

WORKSHOP ON INTELLECTUAL PROPERTY DATA IN 3D MODELS AND IMAGES

Session 1: 3D technologies and intellectual property



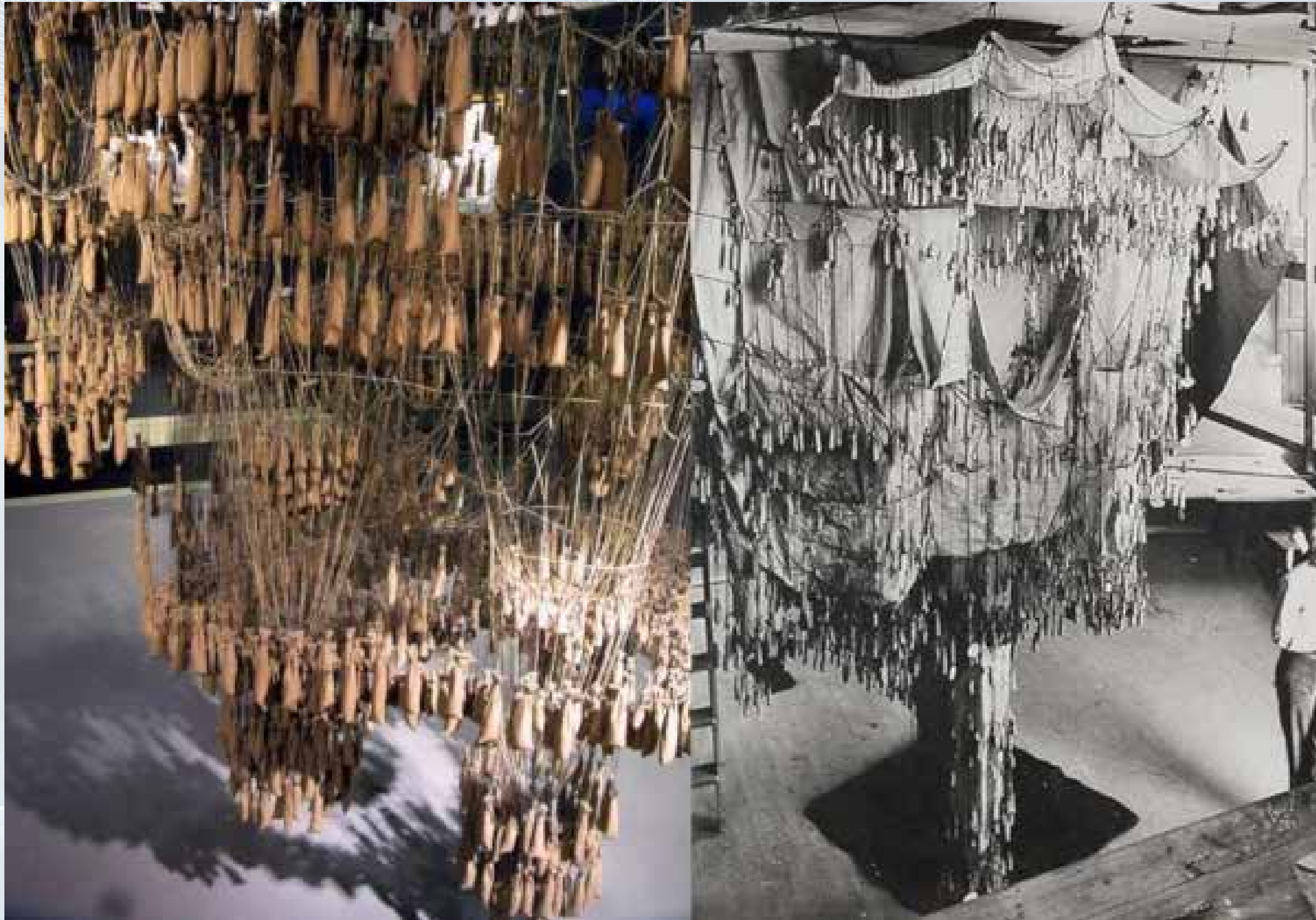
“Impact of the 3D technologies on innovation and creation”



GERMAN HERNÁNDEZ
EL SALVADOR

Geneva, May 14, 2025

REPRESENTING 3D



Inverted polyfunicular model – based on cords or chains – of the church in Colonia Güell, a system for calculating forces that inaugurated Gaudí's architectural revolution.

Ref. image: <https://www.barcelona.cat/bcnmetropolis/2007-2017/en/dossier/gaudi-poeta-de-la-pedra-erico-de-lart/attachment/dossier-gaudi-cast-7/>



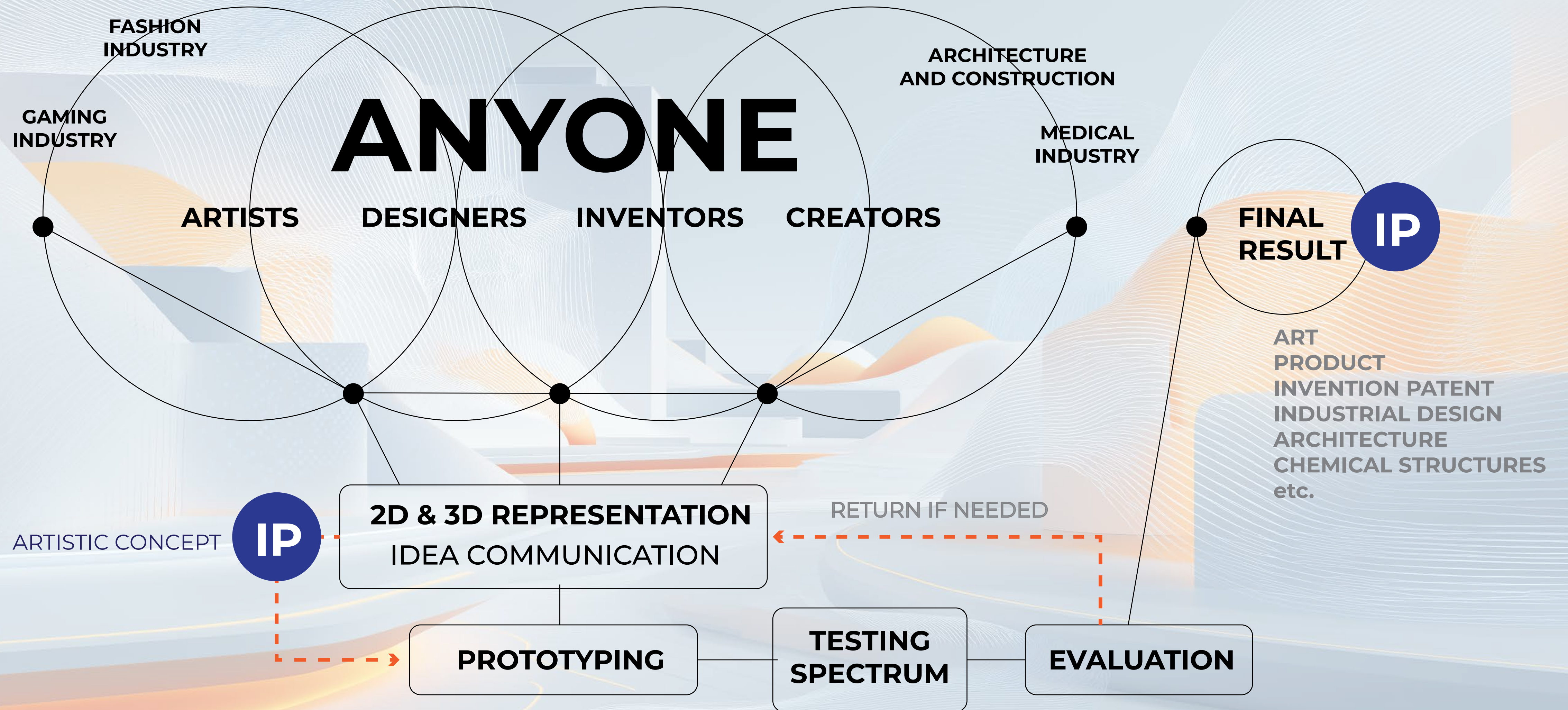


PLAYERS AND MAKERS



WHERE 3D TECHNOLOGIES COME FROM?

HOLISTIC APPROACH - MINDSET



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3D VIRTUAL REALITY

A OPEN WORLD OF OPPORTUNITIES AND CHALLENGES

1ST OPEN WORLD GAMES



LO FI GRAPHICS
LITTLE INTERACTIVITY
FINITE
NO CREATION ABILITY

HIGH TECH

TODAYS OPEN WORLD GAMES



HYPER REALISTIC GRAPHICS
HIGH INTERACTIVITY (WITH PROGRAMMING AND OTHER USERS)
SEEMS INFINITE
VAST CREATION ABILITY

OLD TECH

ANONYMITY

HIDES THE PORPOUSE FOR IT

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3D VIRTUAL REALITY

A OPEN WORLD OF OPPORTUNITIES AND CHALLENGES



1968

Sutherland, with his student Bob Sproull, created the first virtual reality HMD, named The Sword of Damocles. This head-mount connected to a computer rather than a camera and was quite primitive as it could only show simple virtual wire-frame shapes.



An operator controlling The Virtual Interface Environment Workstation



U.S. Navy Hospital Corpsman demonstrating a VR parachute simulator at the Naval Survival Training Institute in 2006



HTC Vive headsets worn at Mobile World Congress 2018

PROJECTION MAPPING

3D AUGMENTED REALITY



1969 opening of the Haunted Mansion ride in Disneyland



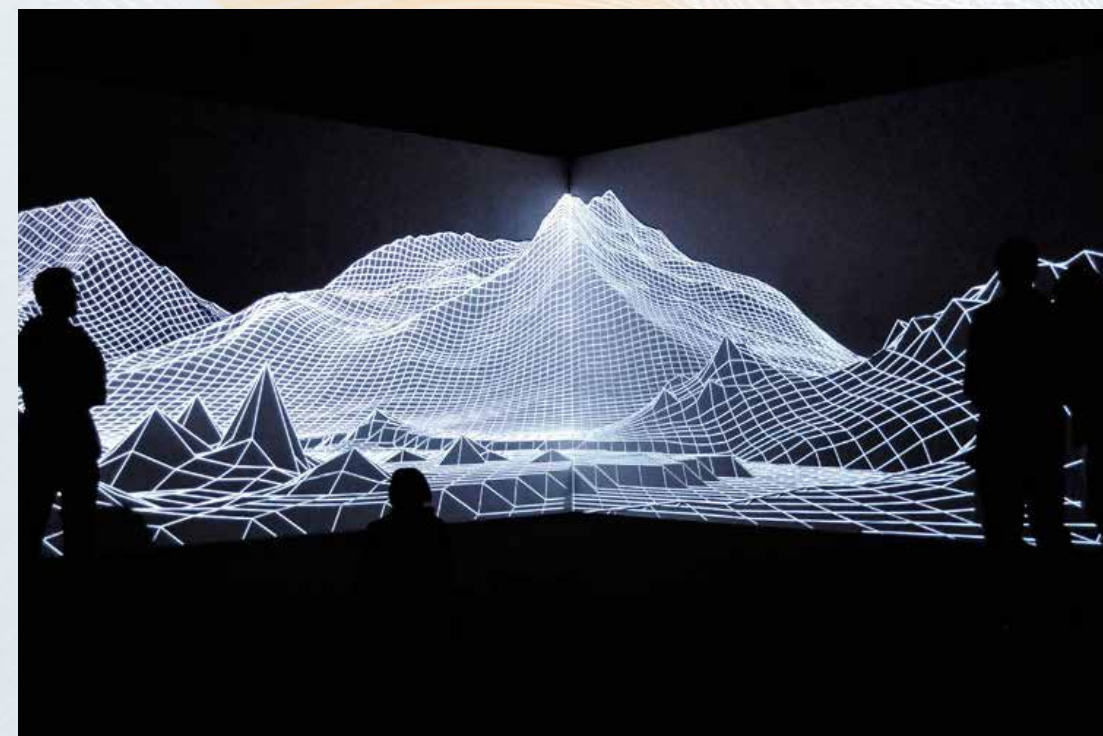
Figure 1: A conceptual sketch of the *office of the future*. By replacing the normal office lights with projectors, one could obtain precise control over all of the light in the office. With the help of synchronized cameras, the geometry and reflectance information can be captured for all of the visible surfaces in the office so that one can project images *on* the surfaces, render images *of* the surfaces, or interpret changes *in* the surfaces. The inset image is intended to help differentiate between the projected images and the real objects in the sketch.

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NEW
TECHNOLOGIES

+

CULTURAL
APPROPRIATION



Anti Vj (Romain Tardy
& Joanie Lamercier)



Santa Ana Church
El Salvador

INNOVATION

IP RECOGNITION



1st IMMERSIVE EXPERIENCE
in LATIN AMERICA
2014, El Salvador.

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SKETCH TO IMAGE AND OTHER 3D + AI WORKFLOWS



**ALL THE WAY
TO VIDEO**



ORIGINAL DRAW OR SKETCH

MULTIPLE FORMS OF PRESENTATION



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AUGMENTED REALITY APPLICATION



Hand Sketch - Digital Sketch - Ai image - 3D rendering - 3D Animation - 3D videomapping

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IMMERSIVE EXPERIENCES (VR-AR-360 mapping)



IMAGINE THE OPPORTUNITIES

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PHOTOGRAMMETRY

1st REQUEST



TERRAIN VIDEO

2nd REQUEST



3D RENDER OF CONSTRUCTION ON A SLOPE LAND

3rd REQUEST



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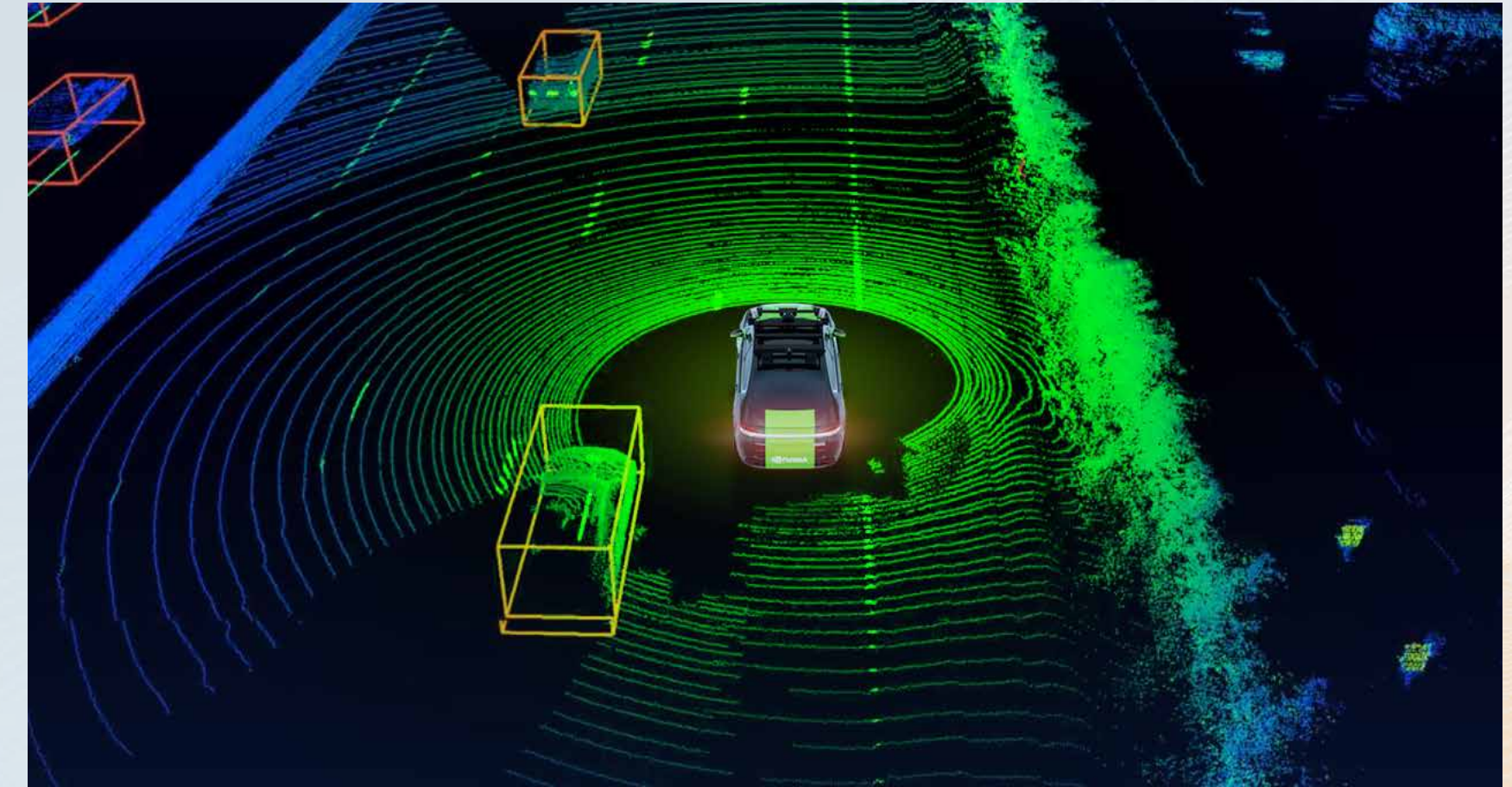
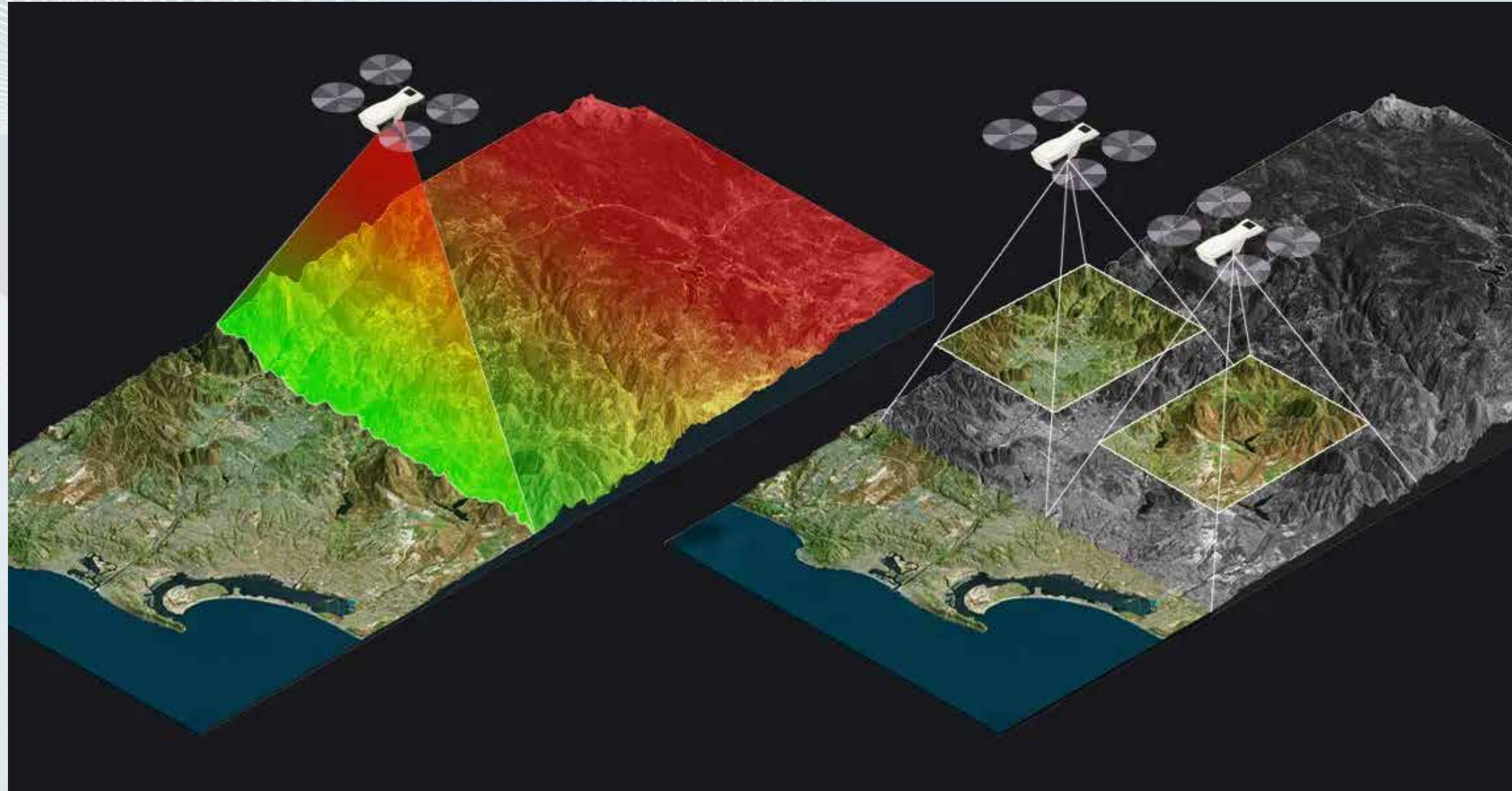
3D INTERFACES - PROCEDURAL GENERATION MODELS



FROM COMPLICATED
TO COMPLEX

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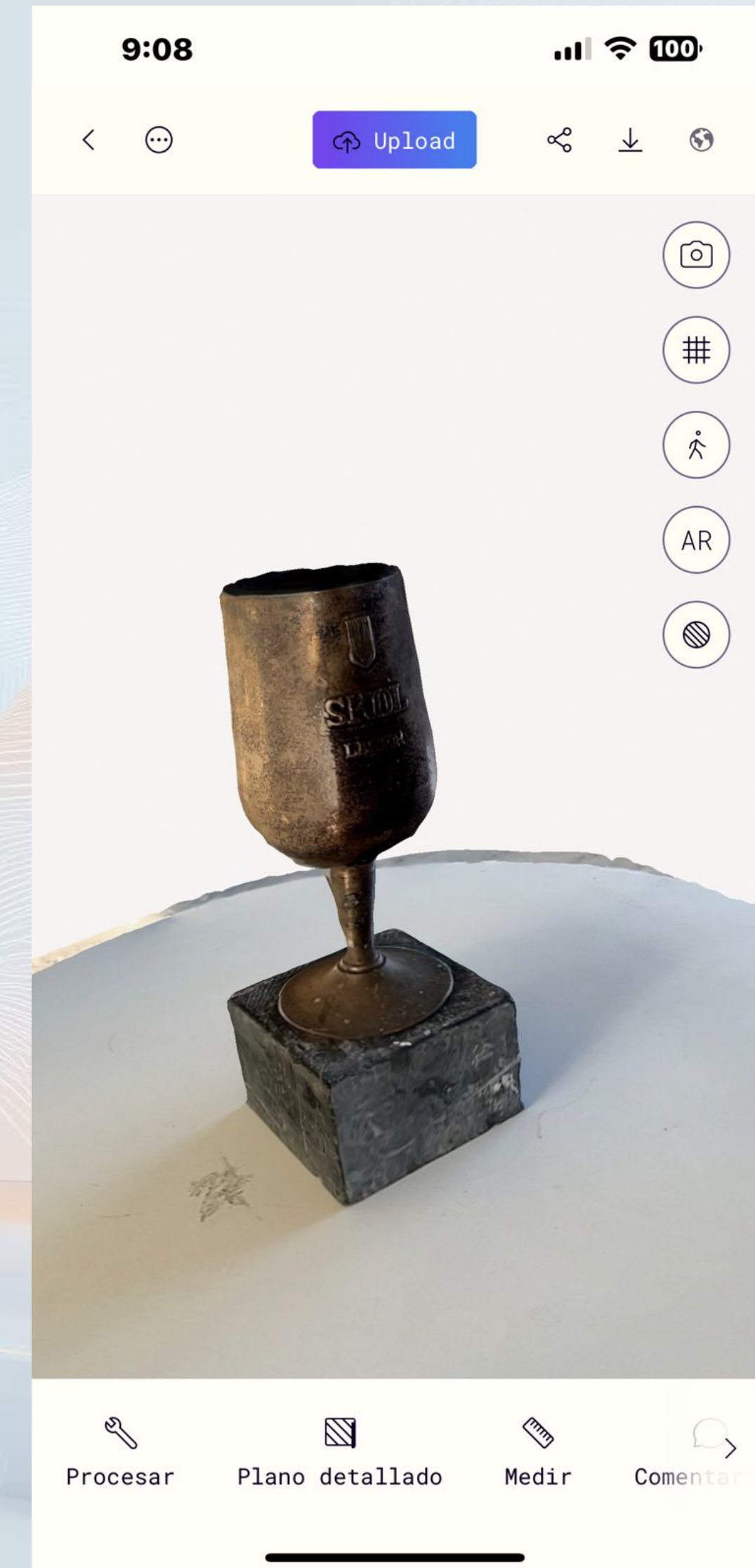
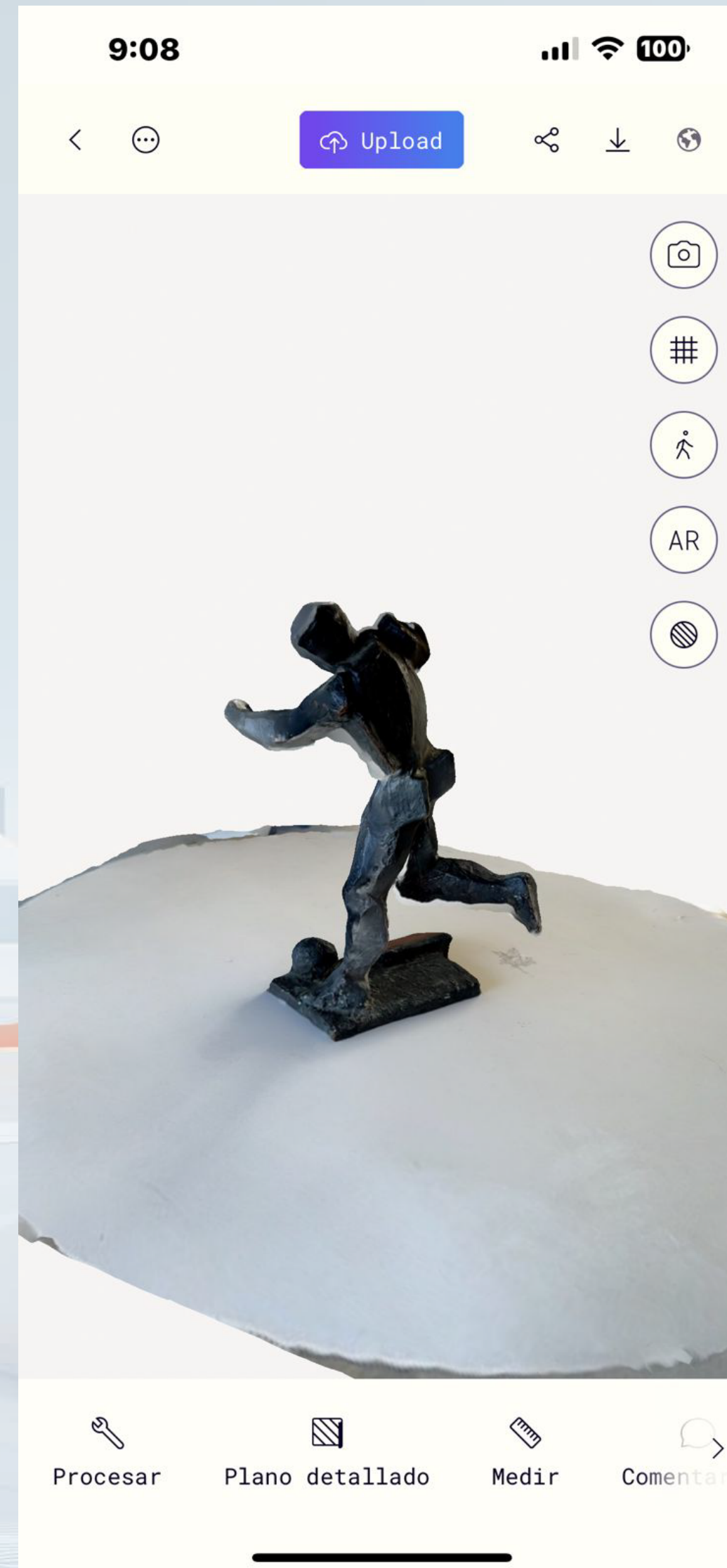
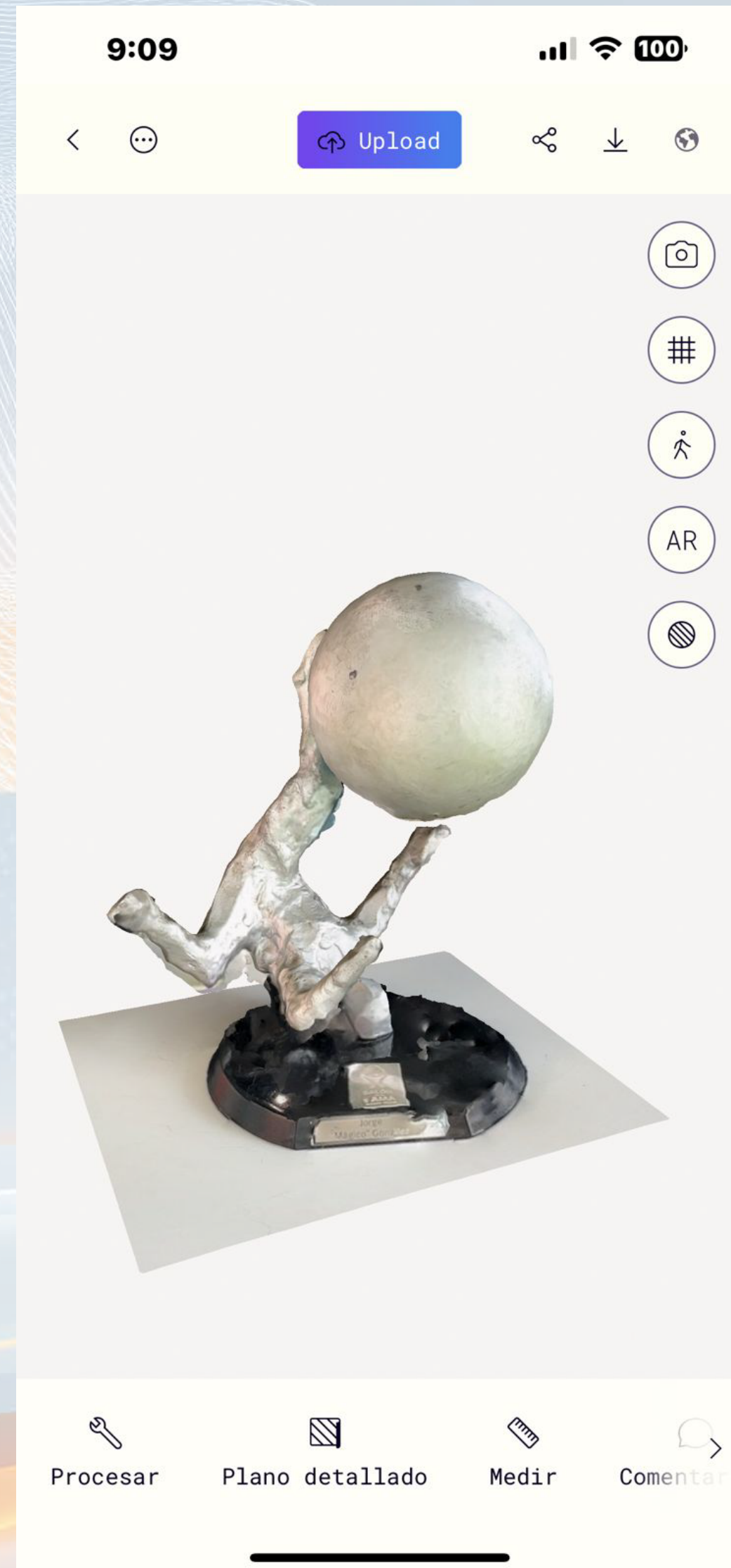
3D LIDAR SYSTEMS



3D LIDAR SYSTEMS

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**3D LIDAR FOR
“EL MÁGICO” MUSEUM**
SAN SALVADOR



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3D LIDAR FOR “EL MÁGICO” MUSEUM SAN SALVADOR



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EL SALVADOR

LET'S START CONCLUSIONS

1. DEFINE YOUR WORKFLOW THROUGH EXPERIENCE AND EXPERTICE

OBSERVATION - IMMERSION - ENGAGEMENT



SOFT AND HARD SKILLS -

2. KNOW YOUR LEGAL FRAMEWORK

STAY AHEAD FOR CURRENT LEGAL PROTECTIONS

TRY WITH BLOCKCHAIN TECHNOLOGY

FIND YOUR WAY THROUGH INNOVATION

3. BE AWARE AND BE PREPARED

NEW TECHNOLOGIES FOR YOUR PURPOSES

AUTOMATION AND ROBOTICS

PROCEDURAL AND RELATIONAL PROGRAMS AND SOFTWARES

BUILD OR JOIN NETWORKS

THANK YOU

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