Metaverse Multistakeholder Workshop

28 February 2023 | Technical University of Munich (TUM) | TUM Think Tank

1. About the Workshop

Metaverse Multistakeholder Workshop

The goal of this interactive and invitation-only Metaverse Multistakeholder Workshop is to explore the contours, shapes, and future trajectories of the Metaverse as tomorrow's digital frontier by examining and contrasting three specific yet exemplary use cases from different areas of life. The workshop is as an invitation to explore the question of how we want to shape and live our digital lives in the future, and to reimagine society's "operating system" - including safeguards and guardrails - at a moment in time where technology, business models, and regulatory systems are still malleable.

To address opportunities, challenges, and open questions concerning the future governance of the Metaverse, this workshop brings together a small group of experts from academia, industry, the public sector, and civil society to engage in an open interdisciplinary dialog.

Convenors

The Metaverse Multistakeholder Workshop is part of the ongoing activities of the Metaverse Research Group, which is currently in its incubation phase at Technical University of Munich (TUM). It is a joint initiative of the Professorship of Public Policy, Governance and Innovative Technologies with the TUM Think Tank and their international partners, including the Nordic Center for Internet and Society at BI Norwegian Business School and Youth and Media at the University of Zurich.

The Metaverse Research Group aims to investigate and shape the interactions of immersive technologies and their applications with society, politics, and the economy in the coming years. Leading up to the Workshop, a bi-weekly Reading Group at TUM investigated a variety of use cases (e.g., smart cities, teaching and learning, or cultural heritage) and governance issues (e.g., app store issues, privacy, or interoperability). Moreover, the TUM team is currently developing a project proposal for a Horizon Europe call, aimed at supporting the emergence of an open-and human-centric Metaverse that encodes and promotes European values, facilitates knowledge sharing, and supports its builders, shapers, and users.

2. Program

The workshop takes place on-site and in person only. The program is scheduled as follows:

Tuesday, 28 February 2023

Time	Session
09:30 - 10:00	Arrival & Registration
10:00 - 10:10	**Welcome** - Urs Gasser
10:10 - 10:30	**Setting the Stage** - Sofie Schönborn, Danil Kerimi Definitions and taxonomy
10:30 - 11:30	**Use Case Introductions** GOV2C: XR Spaces and Extended reality infrastructures in Bavaria by XRHub Bavaria (Silke Schmidt) GOV2C: Metaverse Pilot in EU Communication Campaign by EU Global Gateway (Barend Bouwer) B2B: Digital Twins in Manufacturing SMEs by Umlaut by Accenture (Jana Koçak, Martin Willam, Daniel Saad) B2C: VR Speech Trainer enabled by Artificial Intelligence by Straightlabs (Peter Niermann and Fabrizio Palmas)
11:30 - 11:45	Coffee Break
11:45 - 12:30	**Discussion Round 1** In each round, participants will form three sub-groups to consecutively discuss each use case and associated questions (facilitated by Noha Lea Halim, Brittany Engle, Fabienne Marco, Philip Pfaller).
12:30 - 13:30	Lunch
13:30 - 14:15	**Discussion Round 2**
14:30 - 15:15	**Discussion Round 3**
15:30 - 16:30	**"Bringing it all together"** - Urs Gasser Discussing findings, drawing parallels and distinctions between different cases.
16:30 - 17:00	**Wrap-up**
18:30 - 22:00	**Dinner** (optional) Please let us know whether you would be interested in staying for a dinner via mail to *sofie.schoenborn@tum.de*

3. Use Cases

The workshop will be centered around three exemplary use cases that affect and involve different stakeholder groups (Business-to-Business (B2B), Business-to-Customer (B2C), Government-to-Citizen (GOV2C)).

GOV2C: XR Spaces and Extended reality infrastructures in Bavaria (XR HUB Bavaria)
Presenter: Silke Schmidt
"Where community builds the metaverse" - XR Spaces are for teams, individuals, universities and companies. You can enter or search virtually designed 3D spaces to create and enjoy experiences together. These virtual spaces are built for different purposes: for content sharing, for education, for art exhibitions or as art experiences, as showrooms and for new working methods. Our goal is to build an inter-connected, explorable and interactive 3D world – made of virtual spaces and built by the community. Our list of virtual spaces and events will grow over time. Take part in our current contribution to the metaverse! The Bavarian Ministry for Digital Affairs is funding XR research, networking and content creation in Bavaria with a total of around 1.3 million euros including the XR HUB Bavaria with its three locations in Munich, Nuremberg and Würzburg.

GOV2C: Metaverse Pilot in EU Communication Campaign (EU Global Gateway Initiative), Presenter: Barend Bouwer
The European Commission piloted a metaverse as part of the 2022 Global Gateway Europe communication campaign. The campaign aimed to showcase the EU's role on the world stage and to expand on why investments in EU partner countries are mutually beneficial; both to recipients of EU investments and EU citizens. As the target audience of the campaign was 18-35 year-olds, the Commission opted to pilot the metaverse to align with modern media consumption preferences. The campaign was largely social media based, but the metaverse allowed the audience to go one step further and interact with campaign content, videos, art installations, campaign heroes, influencers and each other. The metaverse was also home to several events where musicians, influencers and EU investment recipients participated. The Commission will be undertaking a full independent evaluation of the campaign as well as the metaverse to fully map the merits, pitfalls and lessons learned.

B2B: Digital Twins in Manufacturing SMEs (Umlaut by Accenture)
Presenters: Martin Willam, Jana Koçak, Daniel Saad
A photo-realistic digital twin, creating a virtual collaboration platform to assess next-generation facilities and train tomorrow's talent for their new thixomolding line. The planning, integration, and commissioning of thixomolding lines are characterized by the

technical complexity of the system. Through the development of a visualized digital twin the process planning and validation were significantly improved. In addition, VR training applications enabled the client to train employees before physical commissioning. Today, with the production up and running, AR technology supports the worker by providing guidance and live-data of the machine in real-time.

B2C: VR Speech Trainer enabled by Artificial Intelligence (Straightlabs)
Presenters: Prof. Peter Niermann and Prof. Fabrizio Palmas
The VR Speech Trainer is a virtual reality training program that allows you to practice speaking and presenting freely in front of a virtual audience without stress. To do this, you immerse yourself in a simulated world and speak in front of your audience in realistic presentation scenarios. Artificial intelligence controls your audience's reactions in real time and gives you feedback on your voice modulation, speaking speed and filler words used. In addition, the AI analyzes your nonverbal communication based on your eye contact with the audience, your posture, and your gestures. The gamified training scenarios turn every virtual presentation into a special learning experience.

4. Participants

Friederike Beck	Student of Politics & Technology at the TUM School of Social Sciences and Technology
Prof. Silke Beck	Professor for Sociology of Science, Department of Science and Technology Studies, TUM School of Social Sciences and Technology
Dr. Lea Beiermann	Science Editor, Ada
Prof. Beatriz Botero	Assistant Professor of Law, Sciences Po | Co-Founder, Edgelands Institute | Faculty Associate, Harvard University Berkman Klein Center
Barend Brouwer	Campaign Manager, DG International Partnerships, European Commission
Dr. Christos Chantzaras	Managing Director, TUM Venture Lab Built Environment
Dr. Sandra Cortesi	Director of Youth and Media, Berkman Klein Center for Internet & Society, Harvard University | Senior Research and Teaching Associate, University of Zurich
Brittany Engle	TUM School of Social Science and Technology (local organizer)
David Fergusson	Executive Managing Director, M&A at Generational Equity
Prof. Christian Fieseler	Professor for Communication Management, Norwegian BI | Co-Director, Nordic Centre for Internet and Society
Nina Katharina Frey	Deputy Head Digitalisation Division, Swiss Foreign Department of Federal Affairs
Prof. Urs Gasser	Professor of Public Policy, Governance and Innovative Technology, Rector of the Munich School of Politics and Public Policy and Dean of the TUM School of Social Sciences and Technology (local organizer)
Alexandra Ginger	Developer Digital Twin, Accenture
Pablo Gomez Ayerbe	Student of Science and Technology Studies at TUM School of Social Sciences and Technology
Noha Lea Halim	TUM School of Social Science and Technology (local organizer)
Stephanie Hare, PhD	Researcher, broadcaster, and author
Camila Hidalgo	TUM School of Social Science and Technology (local organizer)

Anton Hiller	Co-organizer, MUC.xyz | Spokesperson, State Ministry of Economy, Infrastructure and Tourism of Mecklenburg-Vorpommern
Dr. Laura Hirvi	Academic Partnerships Manager, European Policy Campaigns and Programs, Meta
Prof. Marcello Ienca	Assistant Professor, Chair of Ethics of Artificial Intelligence and Neuroscience | Deputy Director, Institute for Ethics and History of Medicine, Technical University of Munich
Eva Ivancic	Strategic Policy Manager Central Europe, Meta
Prof. Catalina Goanta	Associate Professor, Law, Economics and Governance, Utrecht University
Matti Gruener	Lead Software Engineer - Emerging Platforms, Flybits
Simeon Kachegias	Student of Politics & Technology at the TUM School of Social Sciences and Technology
Nathan Kaiser	Board Member, xUpery | Partner, Heuking Kühn Lüer Wojtek
Stephanie Kaiser	Chief Product Officer, DigitalService4Germany
Prof. Enkelejda Kasneci	Distinguished Professor for Human-Centered Technologies for Learning, TUM School of Social Sciences & Technology
Danil Kerimi	COO, Edgelands Institute | TUM School of Social Sciences and Technology, Researcher
Dr. Daniel Kliche	ABG Innovation Center, Senior Vice President | MUC.xyz
Jana Koçak	Program & Project Management Senior Analyst, Digital Twin, Umlaut Engineering - Part of Accenture
Philipp Lesche	Bavarian State Ministry for Digital Affairs, Head of Bavarian Center for Blockchain
Fabienne Marco	Co-Lead, Quantum Social Lab | TUM School of Social Science and Technology (local organizer)
Prof. Juan Carlos de Martín	Professor of Computer Engineering, University of Turin | Founder and Co-Director, NEXA Center for Internet & Society
Dr. Jeannette Neustadt	Project Lead, Digital Education, Goethe Institut
Prof. Peter Niermann	Founder & Managing Director, straightlabs
Prof. Fabrizio Palmas	Creative and Technical Director, Straightlabs
Dr. Philip Pfaller	Innovation Manager, TUM Think Tank (local organizer)
Daniel Saad	Project Manager, Accenture
Daniela Schleh	Officer for Digital Future Technologies, Bavarian State Ministry for Digital Affairs
Silke Schmidt	Head, XR Hub Munich

Dr. Mayte Schomburg	Co-Founder, Alliance4Europe
Sofie Schönborn	TUM School of Social Science and Technology at the TU Munich (local organizer)
Prof. David Shrier	Professor of Practice, Imperial College Business School | Managing Director, Visionary Future LLC
Dr. Markus Siewert	Managing Director, TUM Think Tank (local organizer)
Sophia Spornraft	Student of Politics and Technology at TUM School of Social Sciences and Technology
Dr. Martin Wählisch	Team Leader, Innovation Cell, Policy and Mediation Division, UN Department of Political and Peacebuilding Affairs (UN DPPA)
Tobias Wangermann	Konrad Adenauer Foundation