



# Interactive art in elderly care

Dr. Tom Luyten  
GIES - 2022

GIES EMPOWER



dr. Tom Luyten

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[@tom\\_luyten\\_studios](https://twitter.com/tom_luyten_studios)

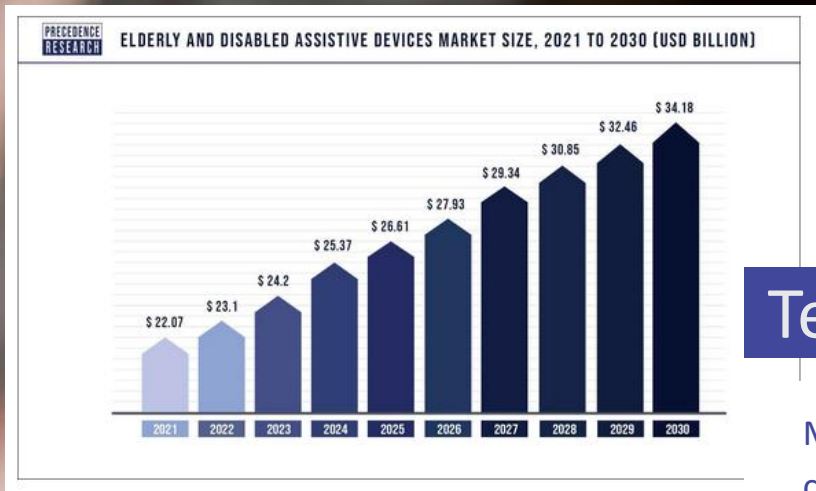
Master  
PhD  
Media artist -  
Teacher  
Creative Director

- the interactive multi-sensory room
- interactive art in elderly care
- generative art and interactive installations
- Maastricht Institute of Arts
- Qeske Community

A stylized signature logo for Tom Luyten, consisting of the letters 'T' and 'L' in a cursive, flowing script.

TOM LUYTEN  
STUDIOS

EMPOWERING EXPERIENCES



Presence research, 2021

# Technology is omnipresent

Mainly aimed at assisting, monitoring,  
care and prevention



Multi-sensory room

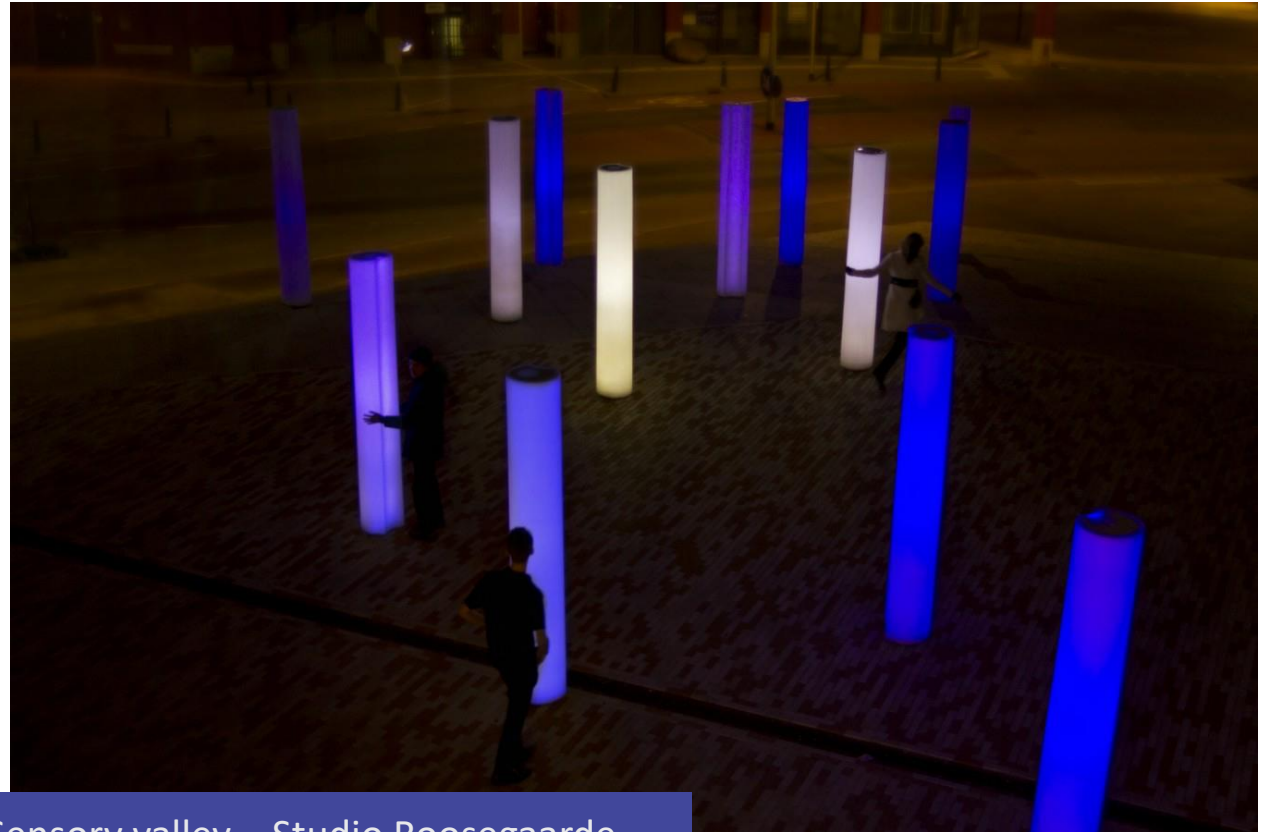
For people who live with cognitive and/or physical problems



## similarities



standard bubble unit



Sensory valley – Studio Roosegaarde





cognitive level of the interface

≠

cognitive level of the aesthetic





# The art of feeling connected

Interactive art as emotion-oriented  
care technology in nursing homes

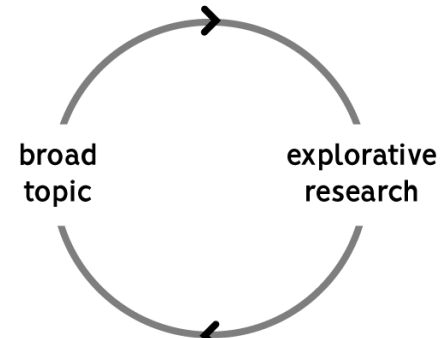
Tom Luyten

PDF available through:

[shorturl.at/esHl2](https://shorturl.at/esHl2)

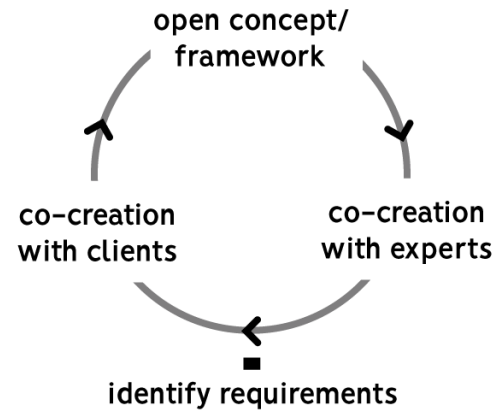
## understanding the problem

creative practice  
literature search  
conversation



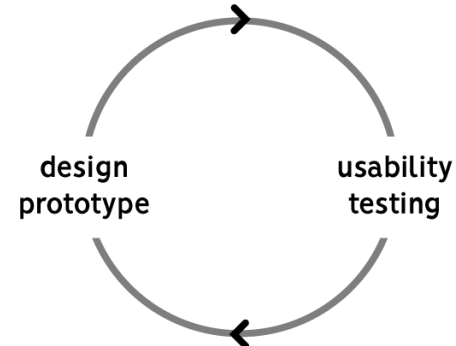
## concepting

creative practice  
guided brainstorm  
activity card sort



## prototyping

task analysis  
narrative storyboards  
interface design sketching  
live and video observation  
think aloud  
wizard of oz





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## **Participant responses to physical, open-ended interactive digital artworks: a systematic review**

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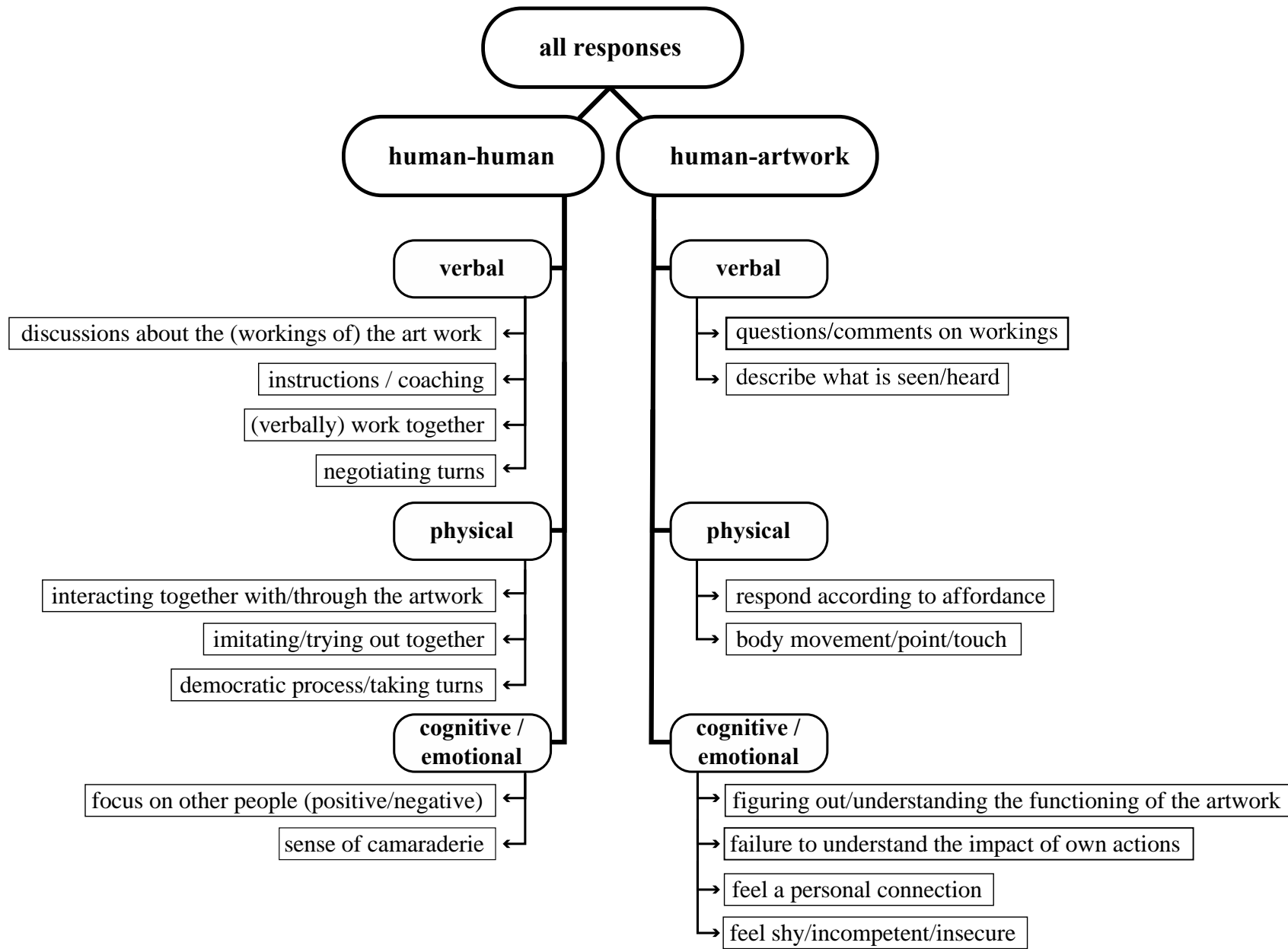
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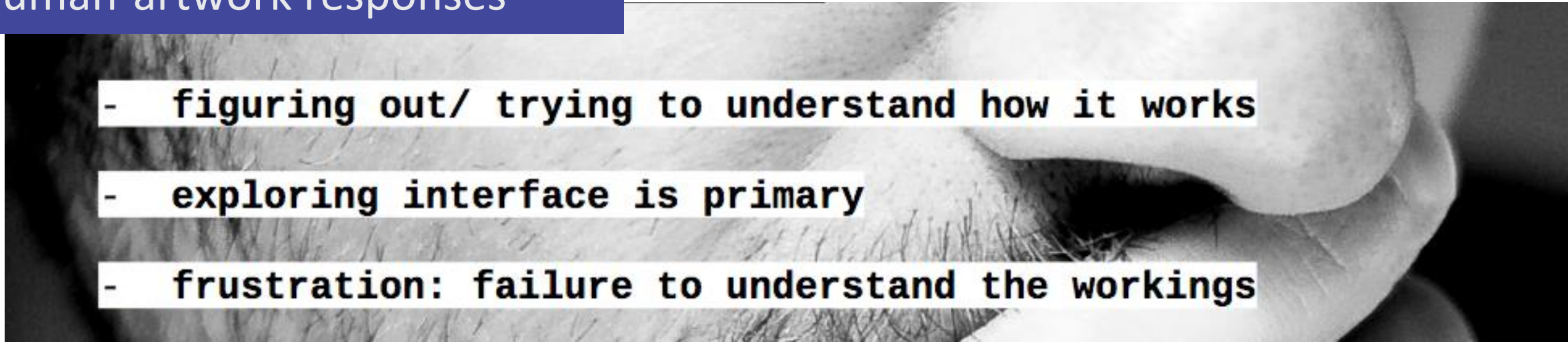
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Systematic review  
13 articles, 22 artworks



## Human-artwork responses

- figuring out/ trying to understand how it works
- exploring interface is primary
- frustration: failure to understand the workings





# Human-artwork responses

## Physical

- strong correlation with affordance (object and projection)
- abstract content : whole body movement to figure out

large, dark open spaces

- void / committing to the space / reflecion
- loose track of time

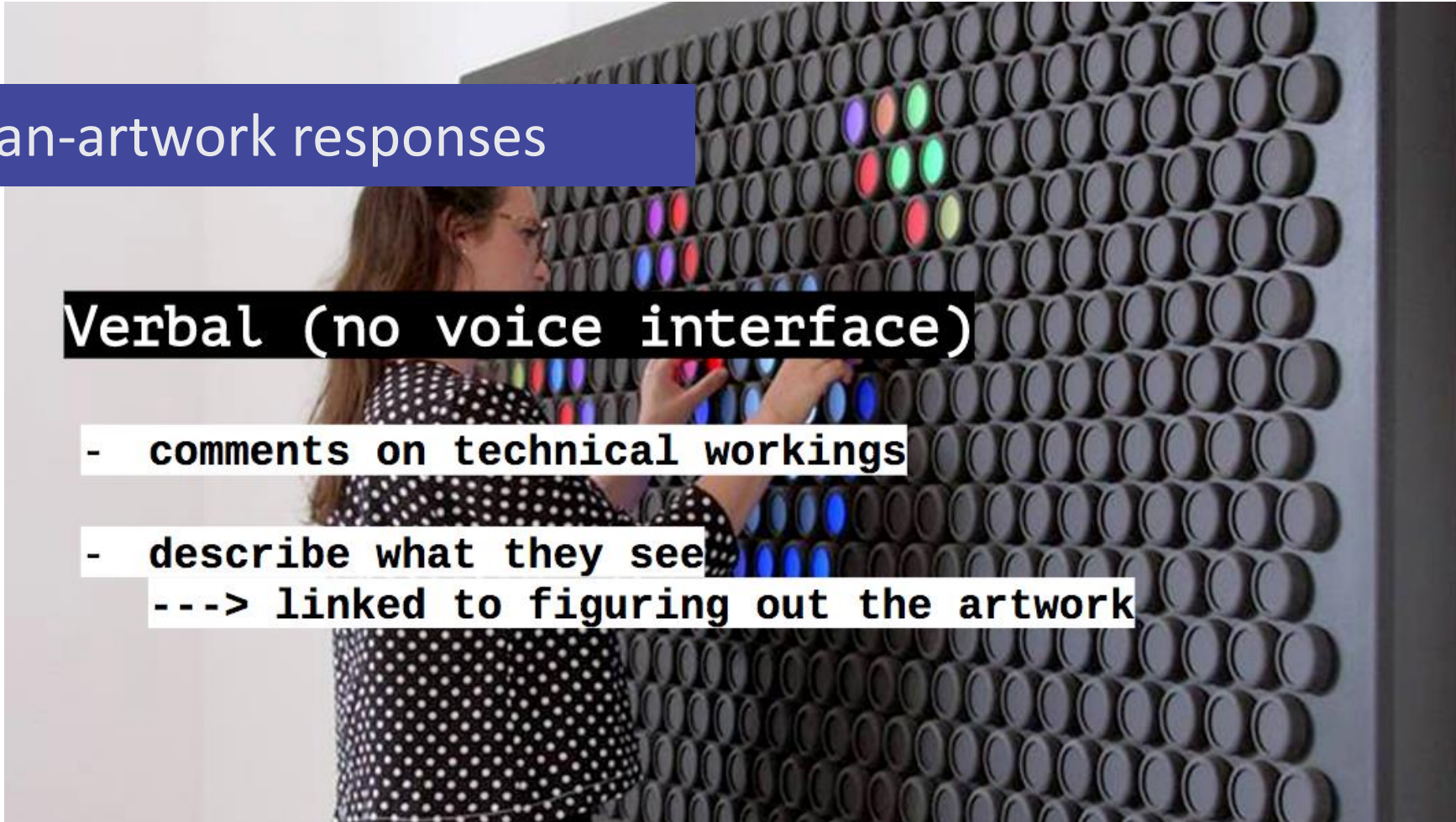
## Physical: smaller, table top

- more sensual, considered, slower in pace

## Human-artwork responses

### Verbal (no voice interface)

- comments on technical workings
- describe what they see
  - > linked to figuring out the artwork

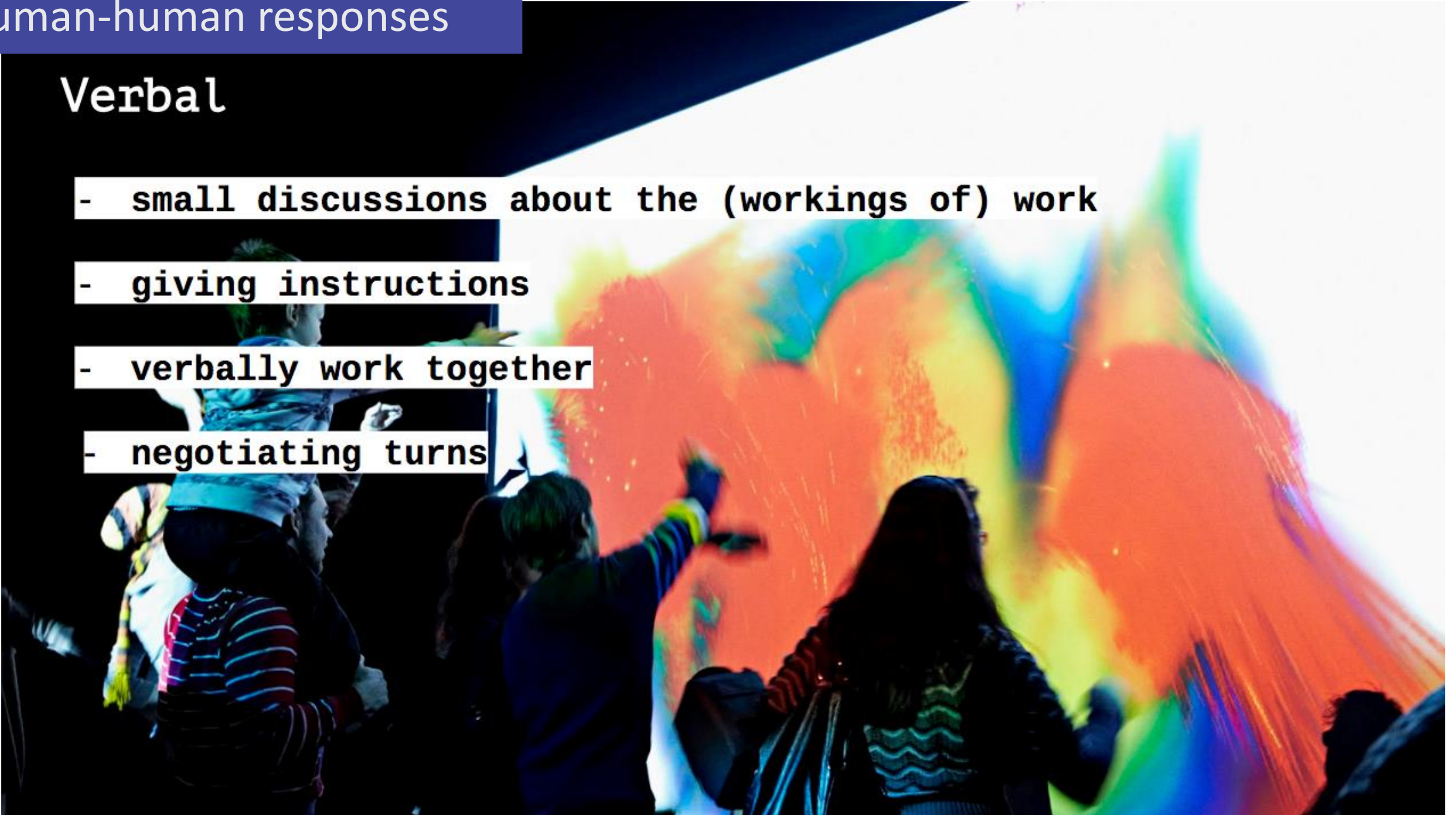




# Human-human responses

## Verbal

- small discussions about the (workings of) work
- giving instructions
- verbally work together
- negotiating turns

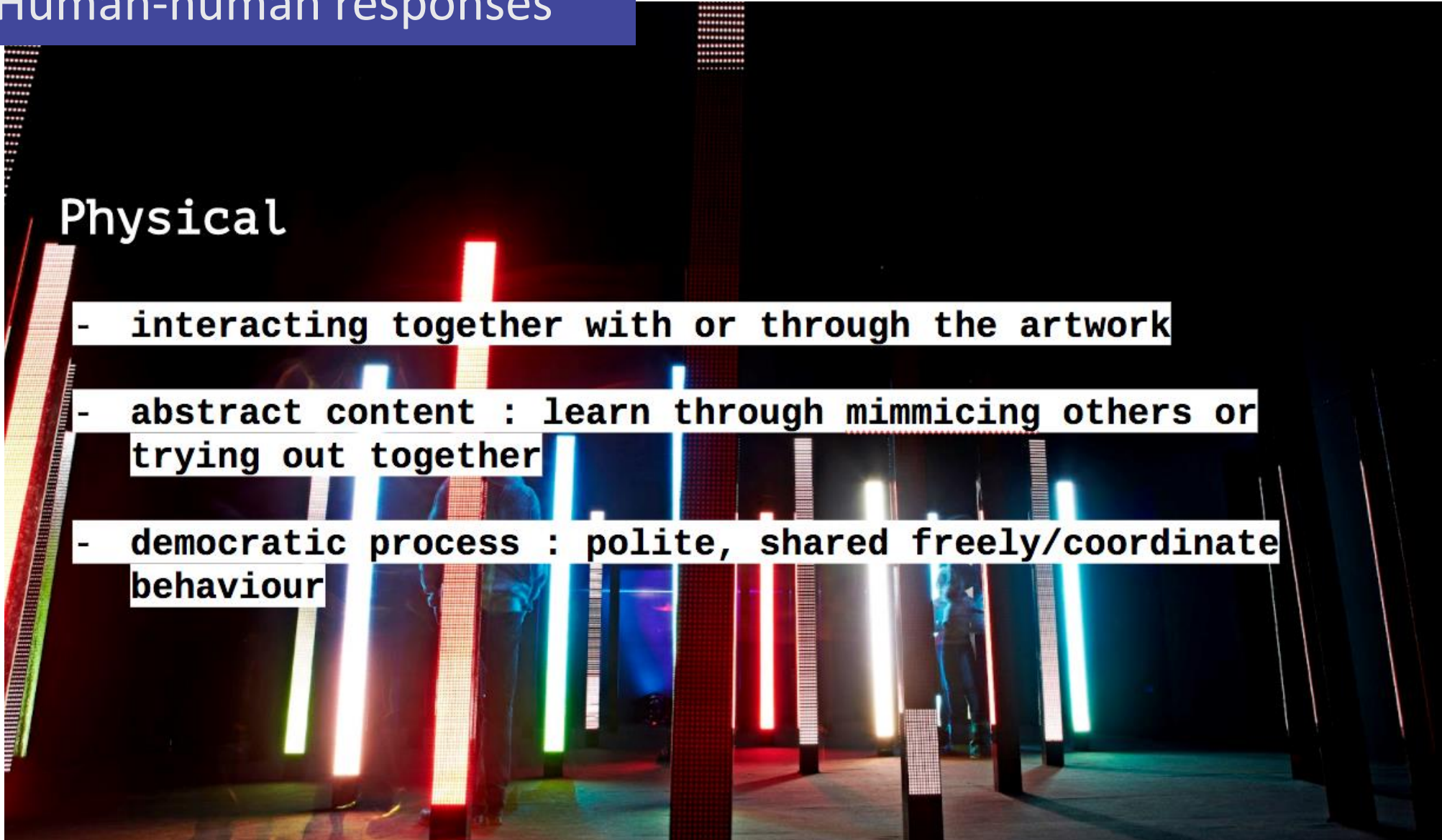




# Human-human responses

## Physical

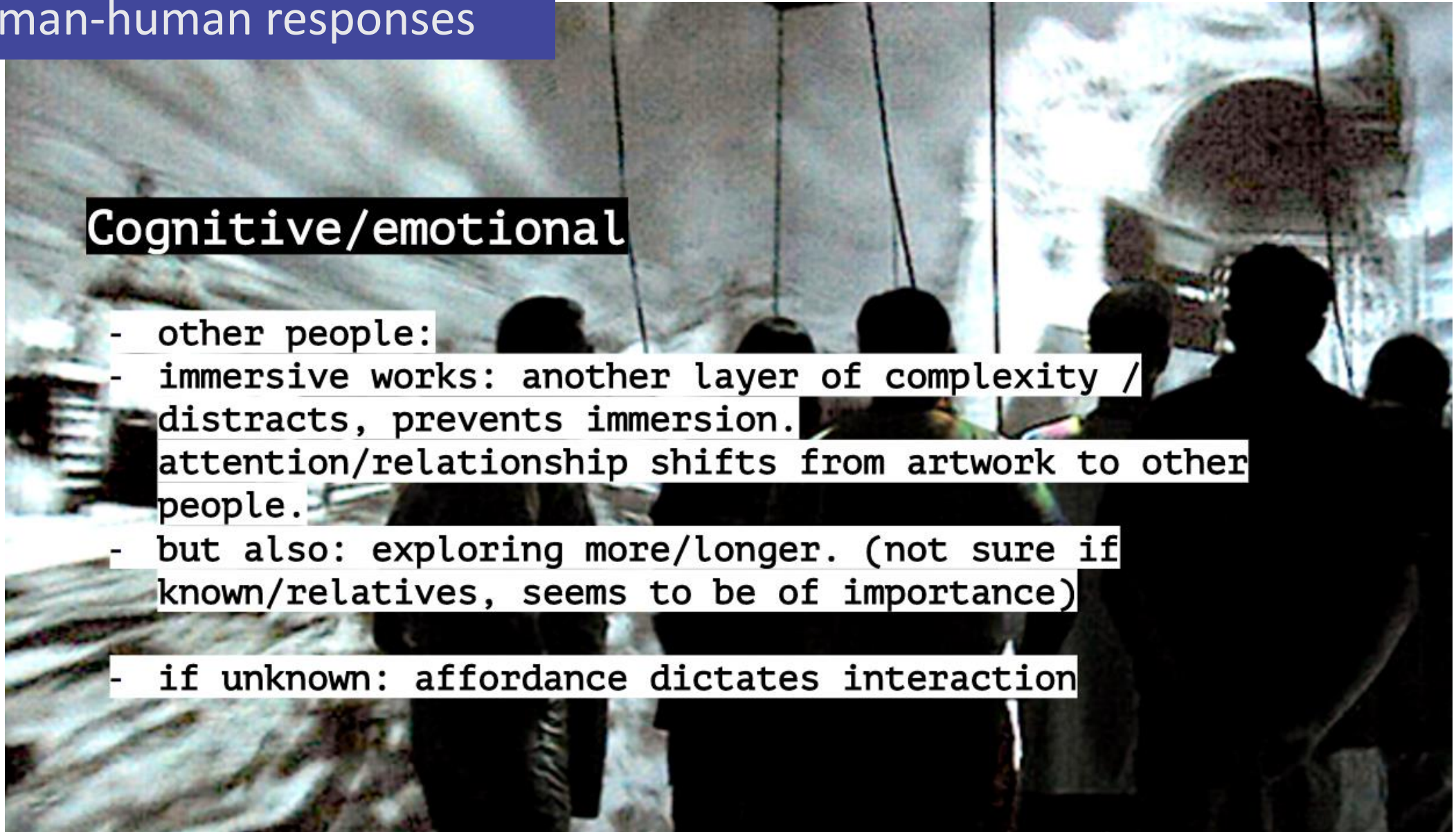
- interacting together with or through the artwork
- abstract content : learn through mimicing others or trying out together
- democratic process : polite, shared freely/coordinate behaviour



# Human-human responses

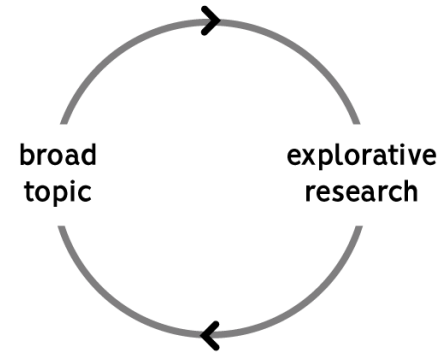
## Cognitive/emotional

- other people:
- immersive works: another layer of complexity / distracts, prevents immersion. attention/relationship shifts from artwork to other people.
- but also: exploring more/longer. (not sure if known/relatives, seems to be of importance)
- if unknown: affordance dictates interaction



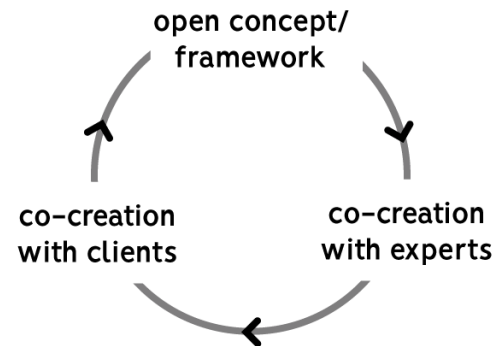
## understanding the problem

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literature search  
conversation



## concepting

creative practice  
guided brainstorm  
activity card sort

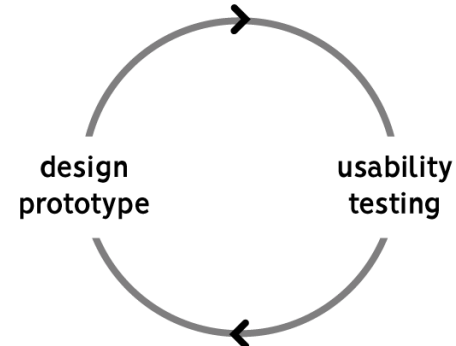


identify requirements



## prototyping

task analysis  
narrative storyboards  
interface design sketching  
live and video observation  
think aloud  
wizard of oz

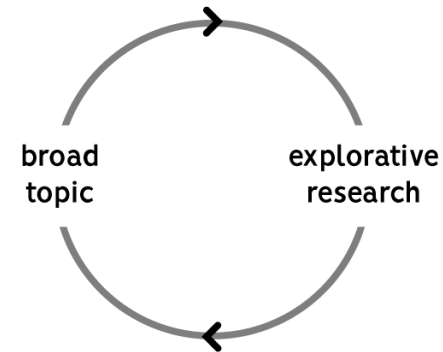






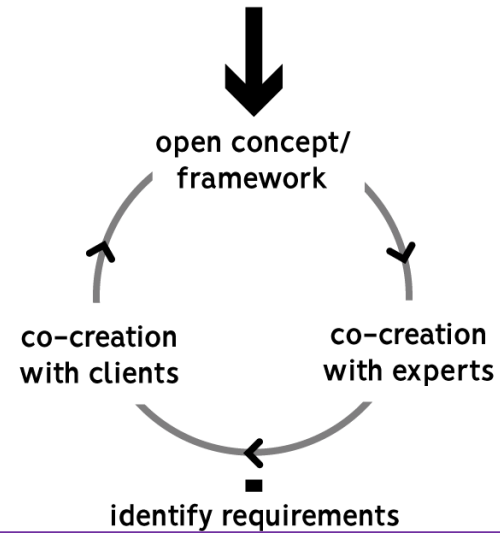
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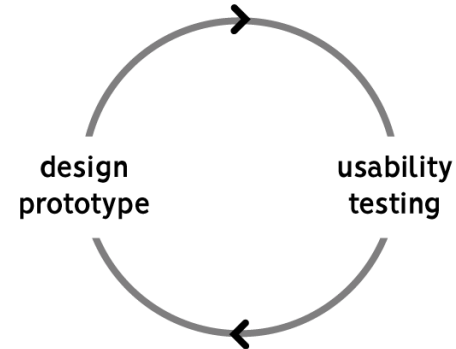
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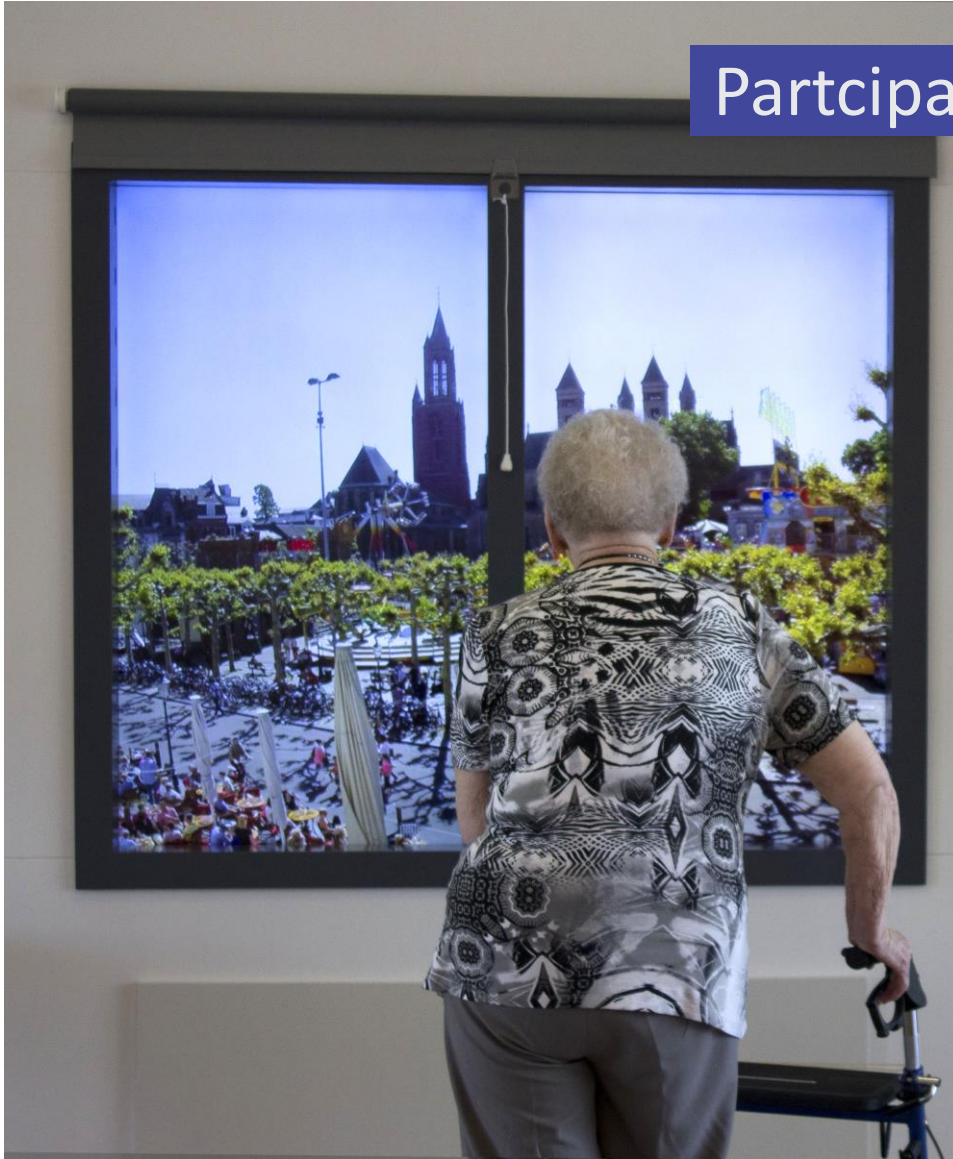


Final product





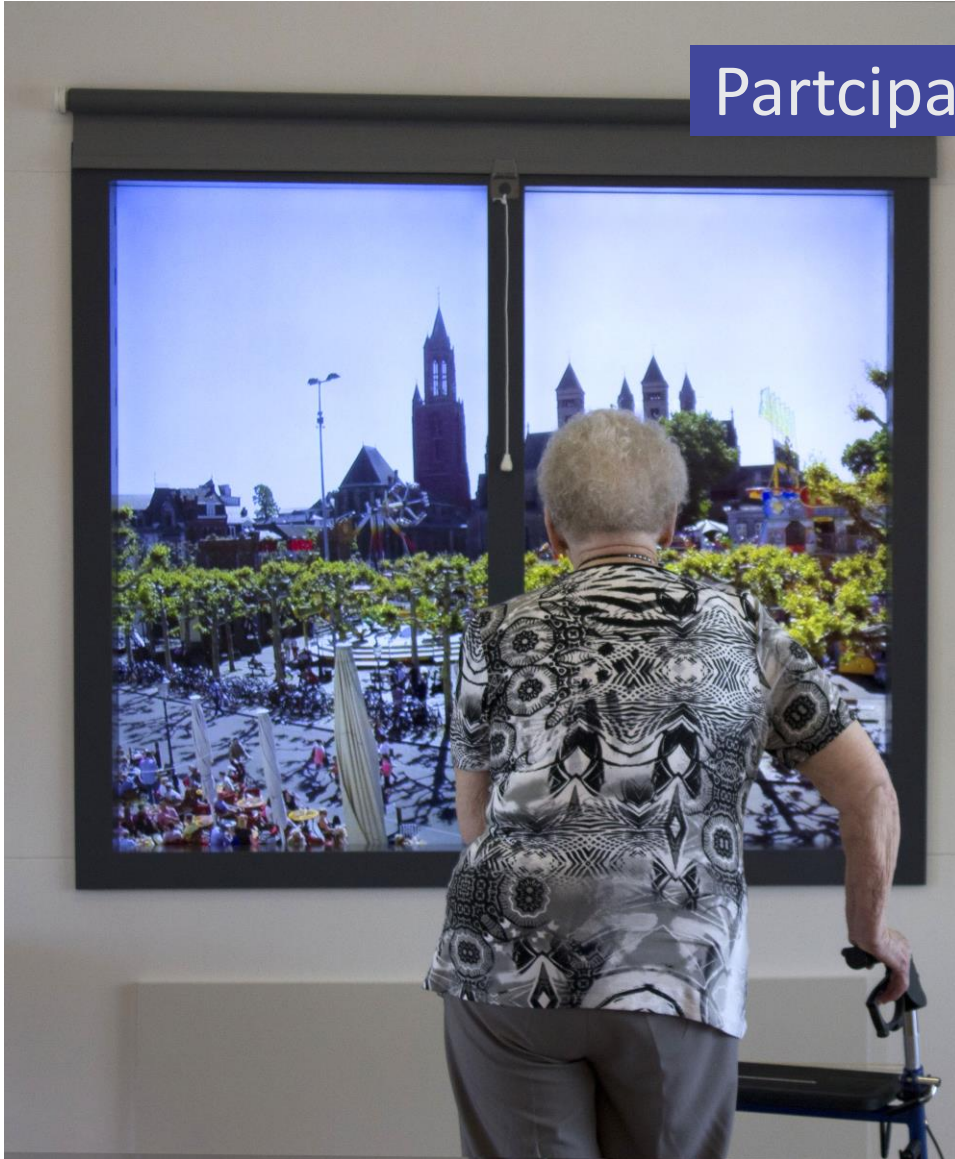
## Participant responses to VENSTER



### Generic responses

- Recognize, talk out loud and share what is familiar
- Ask about the contents of the installation (video)
- Physically pointing or tapping
- Singing and ticking based on the music
- Almost no social interaction between residents

## Participant responses to VENSTER



### Calming content

- Rapid loss of focus, falling asleep

### Activating content

- Generally calm and focussed up to an hour (5-6 people)
- Time for conversation

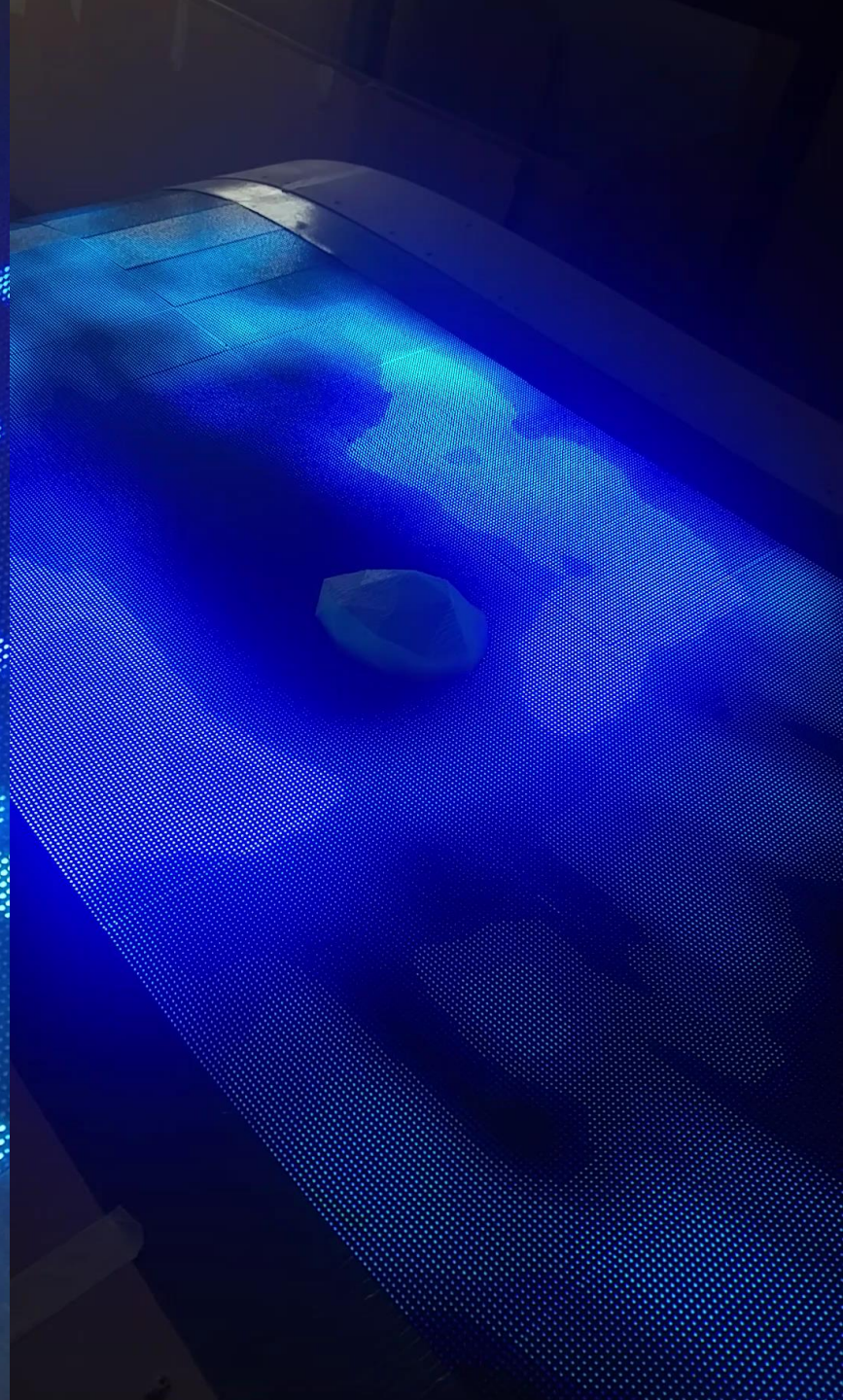
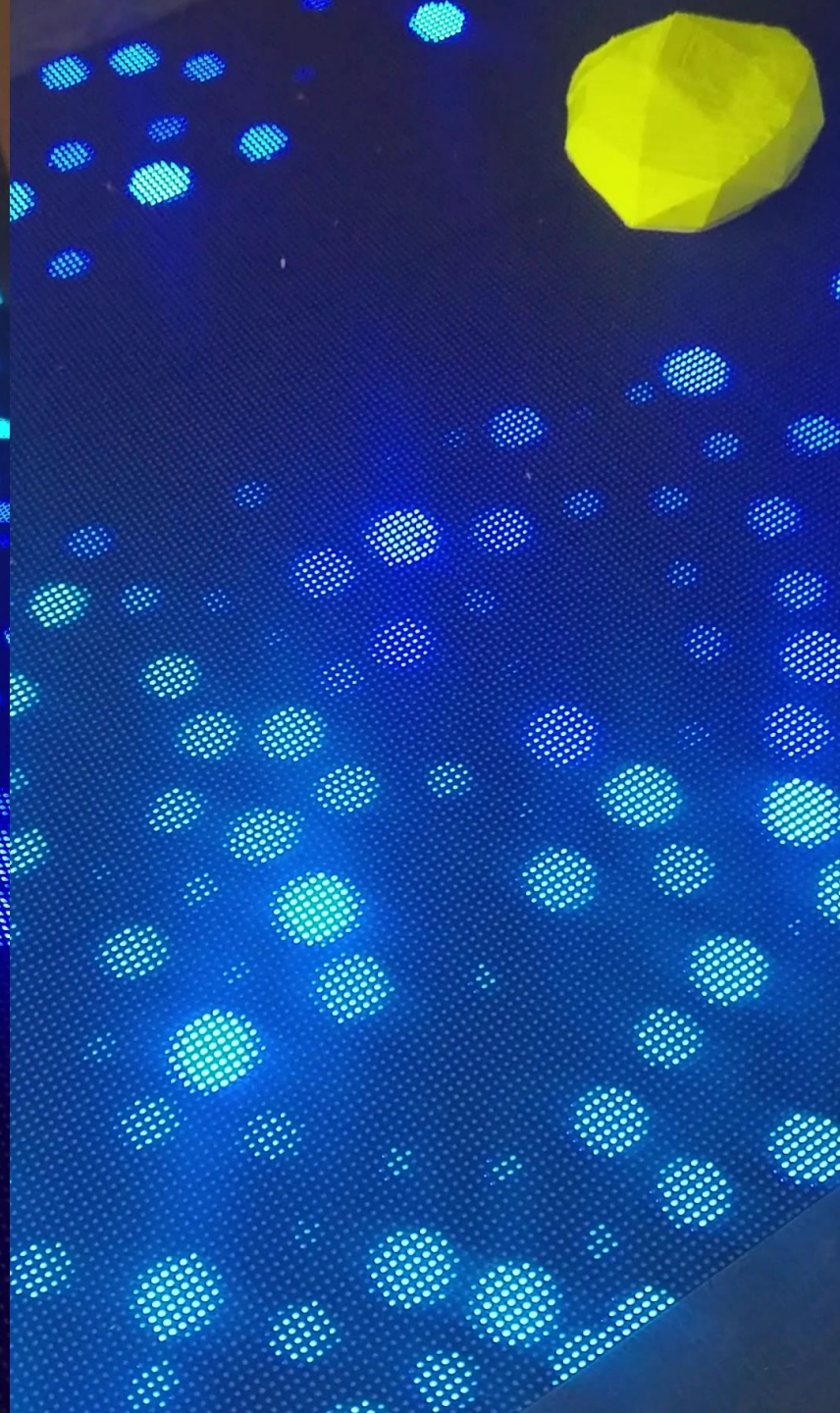
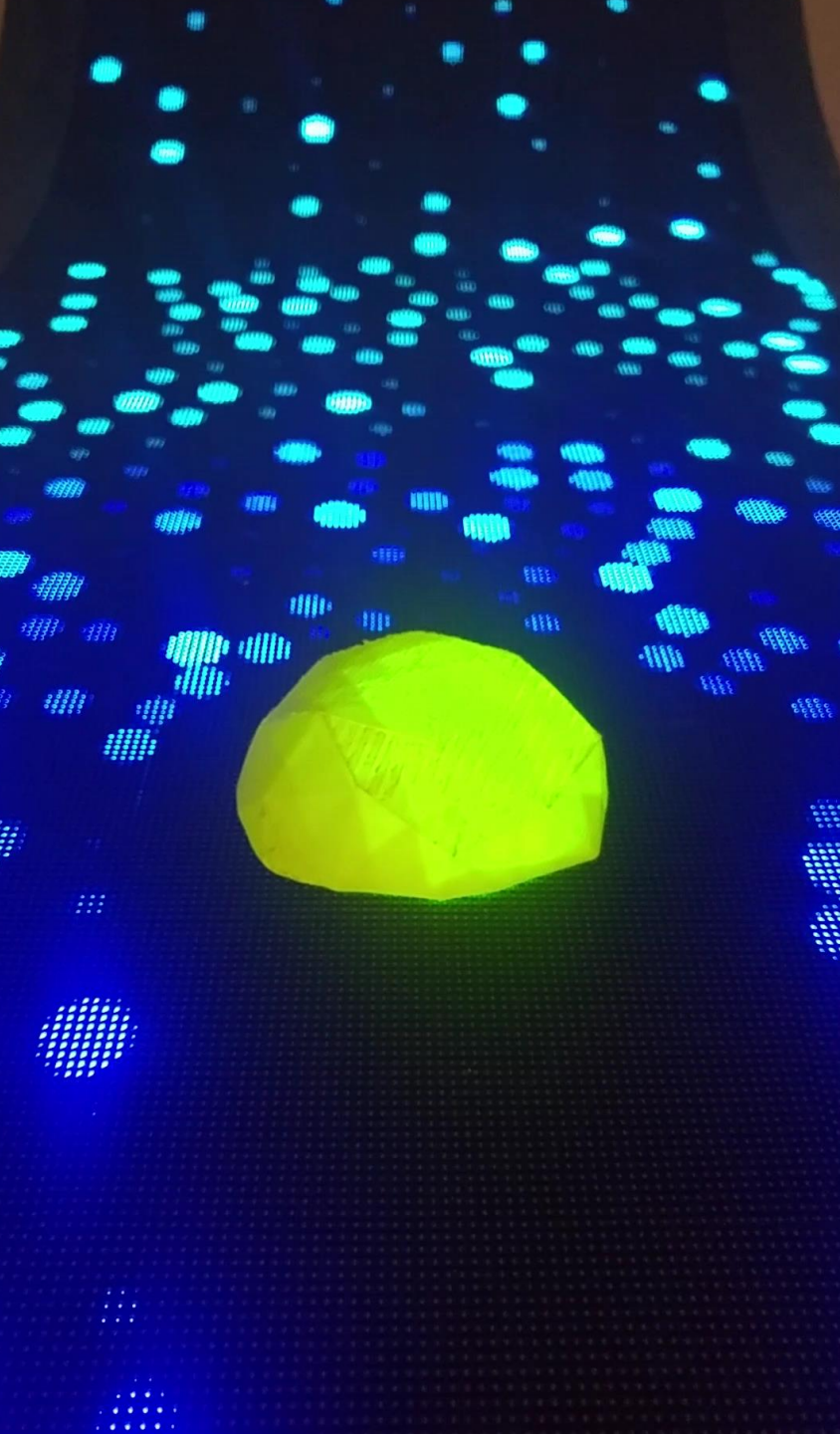
### Interactive content

- Short sessions
- A lot of interaction
- Importance of the (professional) caregiver









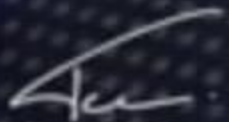


Design

Morgendauw

# Morgendauw

a moment of interaction



**vitalis**  **woonzorg groep**



**ZU  
YD**



## Participant responses to Morgendauw

- Residents do not seem to notice Morgendauw (!)
- If they are gestured towards it, immediate focus, interface is clear
- Interactions lasts about 3 minutes
- Interactions are slow, magic, particles and interactions are closely studied
- Both hands and "rocks" are used to interact

### Context

- Placement and characteristics of the installations don't seem to match initial
- Expectations (context/explanation/introduction is needed)
- For example: art in the museum does work (MOMA)



# Take-aways

## Autonomous use

- Impossible for most, unless **interface-less** experience
- Volunteer or visitor will have to provide a minimum of assistance (no professionals needed)
- Find a balance between **artist-centered** and pure **co-creation**
- The **more “active”** the experience, the **more guidance** and **professional quality** is needed and the **more intense** a “sessions” is for both participants and caregivers.  
(technology might be unnecessary addition)

# Take-aways

## **Social interaction**

- All studied works are conversational pieces and a place to come together (visitors/caregivers)
- Social interaction between residents remains a challenge

# Take-aways

## **Figurative art**

- responses linked to affordance
- the content can be used as interface
- recognition is the “gate” to experience

## **Abstract art**

- challenges remain, but not impossible
- find a connection with existing mental models and expand together
- context, framing and introduction is very important



## Current developments

Vensterr



# Vensterr



## Vogels

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Brril



# Kunst beweegt



**Minor programme**

Maastricht institute of arts



