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The use of Virtual Reality technology for Domestic Violence cases

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Agenda

- E-health in forensic mental health
- What is immersive VR?
- Immersive VR in forensic settings
- Krim-VR: Swedish prison and probation service pilot and experiences so far
- VR in SPPS domestic abuse programs

E-health in forensic mental health

- **Objectives:**
  - Examine E-Health potential in forensic mental health and identify advantages and disadvantages for both patients and treatment, including effectiveness.
- **Method:**
  - *Syst. Lit. rev;* Studies were included if they focused on technological interventions to improve the treatment of forensic psychiatric patients.
- **Results and discussion:**
  - The results confirmed the benefits of technology, for example, the acquisition of **unique information** about offenders, **effectiveness**, and **tailoring** to specific characteristics, but indicated that these are not fully taken advantage of.
  - To bridge the gap between the current situation and **eHealth's potential,** further research on development, implementation, and evaluation should be conducted.

(Kip et al 2018)

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VIRTUALITY CONTINUUM
Milgram & Kishino (1994)

Real Environment	Augmented Reality (AR)	Augmented Virtuality (AV)	Virtual Reality (VR)

Mixed Reality

Real Environment — Augmented Reality — Augmented Virtuality — Virtual Environment

Tangible User Interface

Spatial AR

See-Through AR

Semi-Immersive VR

Immersive VR

”Presence”

The psychological
state where a participant
accepts, interact and are
physically, socially and emotionally
engaged in the virtual world

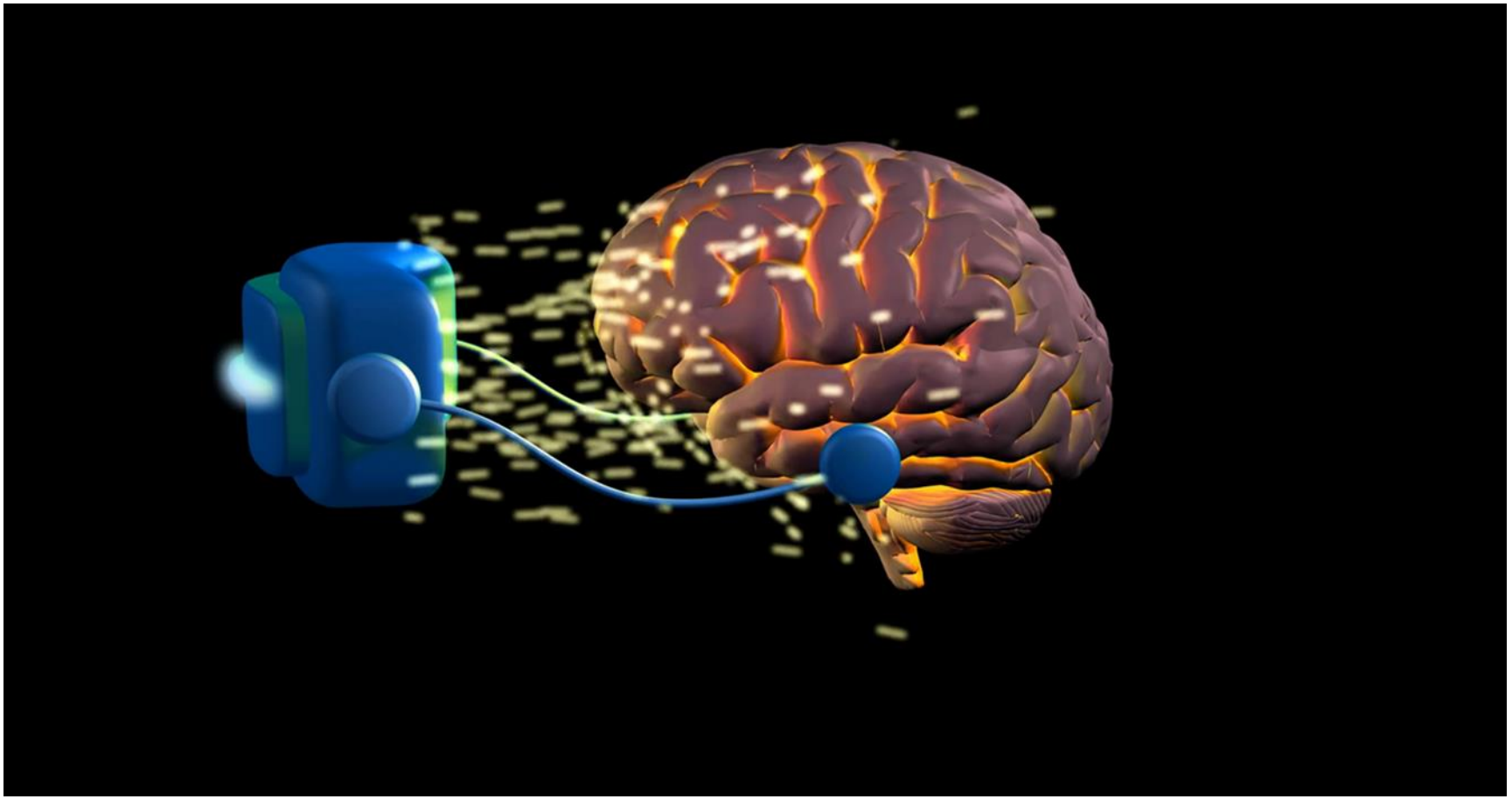
Presence mediated by information technology

Presence has three critical functions which cannot be explained by other cognitive processes:

1. Presence is an intuitive process.
2. Presence provides feedback to the self on its activity status
3. Presence facilitates self-development through the use of technology

Riva & Mantovani, 2012

The brain tends to process VR as reality



Immersive VR in forensic settings…

- **Objectives:**
  - Analyzing current, clinically relevant assessment and treatment methods applying immersive VR in forensic or adjacent clinical settings.
- **Method:**
  - *Syst. Lit. rev;* on the practical use of immersive VR in forensic psychiatry and relevant adjacent psychiatric and forensic fields from 2016 to 2020
- **Results and discussion:**
  - Insufficient evidence to recommend immediate and large-scale implementation of any one VR intervention.
  - None of the studies reported serious adverse effects.
  - Several VR-interventions have been shown to be feasible and acceptable to the participants and to provide insights and inspiration for future research and development.

(Sygel & Wallinius 2021)

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Krim-VR

Thesis: Virtual environment in the refinement of interventions in forensic settings

VR in RVP

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Virtual environment in the refinement of interventions in forensic settings

- ***Study I:*** *Treatment of aggressive behaviors in violent offenders with the support of Virtual Reality. A pilot study of Virtual Reality Aggression Prevention Training (VRAPT) in the Swedish Prison and Probation Service.*
- ***Study II:*** *User experiences and feasibility of Virtual Reality Aggression Prevention Training (VRAPT) in the Swedish Prison and Probation Service.*
- ***Study III:*** *Virtual Reality (VR) as an aid in the improvement of treatment quality in manualized treatment of violent offenders.*
- ***Study IV:*** *Prison staff training using virtual reality (VR) in core correctional practice (CCP)*

Summary

- In sum, the suggested thesis will provide much needed knowledge on:

how VR can be used to enhance the clinical practice in forensic settings.

- **…..provides knowledge needed for the design of large-scale studies** on effectiveness of VR-assisted interventions in forensic settings.

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VR: Social worlds

The VR-tools in Social Worlds

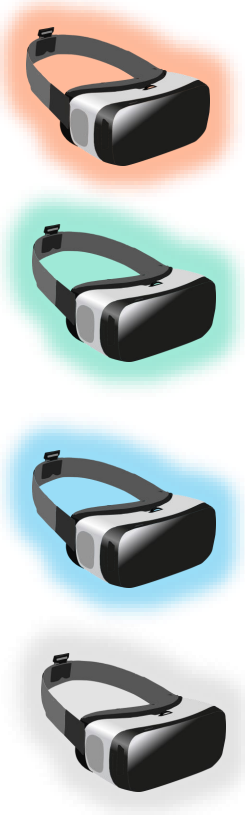
Walking around/”exposure”

Emotion recognition/differention

Role-play

Perspective shift

The city



Taking the bus

At the café

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Home environment

VR in SPPS domestic abuse programs

Experiences and visions of the future

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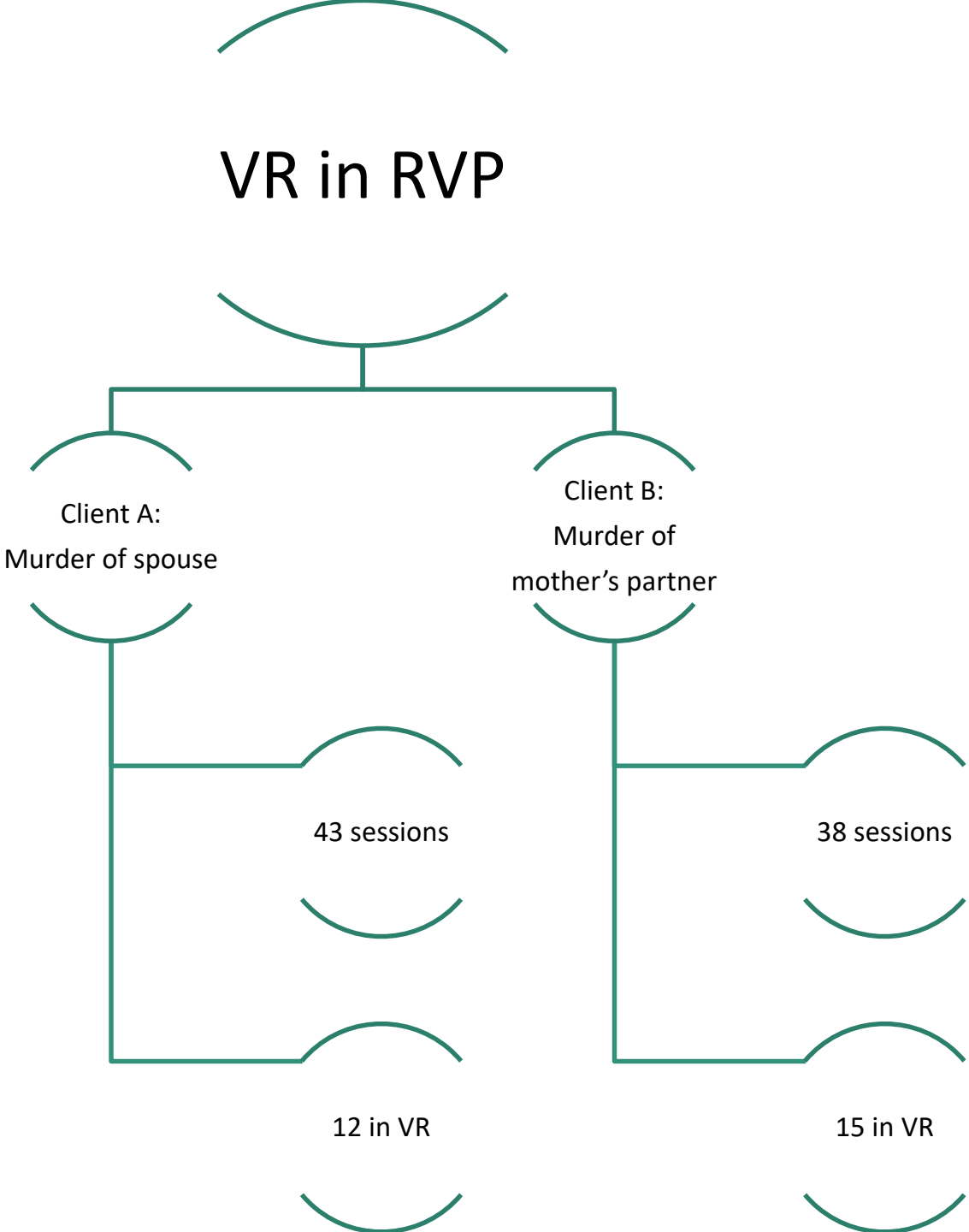
VR in RVP


Client A:
Murder of spouse
Client B:
Murder of
mother's partner
43 sessions
38 sessions
12 in VR
15 in VR

VR in RVP: Experiences

= Intervention

= Assessment

VR in Predov

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Phase 1

Phase 2

Phase 3

Cooperation and valued action

Emotions and life balance

Thoughts and rules about relations

Communi-cation and relations

High risk situations & plan for the future

+

Follow up

Program feedback

Program feedback

Program feedback

Program feedback

NA

NA

NA

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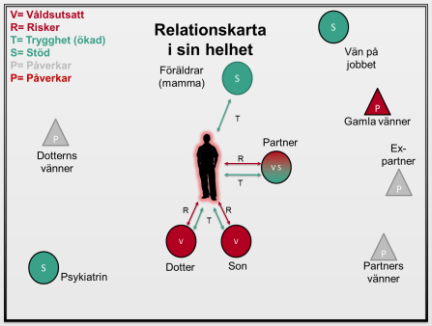
Individual learning tools in Predov



Map of relations (genogram)

Map

Strategies targeting emotions

Strategies targeting cognitions

Valued action

Communication and problem solving strategies

Strategies targeting alcohol and substance use

Strategy board

Compass

My partner is too nice to someone else.

Situation cards

Premisses for navigation (weather, terrain, climate etc)

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Aggressive Acceptance & riskmanaging Passive

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DESIRE TO BE FREE FROM VIOLENCE

Risk situation at work

Ex: Conflict, stress & humiliation

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ALTERNATIVE ACTION?

Reaction to first risk situation

Ex: Drinking alcohol

ALTERNATIVE ACTION?

Risk situation at home

Ex: Irritation and loss of communication

ALTERNATIVE ACTION?

Risk situation at home

Ex: Seeking conflicts, confrontative

ALTERNATIVE ACTION?

RELAPSE IN DOMESTIC VIOLENCE

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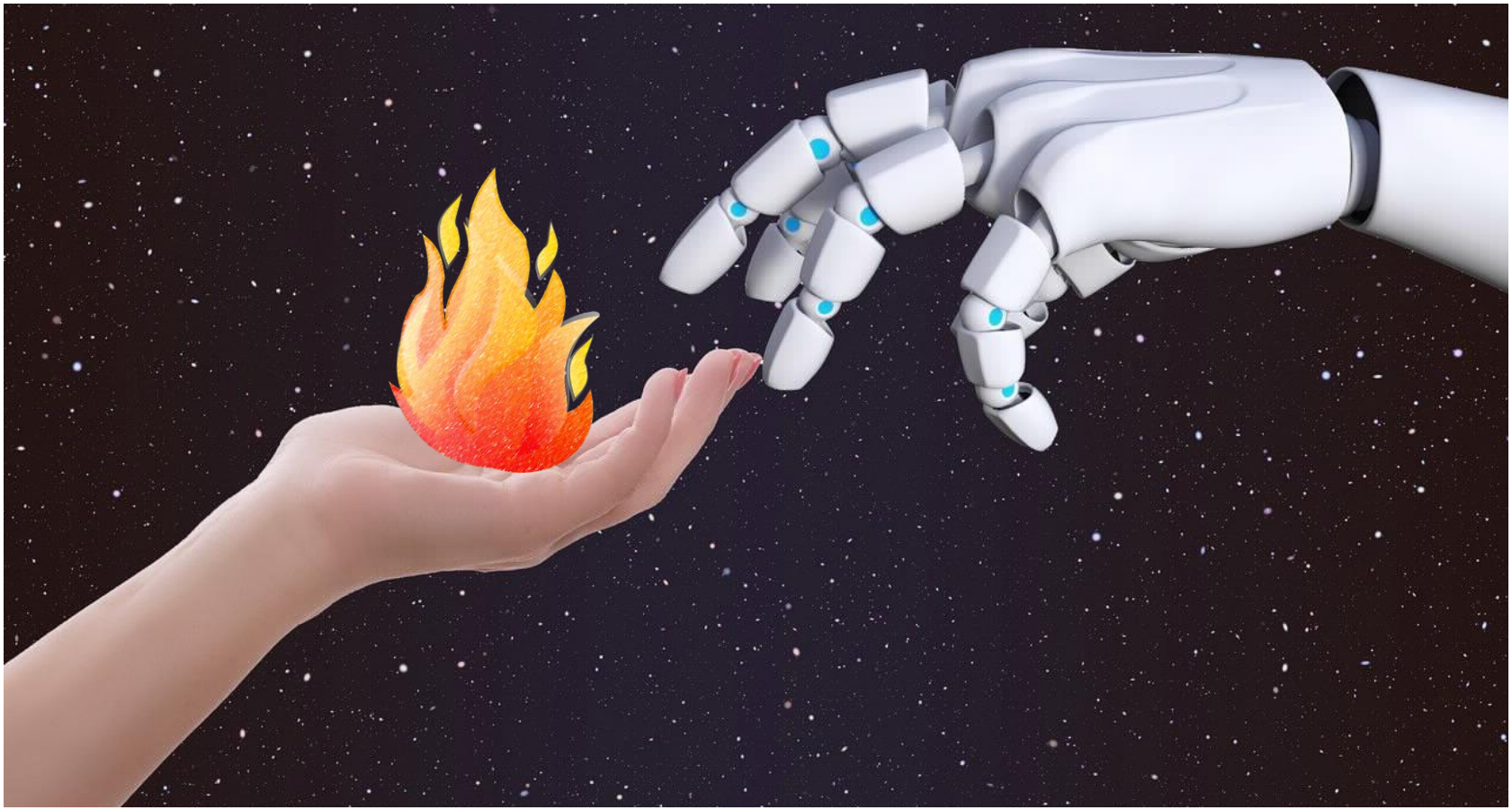
VR-assisted treatment – a cyborg in the treatment of DA-offenders



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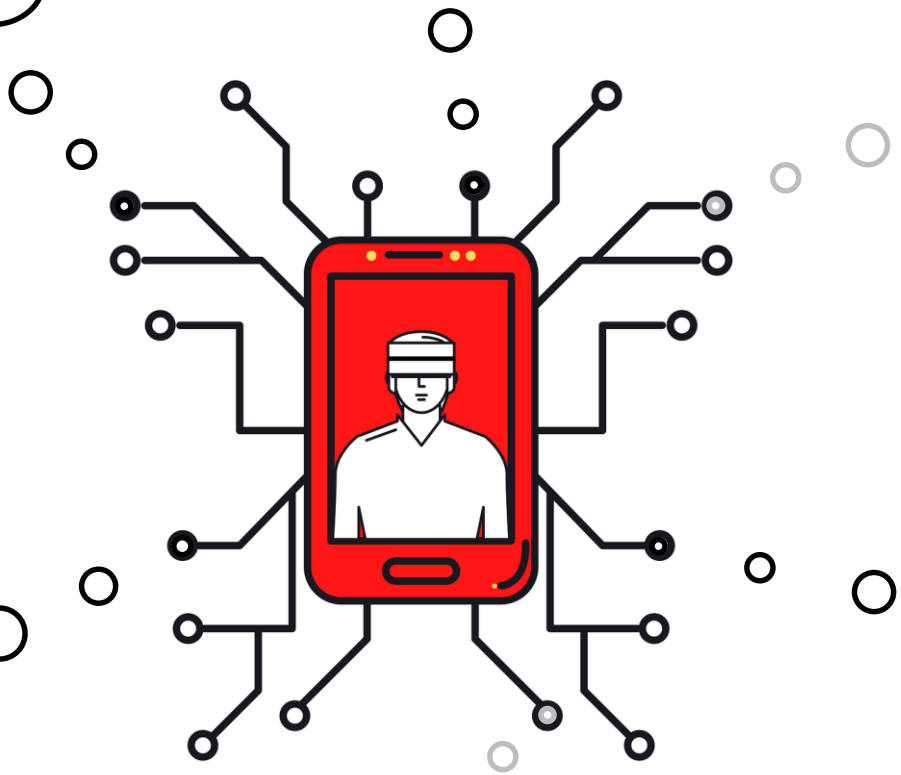
VR-potential

Staff training

Treatment

?



Functional assessment Functional analysis

Risk/needs assessment

?

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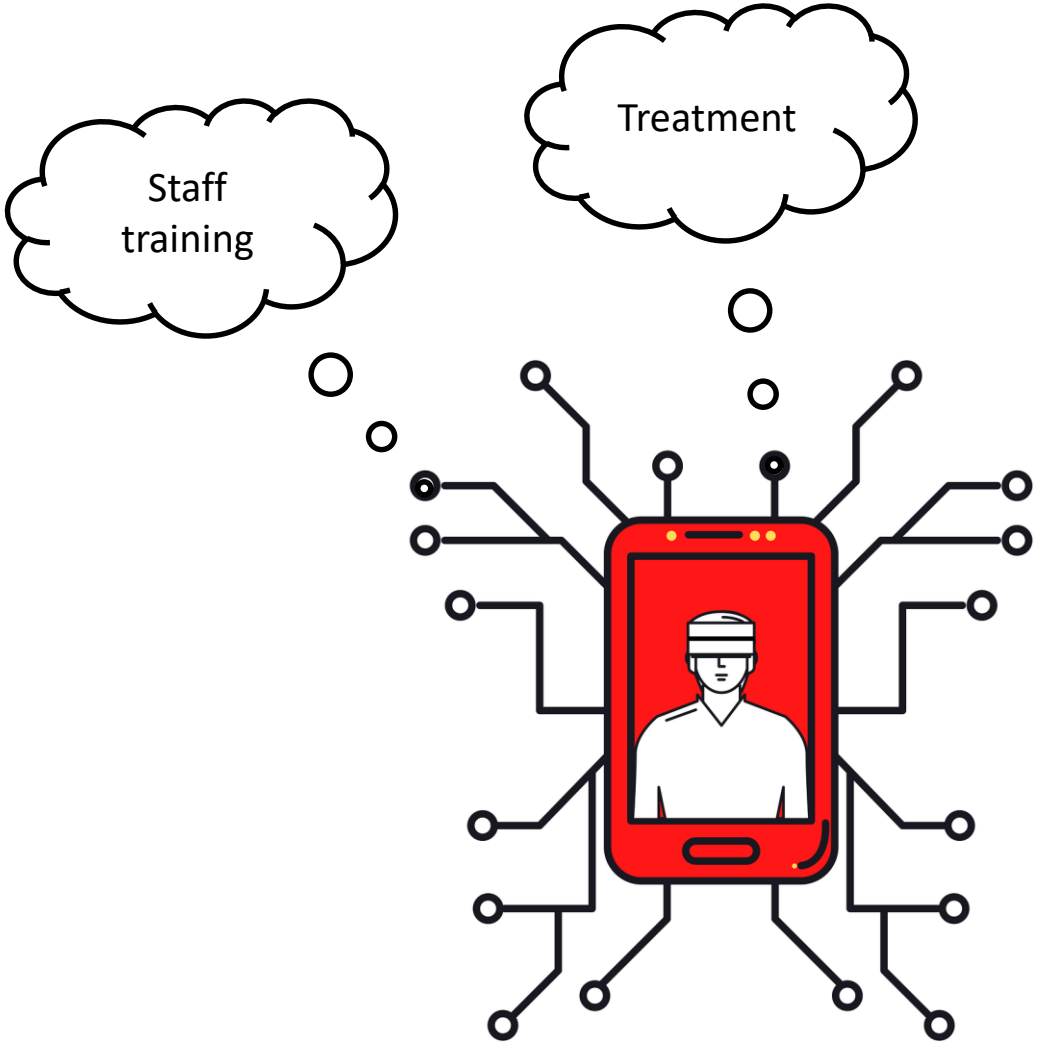

The next steps…

Some concluding remarks….

- Offender programs (also for domestic abuse) have modest, unclear or non-existing treatment effects
- Let us not stare **to much** on **just** on technology as a solution
- Tailoring to client needs and responsivity is key!
- VR isn’t better than the person wielding it and the program facilitated
- VR has potential but we are still in its early years of development and application - Especially in forensic settings!

THANK YOU FOR YOUR ATTENTION!

QUESTIONS?

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