

Mixed Reality Frameworks

**CanUX
2019**

Alastair
@acuity_design

Post-Brunch

Relax

7 topics
2 problems
1 solution

Senses

Mixed Reality Design

Cognitive Accessibility

Autonoetic consciousness

Perception

Tools

**Diversity of people,
diversity of places**

7 topics
2 problems
1 solution

7 topics

2 problems

1 solution

(including why you are extraordinary)

What do I do?

Senses

Mixed Reality Design

Cognitive Accessibility

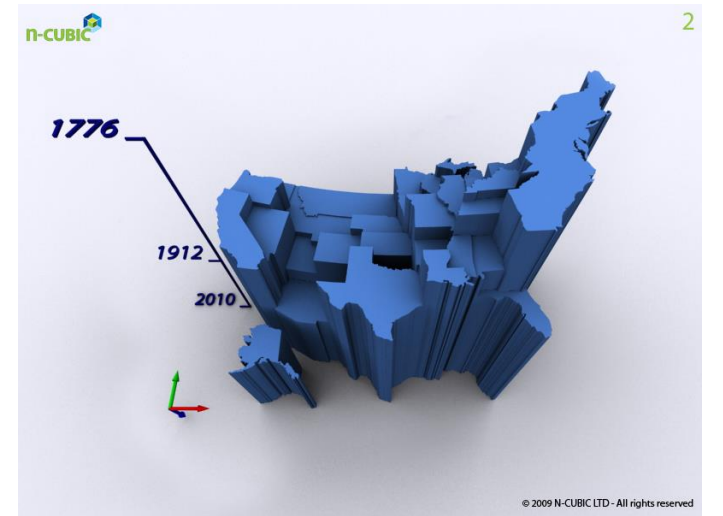
Autonoetic consciousness

Perception

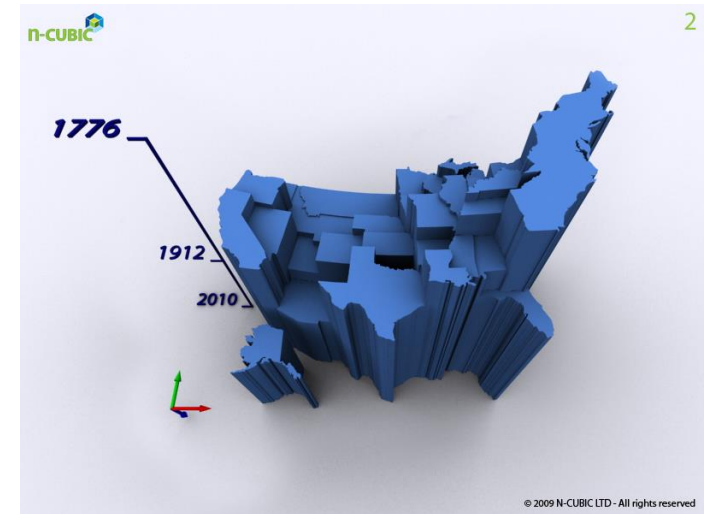
Tools

**Diversity of people,
diversity of places**

**How to help people
perceive information
in places?**

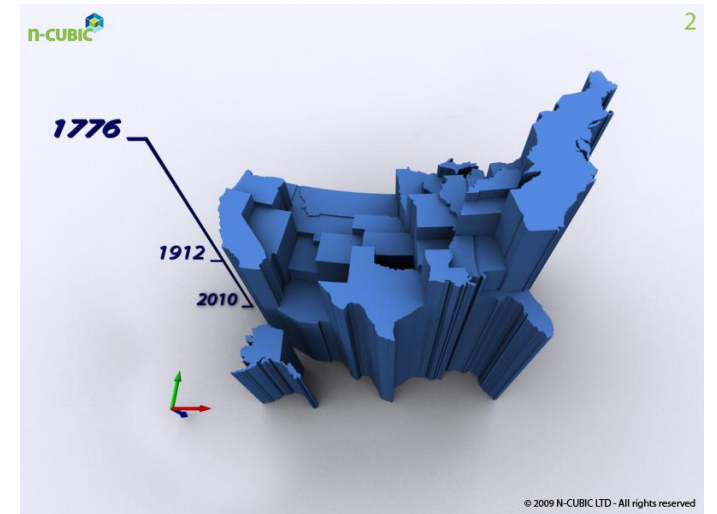


Maps thru touch



Maps thru touch

Augmented Reality thru sound



Maps thru touch

**Augmented
Reality thru
sound**



**Data
visualisation &
manipulation
thru N
Dimensional
data folding in
Virtual Reality**

Maps thru touch

**Augmented
Reality thru
sound**

**Cognitive
accessibility of
information and
places**

**Data
visualisation &
manipulation
thru N
Dimensional
data folding in
Virtual Reality**

Senses

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Tools

**Diversity of people,
diversity of places**

Design of public spaces & services for people with dementia and autistic people

Senses

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Autonoetic consciousness

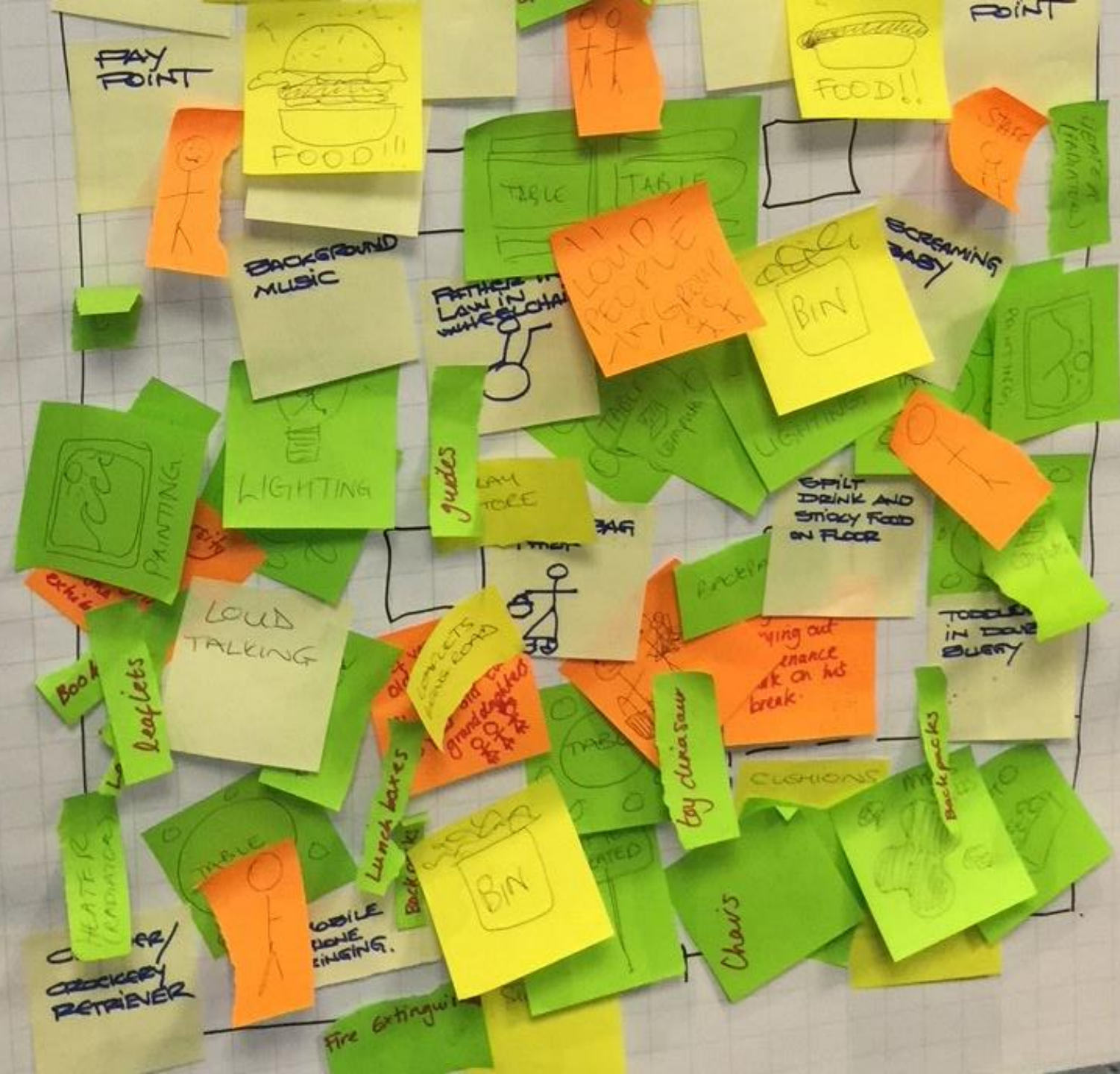
Perception

Tools

**Diversity of people,
diversity of places**

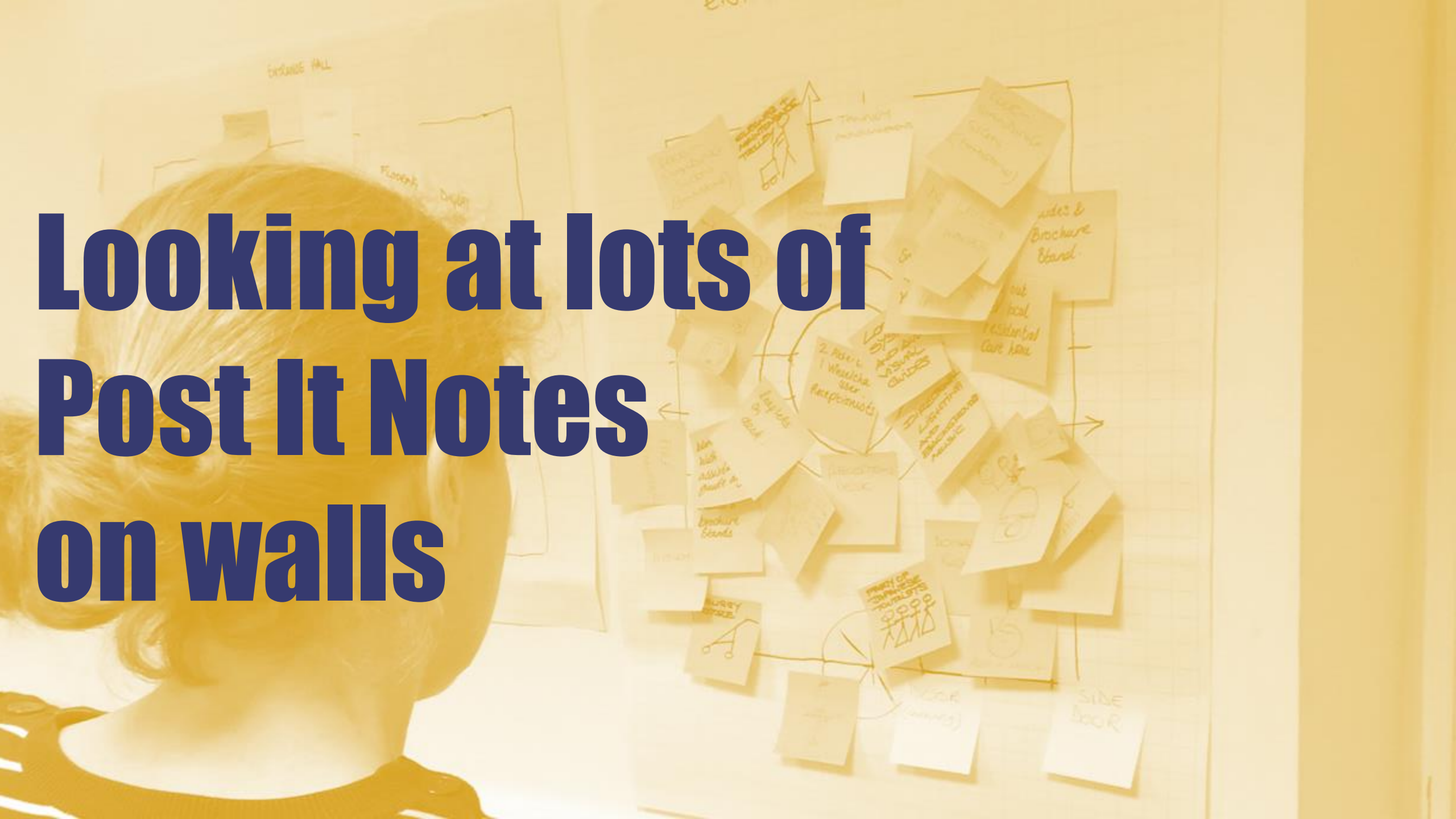
Centre for Accessible Environments

Entrance halls for autistic people



[illegible]

Mapping and sorting



**Looking at lots of
Post It Notes
on walls**

Small problem



Human centered design needs human perspective

Senses

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**Diversity of people,
diversity of places**

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~~**Tools**~~ **Toys**

**Diversity of people,
diversity of places**





Jenga



Human perspective on content



Senses

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Perception

Tools

**Diversity of people,
diversity of places**

Content splitting

Perception

then

Meaning

PERCÉVABLE

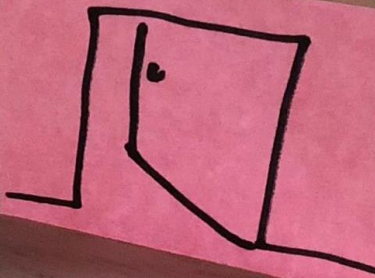
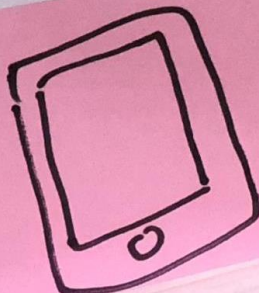


PERCÉVABLE

Perceivable



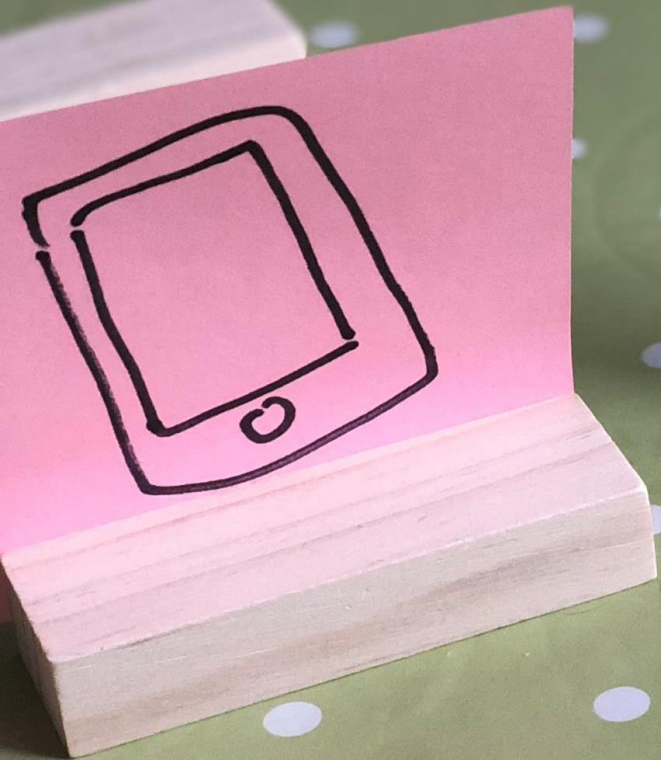
PERCEIVABLE



**From human
perspective, content
may not be
perceivable**

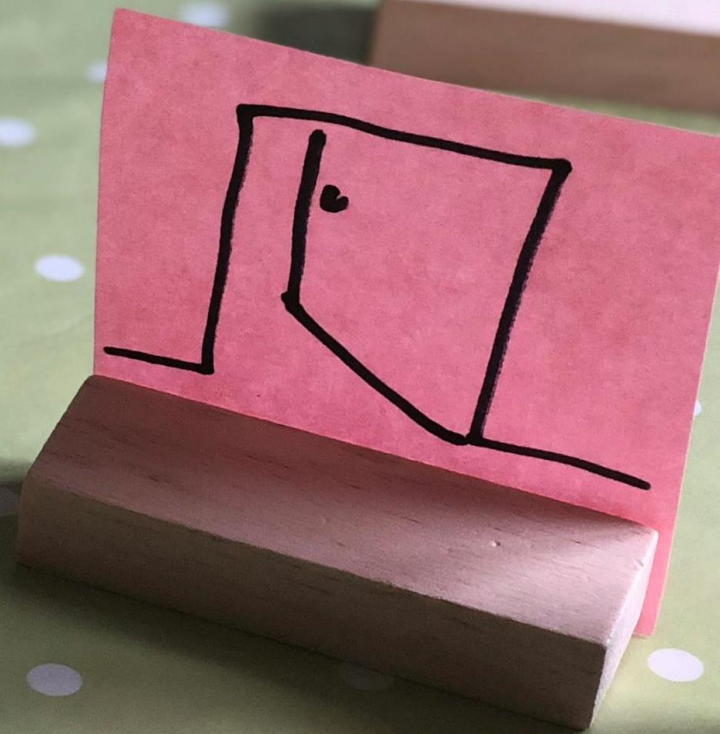


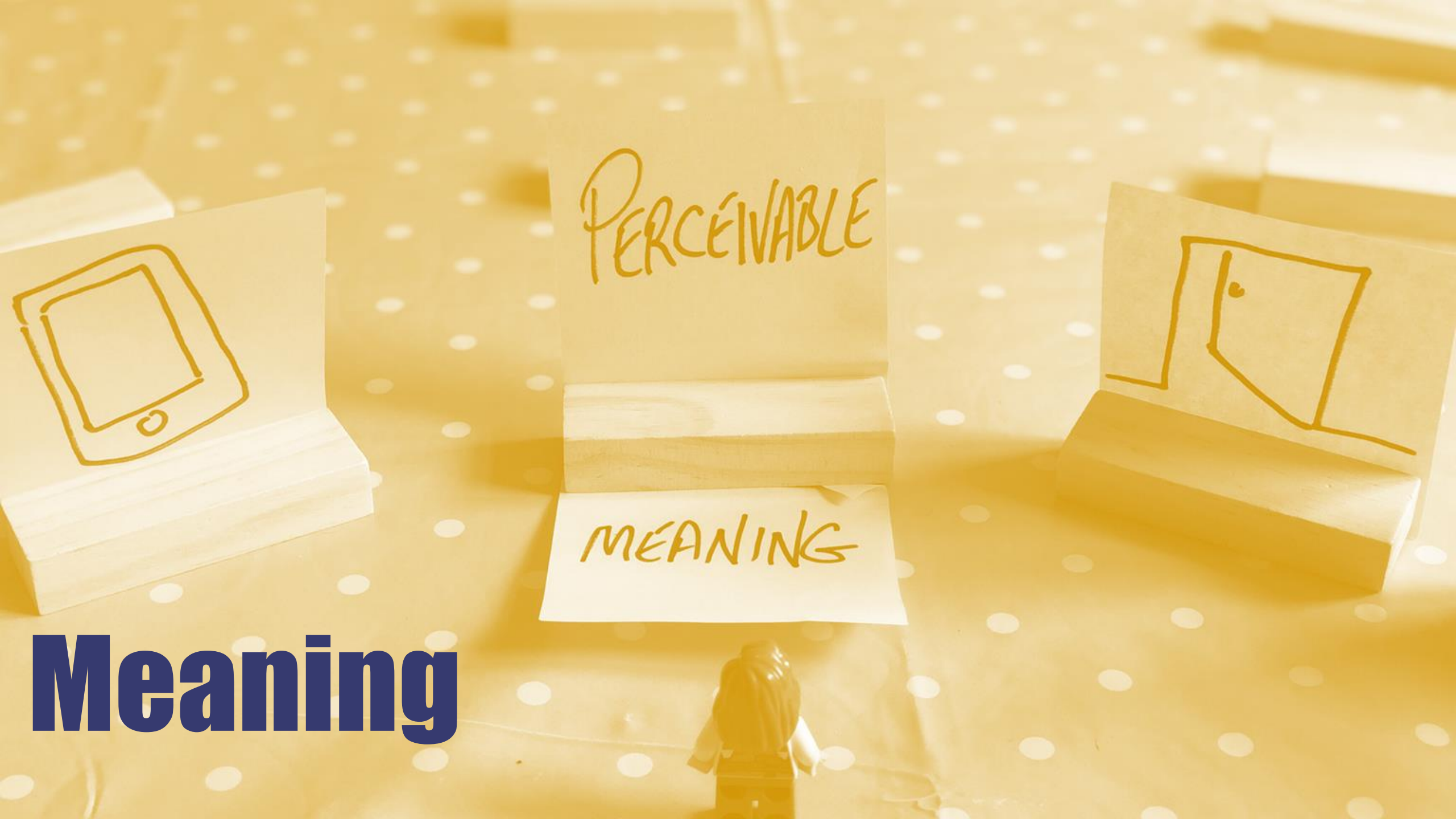
Sensory
Cognitive
Cultural
Economic



PERCÉIVABLE

MEANING





PERCEIVABLE

MEANING

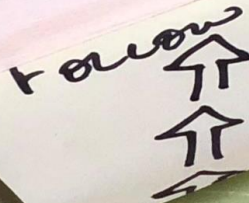
Meaning

PERCEIVABLE

MEANING

IF
HERE
IS...

GO
THERE



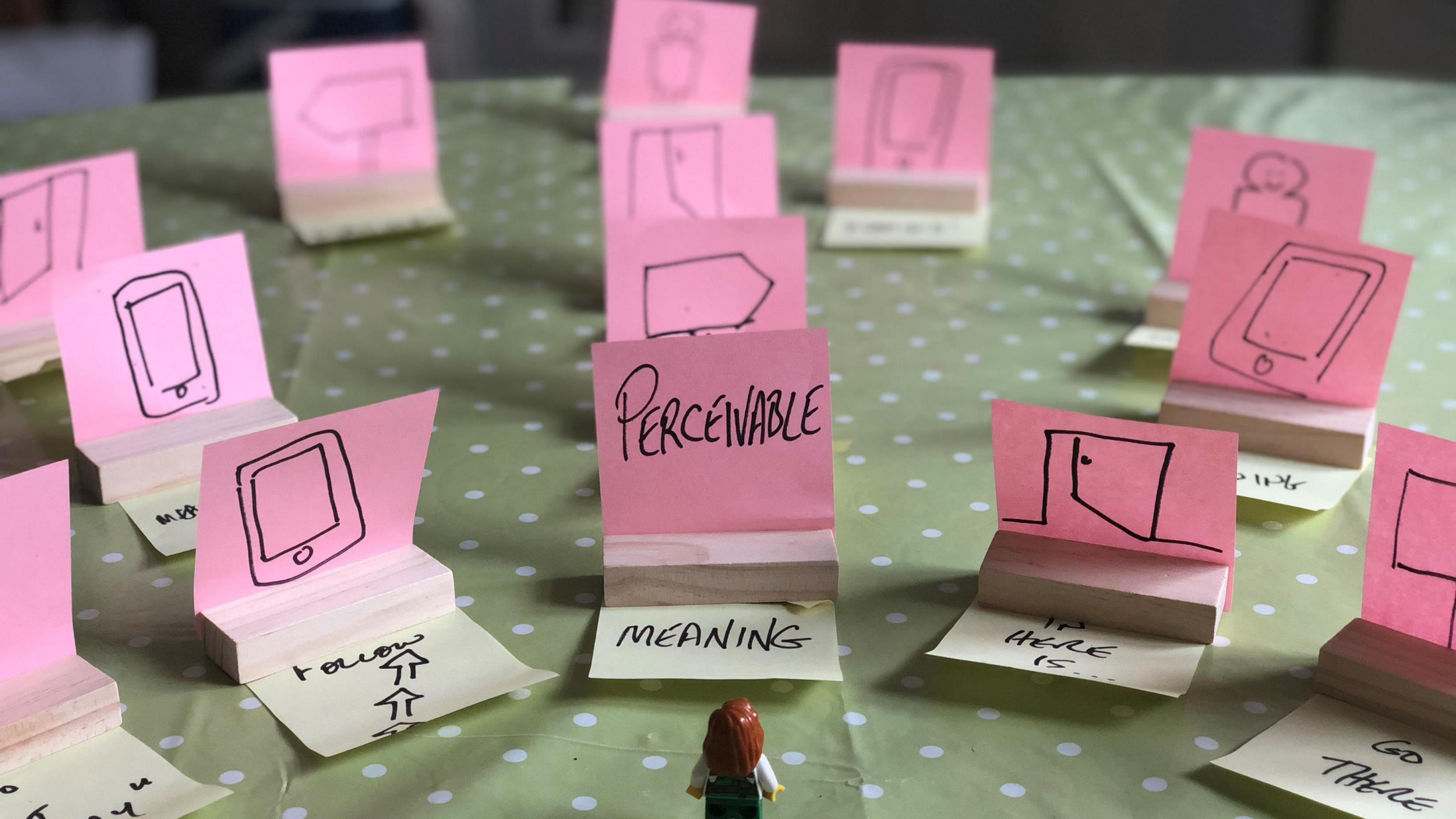
WAY



Meaning is held by user



Perspective switching



PERCEIVABLE

MEANING


FOLLOW
↑↑


HERE IS...


GO THERE


Human perspective





MEANING


MEANING?


MEANING


follow
↑
↑
↑

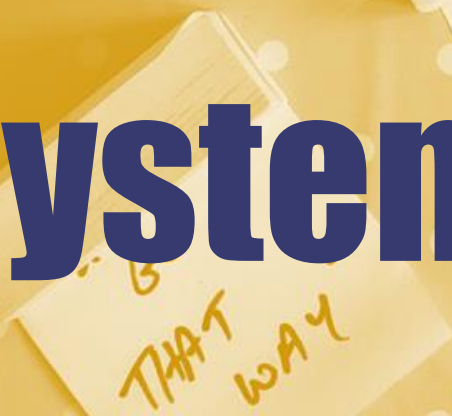
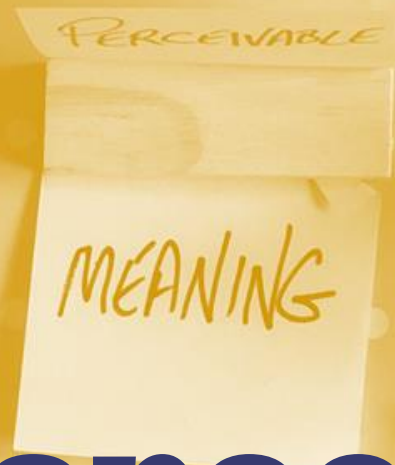
PERCEIVABLE
MEANING

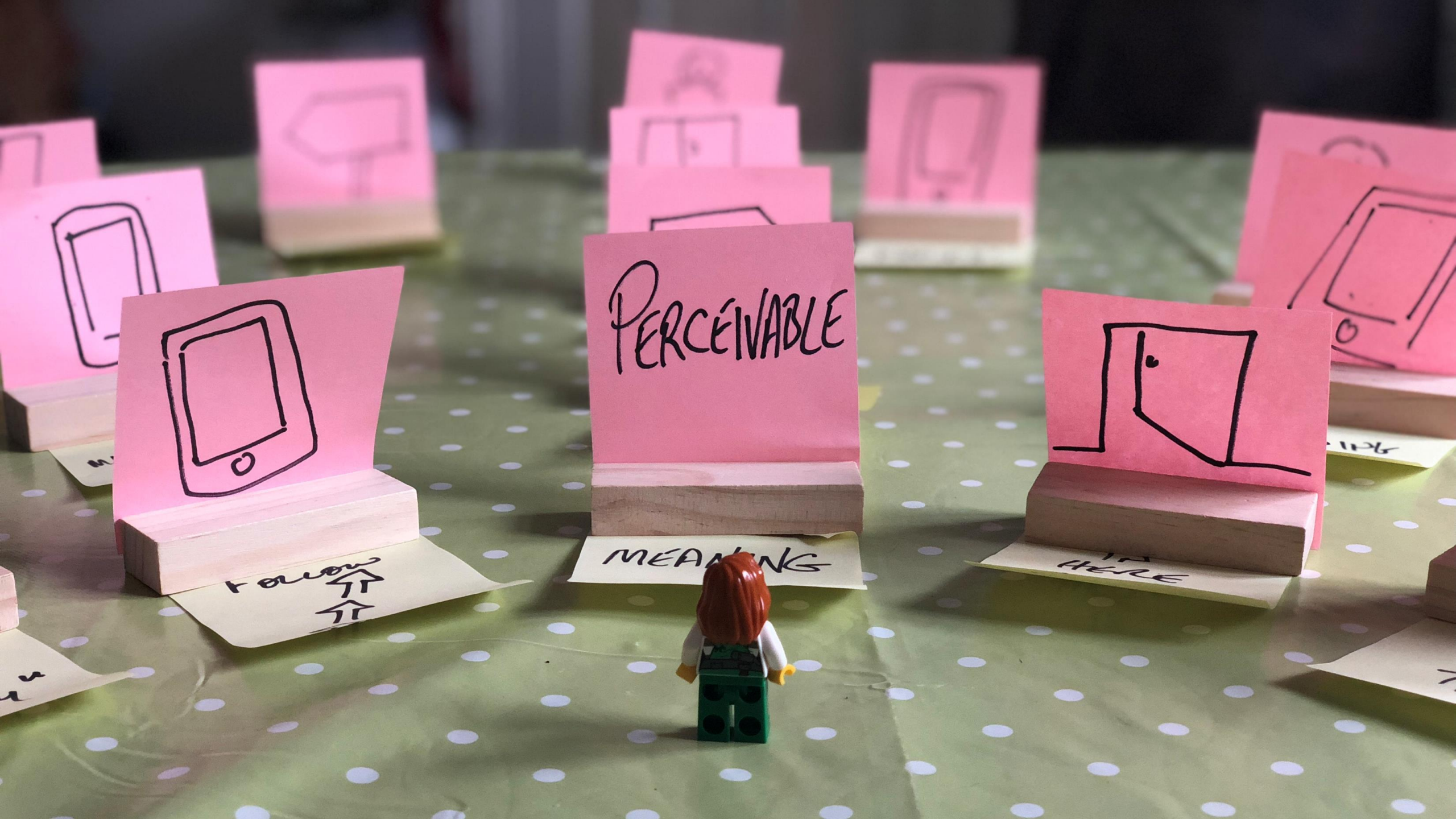

HERE
IS...

Go
THAT
way

Go
THAT

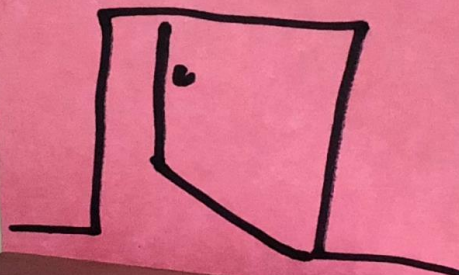
System perspective



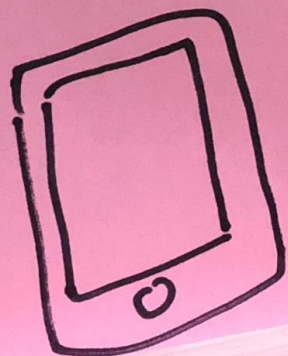


PERCÉVABLE

MEANING

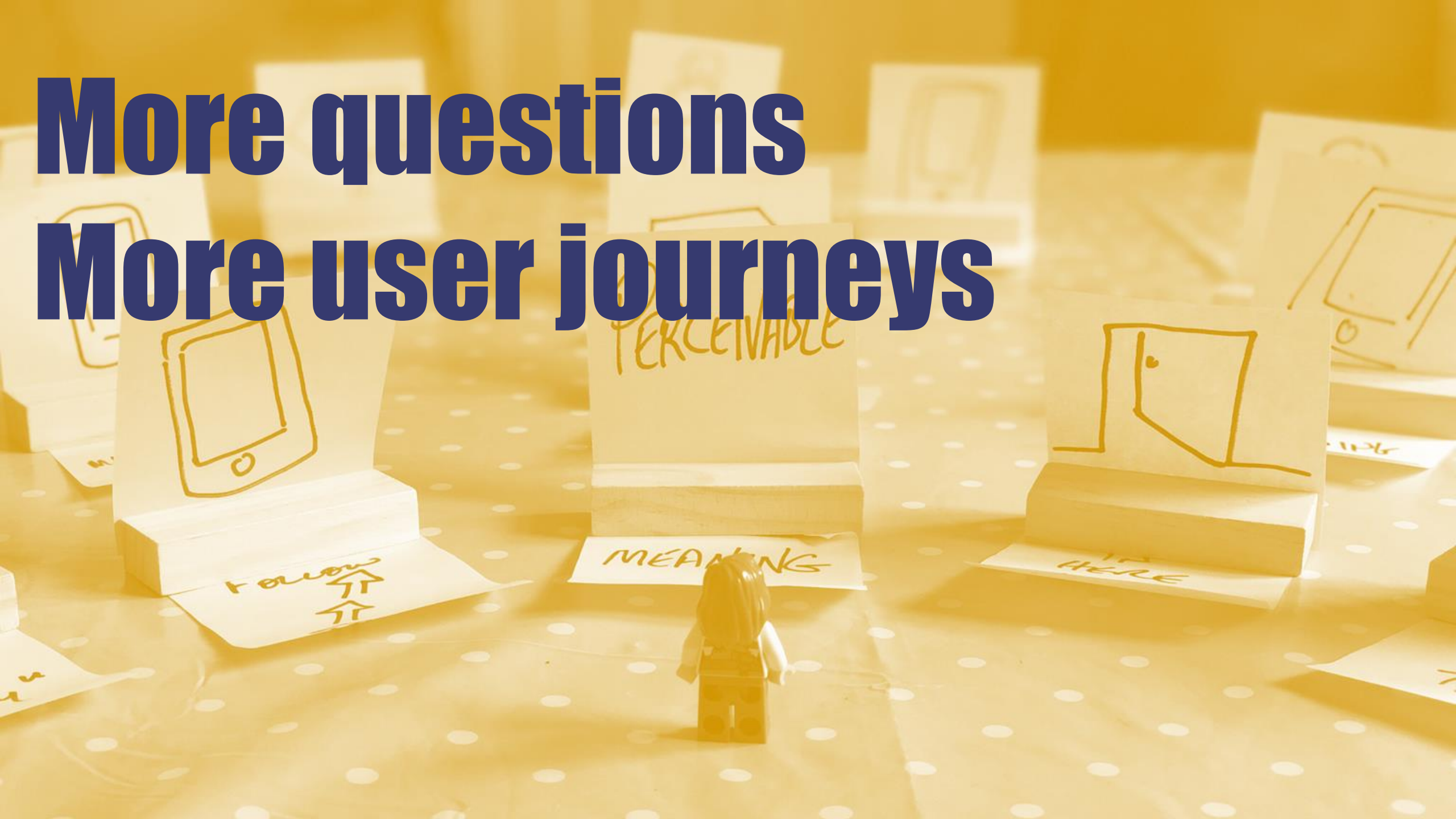


HERE



↑↑
↑↑

More questions More user journeys



MEANING?

MEANING?

MEANING?

MEANING

GO
THAT
WAY

GO

THAT

PHYSICAL
ARCHITECTURE

IF
HERE
IS...

PERCEIVABLE

MEANING



A small detour...

MEANING?

MEANING?

GO THAT WAY

GO

THAT

PHYSICAL ARCHITECTURE

IS...

HERE

PERCEIVABLE

MEANING

Senses

Mixed Reality Design

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Tools

Diversity of people, diversity of places

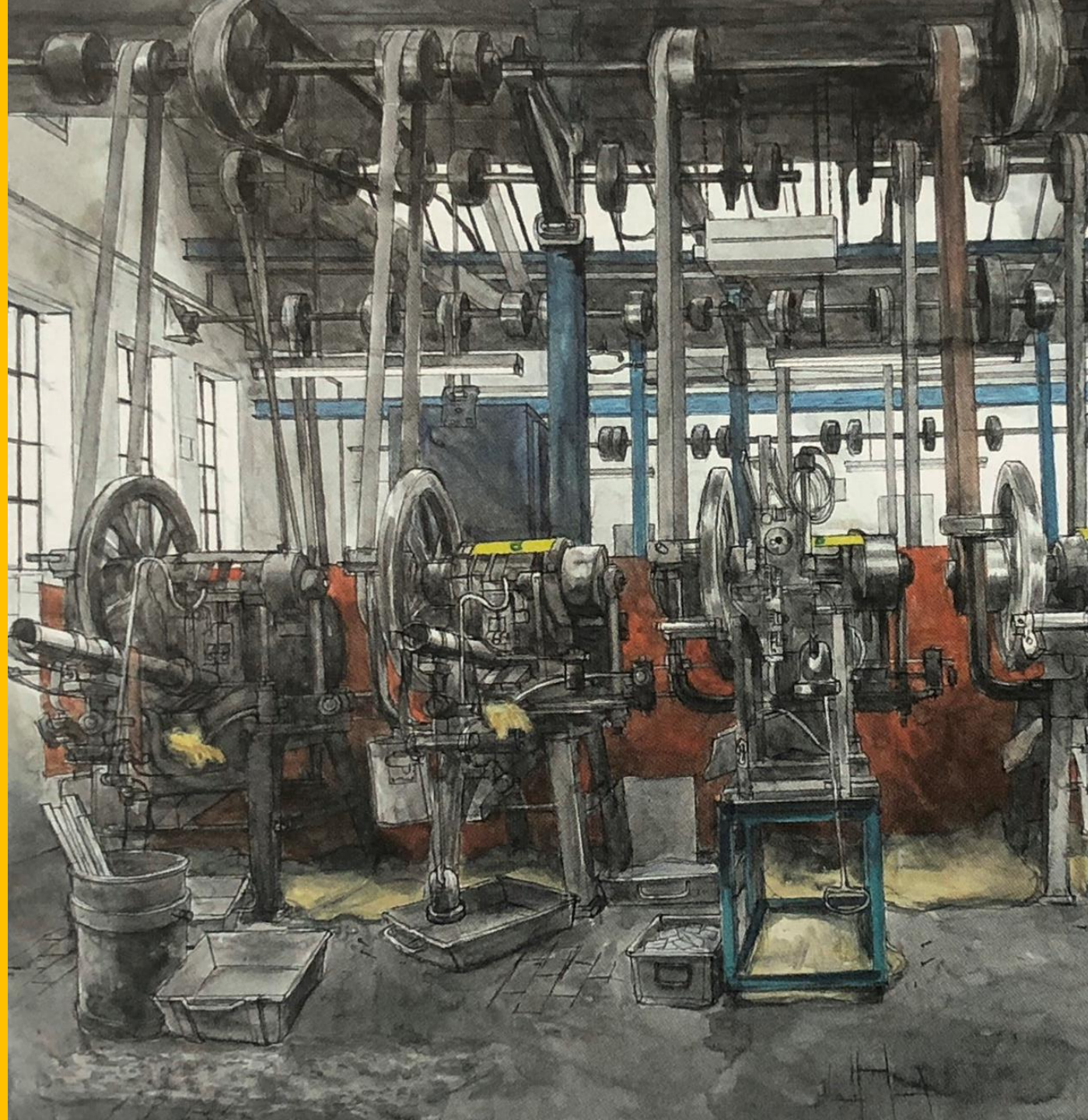
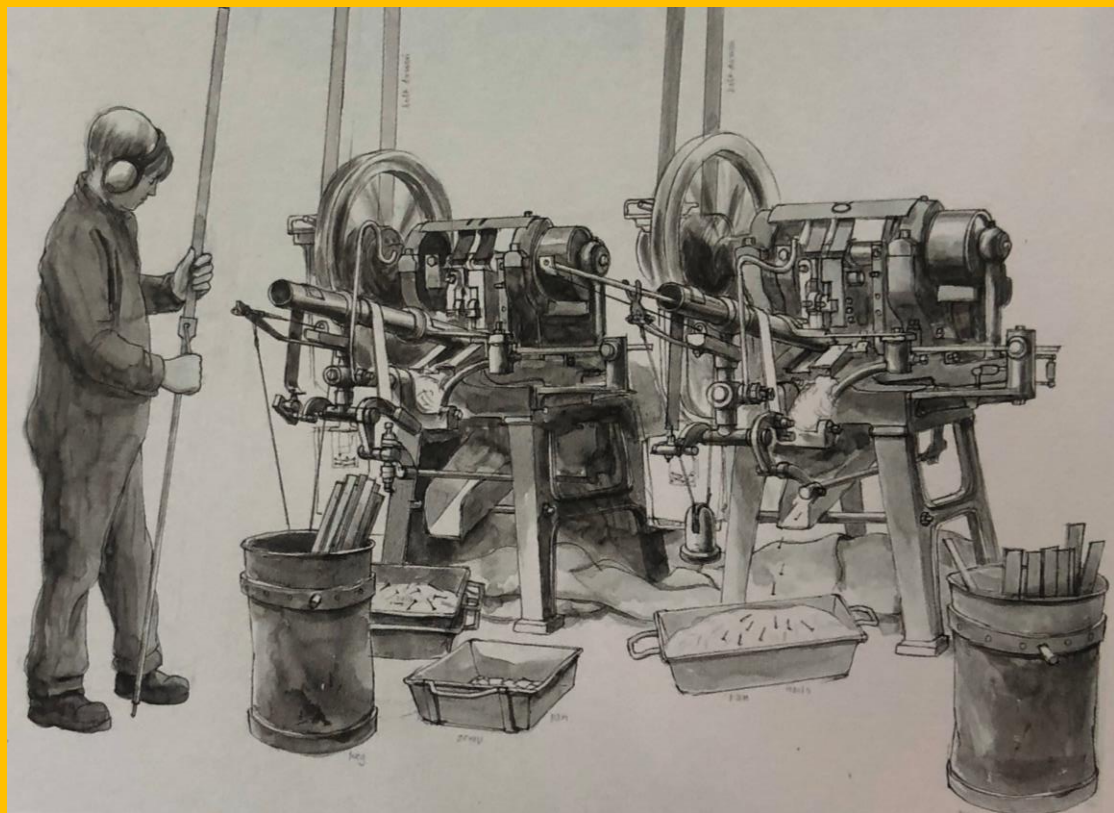
Transcendent User Experience

Make your own tools

Crown Nail

Blued Cut Tacks





**Corollary of mass
production is
custom tools**

**Tool
Room**

**Tool
Makers**



**Maintaining
Infrastructure**

**Making
Innovation**

Police?
How?

in kamiks?
To
use?

Co

MAIN
HALL

Information
Desk



Corridor



Let
Ask
You
Know



Have
That
Collaboration!

**Do not imitate
manufacturing**

**But do make your
own tools**

And back...

Meaning?

Midnight?

GO

THAT WAY

HERE IS...

MEANING

PERCEIVABLE

Technology
&
Tools

Social
Relationships

Augment
←←

Physical
Architecture



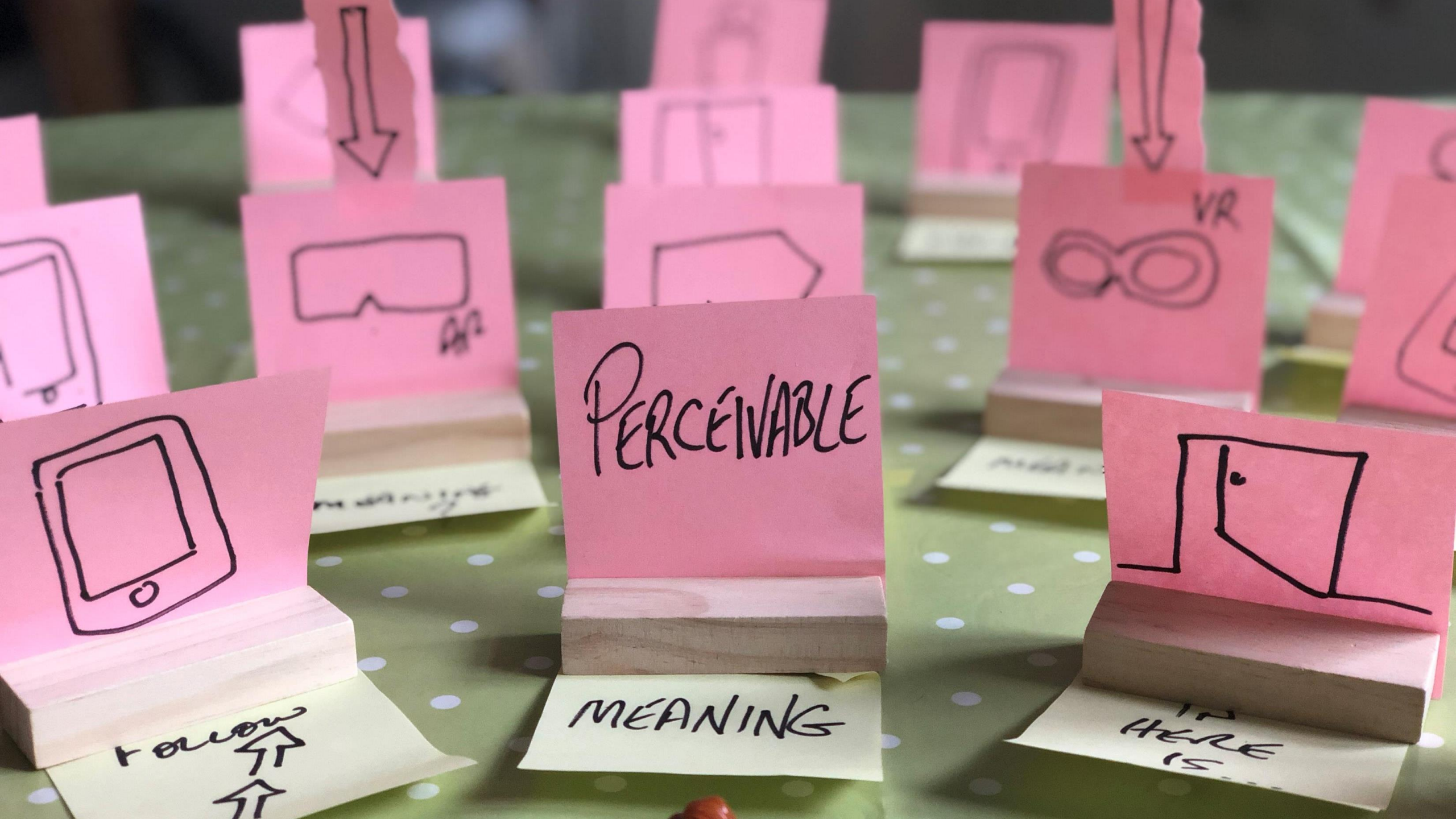
Service Design and sorting into lanes

Technology
&
Tools

Social
Relationships

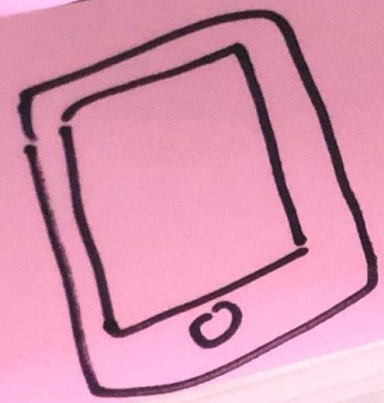
Physical
Architecture

Augment
←←



PERCEIVABLE

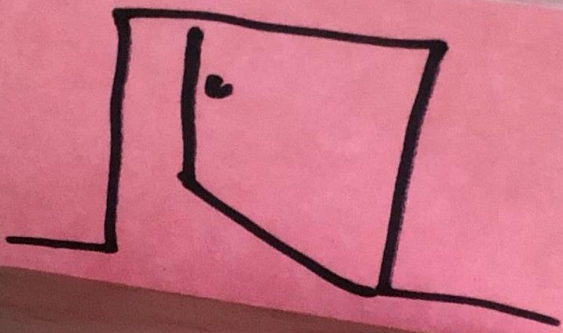
MEANING



Follow
↑↑



VR



HERE IS...



Adding realities



ICAR
TECHNIQUE
T



HERE
IS...

PERCÉIVABLE

MEANING

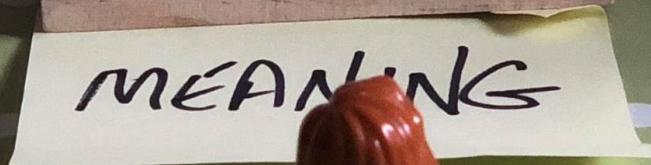
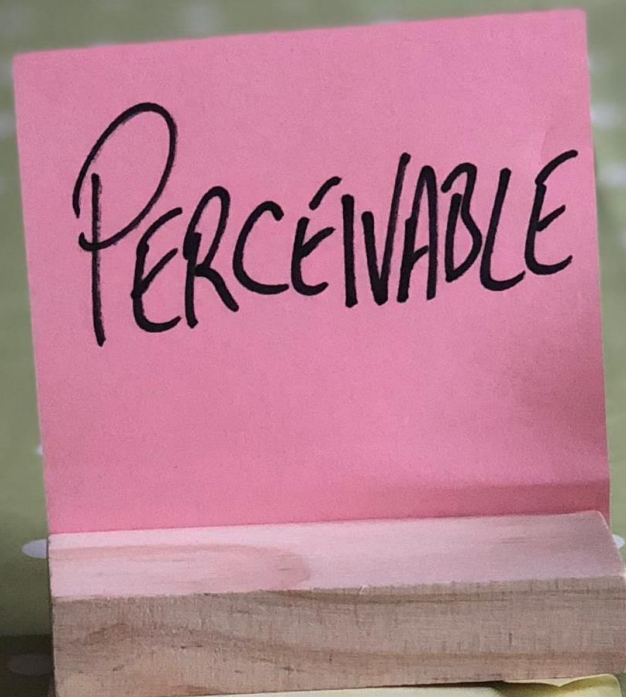
ADJACENT
⇒



MEANING



Virtual realities



AUGMENT
←

PERCEIVABLE

ADJACENT
⇒


MEANING

Mixed realities

ABLE

ADJACENT


VR



MEANING

STORIES

BOOKS




CINEMA

THEATER



DREAMS



DAY DREAMS





**Mixed realities are
everywhere...**



**...and always have
been**

Books

Theatres

Cinema

Daydreams

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**Diversity of people,
diversity of places**

Big problem

Framing Mixed Realities



Building a model





Thresholds

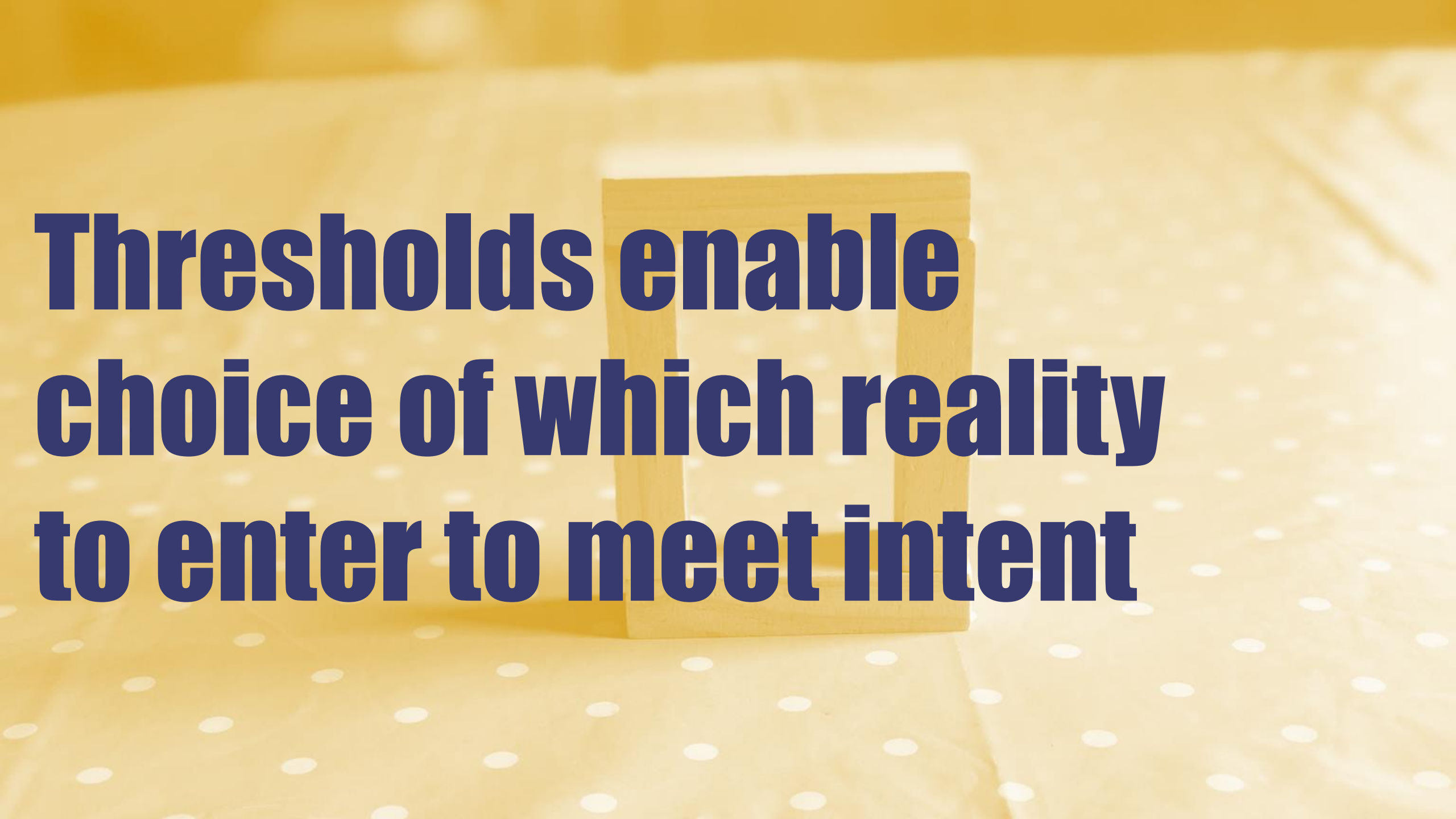


Information Thresholds

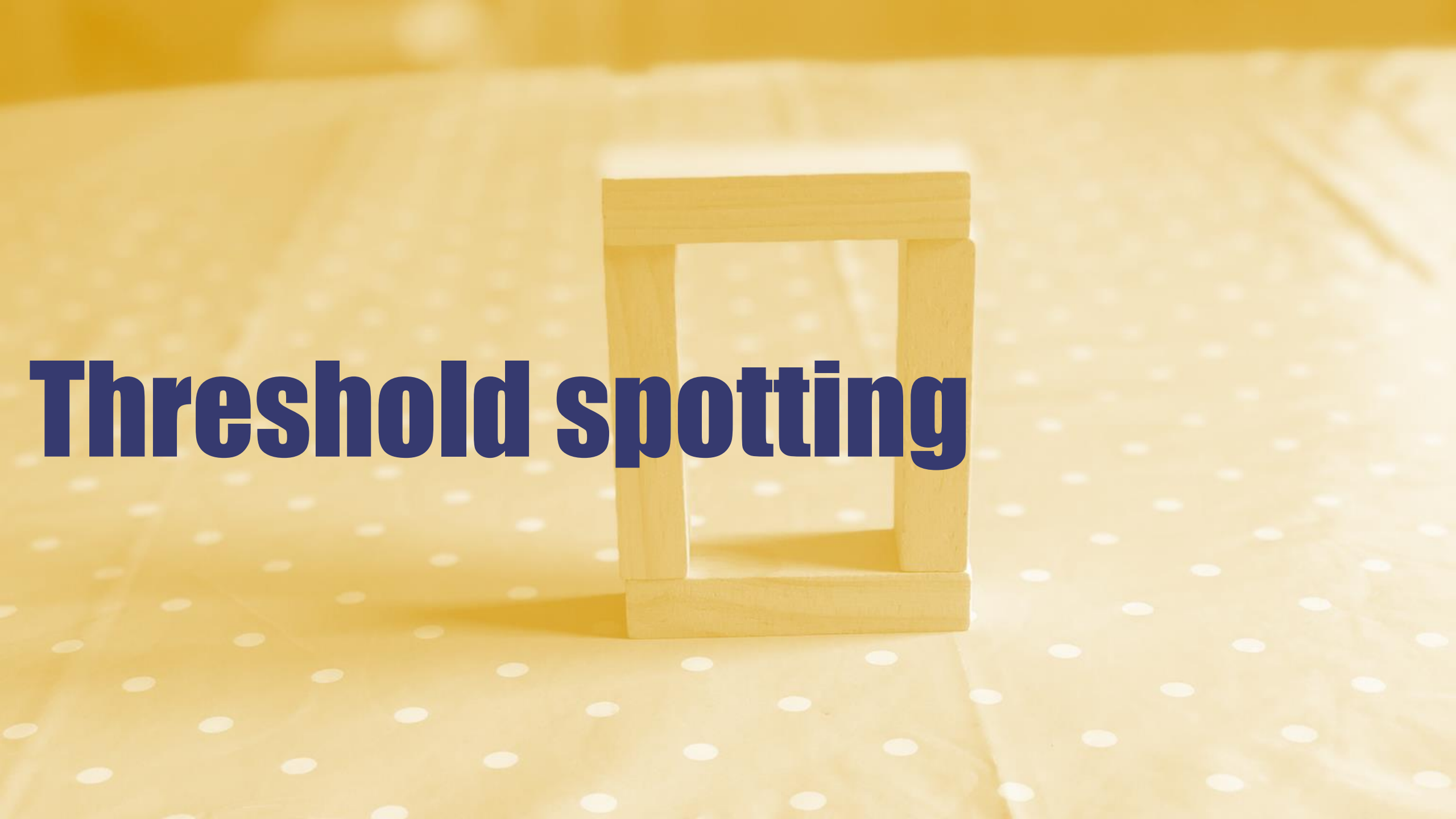


**People move thru
mixed realities all
the time**

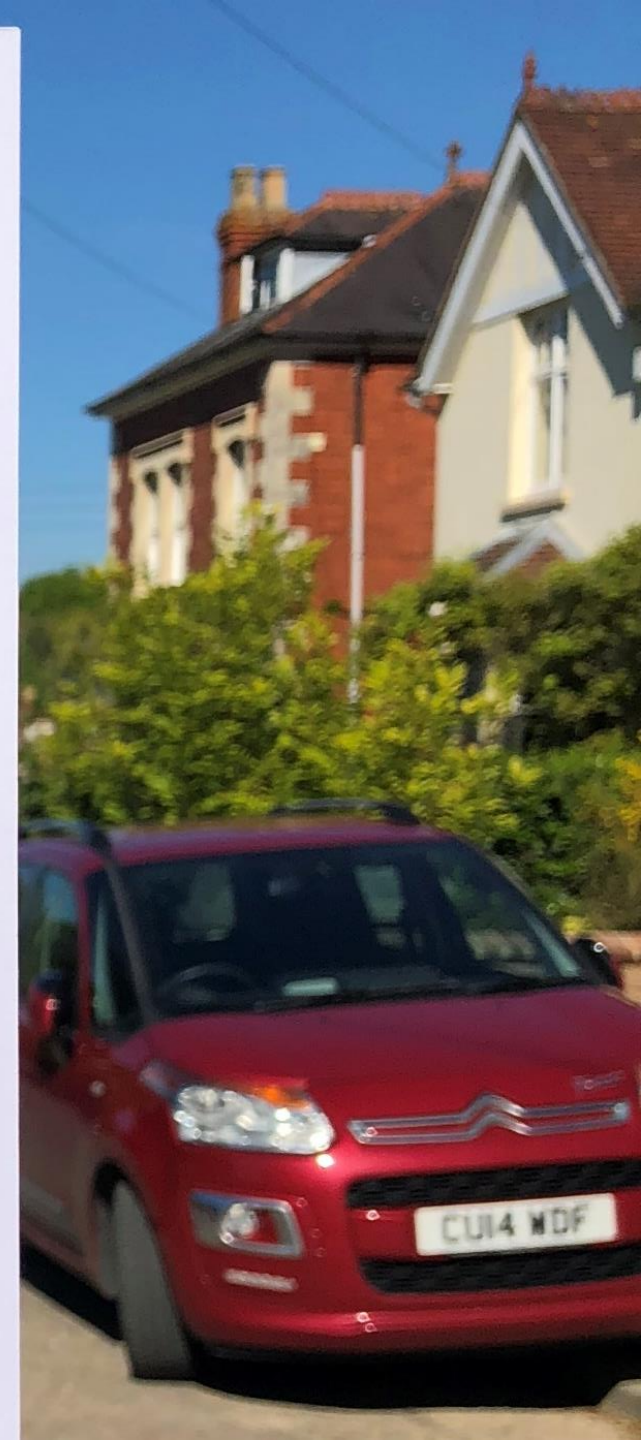
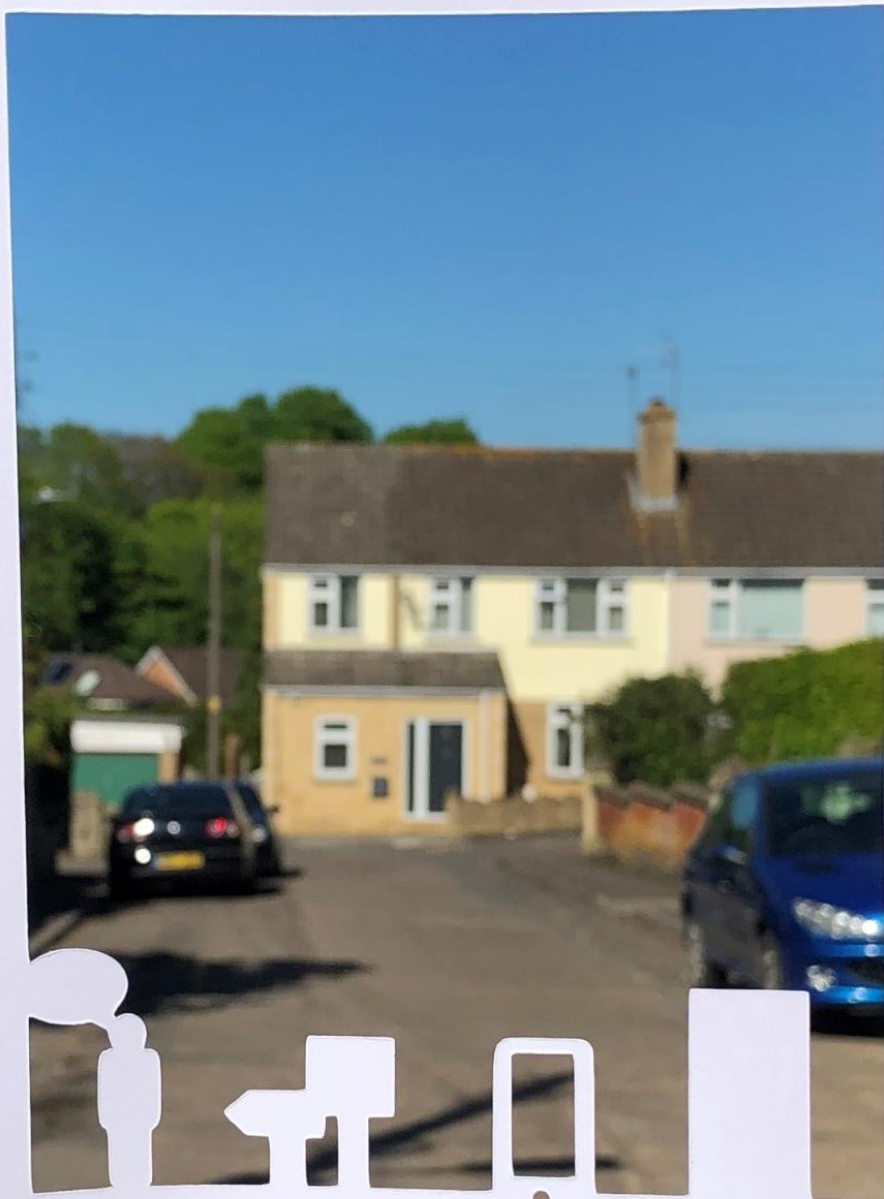
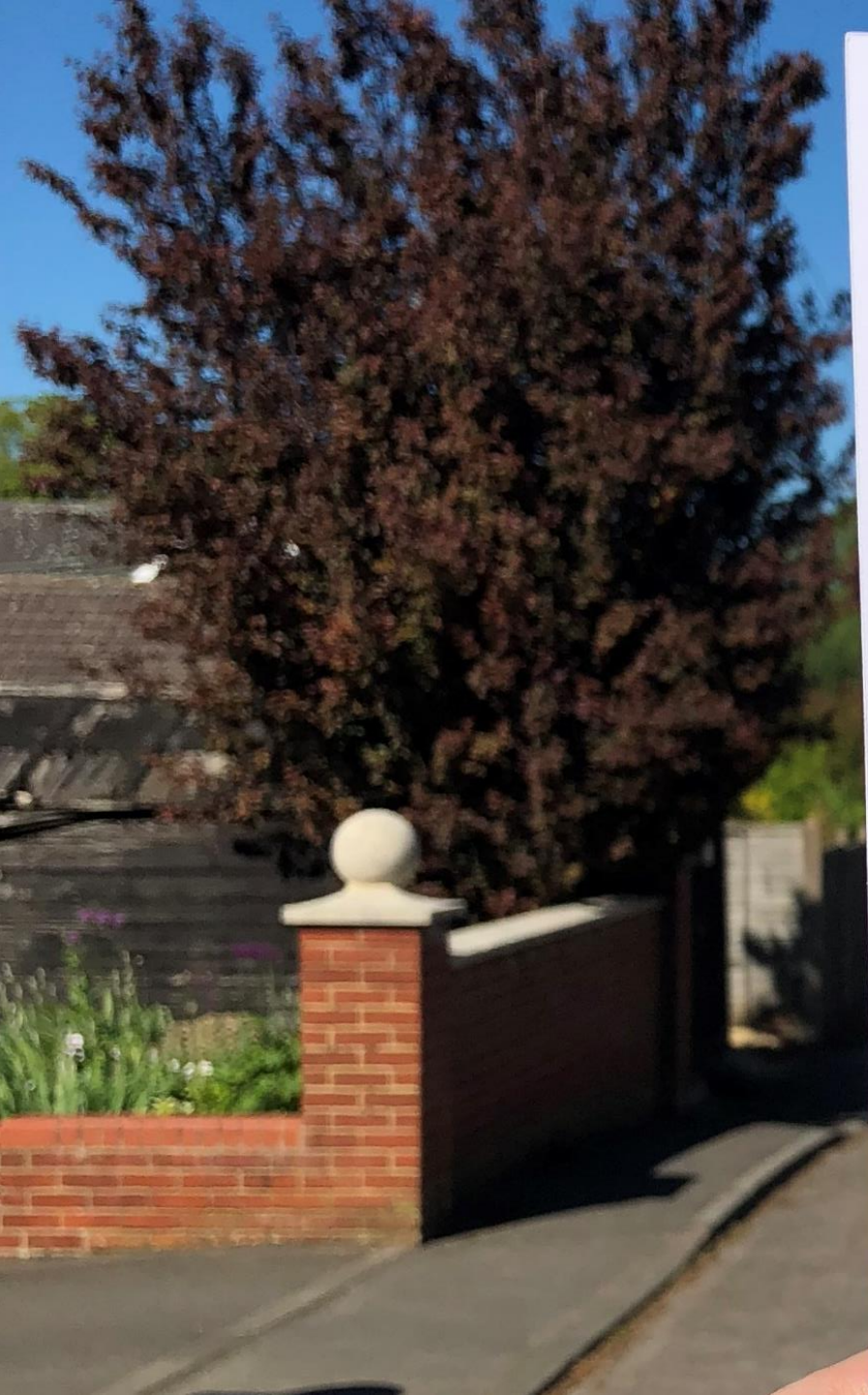


A wooden block stands upright on a yellow surface covered with white dots. The background is a solid yellow color. The text is written in a bold, dark blue font across the middle of the image.

**Thresholds enable
choice of which reality
to enter to meet intent**



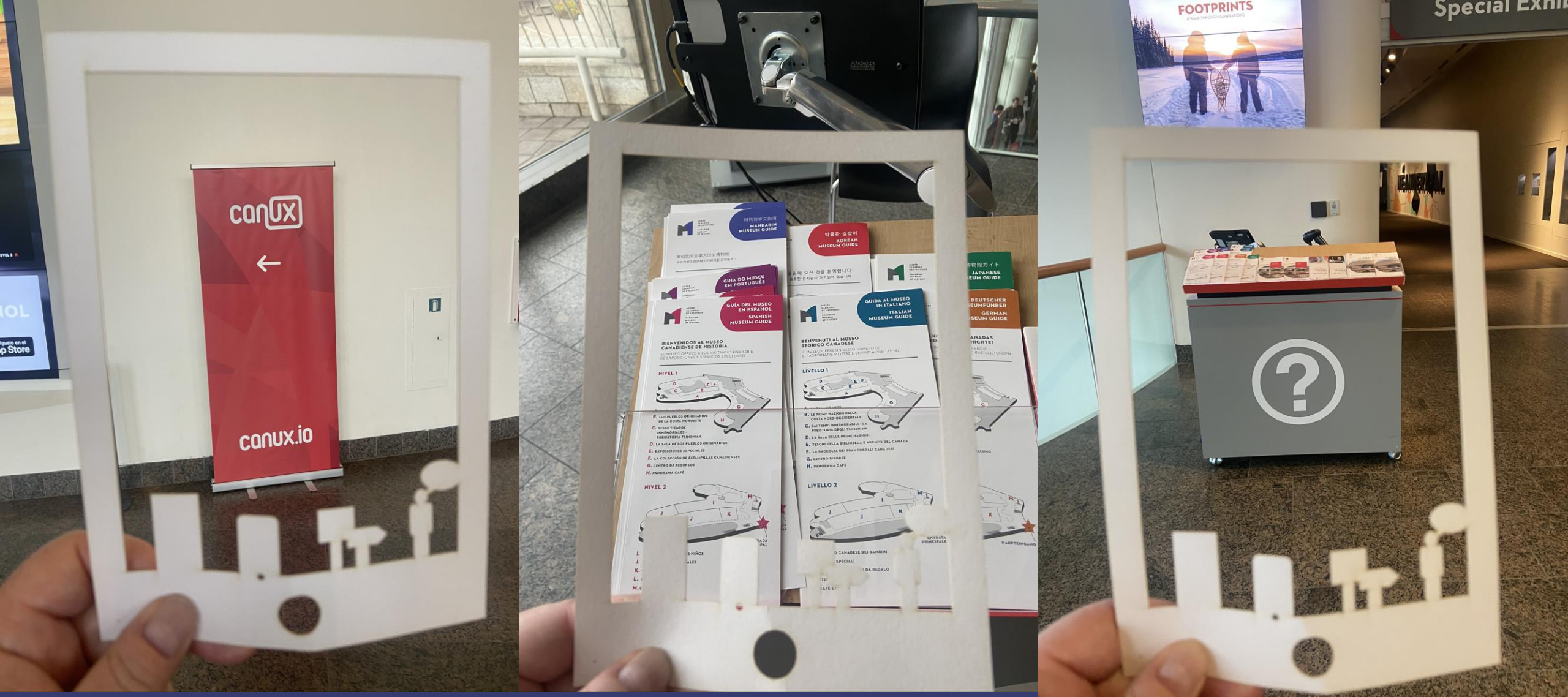
Threshold spotting





Threshold spotting tool

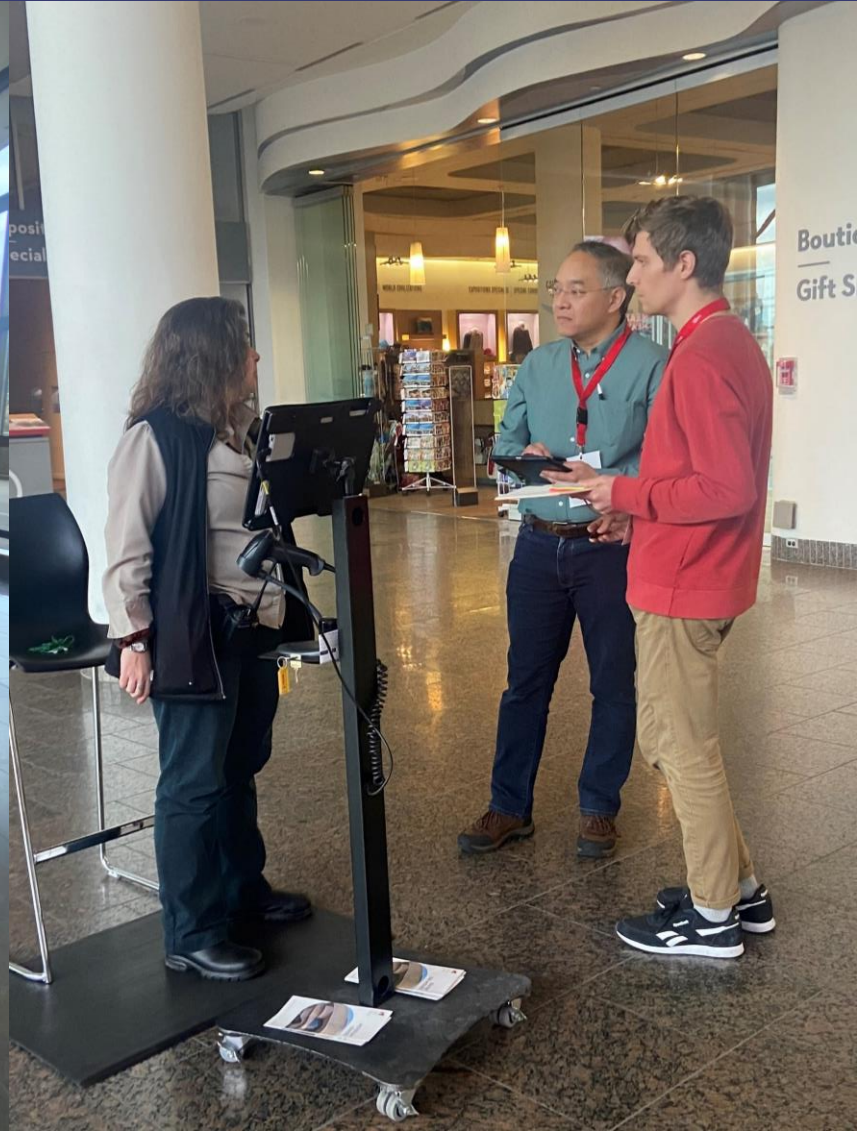


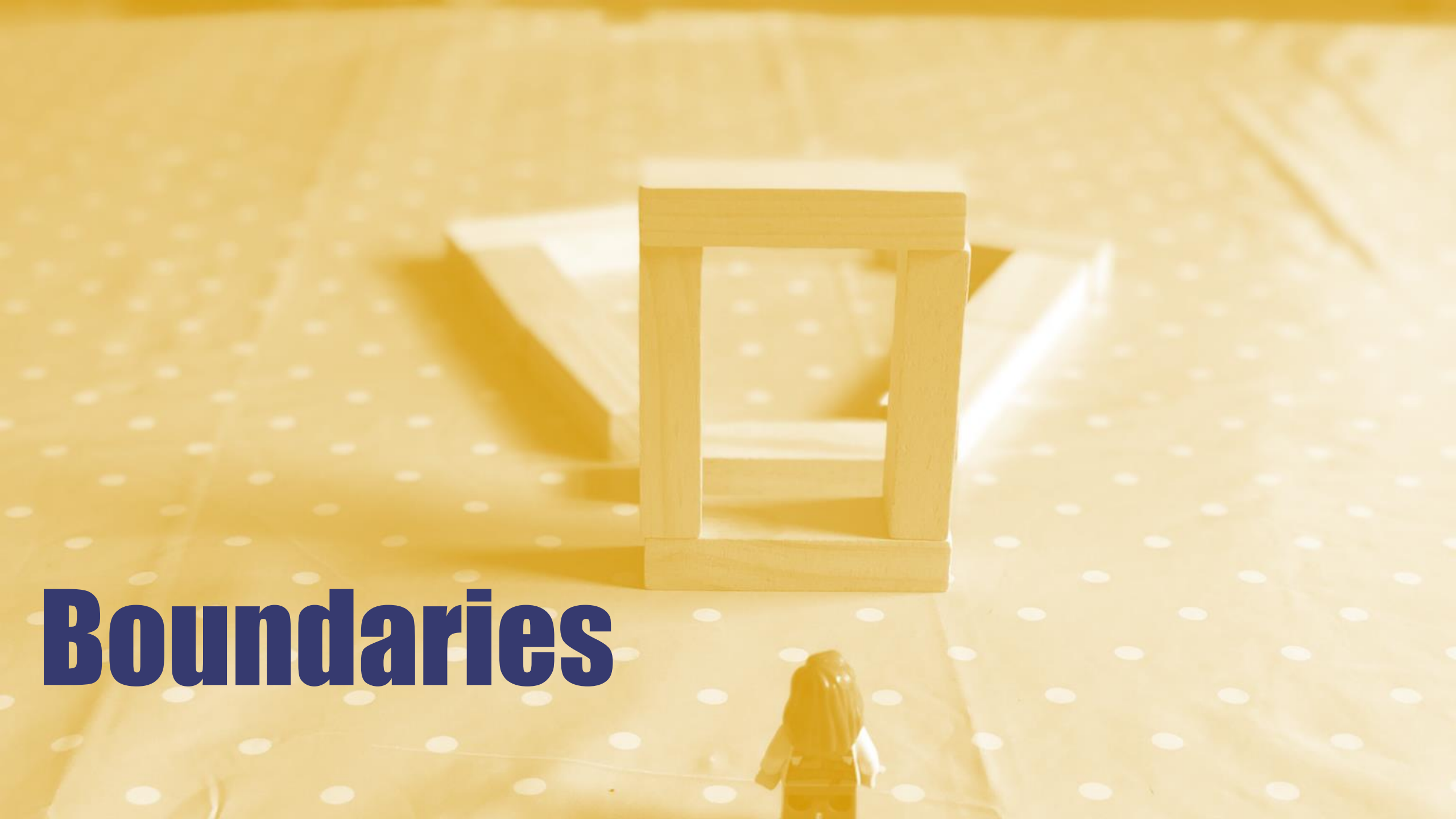


Thresholds are rectangular*

*unless they are human

(with a
rectangular
badge)

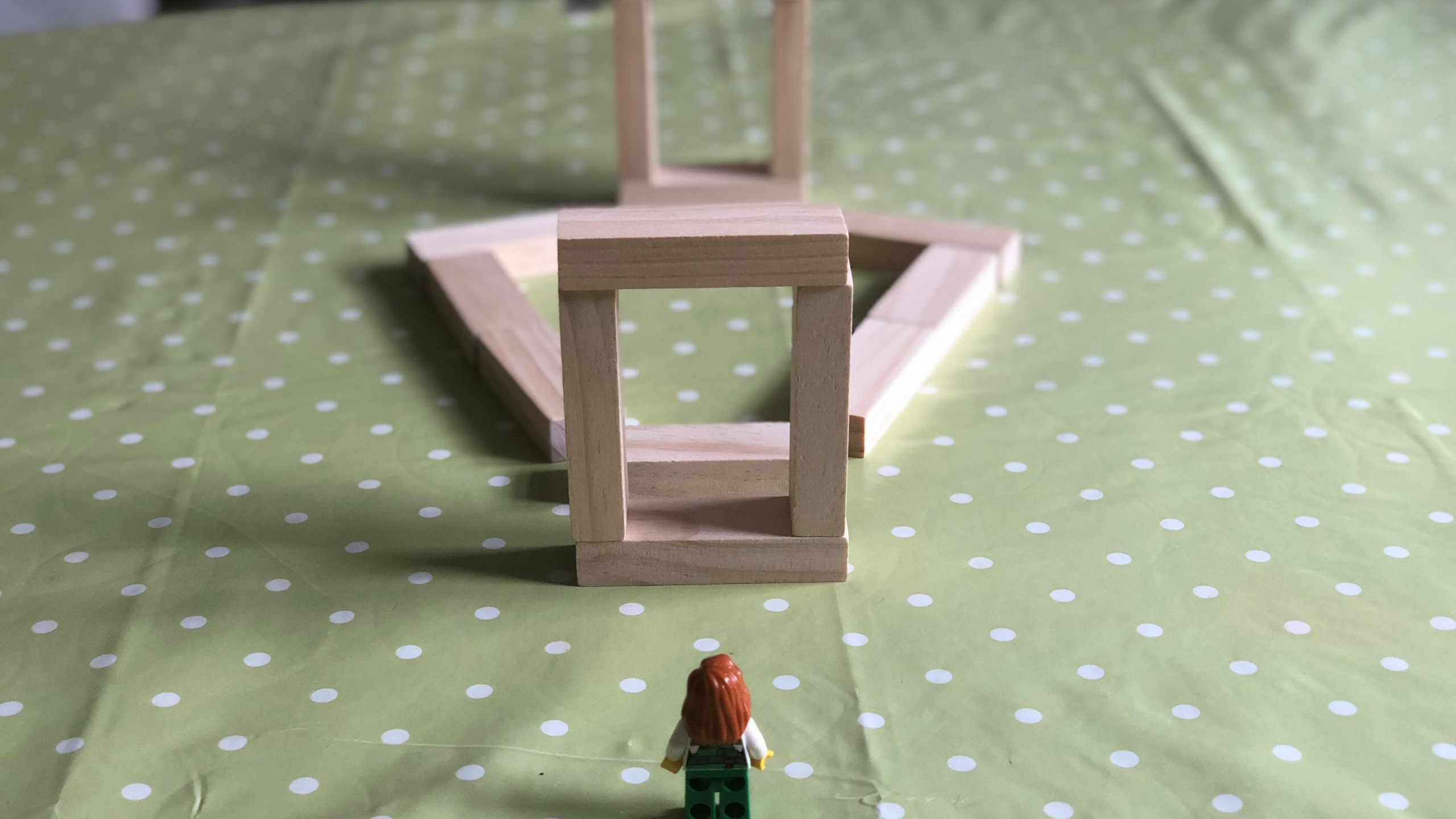




Boundaries

**Boundaries
enable
choices**







**Human perspective:
thinking, dreaming,
imagining**





**Choosing
realities to
enter**



**Another
detour...**



Senses

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**Diversity of people,
diversity of places**

**Autonoetic
consciousness**

Autonoesis

**“an awareness of you, the
experiencing person, as part of
the experience”**

Joseph LeDoux

The background is a warm, yellow-toned photograph. It shows several wooden blocks of various sizes scattered on a surface covered with a white polka-dot pattern. A small, dark-colored toy figure is visible in the lower center of the frame. The overall mood is nostalgic and playful.

**We all journey
back & forward
thru time and
place**

**Autonoesis is unique
to humans***

**Autonoesis is unique
to humans***

*** We cannot prove your pets can do this
because we do not have shared language**

**You, and everyone
you meet, are
extraordinary**

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**Diversity of people,
diversity of places**

**Designing for
diversity of people in
a diversity of
places?**

Postal Museum, London, UK



Photo: <http://alondoninheritance.com>

**Listen to many
people!**



Less like this

Isolated in technology



More like this

**Threshold:
held by
human
storyteller**



**Boundary:
centered in
humanity,
immersed
in stories**



Problematizing people

**Accessibility framed
as problem with
impairments**

Accessibility framed as opportunity for capacities

**Social Model of
Disability:
broken design not
broken people**

**Design framed as
problem with
humanity**

**Design framed as
solution thru
humanity**

**Human centred:
bad design not
bad people**

**People are
amazing**

The uniqueness of human consciousness



**We all move back and
forward thru many realities**

**Work with the huge
diversity of people**

Anchor to human perspective and perception

**Being human is the
solution**

**Being you is the
solution**

**Because you are
extraordinary**

