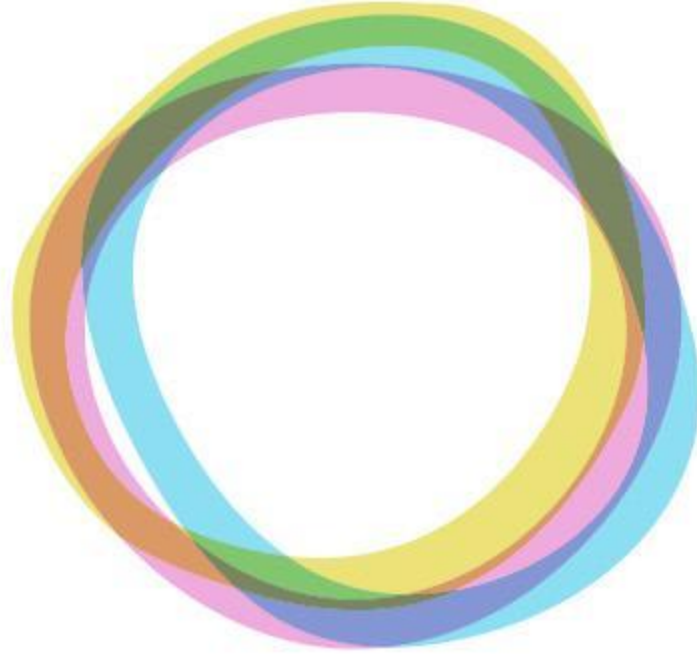




Erasmus+



emex

EMERGING MEDIA EXPLORATION

Final Workshop Introduction, 23.8.2021

emex - project goals

The main objective of EMEX is the creation of a “blended mobility” project-based learning curriculum on the theme of Emerging Media. It shall integrate international online courses, intensive on-site workshops, industry partnerships and shared minor curricula for erasmus students.

Overview of courses in emex

- **Frontiers of Interactive and Participative TV** (online – spring 2019)
- Transnational Workshop on **Interactive Audience Experiences** (at Tampere University – autumn 2019)
- **Virtual Production: Visioning Course** (online – spring 2020)
- **Virtual Production: Common Spaces – Ideas in Transit** (online – autumn 2020)
- **Trending Emerging Media Application Areas** (online – spring 2021)

In the context of EMEX, **Emerging Media** mean new forms of media that **neither know established formats nor well-defined workflows** and mature tools. In Emerging Media, each project is a venture with the air of pioneering and a volatile plan that may hit a dead end or a breakthrough at any time. It typically needs new connections between so far unrelated departments and sees the emergence of new roles and mindsets.

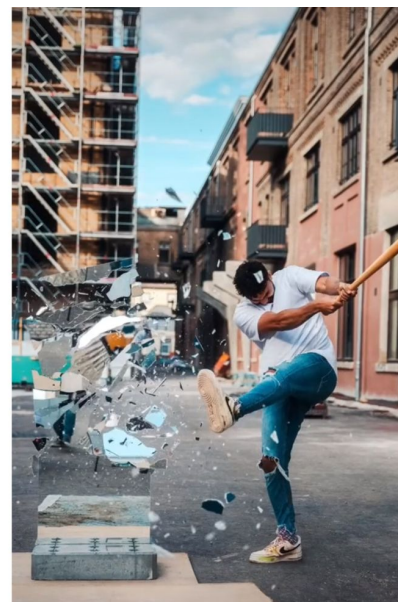
For both creators and users, emerging media are transformative to the way we perceive and think about the world. We want to **educate skilled and reflective media professionals** and **prepare them for a successful 40+ years career** in the ever-changing media business.



XR Storytelling



Generative AI



Emerging Platforms



Virtual Production

Career Paths



today

Film & TV

Immersive
Media

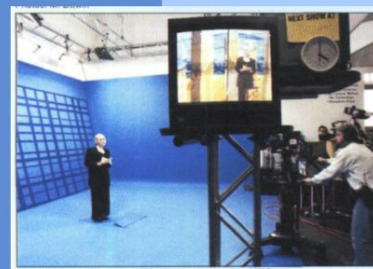
Future
Media

40 years ahead





- 2007



1996



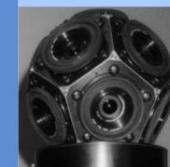
2013—2018



— 2021



Mit dieser Weltneuheit, einem Ganzkörper-Scanner, können beim Digitalisierungsvorgang in nur 17 Sekunden 30.000 3D-Daten einer Person erfasst werden. © Cyber



2003



– 2015



—2018

1995

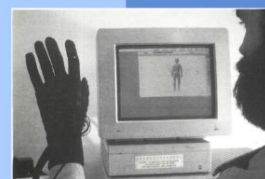


Bild 3: Mit dem Datenhandschuh kann man in die dreidimensionale Computer-Welt via über einen Monitor eindringen und dort interaktiv arbeiten. (Foto: Lesler, IBM, Basel)

1988



DVB-T: Das Überall Fernsehen



—2012

—2003

Erste digitale Farbersehübertragung mit 34 Mbit/s

Gefördert durch das Bundesministerium für Forschung und Technologie (BMFT) begannen bei SEL im Jahre 1973 Arbeiten auf dem Gebiet der digitalen Bildübertragung. Unter der Projekträgerschaft der Gesellschaft für Weltraumforschung (GfW) und später der Deutschen Forschungs- und Versuchsanstalt für Luft- und Raumfahrt (DFVLR) wurde ein System für die Übertragung von Fernsehbildsignalen über Satellitenstrecken mit einer Bitrate von 34 Mbit/s entwickelt und inzwischen fertiggestellt. Über dieses System wurde bereits im Heft

1978

1970

1980

1990

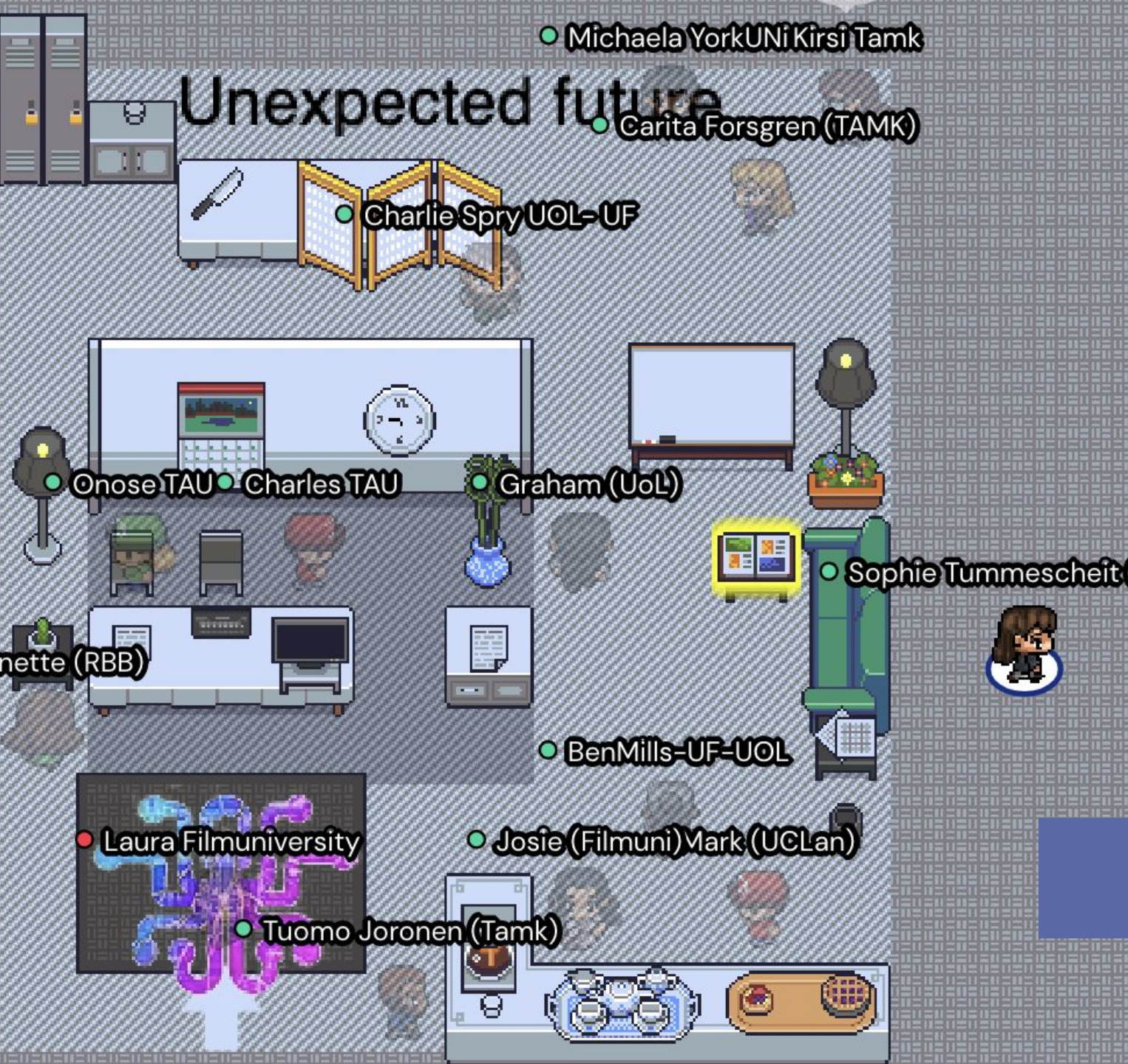
2000

2010

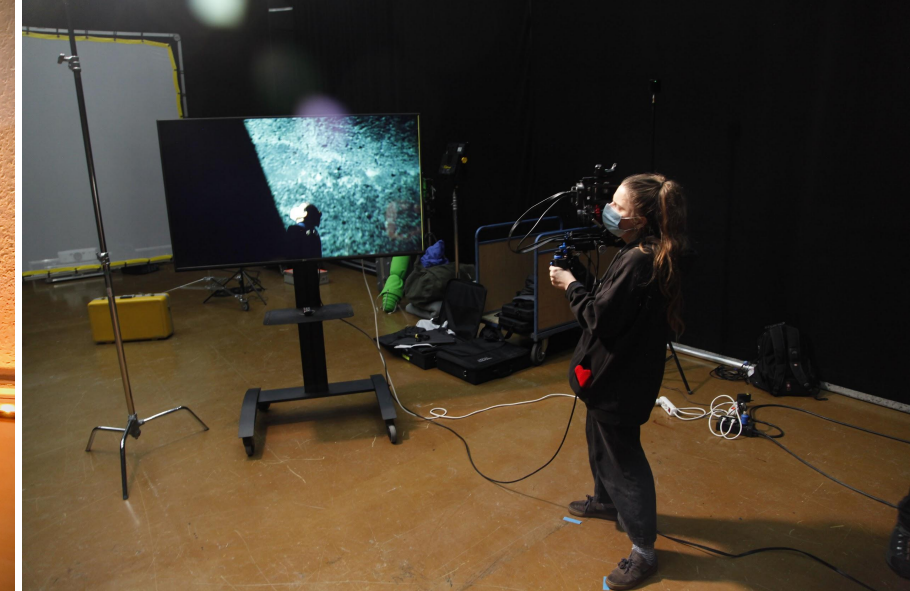
2020

2030





Blended Learning



Virtual iPad cameras instead of LED - Stage



Teaching basic principles

2D video in VR instead of volumetric video



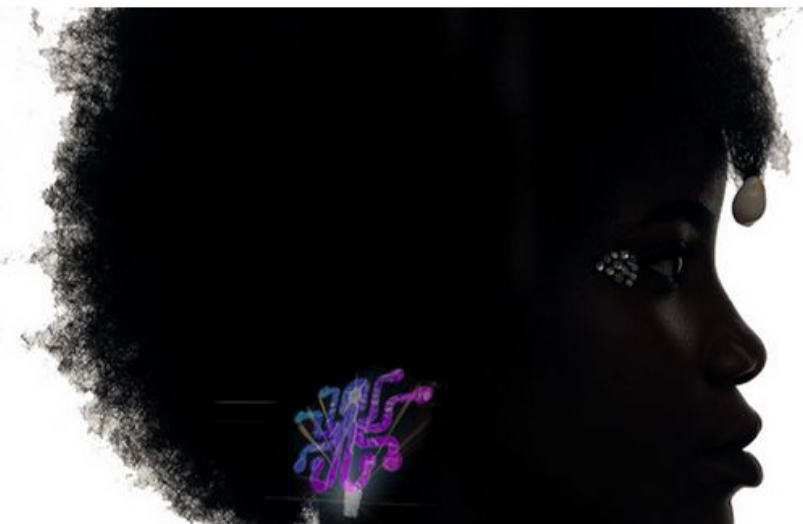
Start-Up Collaboration



[Home](#) [Packages](#) [Add-Ons](#) [How It Works](#) [Members](#) [Forum](#)

[Log In](#) [0](#)

MINDLINK



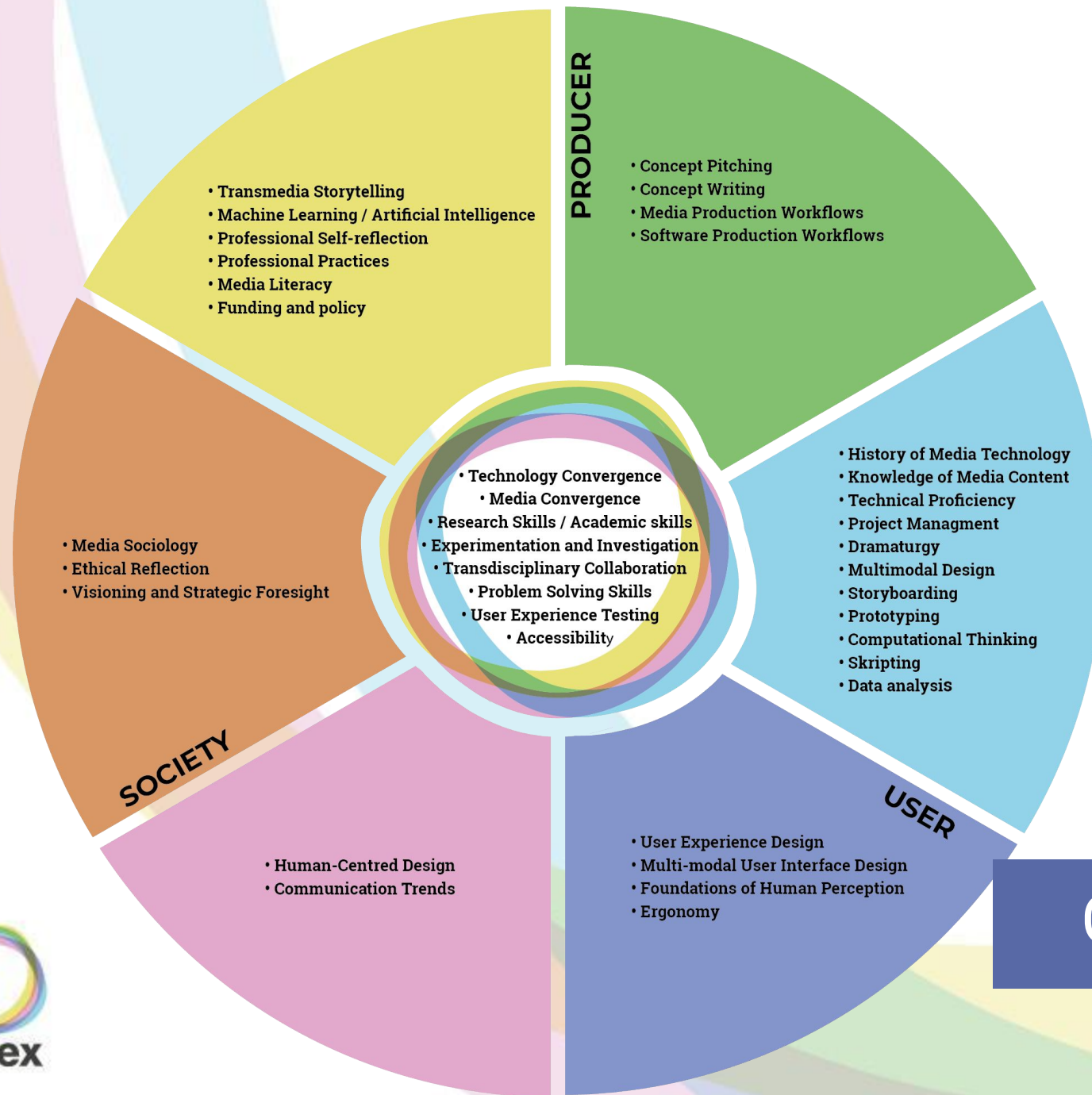
INTRODUCING MINDLINK

the upgrade for your mind

Speculative Design

What is MindLink?

[Let's Chat!](#)



Curriculum development

Emex resources

On: <https://www.emerging-media-exploration.eu>

- Concept, Modules and Framework
- Research
- Emex presentations
- Course Descriptions (for all five courses)
- Learning Material (about 30 documents and links)
- Templates and Tools (with instructions)
- Evaluation and Documentation of the courses



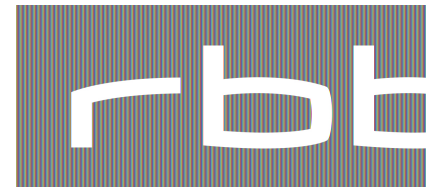
FILMUNIVERSITÄT
BABELSBERG
KONRAD WOLF



Tampere University
Tampere University of Applied Sciences



UNIVERSITY OF
LINCOLN



Introduction of the rooms

Rooms

1. Student works – Results from 3 years
2. Teaching methods and design tools – Best practices
3. Emerging Media – What is it?, What is it not?
What will it be?
4. Hidden Agenda – All things we actually did not plan for
but learned nevertheless

Rules for the Rooms

- Feel free to browse the material linked in the rooms
- Feel free to start a conversation about anything you see
- Feel free to walk away when you're bored
- Once you've seen it all, join us in the garden for an open chat.

Have Fun!



PreViz & Prototyping

Tools and Methods for Creative Online Collaboration





Virtual Collaborative Production

Tools and Methods for Creative Online Collaboration



The Game Engine as Film Studio

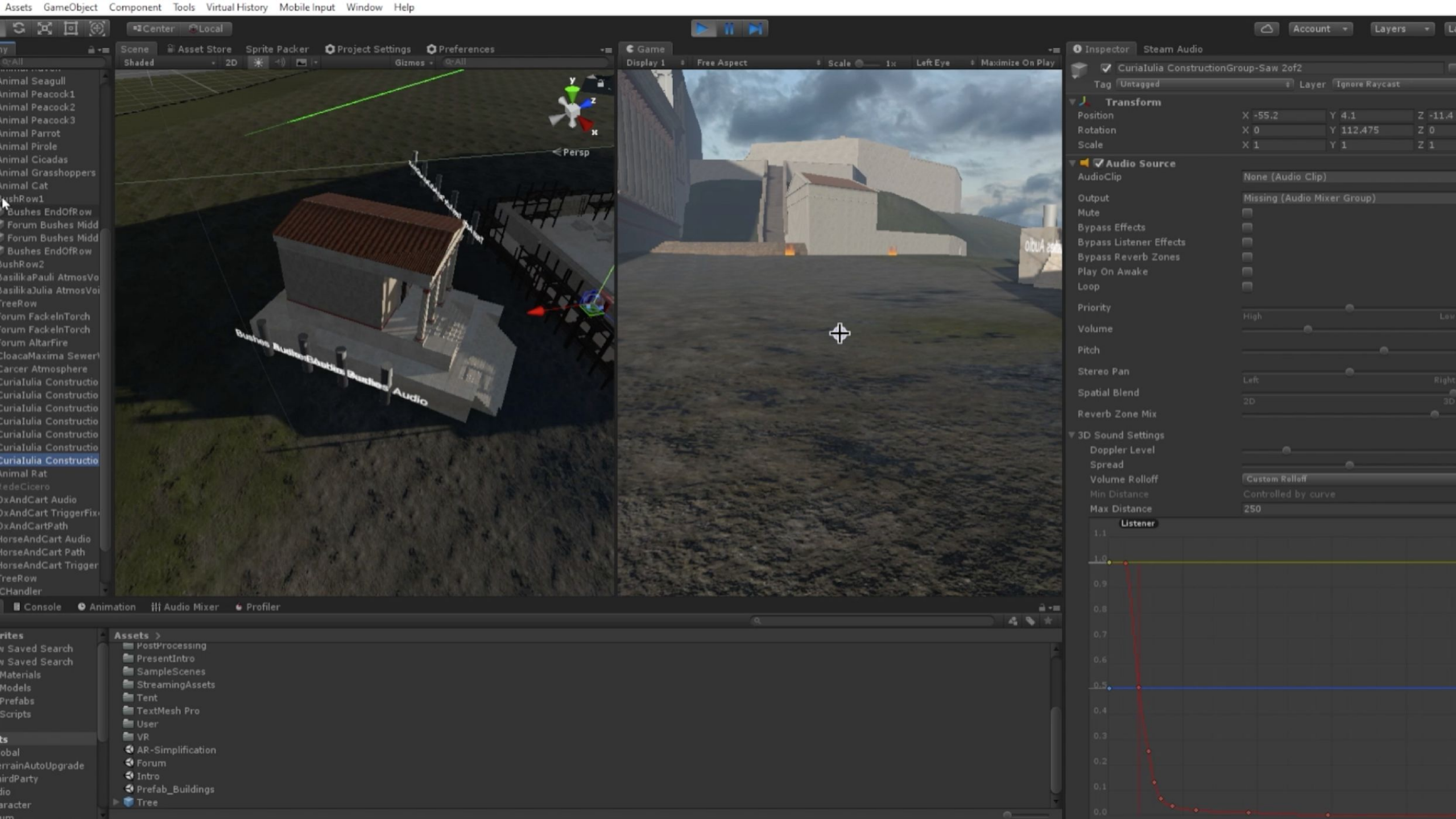
This is the moment where people often refer to **The Mandalorian**. However, we decided to stick with smaller, but own examples.

There are two main approaches to virtual production:

- **In-Engine VFX***: The film is shot inside the engine, with optional green screen video
- **In-Camera VFX***: A major part of the set is done in the engine and projected on canvas or vast LED-Screens (the approach used in The Mandalorian).

In both cases the environment changes in real-time in relation to the camera position, allowing authentic parallax and depth-of-field changes.

*Be aware that the terminology is changing rapidly in this field, fuelled by innovations and new brand and product names.

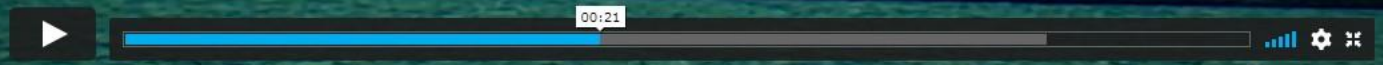




“The Wall”

In-Engine VFX with tracked camera control and green screen feed















“The Wall” - Set Design

- Set Design and shooting was done exclusively in UNREAL engine.
- Assets were mostly taken from the UNREAL Marketplace, e.g. the “MegaScan” Library, which offers naturalistic looking scanned assets.
- The students chose the assets and an expert helped them arranging them UNREAL and add lighting.
- N.B. It is also possibly that all students work collaboratively with UNREAL in a synchronized project file, but we did not try that yet. (Multi-User Editing)
- Story and Set were designed iteratively. Even at the time of shooting, we were able to change the set design on the spot.

“The Wall” - Real-Life Video

- We streamed pre-produced greenscreen video into the Virtual Set.
- We pre-cleaned the greenscreen mask, but the final keying was done through UNREAL in real-time.
- This approach limits the possible camera angles, as the video will appear flat and wrong in perspective if the shooting angle changes a lot, but if you plan well in advance, you can work around that well.
- It is technically possible to stream live greenscreen footage, i.e. combining a real camera with the virtual camera rig. This way, you always get the correct camera angle.

“The Wall” - Virtual Camera

- For the shoot, we used the [DogHut open source Virtual Camera Controller](#).
- Using [Vive Pro Basestations](#), the camera position is tracked in real-time inside the Virtual Set in Unreal.
- The Virtual Camera has all typical camera controls available, behaving very much like an actual camera.
- The camera picture can be seen on a mounted monitor and on a large LED screen, if needed.
- We added a real camera to the rig for Additional weight.









In-Camera VFX

Experimental setup at Film University



In-Camera VFX Workflow

- First preliminary Experiments with UNREAL and NDisplay
- Projected image changed according to the changing camera position.
- Difficult to calibrate to get correct perspective.



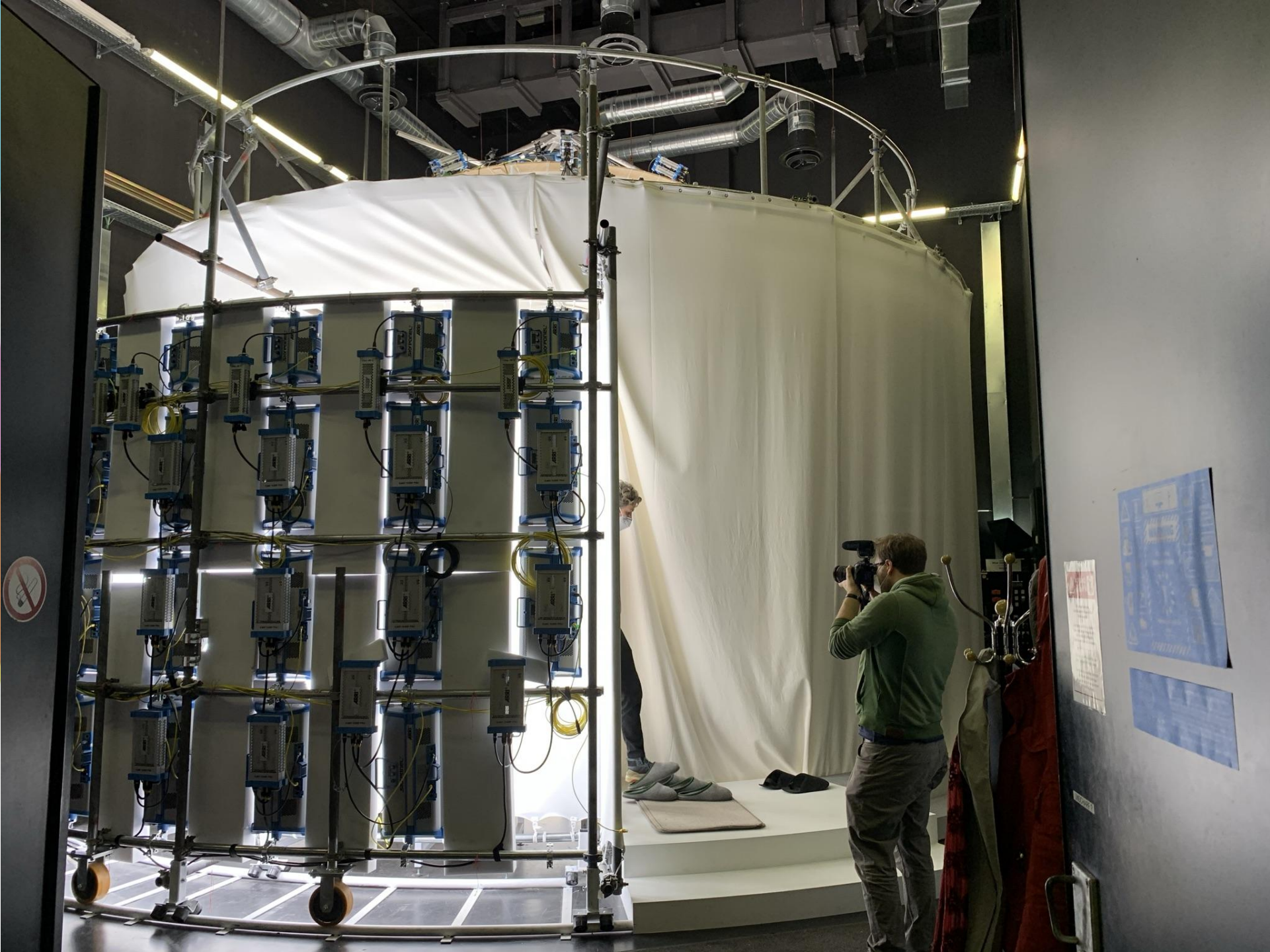


“Romanisches Café”

In-Engine VFX using Volumetric Video













Introduction to Virtual Production

Curated by James Field, University of Lincoln



Thank you.

For more information, visit the [EMEX Project](#).



Prototyping

A lot of people confuse prototypes with sketches, wireframes, and mock-ups. These assets are not prototypes. The idea of simulation (read, “interactivity”) is essential for prototypes. That’s why static assets — such as sketches, wireframes, and mock-ups — can’t be considered prototypes.



Prototypes are simulations or sample versions of a final product/service. The goal is to test and validate an idea before investing precious resources into the final output.

In film, prototypes can be storyboards,

Fidelities

Prototypes don't necessarily look like final products – they can have different fidelities. The fidelity of a prototype refers to how it conveys the look-and-feel of the final product (basically, its level of detail and realism).

Fidelity can vary in the areas of:

- Visual design
- Content
- Interactivity

There are two categories of fidelities in prototyping these are;

- Low-Fidelity
- High-Fidelity

Product teams choose a prototype's fidelity based on the goals of prototyping, completeness of design, and available resources



Fail fast, test early and test often.

Low-Fidelity

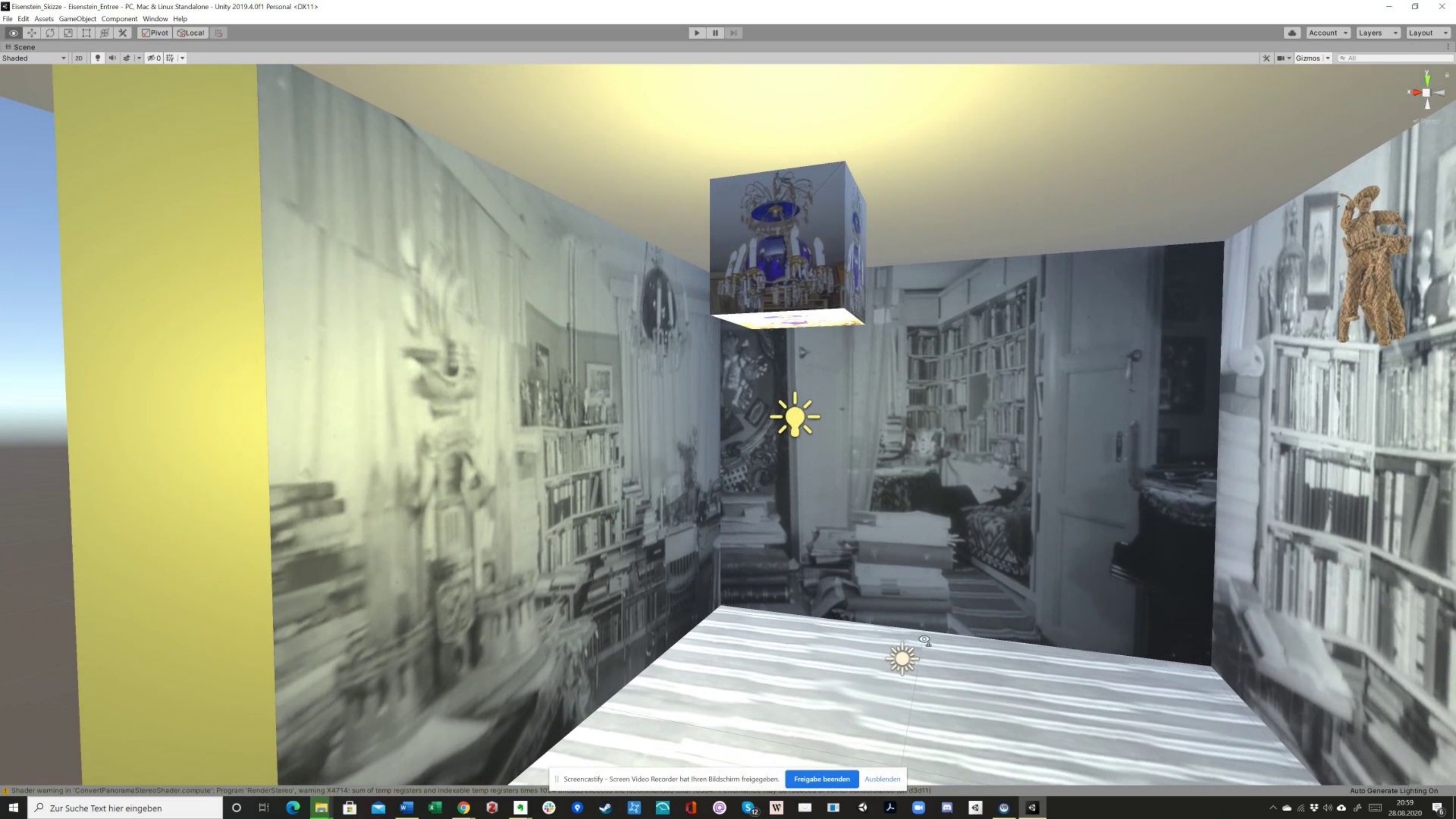
A low-fidelity prototype is

- Simple.
- Cost effective.
- Rapid tangible representation of a concept.
- A user flow.
- An information structure

These prototypes are generally made from paper, card, cardboard, LEGO... Characterised by low technology implementations.







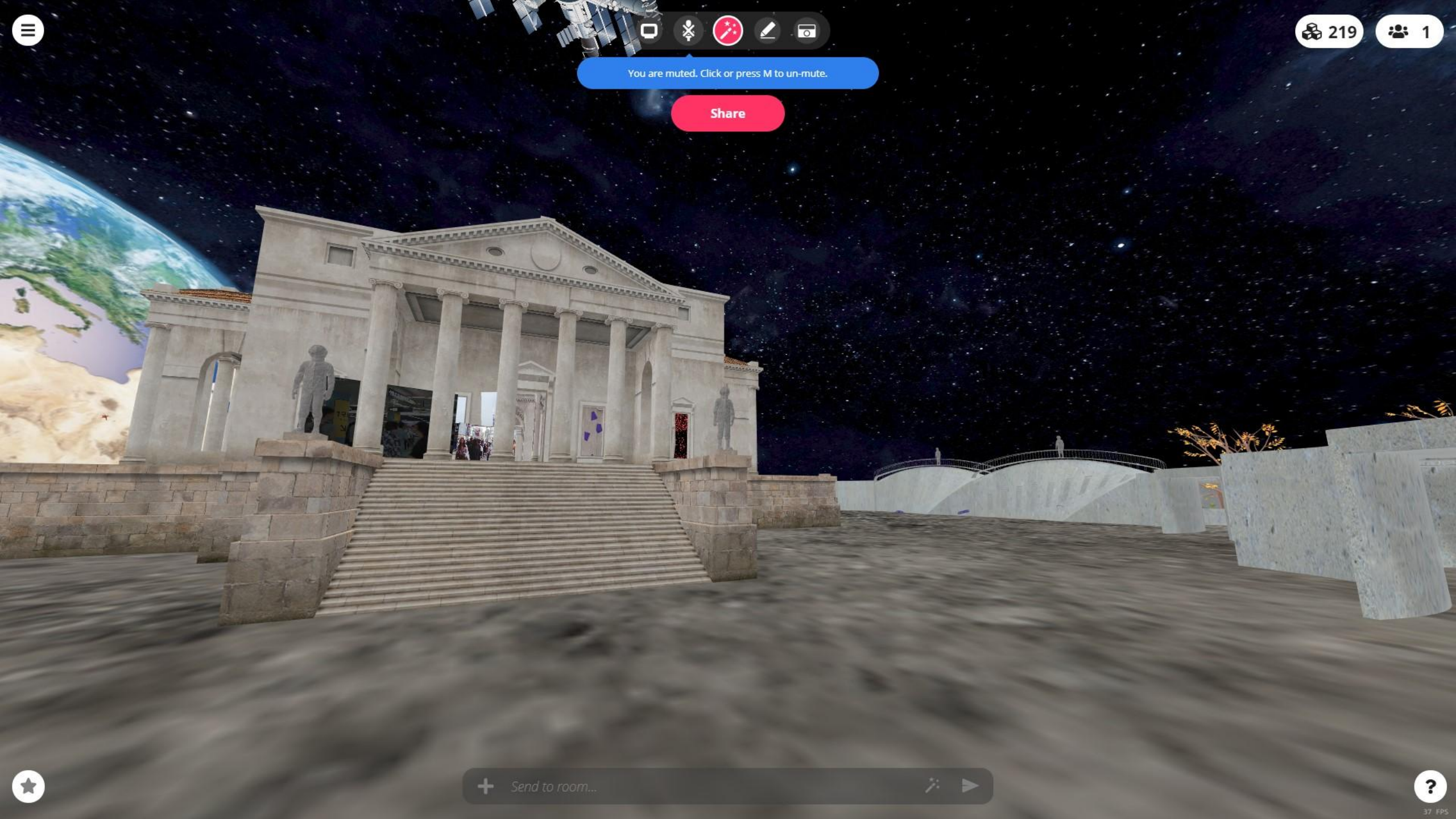


Low-Fi prototyping provides rapid insights into the concept, idea and flow of what you are working on. As you are able to visually and physically communicate the aforementioned to user groups.

Globe Playhouse

Results from an international VR Prototyping Workshop





219

1

You are muted. Click or press M to un-mute.

Share

+ Send to room...

?

37 FPS



You are muted. Click or press M to un-mute.

Share



+ Send to room...



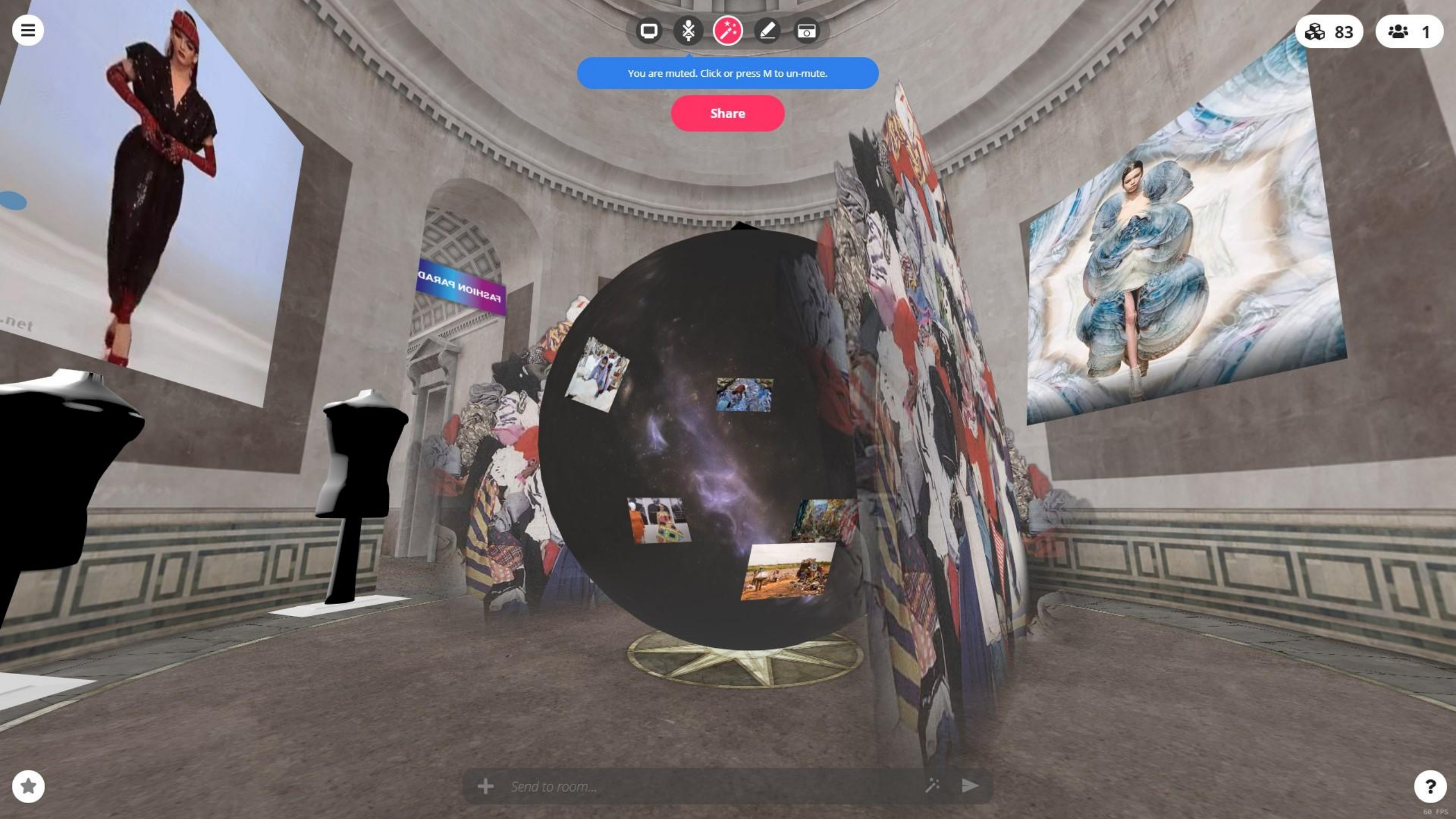


83

1

You are muted. Click or press M to un-mute.

Share



+ Send to room...



60 FPS



62

1

You are muted. Click or press M to un-mute.

Share



+ Send to room...



36 FPS

High-Fidelity

- High-fidelity prototypes refers to the level of detail in your prototype.
- They provide users with richer visuals, aesthetics and interactions.
- Like lo-fi prototypes, high-fidelity prototypes focus on core features but are closer to the final look and feel.
- During this phase you are creating the assets required for your product, which will feature in the final developed version.



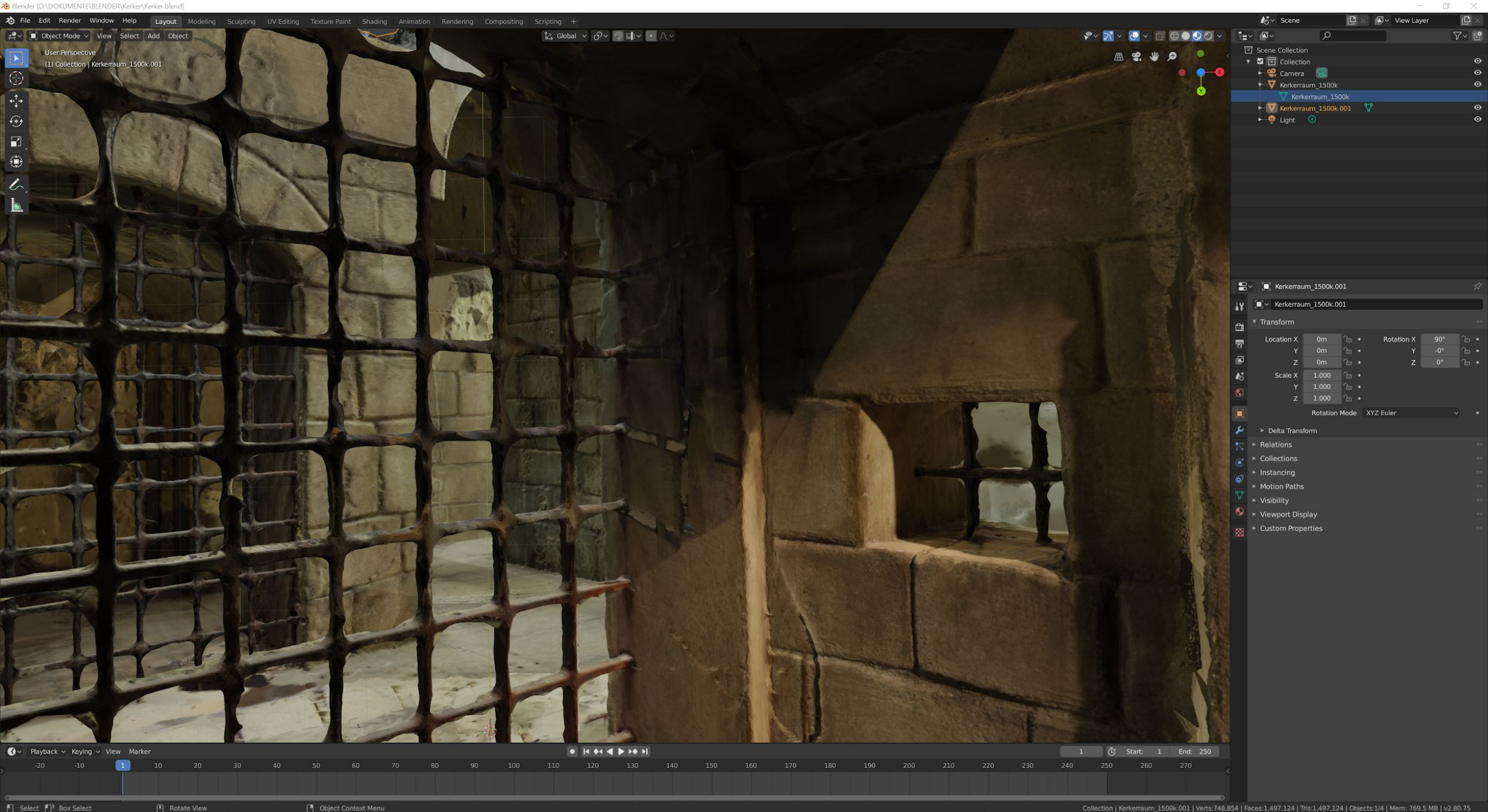
Zurückschicken



Auf das Boot schicken



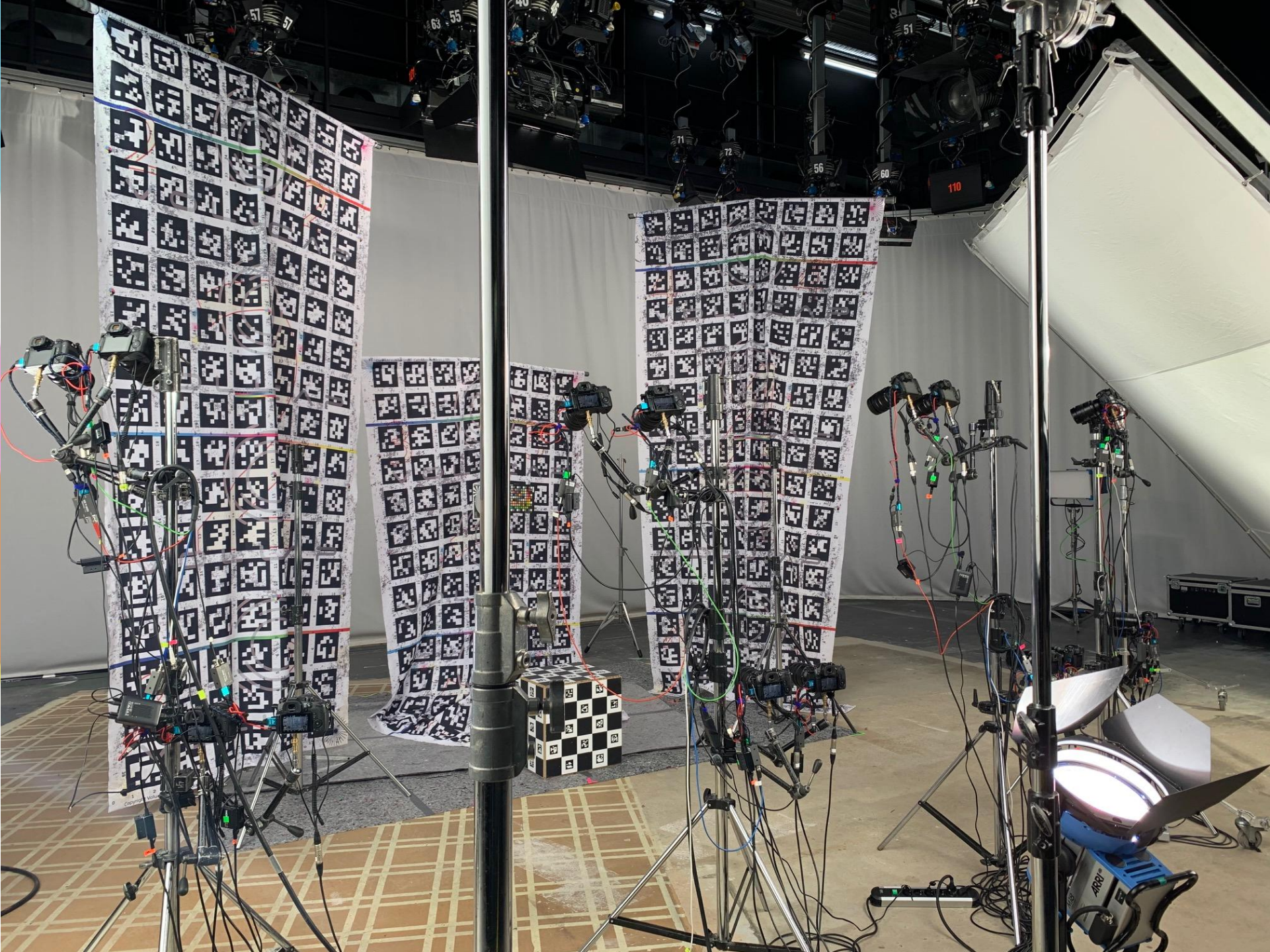
Screenshot gespeichert
Der Screenshot wurde Ihrem
OneDrive hinzugefügt.
OneDrive

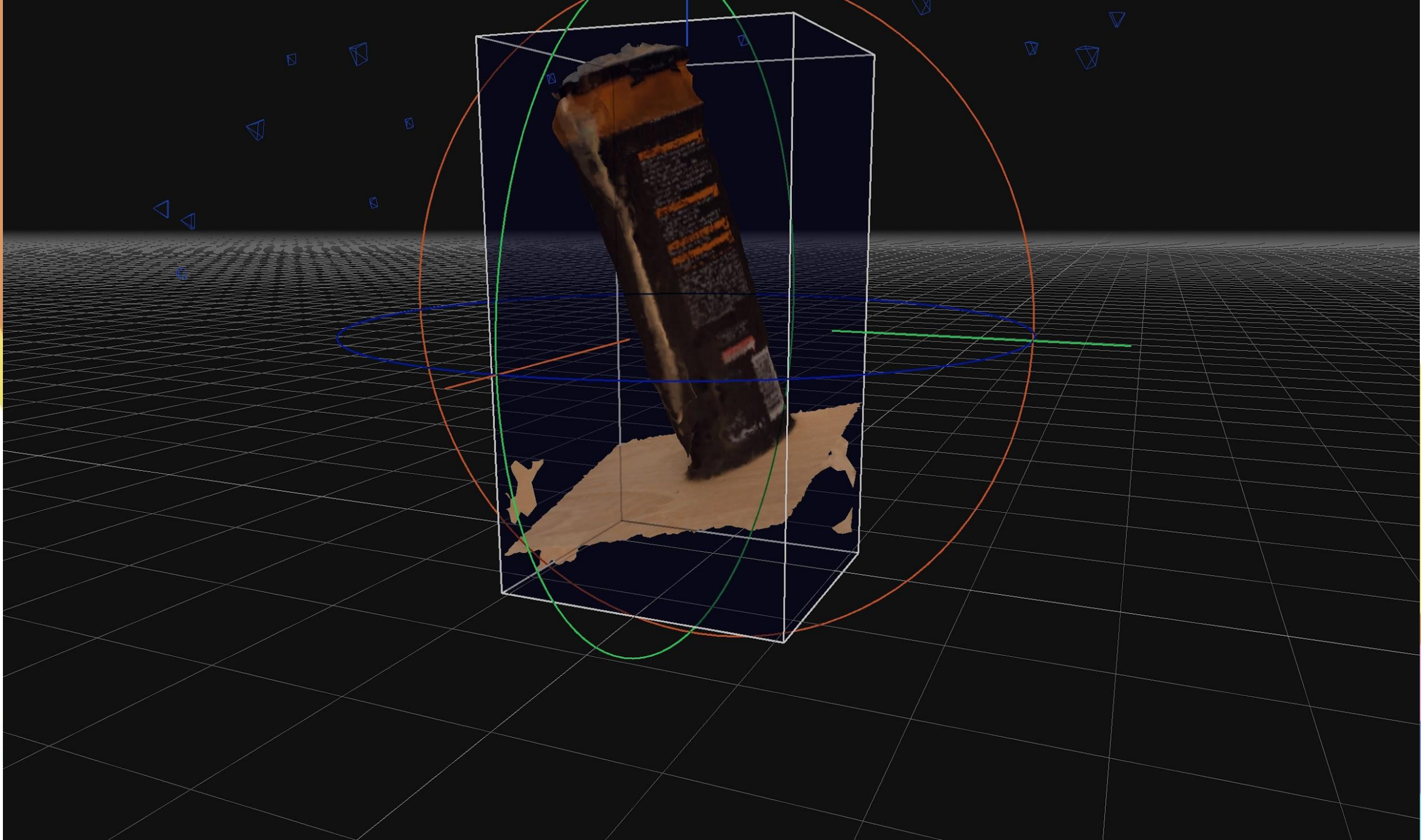


Technologies

Virtual Production Technologies













Course Goals

- Get an overview of the current potential of Virtual Production and Real-Time Visualisation Technologies - in the Film Sector and beyond
- Become able to judge the novelty of Virtual Production Use Cases, Applications and Methods
- Spark ideas, select and present them in one slide each
- Learn the basics of creative online teamwork
- Have intercultural fun!

Approach

- Explorative ideation course:
We give you learning materials, access to experts, methods and guidance - The rest is up to you!
- Three plenary events (18th, 25th, April 22nd)
- Small tutor groups with individual sessions
- Tutors chose individual approaches to guide you

Schedule

- Three plenary online meetings (18th, 25th, April 22nd)
 - 18th (today) - Kick-Off and first tutor session
 - 25th Live Expert Interview and second tutor session
 - 22nd Presentation and discussion of ideas
- Tutoring sessions and team meetings by individual appointments

Please do ...

- Tell us right away if anything is unclear or you feel lost!
- Tell your tutor and group in case you are not available for a certain time or have to drop out.
- Show curiosity to all the different skills and interests gathered in the course. That's a key asset.

Tutors

- Carita Forsgren, Visual Design & Scriptwriting, TAMK
- Kirsi Karimäki, UX Design, TAMK
- Tuomo Joronen, Animation & Postproduction, TAMK
- Mark Lochrie, Creative Technology, University of Central Lancashire
- Martyn Thayne, Media Practice & Digital Culture, University of Lincoln
- Graham Cooper, Media Production, University of Lincoln
- James Field, Interactive Media, University of Lincoln
- Jaakko Hakulinen, Human-Computer-Interaction, Tampere University
- Päivi Majaranta, Human-Computer-Interaction, Tampere University
- Simone Holleder, Innovation Projects, Rundfunk Berlin-Brandenburg
- Sophie Tummescheit, Design, Film University
- Björn Stockleben, New Media Production, Film University

Interview Partners

- Sönke Kirchhof, CEO INV.R.SPAC
- Sven Bliedung, CEO Volucap Studios
- Tim Deussen, Producer
- Oliver Pidancet, Innovation Engineer at RBB
- Mikko Karsisto, CEO Keho Interactive
- Christian Möller, Immersive Cinematographer, Film University
- Robert Zapke, VFX Supervisor at Cinechromatix
- Olli-Pekka Salli, YLE Innovation
- Ilmari Huttu-Hiltunen, CEO Rakka Creative
- Jukka Holm, Researcher, TAMK
- Paul Long, Creative Director at Metro-Boulot-Dodo
- Maybe a couple more to come ...

Schedule

- Three plenary online meetings (18th, 25th, April 22nd)
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 - 22nd Presentation and discussion of ideas
- Tutoring sessions and team meetings by individual appointments

Introduction to Virtual Production

James Field



Tutor Sessions

- Is anybody here that has not been assigned to a group yet?
- You will be assigned to a breakout room in this meeting, so stay in the room.
- If you get lost, give us a ping in the DIGMA forum or in the chat. This room will stay open throughout the meeting, so if you have difficulties, just restart using the same link.

Have Fun!

Your EMEX Team

