

Virtual Worlds Connect

Brokerage event

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Fraunhofer Institute for Computer Graphics Research IGD

Type: research institution

Country: Germany



- ✓ Department „Virtual & Augmented Reality“
- ✓ Expertise:
 - ✓ Applied R&D: **XR, 3D web, industrial twins**
 - ✓ Interop.: **BIM, CAD, 3D formats**
 - ✓ **AI/CV**: inspection, reconstruction, validation
 - ✓ 3D and Material **reconstruction**
 - ✓ **Hybrid real + synthetic datasets** from CAD and real imagery



Project idea

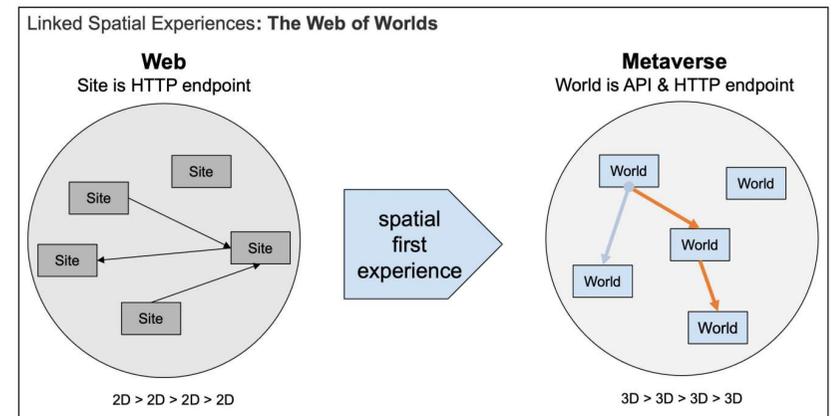
- Topic to be addressed: **HUMAN-02** (HORIZON-CL4-2026-04-HUMAN-02)
 - Web 4.0 architectural framework and Open Internet Stack applications for virtual worlds (RIA)
- Project proposal title: **LINKWORLDS - Web of Worlds for Industry**
- Our role in the project: **Core technical lead** (optionally coordinator)



Project idea

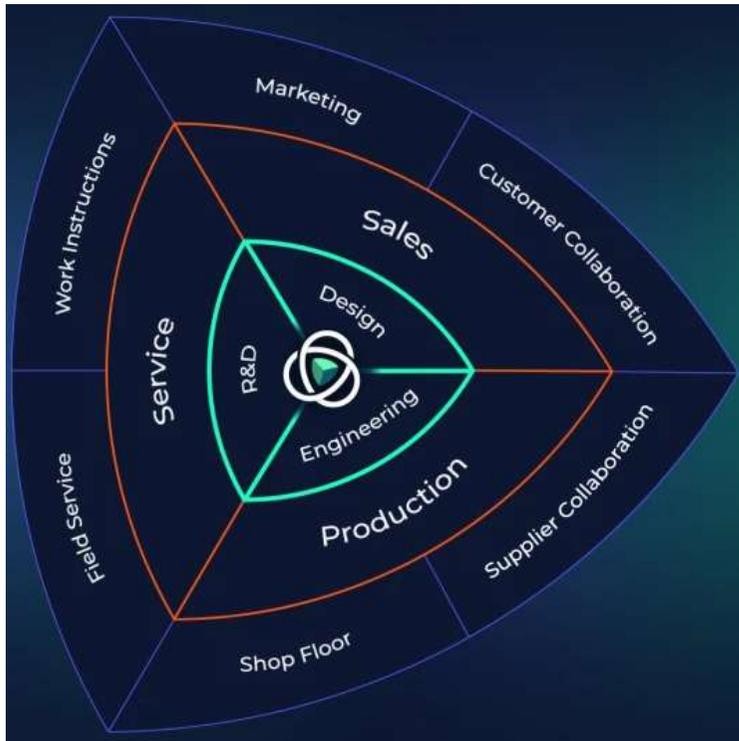
- ✓ Open-source **virtual-world services**: preview → join via standard URLs
- ✓ **Cross-world links**: viewpoints, states, assets, permissions (“world bookmarks”)
- ✓ **Interoperable 3D pipelines** across formats and engines
- ✓ **Multi-device collaboration** with hybrid rendering

The “Web of Worlds” model exposes metaverse worlds as web endpoints.



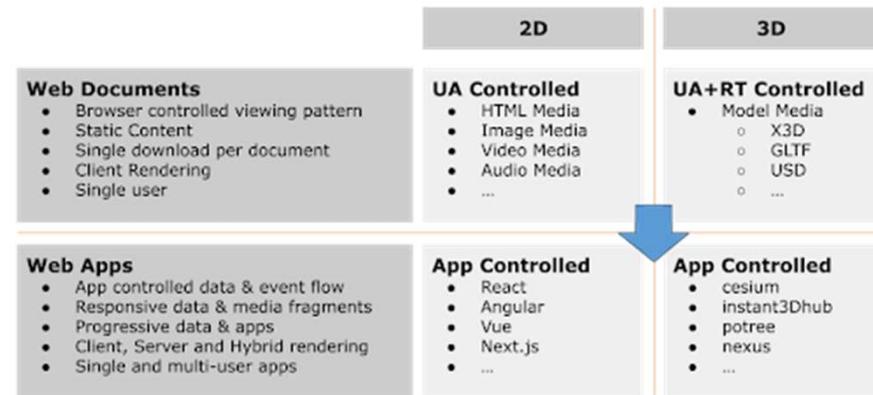
Source: <https://metaverse-standards.org/news/blog/linked-spatial-experiences-the-web-of-worlds/>

Project idea



Source: <https://www.threedio.digital-solutions/business-functions>

The modern Web continuum from 2D addressable documents to data-driven, in-flight 3D content



Source: <https://metaverse-standards.org/news/blog/building-the-world-wide-webiverse/>

Project idea

- Current consortium:
 - Fraunhofer IGD: <https://www.igd.fraunhofer.de/>
 - Threedy: <https://www.threedy.io/>
- Partners sought (industrial-first)
 - **Industrial deployers** (AEC / manufacturing / energy): pilots + rollout intent
 - **System integrator / MSP**: packaging, deployment, operations, onboarding
 - **Telco / edge provider**: scalability, resiliency, energy-efficiency metrics
 - **Identity / EU Wallet specialist**: wallet-ready flows, attribute governance
 - **Security + accessibility auditor**: audits, secure SDLC, remediation cycles
 - **Open-source foundation/community anchor**: governance, contributor scale-up
 - **XR runtime / engine connector vendors**: adapters, SDK hooks, reference clients



THREEDY GmbH



Organisation Profile



- Topic to be addressed:
 - HORIZON-CL4-2026-04-**HUMAN-01**
 - HORIZON-CL4-2026-04-**HUMAN-02**
 - CREA-CROSS-2026-**INNOVLAB**
 - HORIZON-CL2-2026-01-**HERITAGE-01**
- Roles:
 - **WP lead / technical contributor** for perception, inspection, and data pipelines
 - Bridge between industrial requirements and **deployable AI/XR systems**
 - **Technology integrator**: connect sensors, data pipelines, 3D/XR frontends, and target platforms



Organisation Profile



- ✓ **AI/CV** for inspection: detection, **semantic segmentation**, anomaly assessment
- ✓ **Hybrid real + synthetic datasets** from CAD and real imagery
- ✓ 3D and Material **reconstruction**
- ✓ **XR systems** and user interface development
- ✓ **Edge AI** “CAD-to-deployment” pipelines for sovereign industrial inference
- ✓ **Digital-twin workflows** from mobile scanning for remote inspection/collaboration
- ✓ **Cultural Heritage**: immersive experiences, digital heritage pipelines

