

# Human Factors in the Metaverse?

Could it be 'Better than Real Life'?

Virtual Training Spaces for Non-Technical Skill Development

Denis Manson – Ten Hammers

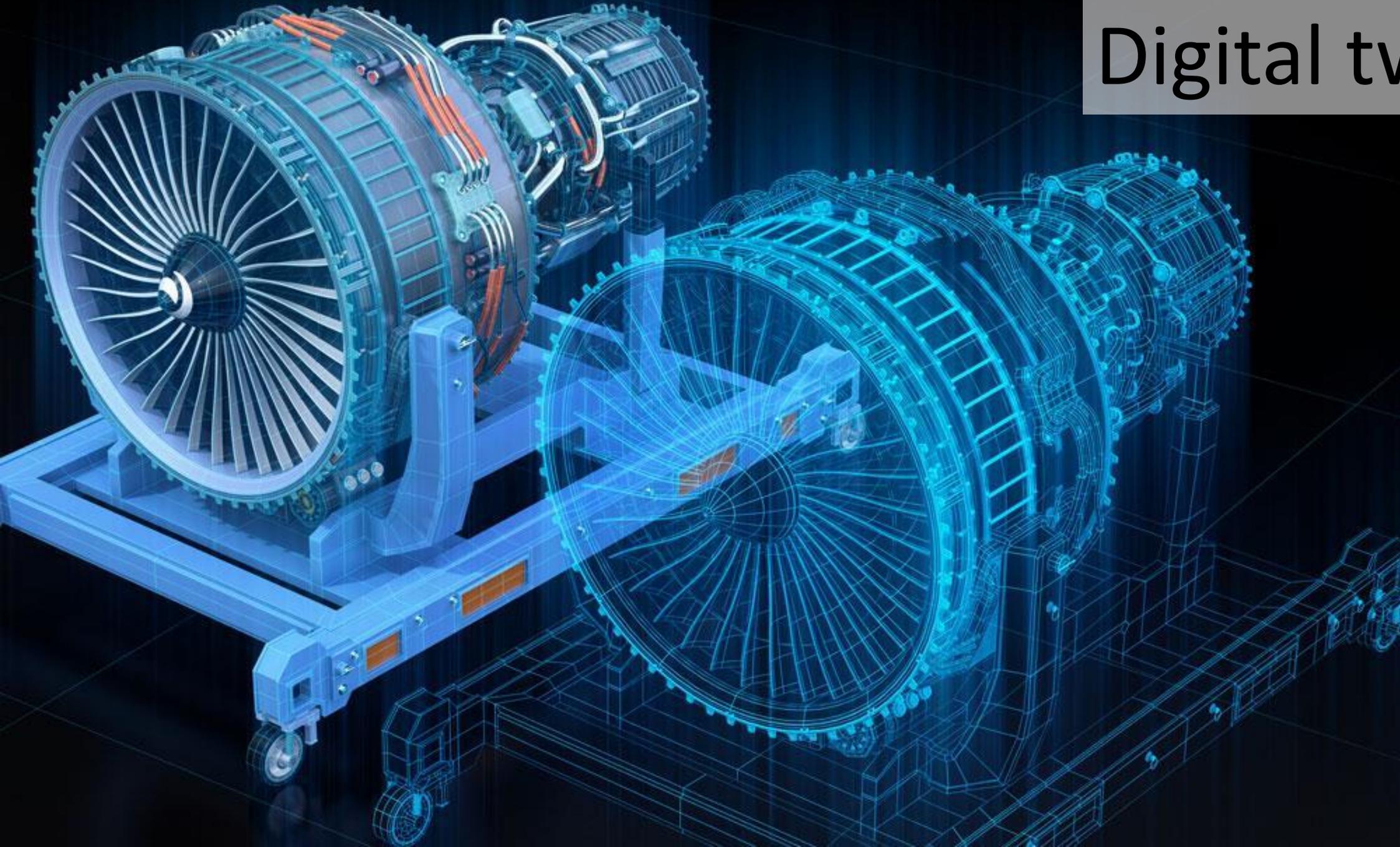


**apats2023**  
SINGAPORE



***Future?***

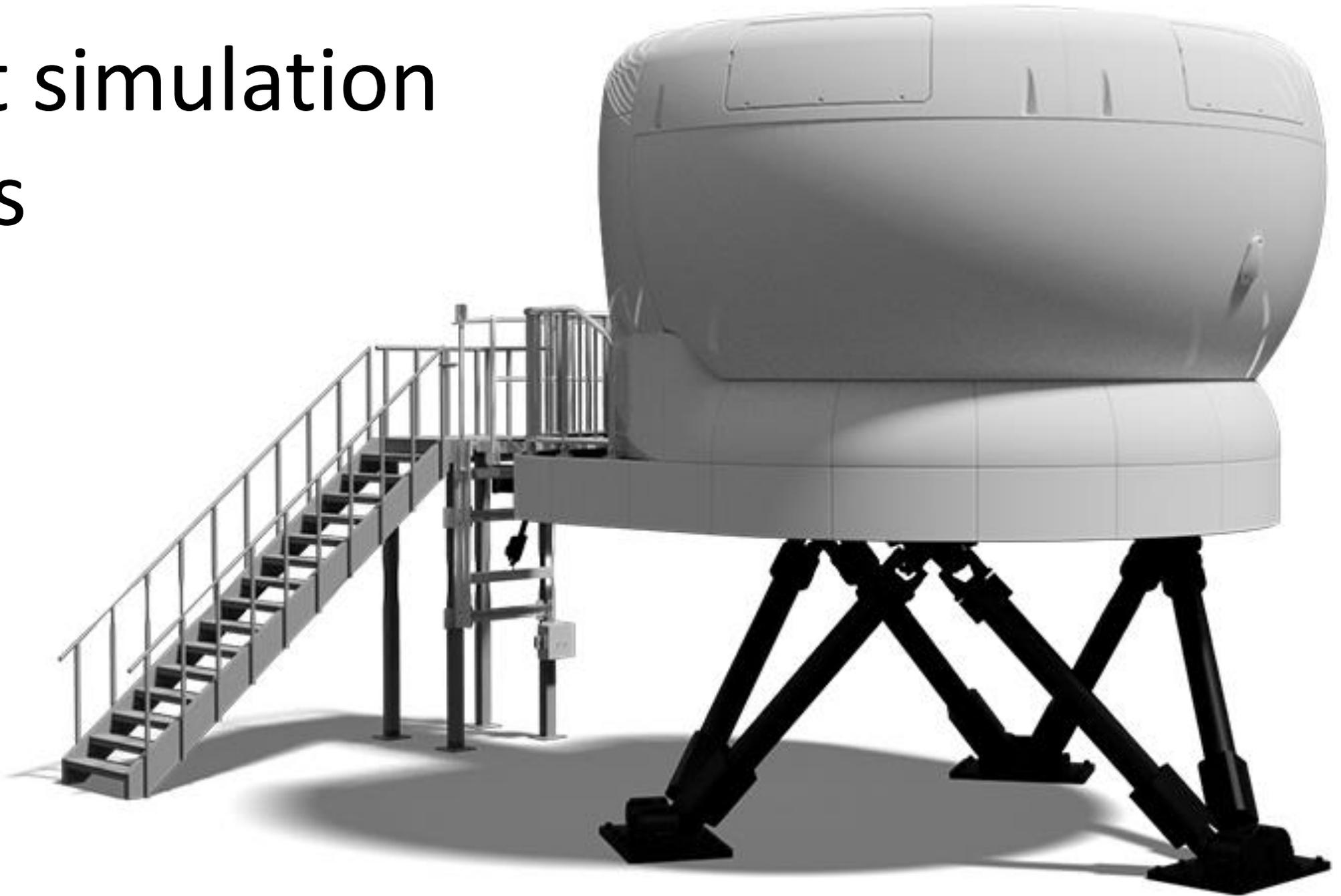
# Digital twin



# Flight simulation 1920s



# Flight simulation 2020s





Dangerous

Engine failure in flight



Impossible

Walking on Mars



Counterproductive

Drink driving education



Expensive

Fuel burn



Repetition

Practice makes perfect

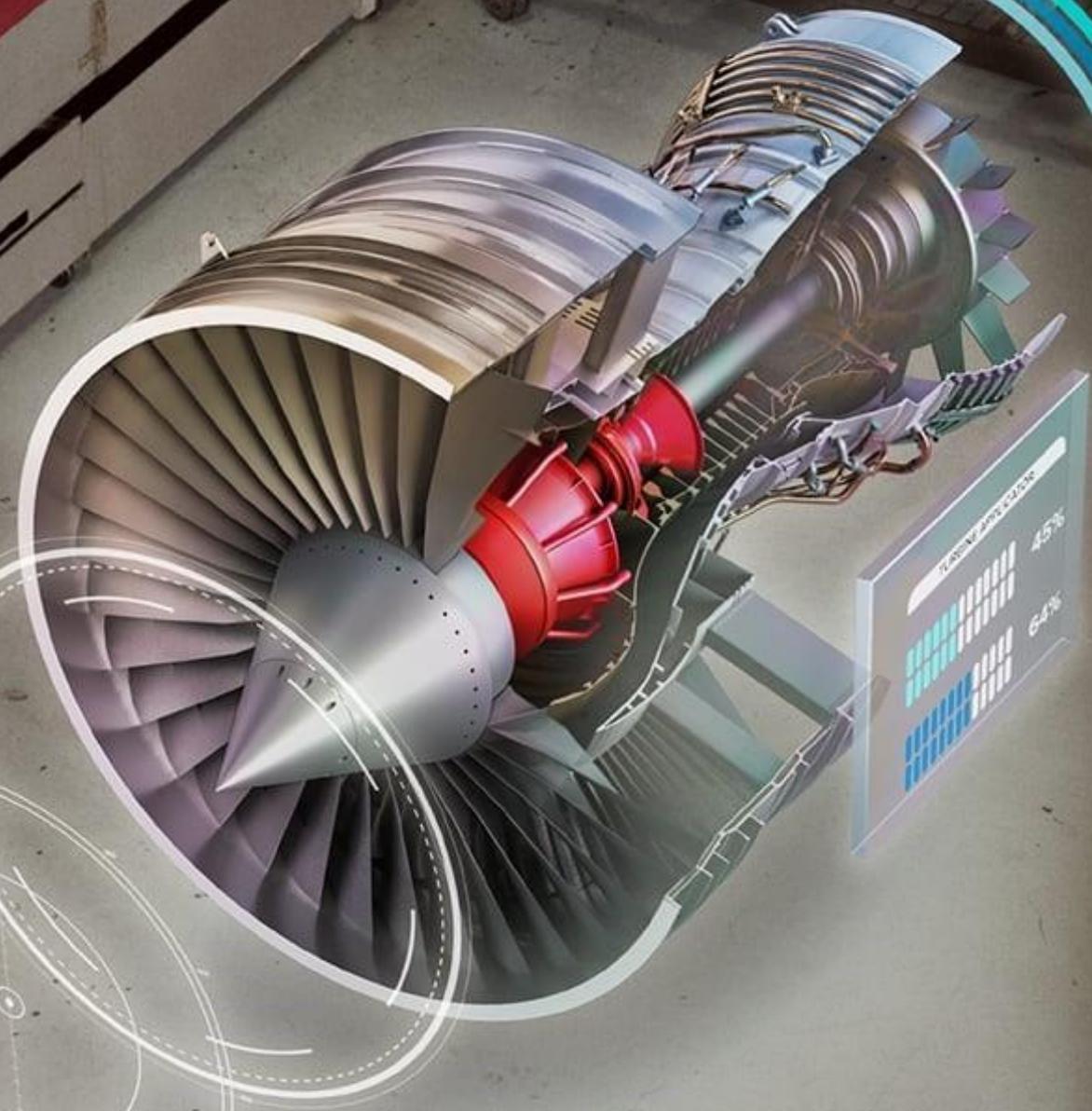
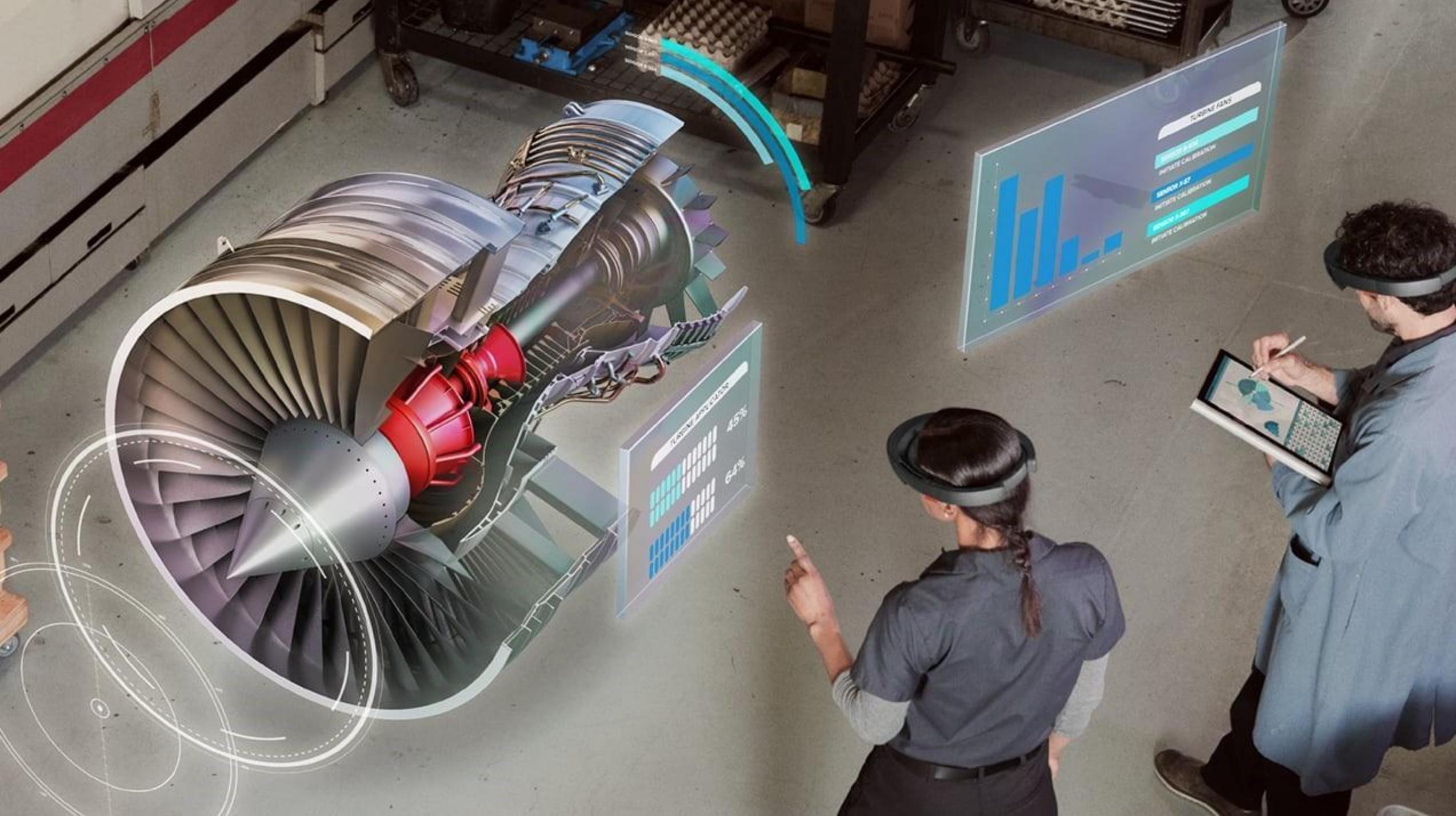


Variability

Simplification

Making small things large  
Making large things small











Dangerous

Interviewing psychopaths



Impossible

Conversing freely in Swahili



Counterproductive

Use experimental social techniques



Expensive

Bringing a group together



Repetition

Practice makes perfect



Variability

Depth, breadth of experience



**Real human to 'virtual' human**  
e.g. interviewing skills, customer service skills

# Virtual Humans Outperform Real People Teaching Career Leadership Skills, Study Finds

Bryan Robinson, Ph.D. Contributor ⓘ

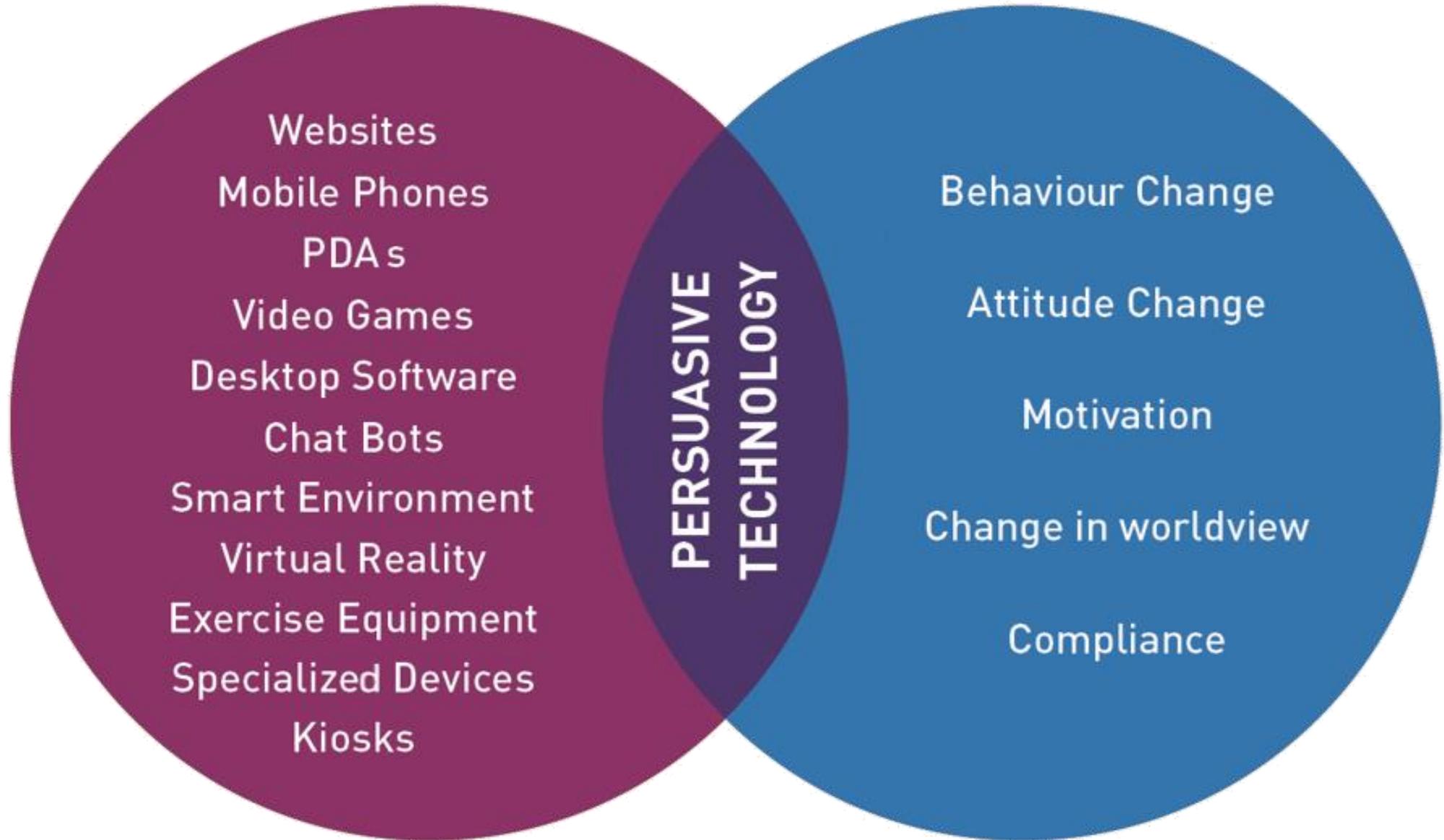
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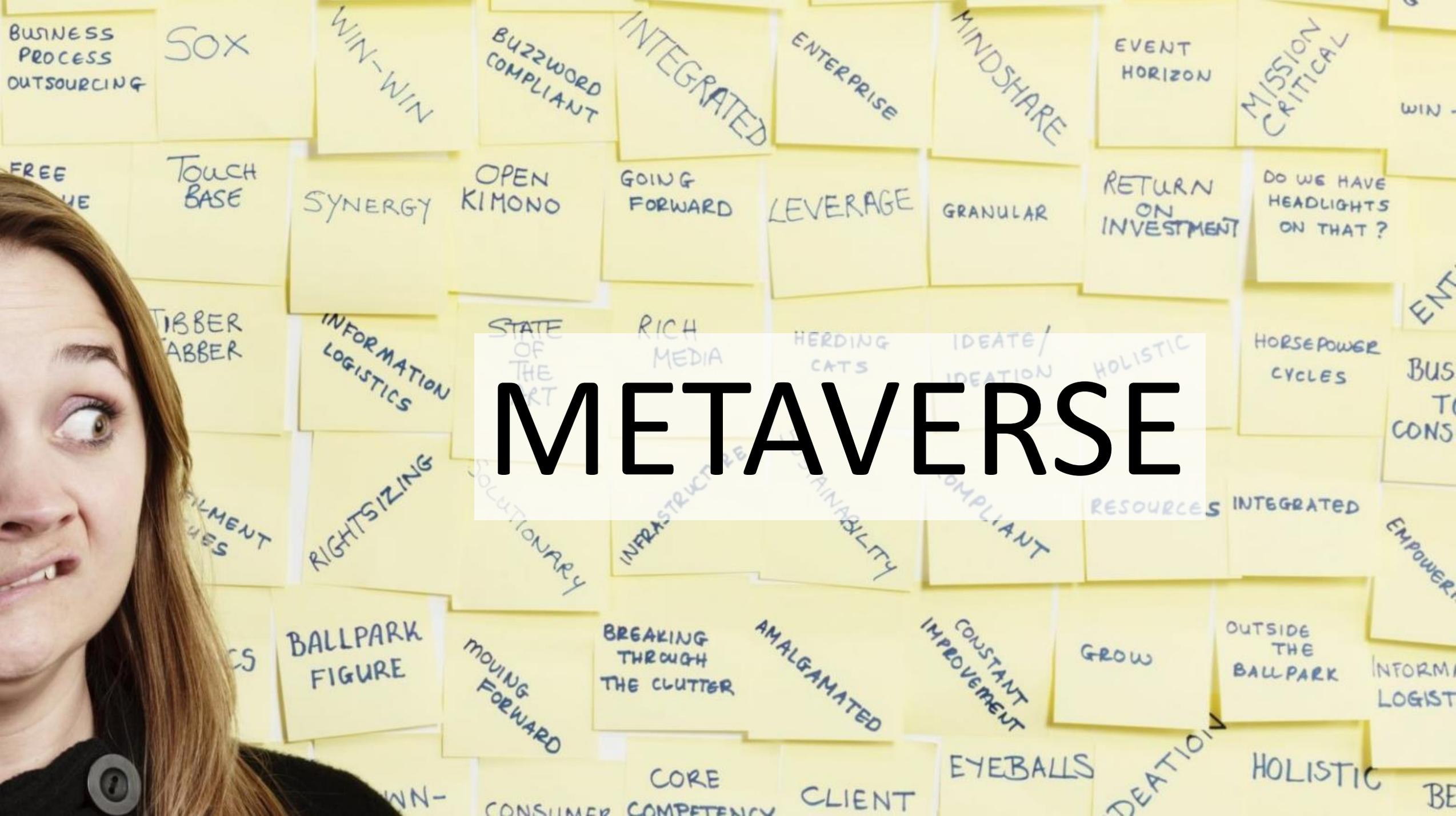




# COMPUTER

# PERSUASION





# METAVVERSE

BUSINESS  
PROCESS  
OUTSOURCING

SOX

WIN-WIN

BUZZWORD  
COMPLIANT

INTEGRATED

ENTERPRISE

MINDSHARE

EVENT  
HORIZON

MISSION  
CRITICAL

FREE  
THE

Touch  
BASE

SYNERGY

OPEN  
KIMONO

GOING  
FORWARD

LEVERAGE

GRANULAR

RETURN  
ON  
INVESTMENT

DO WE HAVE  
HEADLIGHTS  
ON THAT?

TIBBER  
TABBER

INFORMATION  
LOGISTICS

STATE  
OF  
THE  
ART

RICH  
MEDIA

HERDING  
CATS

IDEATE/  
IDEATION

HOLISTIC

HORSEPOWER  
CYCLES

BUS  
TO  
CONS

FILMENT  
PIECES

RIGHTSIZING

SOLUTIONARY

INFRASTRUCTURE  
SUSTAINABILITY

COMPLIANT

RESOURCES INTEGRATED

EMPOWER

CS

BALLPARK  
FIGURE

MOVING  
FORWARD

BREAKING  
THROUGH  
THE CLUTTER

AMALGAMATED

CONSTANT  
IMPROVEMENT

GROW

OUTSIDE  
THE  
BALLPARK

INFORMA  
LOGIST

WIN-

CONSUMER  
COMPETENCY

CLIENT

EYEBALLS

DEATION

HOLISTIC

BE



Coy  
VirBELA System Administrator

Jacob.Westerberg  
VirBELA Learn

Daniel.Waltman  
VirBELA Artist

Dan\_Sinni

Gabe.Baker

NickRay  
VirBELA Marketing

BrysonKath

Dalton.Steele  
VirBELA Specialist

Brazen.Abelgas

SheldonBrown

Christian.Nguyen  
VirBELA QA

Bynhan  
VirBELA Staff

Campbell  
VirBELA

EvanVore

Jeff.Whiteside

AndrewGomoll  
VirBELA

BlairScott



Alex

ErikH  
VirBELA Dev

Wes  
VirBELA Dev

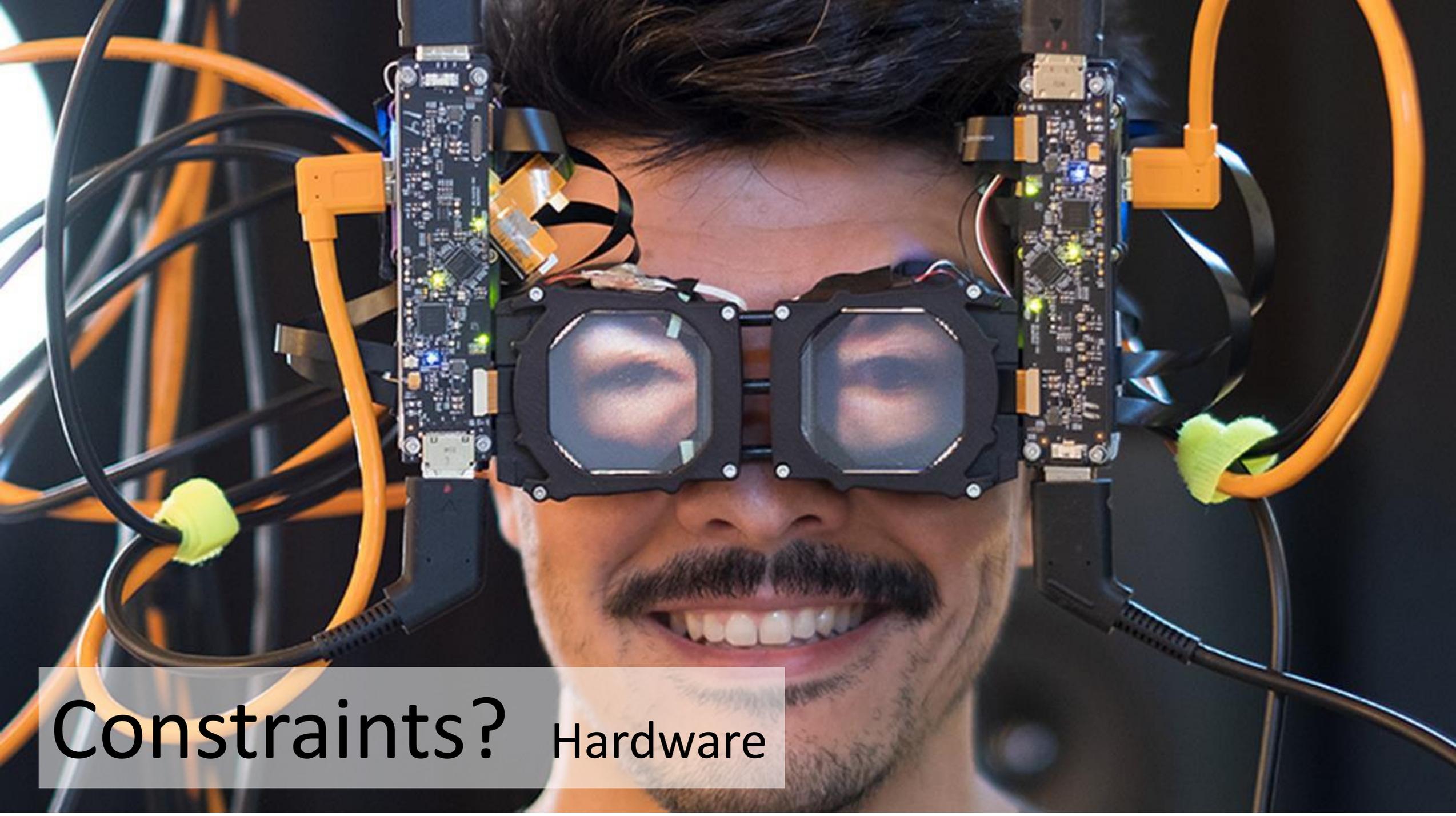
Nicole  
VirBELA Artist



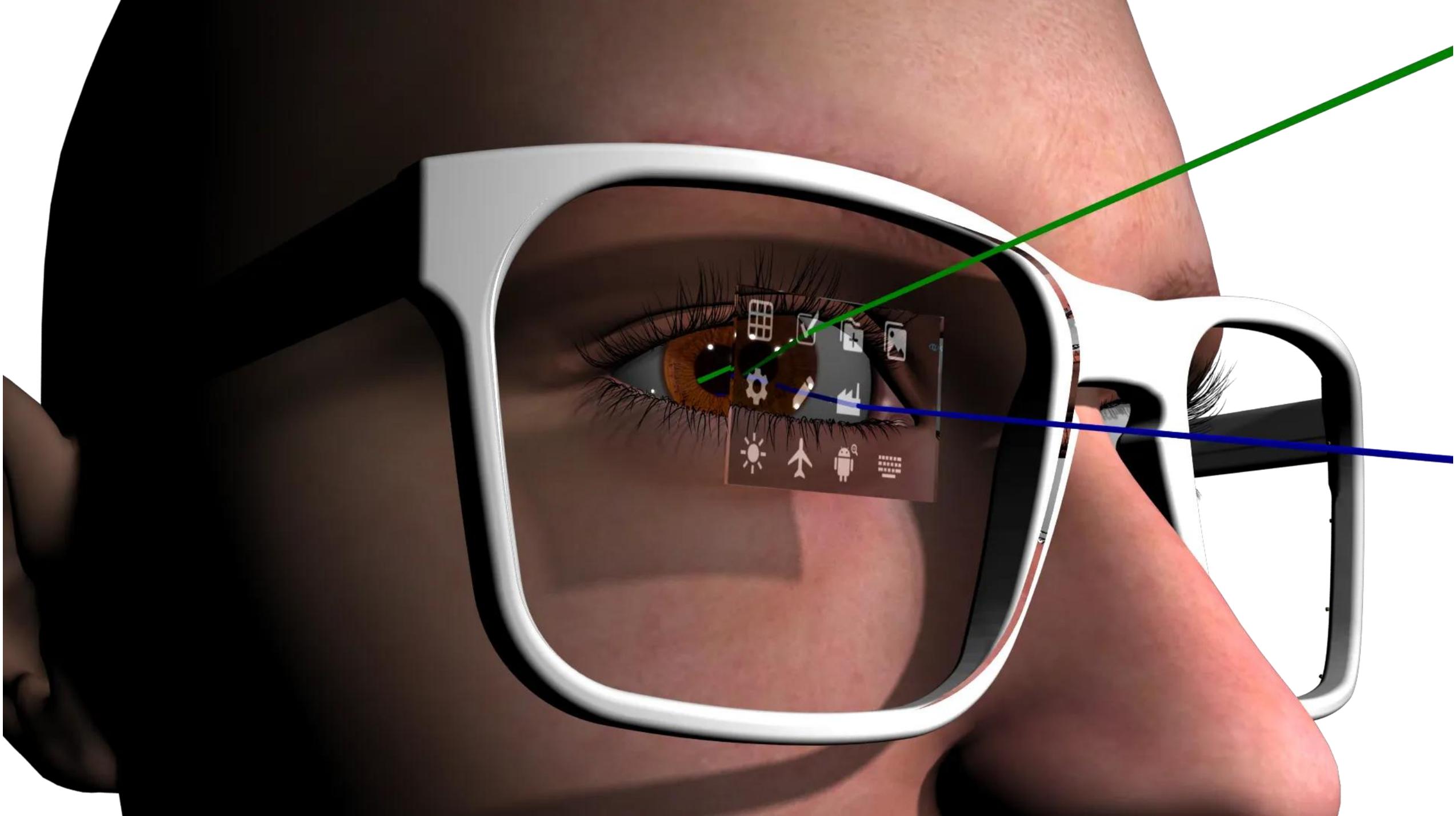




Constraints? Eeeew



Constraints? Hardware



# THIS IS XR

TYR





Constraints? Cost



Constraints? Artificial intelligence



# Artificial intelligence

(from Oppermann)

Can you tell?

Does it matter?

How is it qualified?

Who is responsible?

Can you trust it?

What is happening to my data?

How informed is my consent?

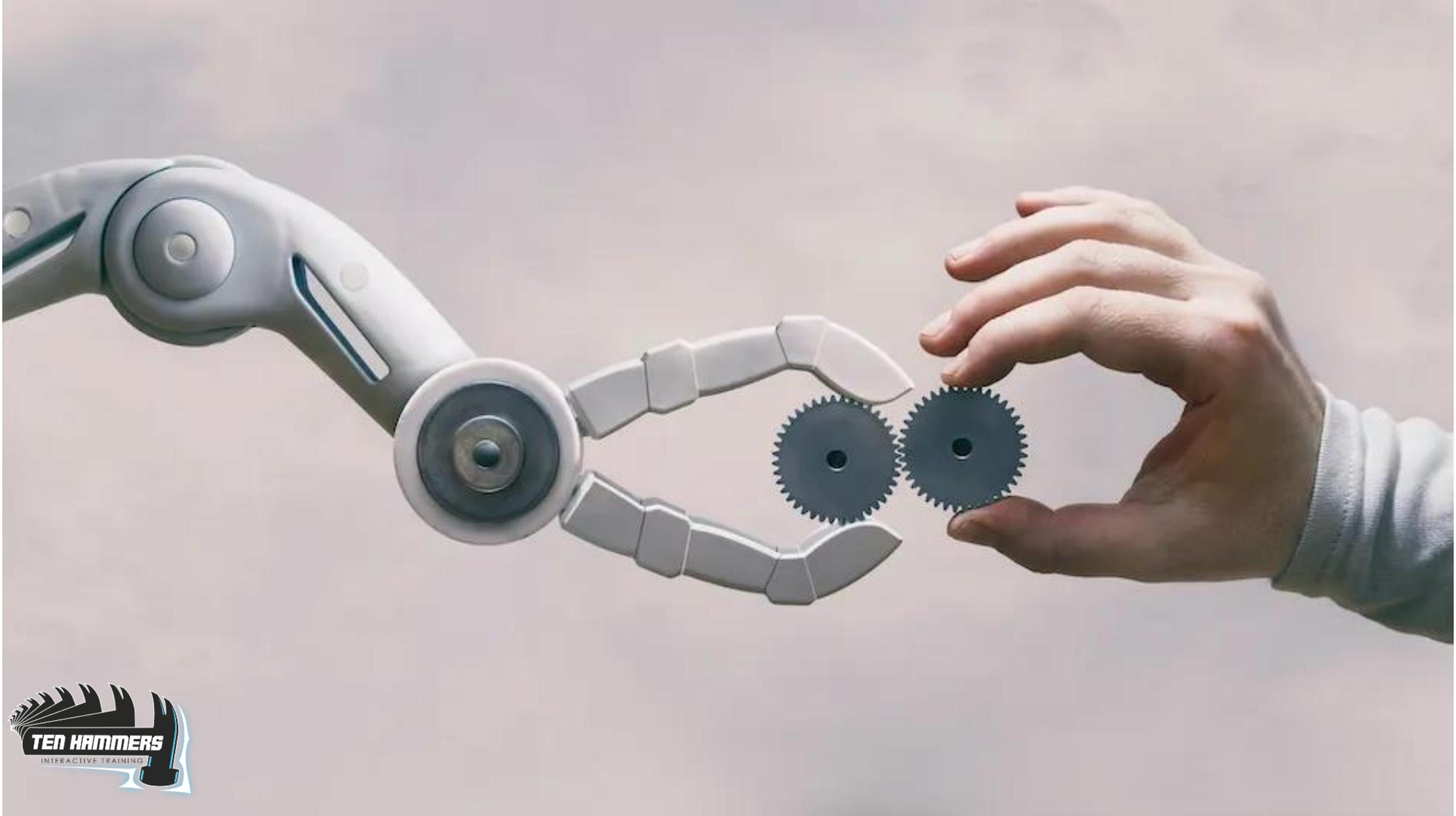
Can decisions be explained?



# Ethical constraints?

Personal agency





# Virtual Training Spaces for Non-Technical Skill Development

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Thank you

