



Alliance for IoT
and Edge Computing
Innovation



Session: Intelligent Edge IoT Immersive Technologies and Applications - Convergence of Physical, Digital, Virtual and Spatial Worlds

The technologies and conditions that will shape the
future of virtual worlds

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Event Sponsors



OPENVERSE at a glance

OPEN and co-created ViRtual worlds

Funding scheme:
Horizon Europe
Budget: 3,206,00

Duration
36 months

12 partners

from
5 countries

AI@TI

▪ **OPENVERSE** aims to lay the foundational framework to **create inclusive, open, and ethically responsible European virtual worlds**, enhancing the European Union's technological sovereignty in the global arena, combining user co-creation with extended reality technologies, addressing legal and ethical challenges, and guiding future policy and industry standards for globally influential virtual worlds.

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First findings: Analysing 75 virtual worlds

Domains of application: Scores upon 75 screening examinations

Scoring rationale (over 675 points or 9 x 75 VWs):

- Out of 24 sectors, domains of application importantly dealt with = 9
- Out of 24 sectors, domains of application moderately dealt with = 5
- Out of 24 sectors, domains of application not really dealt with = 1

Entertainment	619	Mainstream
Videogames	567	79,86 % of all VWs are videogames or gaming env.
Culture, art	507	Creativity, education, culture
Education	483	To be analysed, not conclusive, means several things
Marketing, retail	479	Typical of the first VW phase, virtual property to sell
Real estate	387	Typical of the first VW phase of MVs: NFTs
Fashion	363	Creativity, to be examined, involves several issues
Tourism	351	Still in its beginning
Media	335	Complex issue, to be analysed more in depth
Research	335	Interesting, to be analysed in a EU perspective
Urbanism, construction	323	Goes with creativity, but really useful
Healthcare	259	Deep dive option: our own work in progress
Sport	251	Fitness coaching, sport events, not much more
Smart cities	191	A lot of planning + simul., digital twins
Environment	143	Interesting, but still very low profile in the VW arena
Tertiary sector (finance, insurance, etc.)	123	A few interesting trends, low still key so far
Industry	107	Interesting attempts, to be explored with attention
Agriculture, landscape	103	Should be higher
Security, military	99	Very low
Mobility	95	Linked to urbanism
Territorial development	91	Very low
Government	79	Gov. VWs are dispatched in other categories
Maintenance, logistics	83	Very low, like industry, it should be higher
The Law	75	There are VWs on this, but not in the 75

Countries of domiciliation of the 75 virtual worlds

US: 30
Canada: 6
Argentina: 1

N. America:
37/75

Sweden: 3
Germany: 3
The Netherlands: 2
Austria: 1
Bulgaria: 1
Ireland: 1
Czech Rep.: 1
Cyprus: 1
Finland: 1

EU = 14/75

Japan: 3
Hong-Kong: 2
Singapore: 2
South Korea: 2
New Zealand: 1
Australia: 1
Vietnam: 1
Taiwan: 1

Asia: 13/75

UK: 4
Switz.: 4

UAE: 2

Unassigned (OS_EU): 1

Four evolution patterns, for the last five years, among the «most popular» virtual worlds

Avakin Life

The gradual decline slope



Decentraland

The popularity surge and then fast decline



Remio

The positive maintenance



VRChat

The clear growth pattern



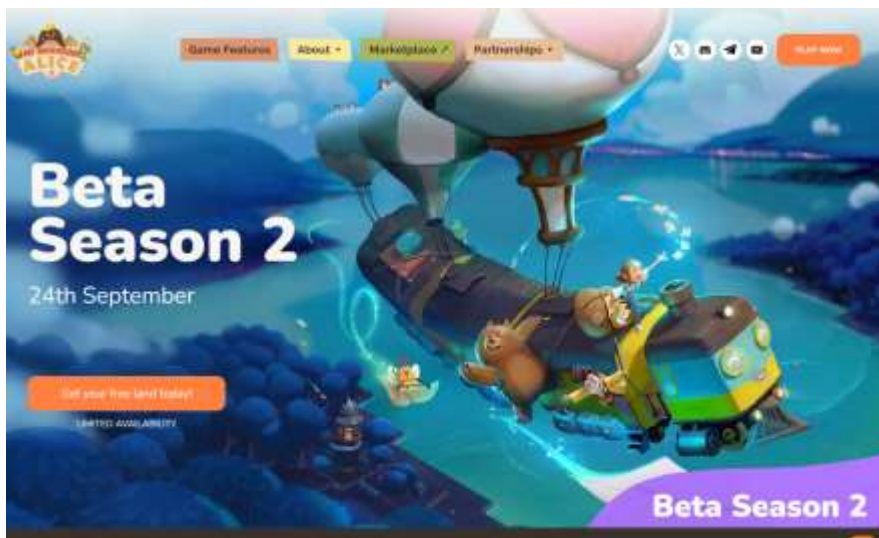
1. The Co-creation objective: 2 types of VWs

- Co-creation, but for what?



- End-user, young, & game, community and event driven
- With clear 20-30 years old high fits

VS.



- Enterprise & or professional oriented co-creation
- Education, industry, construction, healthcare: B2B, B2B2C

Foresighting the next step and key EU stakes

Our current target: technology foresight and policy-recommendations, for **open and human-centric VWs**, but also taking into account:

- **Sovereignty issues** (multiple)
- **Techs** that separately but also to a great extent conjunctly will shape the future of virtual worlds, including building on XR developments:

For utility-oriented virtual worlds : IoT (sensing, sensorial interfacing, augmenting), 5-6G/others to communicate, robotics and automation, cybersecurity, and AI

For virtual assets monetization/games or events, AI but also BC-supported applications

- Pending stakes: 1) **standards gaps** (to be narrowed down), 2) **IPR variations** (to fit SMEs and start-up needs), and **EU governance efforts, to be pursued**