Microsoft

Microsoft Mesh

Agenda

Mixed Reality Opportunity

Introduction to Microsoft Mesh

Mesh Developer Platform

Get Started

Mixed Reality Opportunity

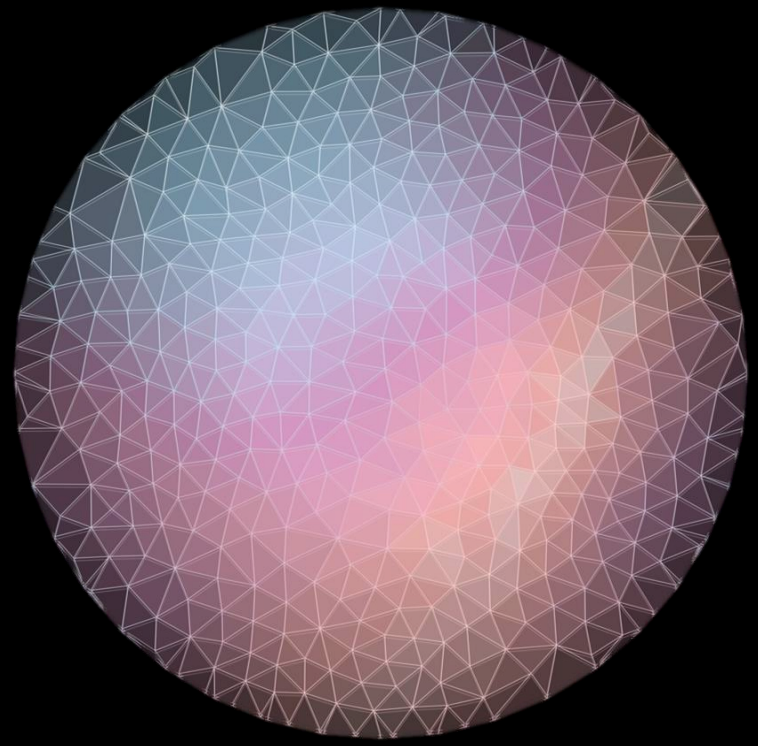
Mixed Reality is a

blending of the physical and digital worlds

PHYSICAL WORLD

MIXED REALITY

DIGITAL WORLD



Mixed Reality is here and

Companies are creating a new reality for work

1 in 3

By 2021, at least one-third of enterprises will support multi-experience platforms, including augmented reality

Gartner Strategic Technology Trends, 2020

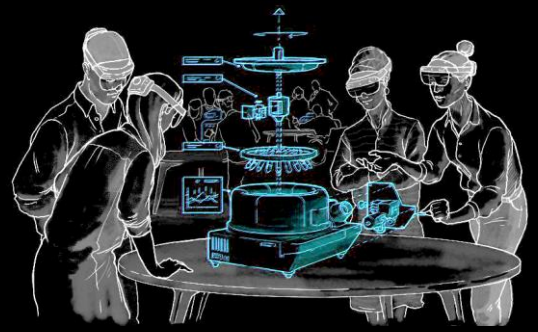
Collaborative Mixed Reality opportunities

Remote expertise

Train/learn together

Immersive meetups

In-situ information



Design together

Connect and create

While the opportunity is large, building collaborative Mixed Reality solutions is challenging

It is hard to bring high fidelity 3D models into Mixed Reality in the file formats customers have

Representing people in mixed reality with realism requires a lot of time and resources

It is hard to keep a hologram stable in a location across time and devices

Synchronizing actions and expressions in a geographically distributed session is complex

Microsoft Mesh reduces the complexity of building collaborative Mixed Reality solutions

Introduction to Microsoft Mesh

Microsoft Mesh
Here can be anywhere.
Feel presence
Experience together
Connect from anywhere

Microsoft Mesh

Mesh-enabled Apps

- HoloLens Mesh App
- Altspace VR (new enterprise capabilities)
- Microsoft Teams *Coming later*
- Microsoft Dynamics *Coming later*
- Partner Apps

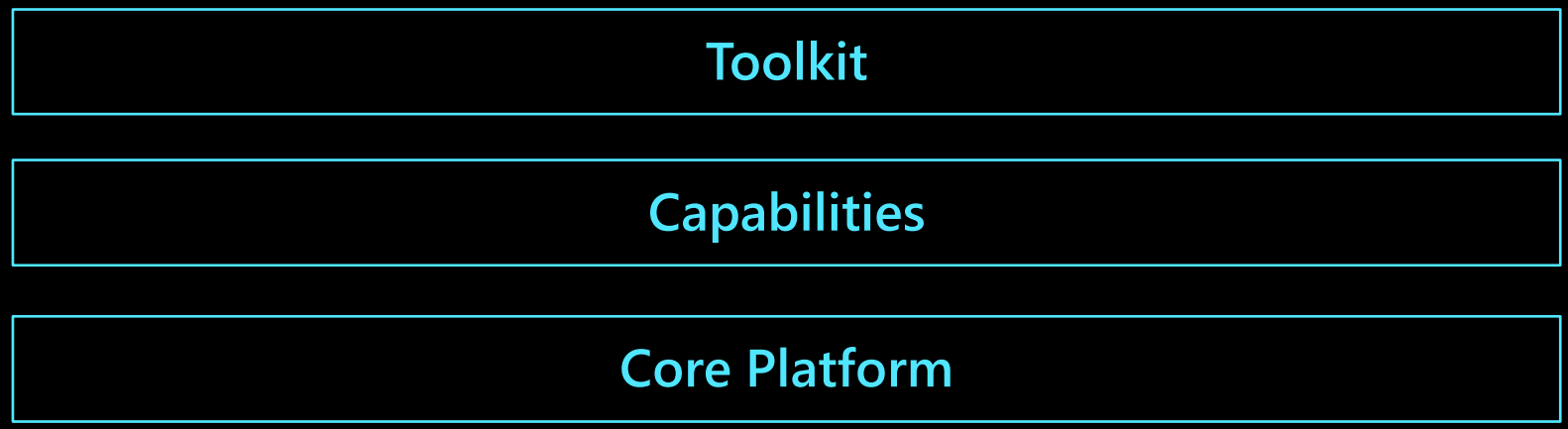
Developer platform

- Toolkit
- Capabilities
- Core Platform

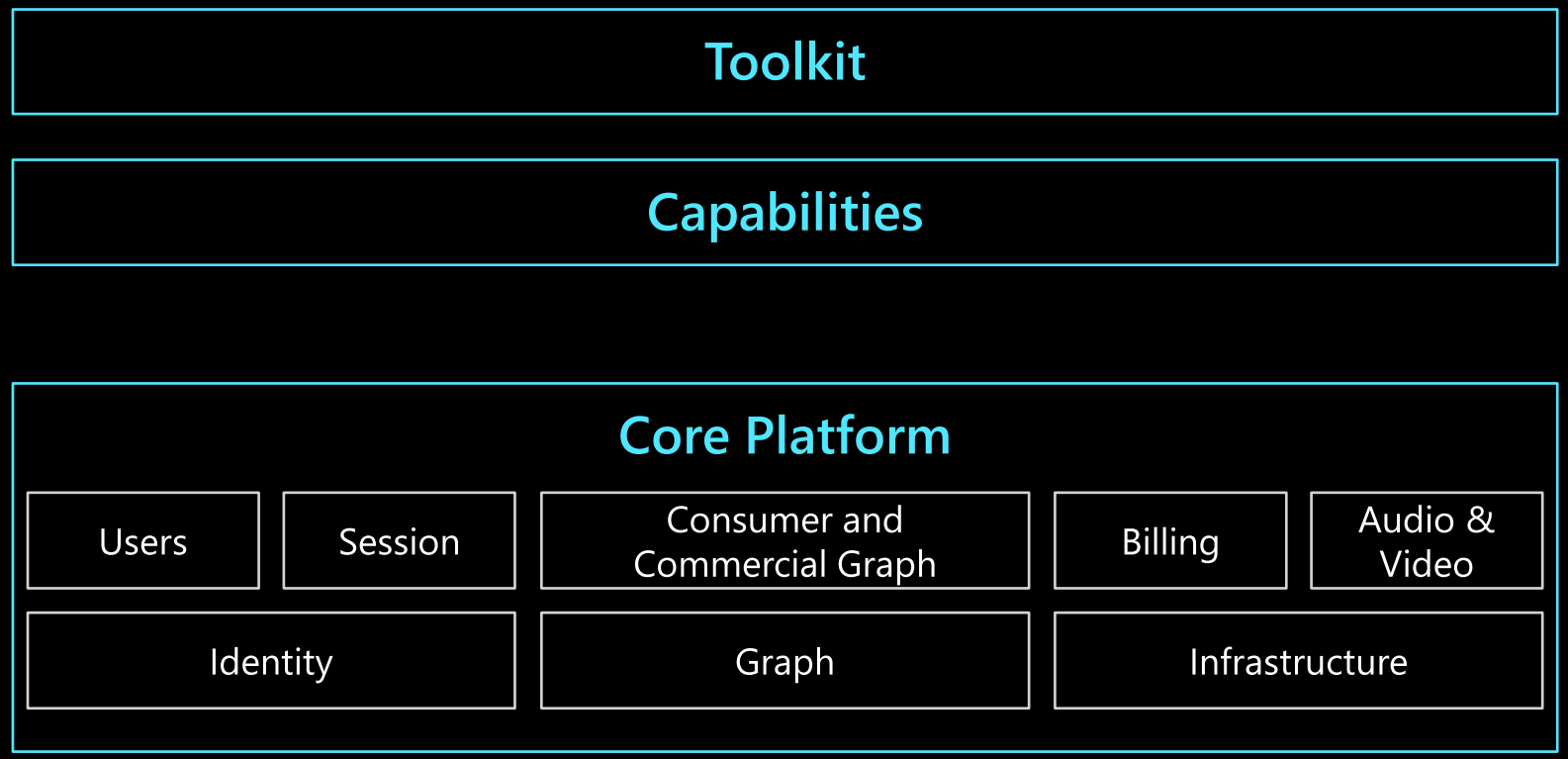
Multi-device support

Mesh Developer Platform

The Mesh Developer Platform



The Mesh Developer Platform



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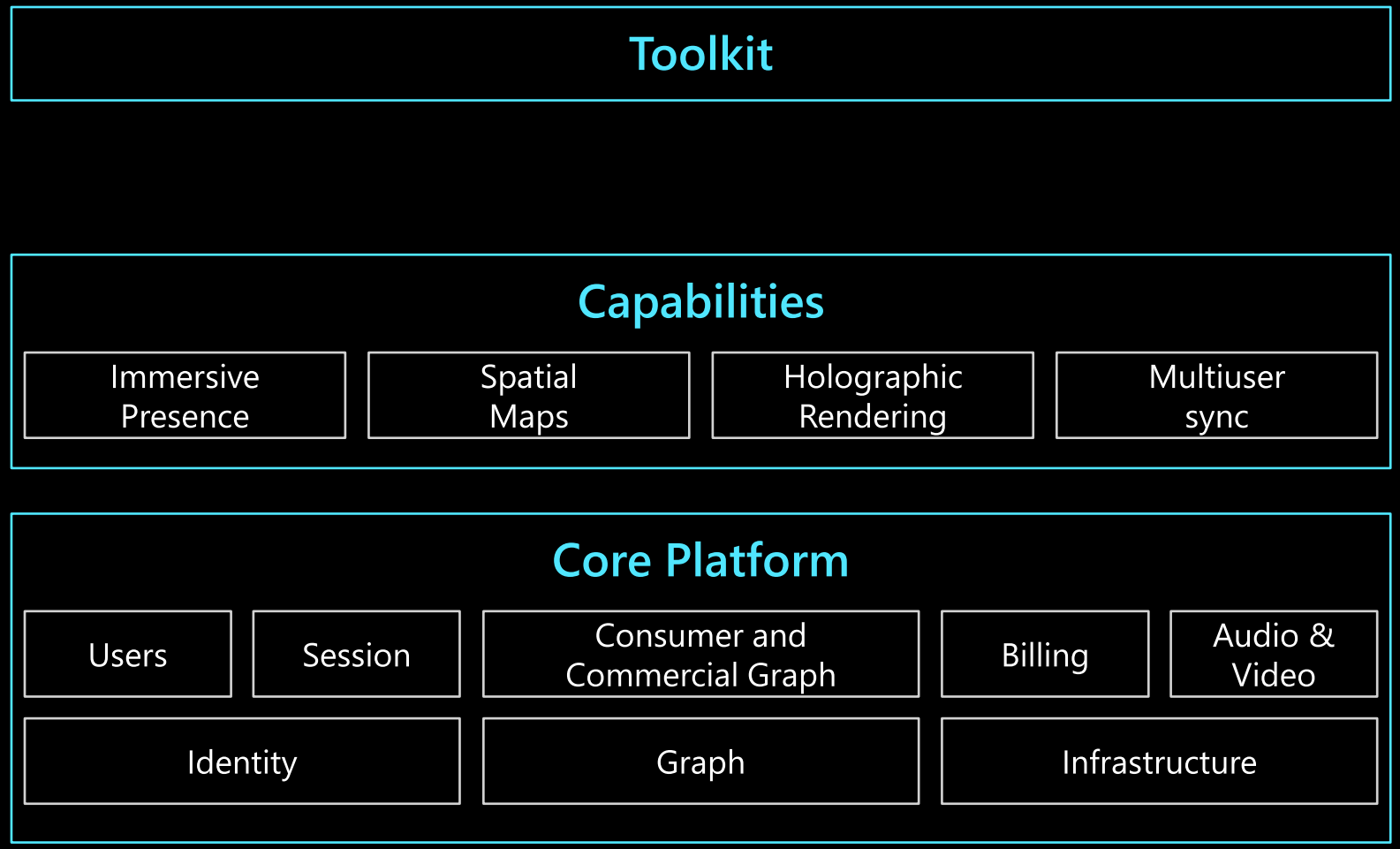
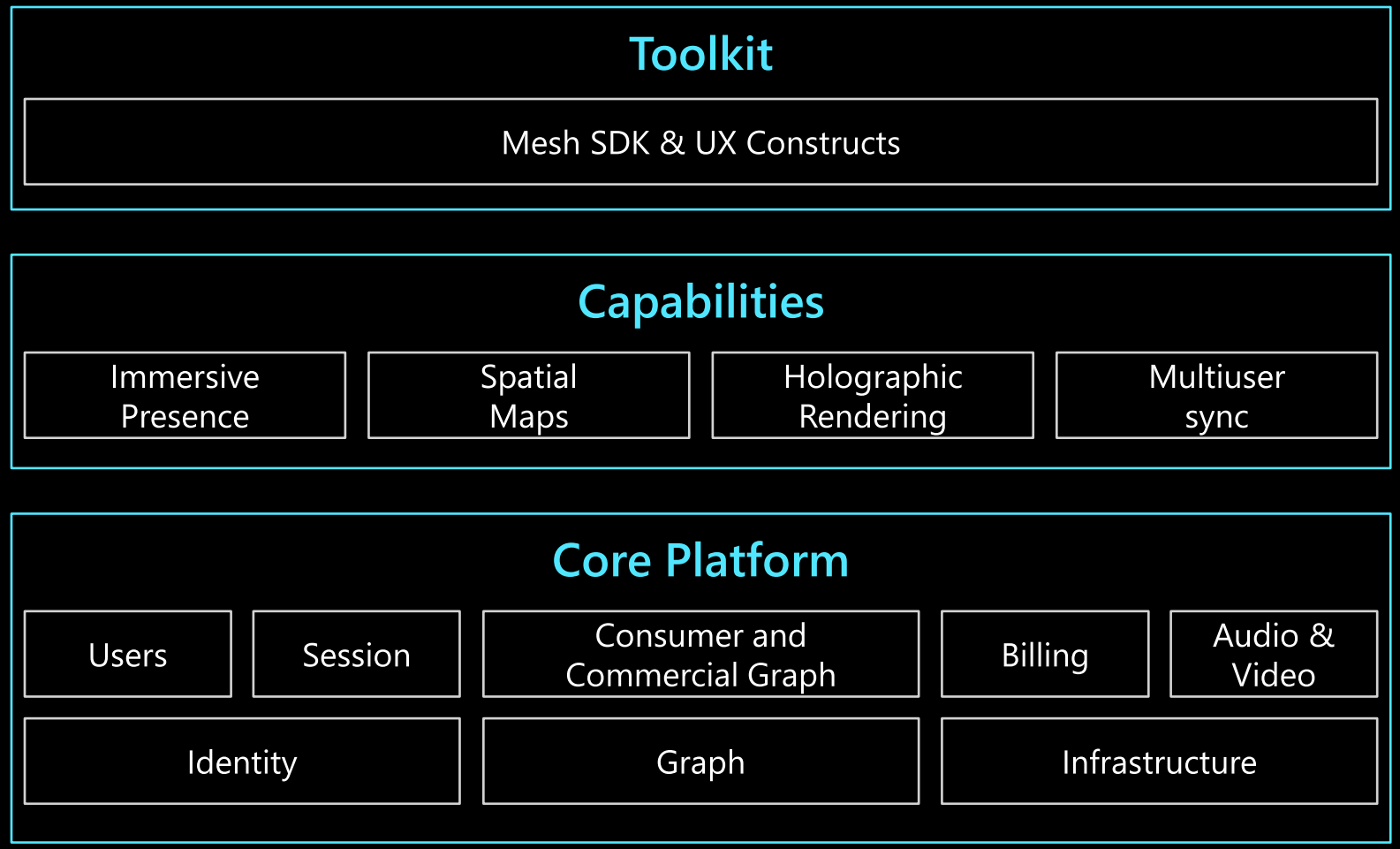
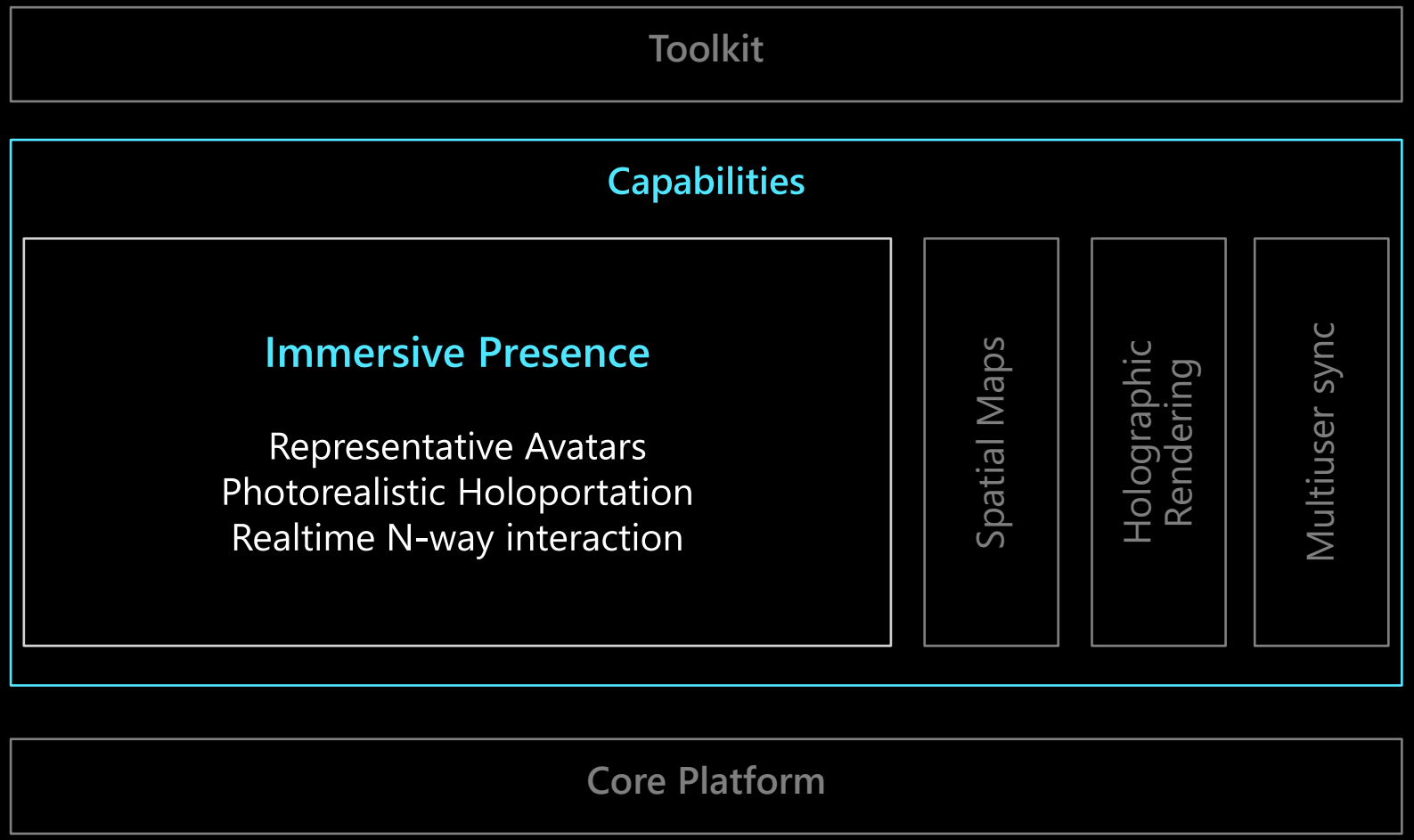
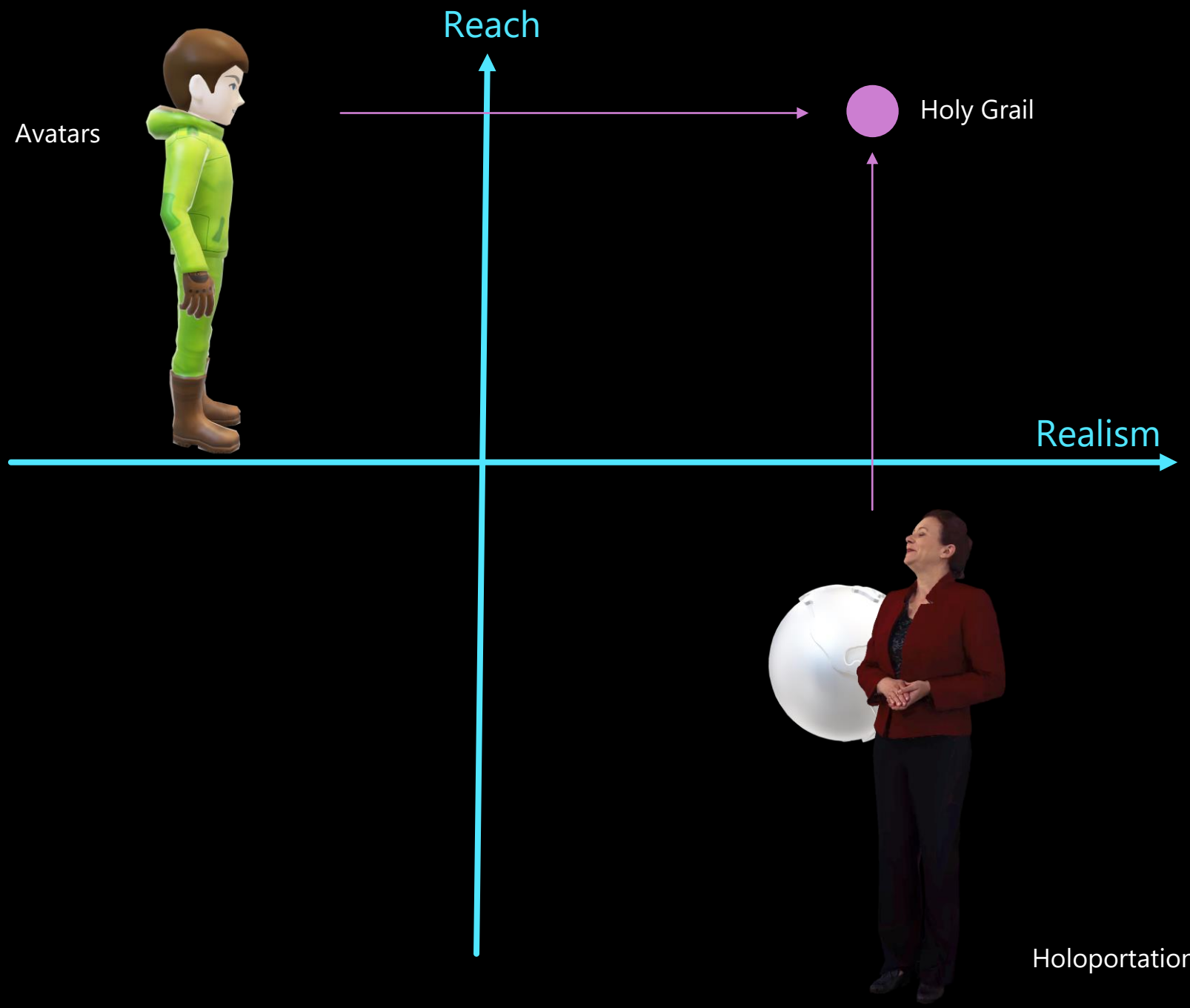


The Mesh Developer Platform

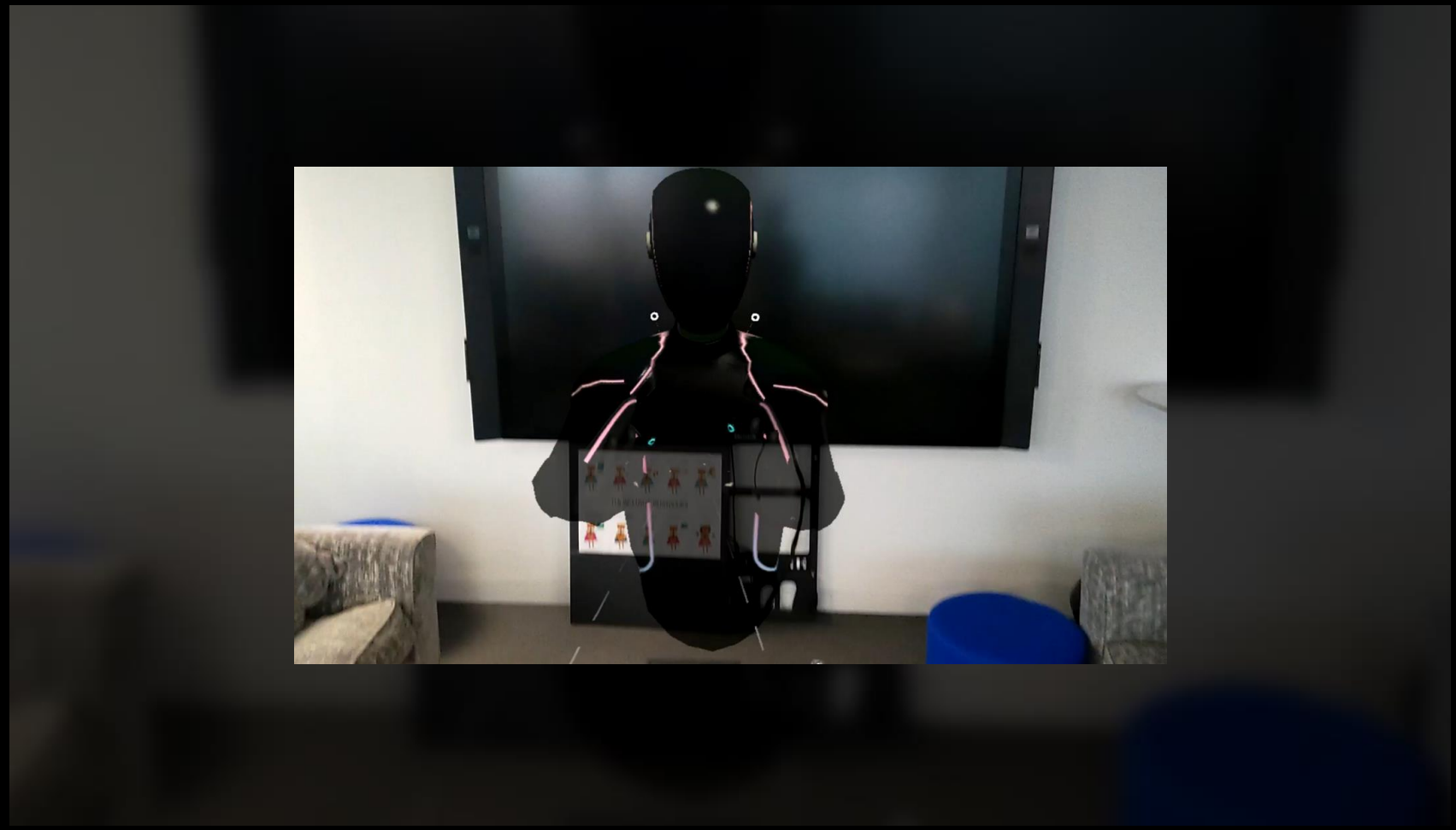


The Mesh Developer Platform




Reach
Avatars
Holy Grail
Realism
Holoportation

Avatars

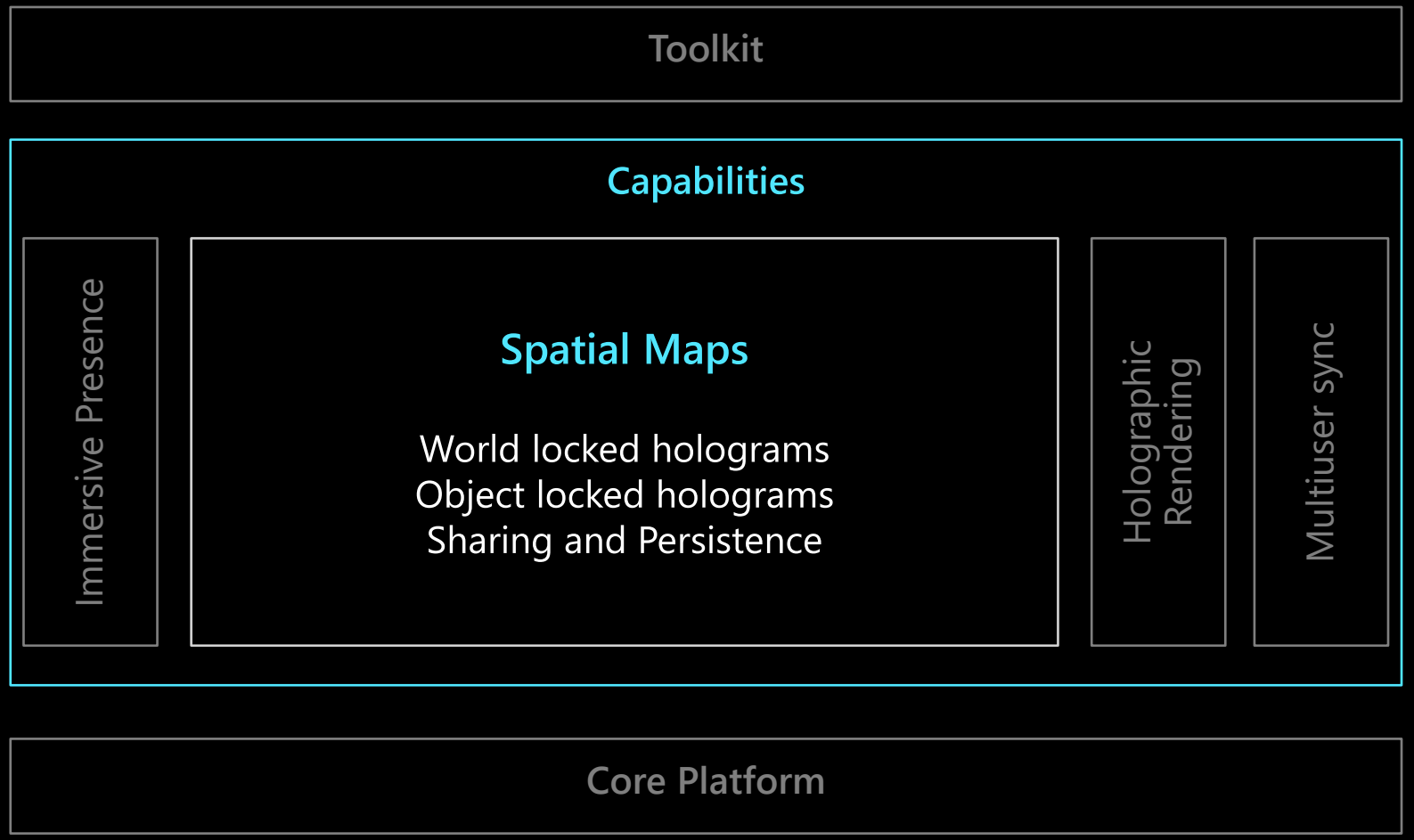


Authentically represent users in Mixed Reality with avatars that convey their motion and expression

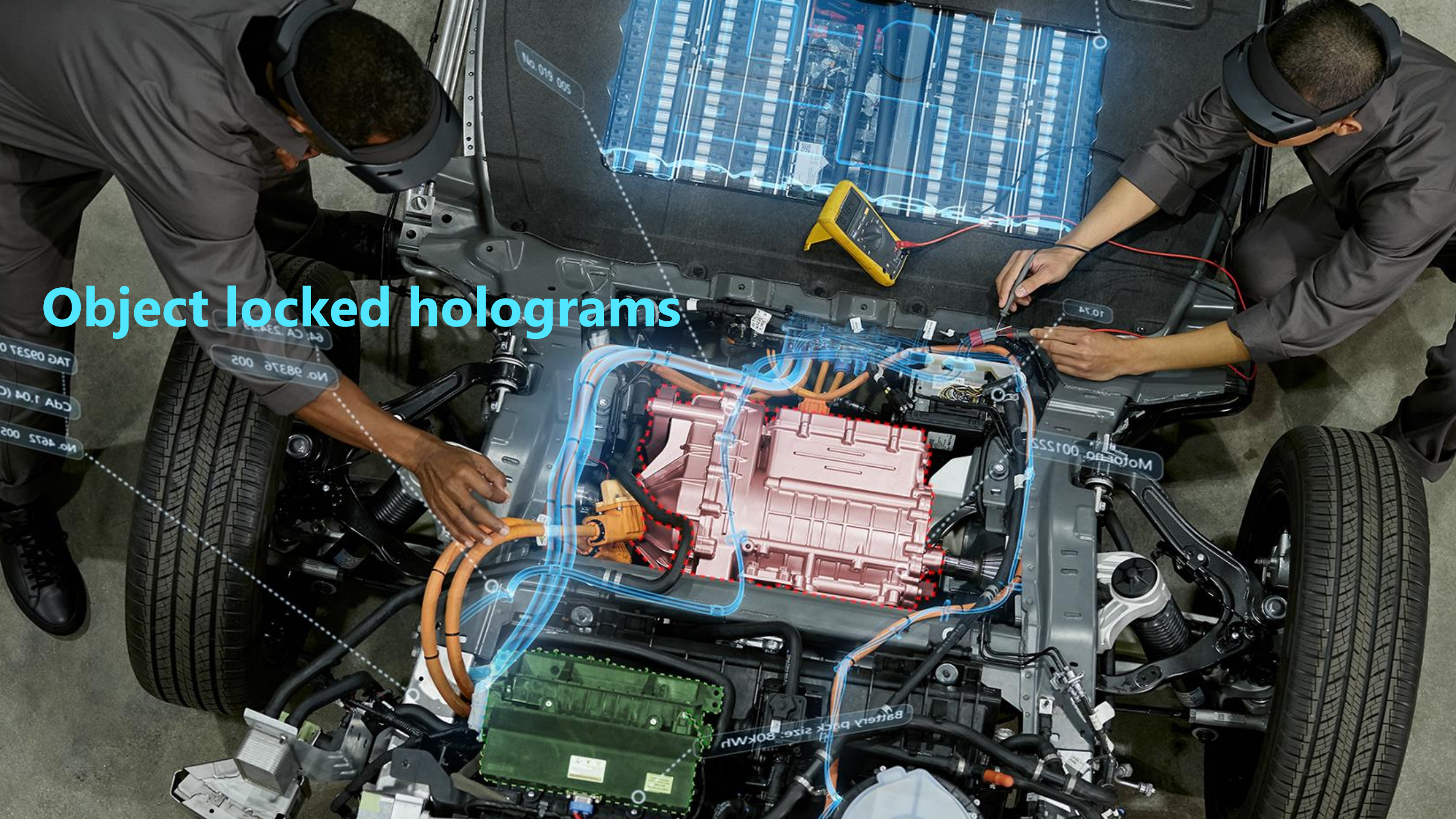
Holoportation

Deliver 360 degree photorealistic holoportation when augmented with external sensors

The Mesh Developer Platform

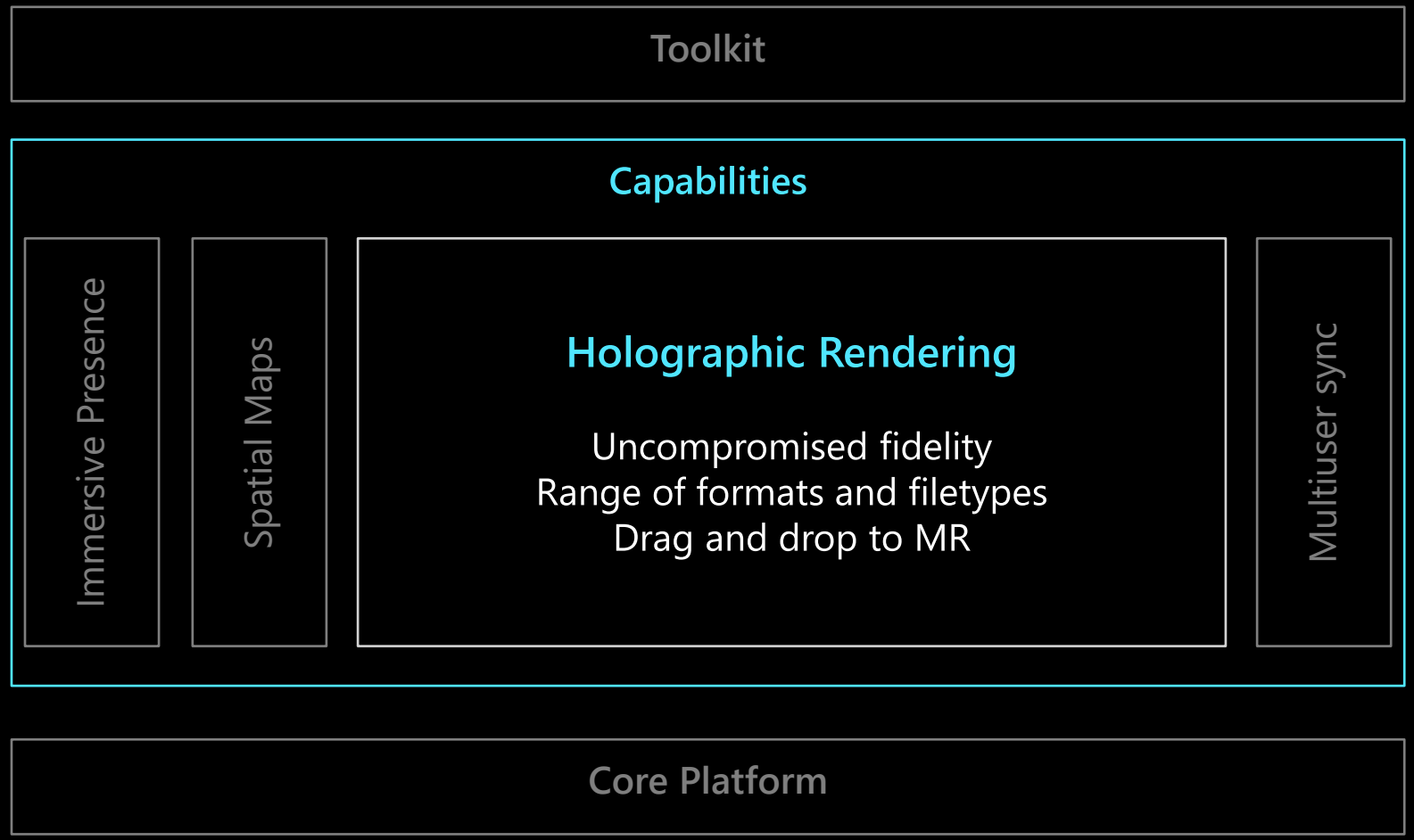


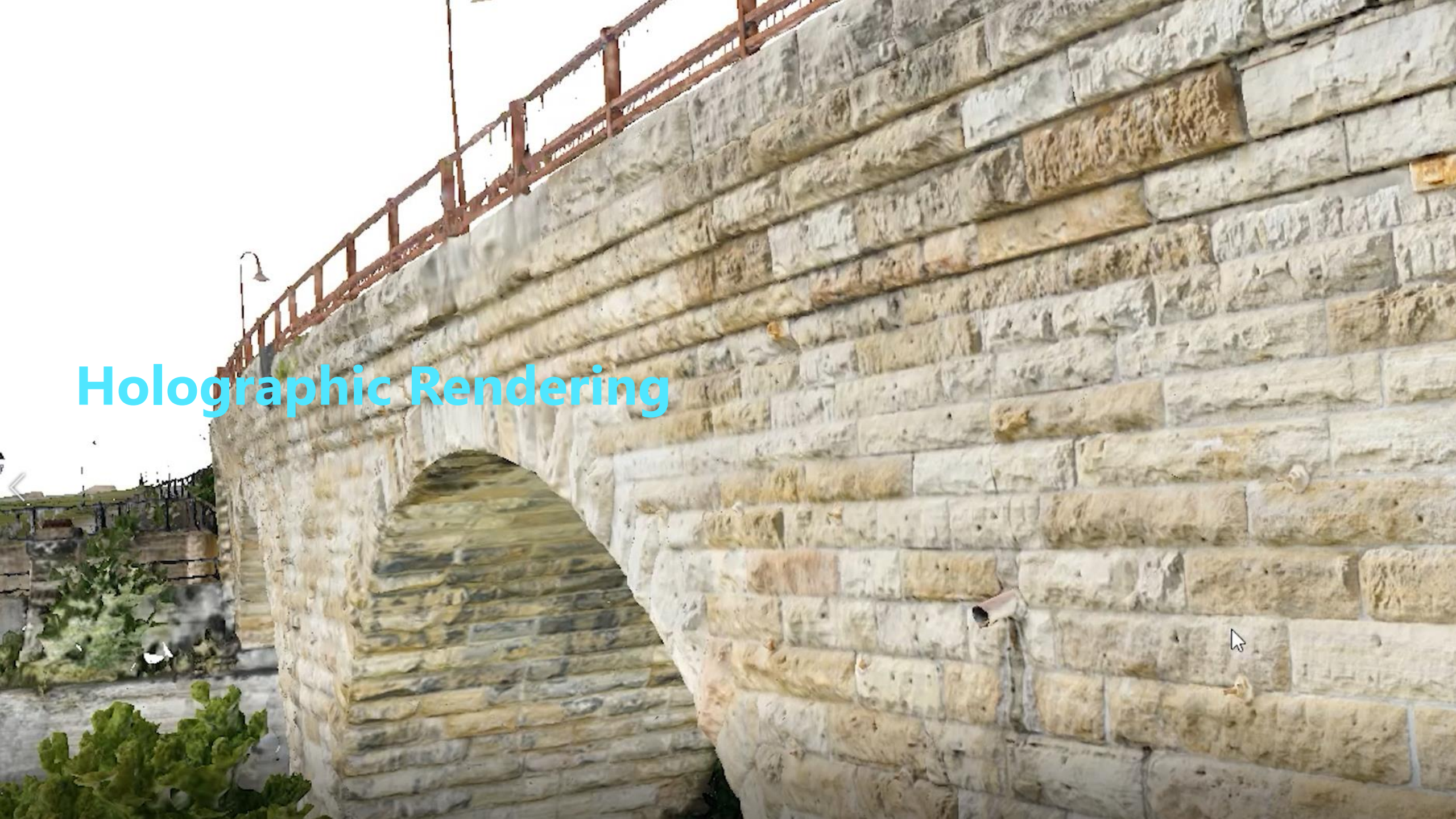
10:51 am
70 m
Turn Right
Then
World locked holograms
1
Old Stove Brewing
$$ - Pub, Burgers, Seafood
2
Market Grill
$$$ - Seafood, Sandwiches, Soups
3
Corner Stone
04:28 +1 LAP
1 EVANS 15%
2 DA COSTA 15%
3 VANDOORNE 16%
4 GÜNTHER 15%
5 BIRD 14%
6 FRIJNS 14%
7 DI GRASSI 14%
8 LYNN 15%
9 LOTTERER 16%
10 VERGNE 15%
11 DA COSTA 16%
12 MORTARA 16%
13 BUEMI 16%
14 MASSA 14%
15 SIMS 15%
16 DE VRIES 15%
17 JANI 15%
18 SETTE CÂMARA 14%
19 BLOMQVIST 15%
20 D'AMBROSIO 15%
21 TURVEY 14%
22 ABT 16%
23 MÜLLER 25%
24 ROWLAND OUT
Shoreditch 35
314
abellio
LJ09 CAV


Object locked holograms

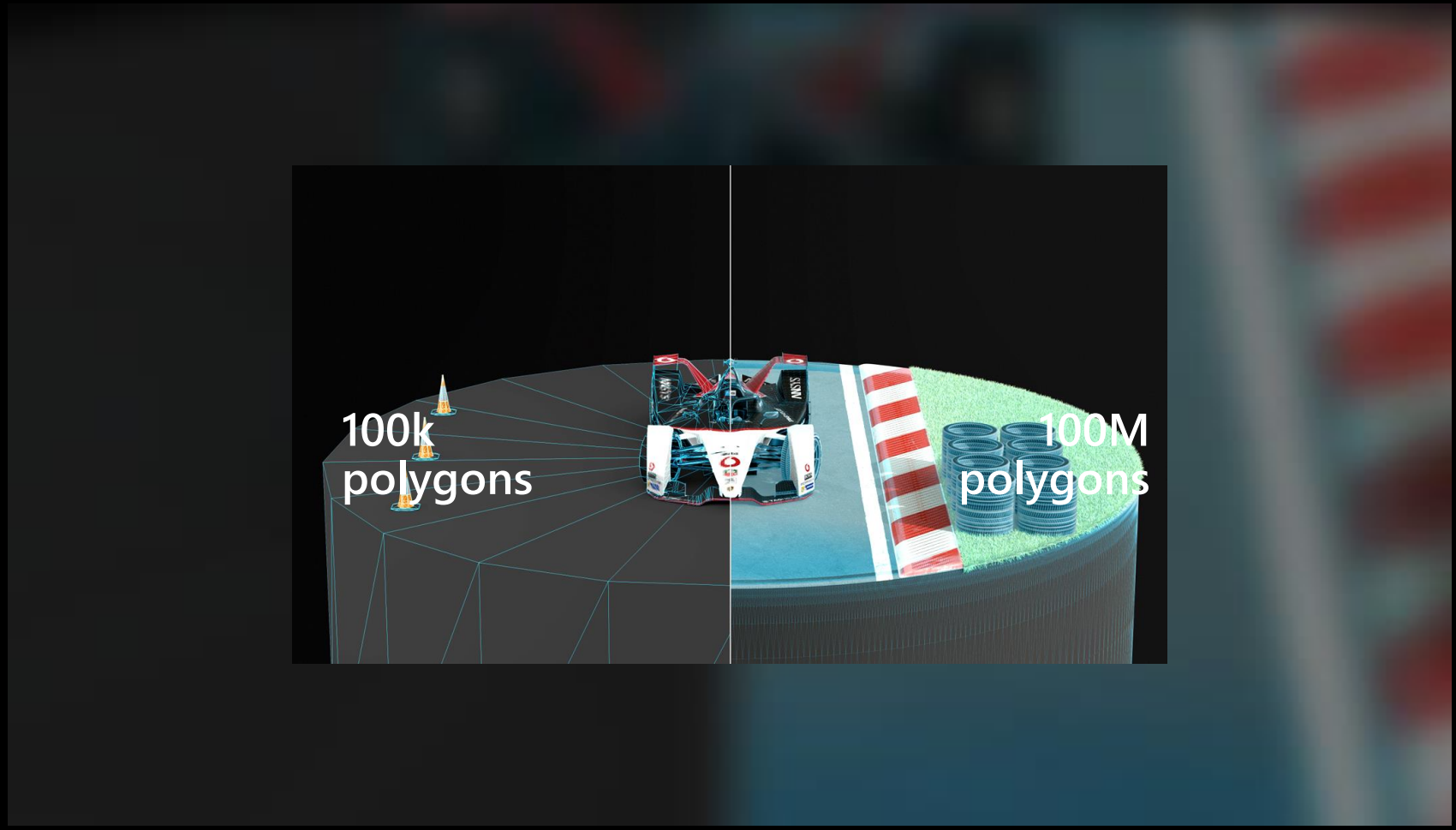
Sharing and Persistence

The Mesh Developer Platform



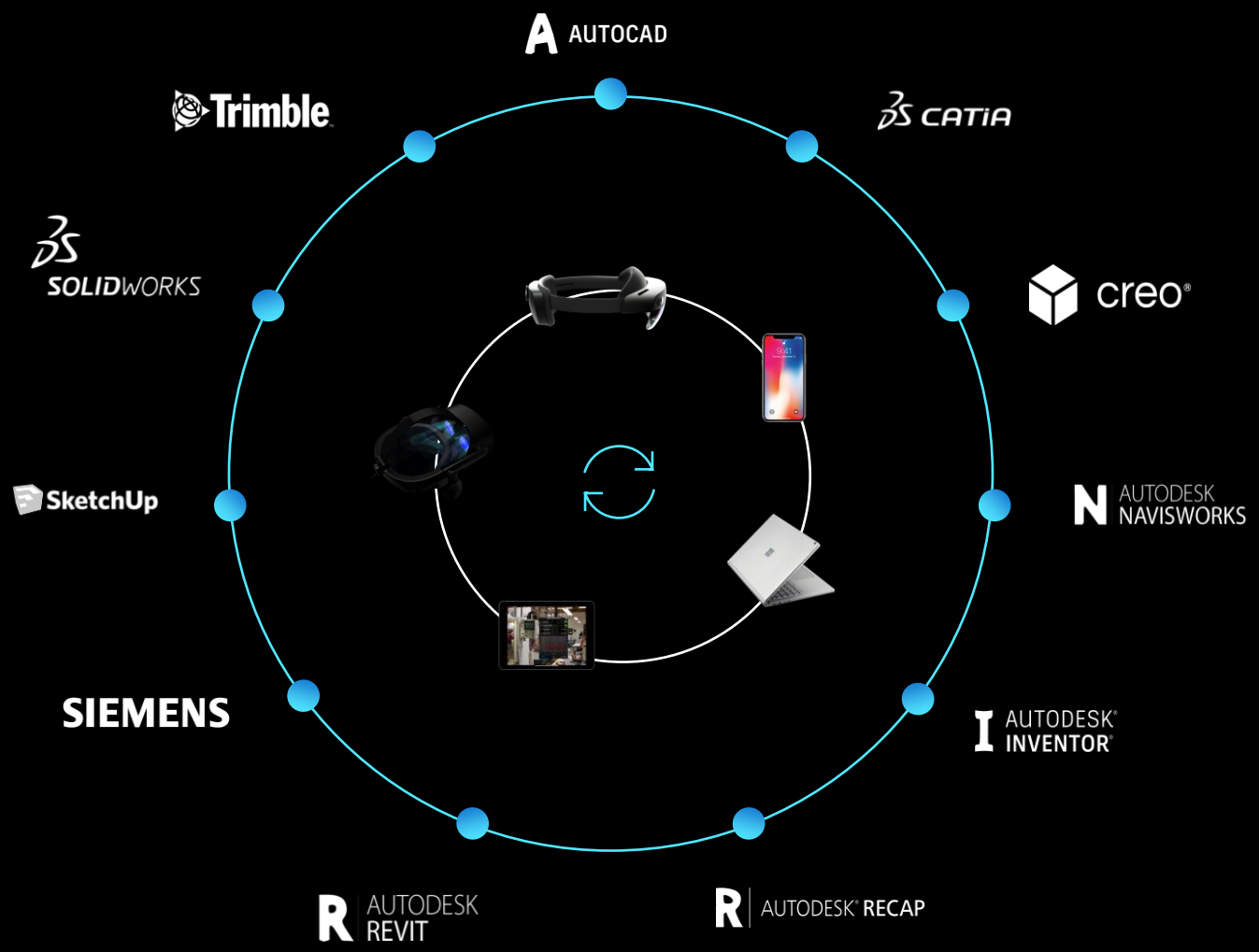

Holographic Rendering

Holographic Rendering



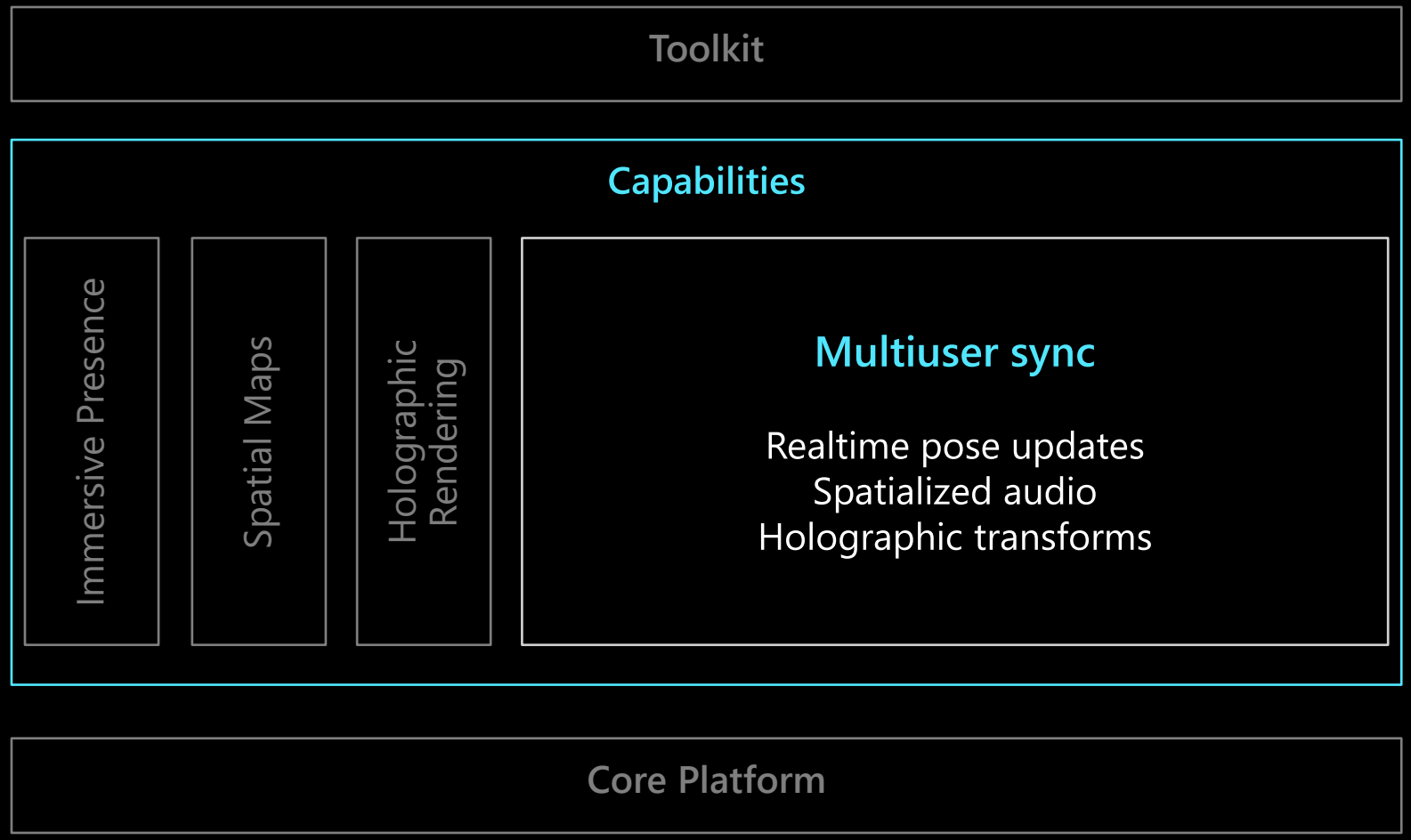
100k or 100M polygons, Mesh intelligently transcends from local rendering to cloud powered rendering to deliver **uncompromised fidelity**

Holographic Rendering



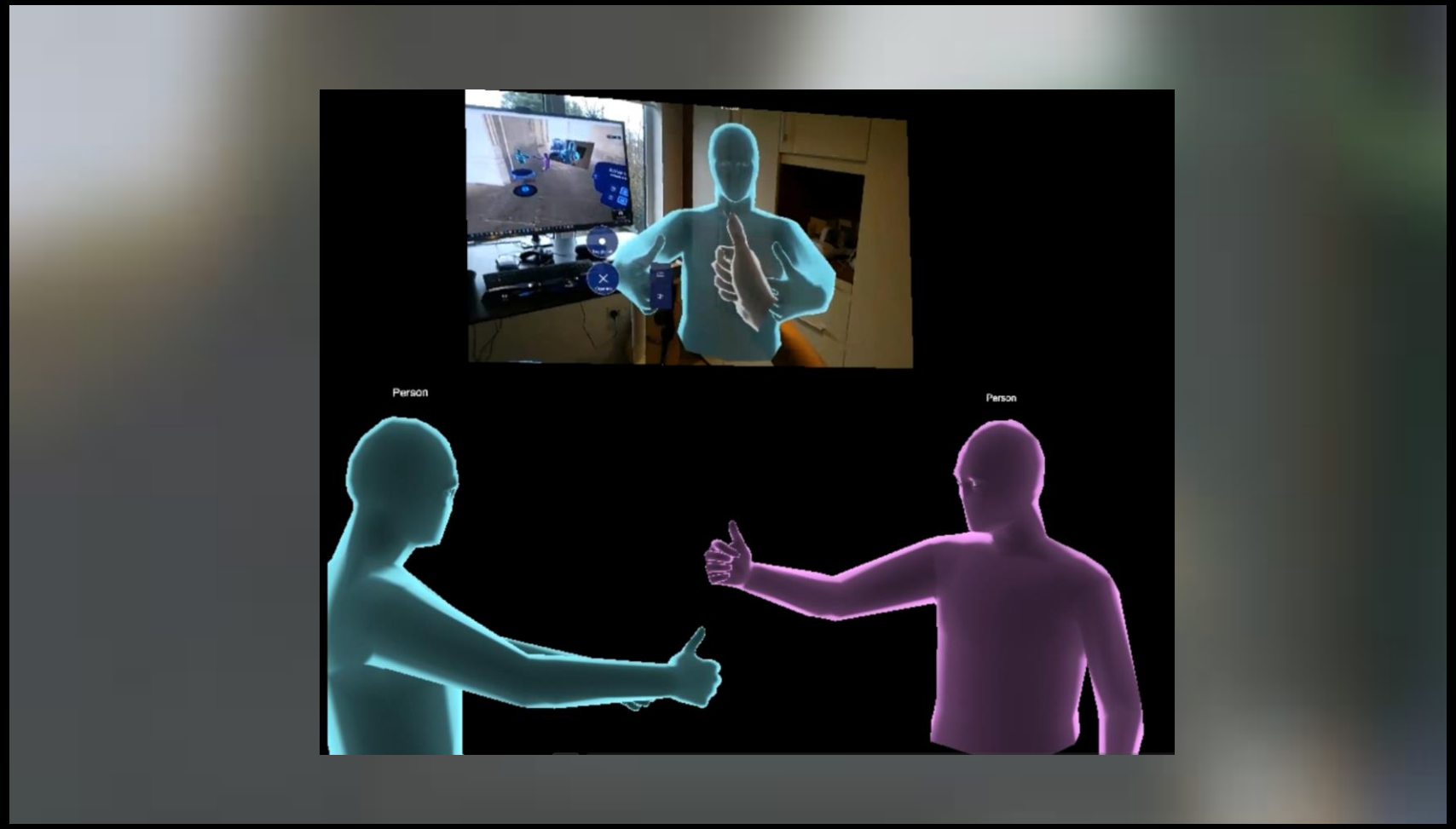
Mesh supports most 3D file formats to natively render in mesh enabled apps.

The Mesh Developer Platform



Real time pose updates

Multiuser sync



Synchronize the motion and expression of participants to deliver a sense of true engagement

Spatialized audio

Spatial audio enables apps that create a sense of being in the same physical space in multiuser scenarios

Holographic transformation

Synchronize holographic transformation across all participants to easily deliver MMO apps

The Mesh Developer Platform

Toolkit

Capabilities

Immersive Presence

Representative Avatars

Photorealistic Holoportation

Realtime N-way interaction

Spatial Maps

World locked holograms

Object locked holograms

Sharing and Persistence

Holographic Rendering

Realtime pose updates

Spatialized audio

Holographic transforms

Multiuser sync

Uncompromised fidelity

Range of formats and filetypes

Drag and drop to MR

Core Platform

Cross Platform/Toolchain Availability

In preview

HoloLens 2: Unity, Native C++/C#

PC/Windows 10: Unity, Native C++/C#

Windows Mixed Reality: Unity

Android Headsets/Oculus Quest 2: Unity

Cross Platform/Toolchain Availability

SDK Availability over the next 12 months

- HoloLens 2: Unity, Native C++/C#, Unreal
- PC/Windows 10: Unity, Native C++/C#, Unreal
- Windows Mixed Reality: Unity, Unreal, Native C++/C#
- Android Headsets/Oculus Quest 2: Unity, Unreal
- MacOS: Unity, Unreal
- iOS: Unity, Unreal
- Web: Babylon, React Native

Get Started

Join the Microsoft MR Developer Program

aka.ms/iwantmr

Watch the Microsoft Mesh Mechanics Session

aka.ms/mesh-mechanics

Read the Microsoft Mesh Documentation

aka.ms/meshdocs

Thank you