171K views • 4 years ago

360°

VR 360° - Claustrophobia - Glass elevator - With people...

147K views • 3 years ago

360°

VR 360° - Claustrophobia - Old elevator moving doors -...

76K views • 3 years ago

360°

VR 360° - Claustrophobia - Elevator - With People - lvl2

73K views • 3 years ago

360°

VR 360° - Claustrophobia - Elevator - lvl1

63K views • 3 years ago

360°

Multiple playlists

VR 360° – Nature

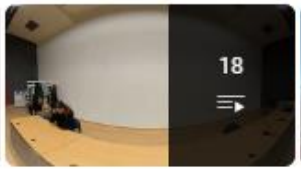
e-mental health

View full playlist

VR 360° – Height

e-mental health

View full playlist



VR 360° – Claustrophobia

e-mental health

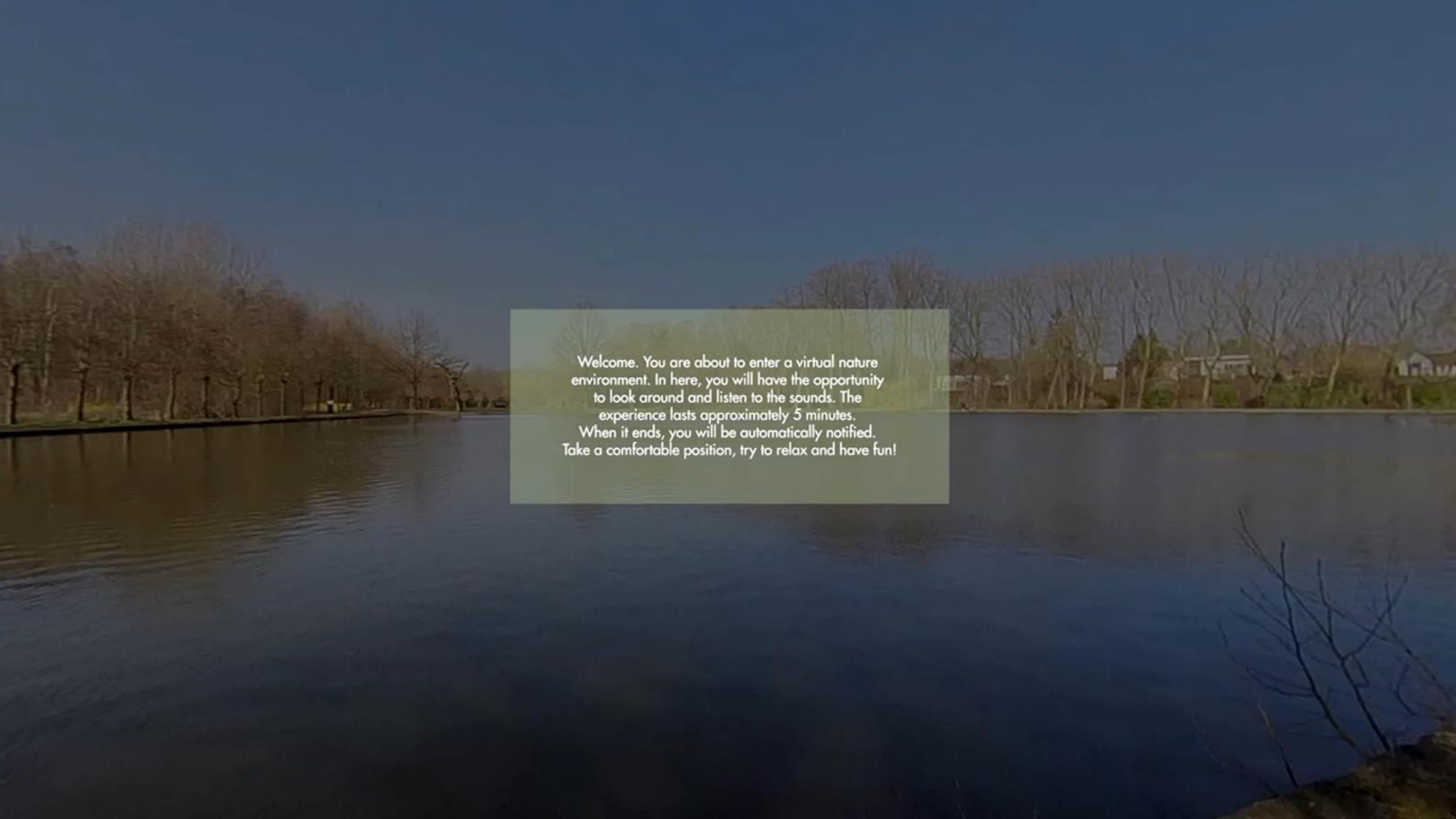
View full playlist

VR 360° – Buiten Binnen Brengen

e-mental health

View full playlist

(YouTube) 360°


Welcome. You are about to enter a virtual nature
environment. In here, you will have the opportunity
to look around and listen to the sounds. The
experience lasts approximately 5 minutes.
When it ends, you will be automatically notified.
Take a comfortable position, try to relax and have fun!

ZeroPhobia

Research

JAMA Psychiatry | Original Investigation

Effectiveness of Self-guided App-Based Virtual Reality Cognitive Behavior Therapy for Acrophobia
A Randomized Clinical Trial

Tara Donker, PhD; Ilja Cornelisz, PhD; Chris van Klaveren, PhD; Annemieke van Straten, PhD; Per Carlbring, PhD; Pim Cuijpers, PhD; Jean-Louis van Gelder, PhD

1
Lamp
2
Speakers
3
Clouds
4
Spot
5
Felix
6
Storm
7
Letters
8
Action!
Exit VR environment
1
Lamp
2
Speakers
3
Clouds
4
Spot
5
Felix
6
Storm
7
Letters
8
Action!
Exit VR environment

Phobos AR

- AR for animal phobia
- Able to elicit anxiety in non-clinical populations

De Witte et al. (2020)

Phobys

- AR for spider phobia
- Embedded within a broader self-help intervention
- Proven effective

Zimmer et al. (2021)

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