

2nd ITU Forum on “Creating a metaverse for all through international standards”



Shaping the metaverse through international standards

Shin-Gak Kang
Chairman, ITU-T Focus Group on metaverse (FG-MV)

(Updated from the presentation at 2nd Forum in Shanghai, China)

8 August 2023



The importance of standards in the metaverse

**Support a safe, secure,
and regulated metaverse**



**Ensure that the metaverse
is open and accessible to all**

**Allow for interoperability
within the metaverse**

**Ensure that technologies
can work together
seamlessly in the metaverse**

ITU Focus Group on metaverse (FG-MV)

Unanimously established by TSAG in December 2022;

(ITU) 193 Member States as well as more than 900 companies, research institutes and international organizations



Open to non-ITU members;

Free of charge;

Physical meetings with remote participation & E-meetings



Diverse management team:

- Government, Industry, Academia, UN agencies
- Africa, Asia, Europe, Americas



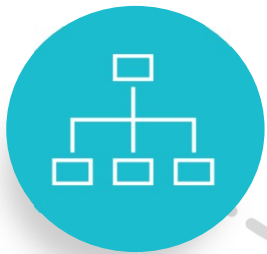
50+ planned deliverables (06 July 2023),
including Technical Specifications & Reports



More than 500 experts
involved in the FG-MV

The 1st FG-MV meeting broke the record!

Most attended ITU Focus Group meeting with over 650 participants!



FG-MV Management Team

Government, industry,
academia, UN agencies, Asia,
Africa, Europe, the Americas



FG-MV Structure established

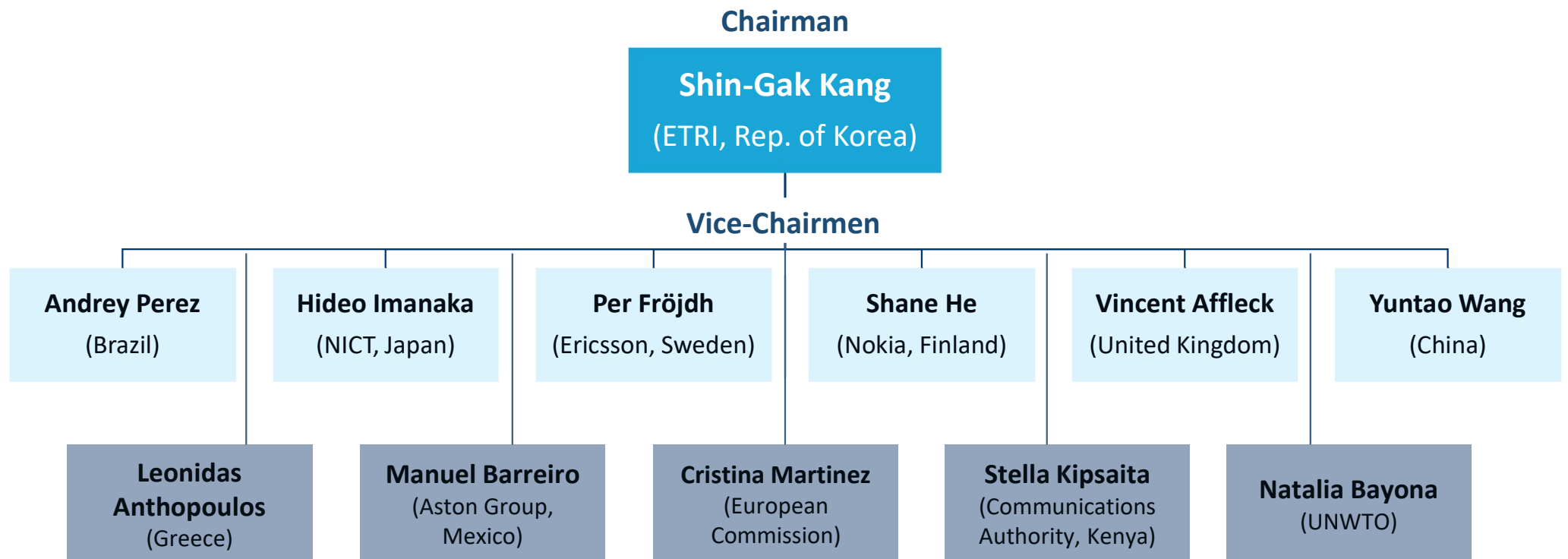
8 Working Groups and
10 Task Groups



Work Plan agreed

18 new work items were
created and are moving fast!

ITU FG-MV Management Team ('23.03.)



FG-MV Initial Structure (March 2023)

Task Groups (TGs) can be formed under either FG or WG for intensive discussions and developing deliverables on specific sub-areas or topics. [FG's decision]

FG	metaverse TG-collaboration
WG 1	General TG-terminology & definitions TG-gap analysis
WG 2	Applications & Services TG-media coding
WG 3	Architecture & Infrastructure
WG 4	Virtual/Real World Integration

WG 5	Interoperability
WG 6	Security, Data & Personally Identifiable Information (PII) Protection TG-child online protection TG-cybersecurity TG-building confidence and security in the metaverse TG-issues on trustworthiness related to the metaverse
WG 7	Economic, regulatory & competition aspects
WG 8	Sustainability, Accessibility & Inclusion TG-sustainability TG-accessibility & inclusion

Outcome of the 2nd FG-MV meeting (4~6 July, 2023)

- The Focus Group meeting, was attended by **more than 2,000 participants** on-site and online, which broke the record set by the first FG-MV meeting.
 - 1st FG-MV meeting : 650 participants
- A Technical Report on “**Exploring the metaverse: opportunities and challenges**” has been approved.
 - The 1st time that a deliverable has been approved at the 2nd Focus Group meeting.
- **39 new work items** have been approved.
 - Currently, total 57 on-going work items
- **1 new Working Group** and **10 new Task Groups** have been approved.
 - Change of TG-collaboration to ‘WG9 on collaboration’ for promoting of relevant activities

Outcome of the 2nd FG-MV meeting (4~6 July, 2023)

- FG-MV encouraged ITU to organize a **UN Metaverse Week** in 2024.
 - Many UN entities and partners are already interested and participated in the FG-MV and ITU Metaverse Forum
 - It aims to promote collaboration, knowledge exchange, and innovation in leveraging the metaverse for the achievement of the SDGs.
 - TSB was requested to follow up on this action and to report back to the next FG-MV meeting.

- FG-MV encouraged ITU to establish a **Digital Coalition on CitiVerse**.
 - To enable sustainable and inclusive development of the metaverse in cities worldwide.
 - It will develop guiding principles, foster collaboration, and provide a neutral platform for cities to identify priorities.
 - TSB was requested to follow up on this action and to report back to the next FG-MV meeting.

1 new Working Group and 10 new Task Groups have been approved (at the 2nd FG-MV meeting, July 2023)

Working Groups	New Task Groups
WG1 - General	• TG on implications for people in the metaverse
	• TG on pre-standardization for the CitiVerse
WG2 - Applications & Services	• TG on Generative Artificial Intelligence in the metaverse
	• TG on Embodied Artificial Intelligence for metaverse
	• TG on medical metaverse
	• TG on metaverse tourism
	• TG on power metaverse
WG8 - Sustainability, Accessibility & Inclusion	• TG-design criteria and metrics with incentives for sustainable metaverse
	• TG-metaverse social safety
WG9 - Collaboration	• TG-gap analysis

FG-MV structure (06 July 2023)



WORKING GROUP 1

General



WORKING GROUP 2

Applications & Services



WORKING GROUP 3

Architecture & Infrastructure



WORKING GROUP 4

Virtual/Real World Integration



WORKING GROUP 5

Interoperability



WORKING GROUP 6

Security, Data & PII Protection



WORKING GROUP 7

Economic, Regulatory & Competition Aspects



WORKING GROUP 8

Sustainability, Accessibility & Inclusion



WORKING GROUP 9

Collaboration

Structure of FG-MV - WGs/TGs (July 2023)

Working Groups	Task Groups
WG1 - General	• TG on Terminology & definitions
	• TG on implications for people in the metaverse
	• TG on pre-standardization for the CitiVerse
WG2 - Applications & Services	• TG on Media coding
	• TG on Generative Artificial Intelligence in the metaverse
	• TG on Embodied Artificial Intelligence for metaverse
	• TG on Medical metaverse
	• TG on metaverse Tourism
	• TG on Power metaverse
	• TG on Industrial metaverse
WG3 - Architecture & Infrastructure	
WG4 - Virtual/Real World Integration	

Structure of FG-MV - WGs/TGs (July 2023)

Working Groups	Task Groups
WG5 - Interoperability	
WG6 - Applications & Services	• TG on Cybersecurity
	• TG on Building confidence and security in the metaverse
	• TG on Child online protection
	• TG on Issues on trustworthiness related to the metaverse
WG7 - Economic, regulatory & competition aspects	
WG8 - Sustainability, Accessibility & Inclusion	• Sustainability
	• Accessibility & inclusion
	• Design criteria and metrics with incentives for sustainable metaverse
	• Metaverse social safety
WG9 - Collaboration	• Gap analysis

Outcome of the 2nd FG-MV meeting (4~6 July, 2023)

Technical Specifications	Overview of metaverse	Younghwan CHOI (ETRI, Korea)
Technical Report [Approved]	Exploring the metaverse: opportunities and challenges	Leonidas ANTHOPOULOS (University of Thessaly, Greece)
Technical Specifications	Vocabulary for metaverse	Xiaomi AN (Renmin, University of China) Jie SONG (State Grid Corporation of China)
Technical Report	Principles and Processes for Building Concepts and Definitions Related to metaverse	Xiaomi AN (Renmin University of China)
Technical Report	An analysis of definitions	Leonidas ANTHOPOULOS (University of Thessaly, Greece)
Technical Report	Pre-standardisation roadmap for an inclusive and sustainable CitiVerse	Cristina MARTINEZ and Miguel Alvarez RODRIGUEZ (European Commission)
Technical Report	Near-term and Long-term Implications of People in the metaverse	Radia FUNNA (Build n Blaze)
Technical Report	Overview of the application requirements of metaverse on emergency management in chemical industrial parks	Ziqin SANG (CICT, China), Keng LI (CICT, China), Hao WU (CICT, China)
Technical Specifications	Use case and requirements for virtual and real fusion coding in metaverse application	Zekun WANG (China Telecom)
Technical Specifications	Use cases and requirements on immersive audio coding for metaverse applications and services	Marcelo MORENO (Fraunhofer IIS, Germany)
Technical Specifications	Framework and requirements for the construction of 3D manual driven digital human application system based on image recognition algorithm	Qihong ZHENG (China Telecom) Liang WANG (ZTE)

Outcome of the 2nd FG-MV meeting (4~6 July, 2023)

Technical Specifications	Use cases and requirements for Generative Artificial Intelligence in metaverse applications and services	Qihong ZHENG (China Telecom), Liang WANG (ZTE)
Technical Specifications	Requirements and framework for extended reality content creation system based on artificial intelligence	Jiixin WEI (China Unicom), Liya YUAN (ZTE), Zehua HU (China Telecom)
Technical Report	Medical metaverse: Use-case Relevant to Medical Training and Hospital	Robin ROWE (Heroic Robots)
Technical Report	Guidelines and use cases on tourism in the metaverse	Salma ARAFA (UNWTO)
Technical Report	Use case and requirements for remote amusement service with automatic movable robot (AMR) with multimedia functions on metaverse	Hideki YAMAMOTO (Oki, Japan)
Technical Specifications	Power metaverse: Use Cases Relevant to Grid Side and User Side	Jie SONG (State Grid Corporation of China)
Technical Specifications	Guidelines for metaverse application in energy power	Dong WANG (State Grid Corporation of China)
Technical Report	Requirements and challenge associated with network infrastructure to enable the metaverse	Jingwen LI (China Telecom, China)
Technical Specifications	Requirements and functional architecture of IoT- based metaverse service	Chao MA (CAICT, China)
Technical Specifications	Reference architecture of industrial metaverse	Cheng CHI (CAICT, China)
Technical Specifications	Setting the framework for an ICT architecture to enable the metaverse	Leonidas ANTHOPOULOS (University of Thessaly, Greece)
Technical Specifications	Use cases and requirements for the metaverse based on digital twins enabling integration of virtual and physical worlds	Changkyu LEE (ETRI, Korea)

Outcome of the 2nd FG-MV meeting (4~6 July, 2023)

Technical Specifications	Reference model for the metaverse based on a digital twin enabling integration of virtual and physical worlds	Haksuh KIM (ETRI, Korea)
Technical Specifications	Use cases and requirements for metaverse cross-platform interoperability	Jungha HONG (ETRI, Korea)
Technical Specifications	High-level interoperability architecture for cross-platform metaverse	Wook HYUN (ETRI, Korea), Xiongwei JIA (China Unicom)
Technical Specifications	Interoperability and migration of identity of things across metaverses	Xiongwei JIA (China Unicom)
Technical Specifications	Requirements and framework for digital identity system	Jingwen LIU (China Mobile)
Technical Specifications	Data management and security for things across metaverses	Xiongwei JIA (China Unicom)
Technical Specifications	Security Framework for the Metaverse Architecture	Sarah ABANUMAY, Aljawharah ALSALEM (NCA, Kingdom of Saudi Arabia)
Technical Specifications	Identity management Security guidelines in the metaverse	Sarah ABANUMAY, Aljawharah ALSALEM (NCA, Kingdom of Saudi Arabia)
Technical Specifications	Guidelines for security management of using metaverse applications	Sarah ABANUMAY, Aljawharah ALSALEM (NCA, Kingdom of Saudi Arabia)
Technical Specifications	Asset management Security guidelines in the Metaverse	Sarah ABANUMAY, Aljawharah ALSALEM (NCA, Kingdom of Saudi Arabia)
Technical Specifications	Asset management Security guidelines in the Metaverse	Sarah ABANUMAY, Aljawharah ALSALEM (NCA, Kingdom of Saudi Arabia)

Outcome of the 2nd FG-MV meeting (4~6 July, 2023)

Technical Report	Guidelines for consideration of ethical issues in standards that build confidence and security in the metaverse	Radia FUNNA (Build n Blaze) , Gayoung PARK (The State University of New York, Korea)
Technical Report	Embedding safety standards and the user control of Personally Identifiable Information (PII) in the development of the metaverse	Jan EISSFELDT (Wikimedia Foundation), Sarah Nicole (McCourt Institute)
Technical Report	Risks, threats and potential harms in the metaverse	Sarah ABANUMAY, Aljawharah ALSALEM (NCA, Kingdom of Saudi Arabia)
Technical Report	Responsible use of AI for child protection in the metaverse	Muhammad Khurram KHAN (King Saud University, Kingdom of Saudi Arabia), ZaheemalQBAL (Global Foundation for Cyber Studies and Research), Paul GRAINGER (University College London), Farhan KHAN (Metaronical)
Technical Specifications	Children age verification in the metaverse	Yazeed ALABDULKARI, Muath ALDUHISHY, Bushra ALAHMADI, Louai ALARABI (SITE, Kingdom of Saudi Arabia)
Technical Report	Extended reality and children: key issues and recommendations for government stakeholders, including policymakers and regulators, and technology companies	Afrooz Kaviani JOHNSON, Steven VOSLOO, Hlekiwe KACHALI(UNICEF)

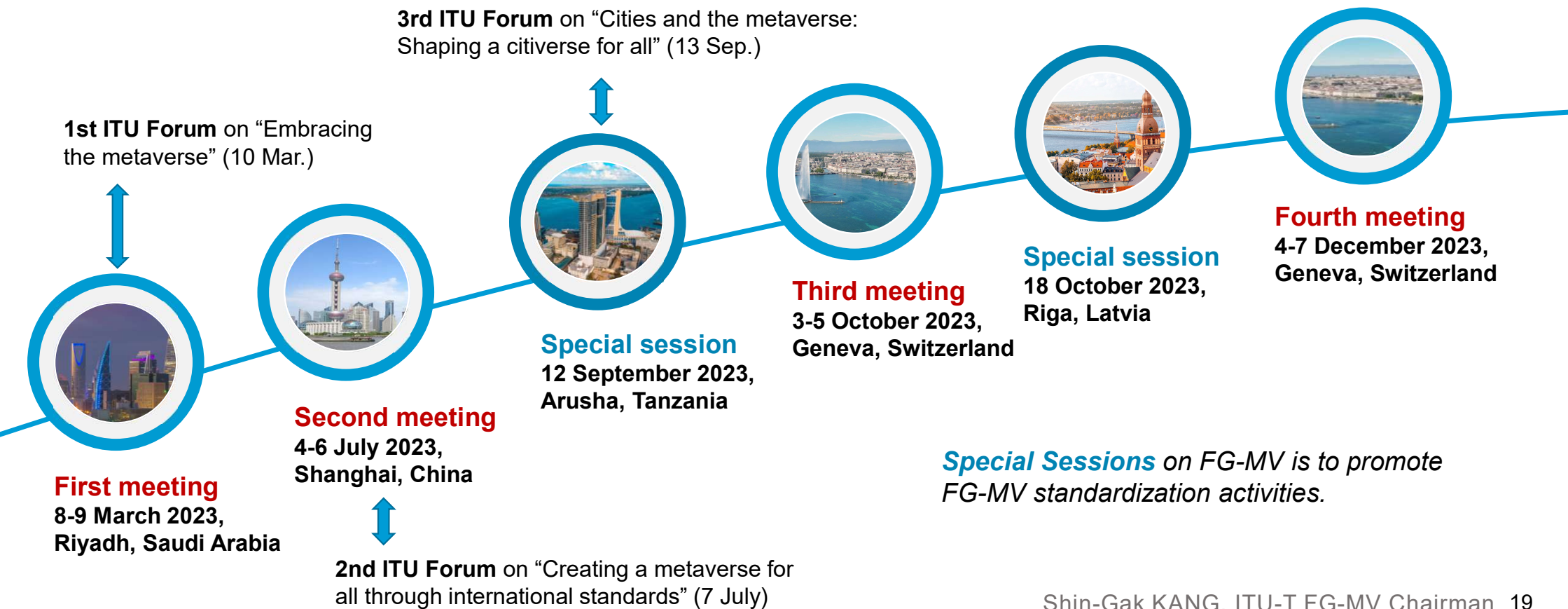
Outcome of the 2nd FG-MV meeting (4~6 July, 2023)

Technical Report	Trustworthy Metaverse	Gyu Myoung LEE (KAIST), Woojoo PARK (ETRI, Korea), Xiaojia SONG (China Mobile), Xiongwei JIA (China Unicom)
Technical Specifications	The framework of building a trustworthy digital human	Naying HU (CAICT, China), Sumin GUO (Beijing Normal University, China)
Technical Specifications	Economic Value Creation and Competition in metaverse	Okan GERAY (Digital Dubai, UAE)
Technical Report	Regulatory and economic aspects in the metaverse: Data protection-related	Andrey PEREZ (Anatel, Brazil), Okan GERAY (Digital Dubai, UAE), Ahmed SAID (MCIT, Egypt), Hedaia NABIL (MCIT, Egypt)
Technical Report	Policy and regulation challenges of the metaverse	Andrey PEREZ (Anatel, Brazil), Okan GERAY (Digital Dubai, UAE)
Technical Specifications	Guidance on green and low carbon development of metaverse	Shuguang QI (CAICT, China)
Technical Specifications	Accessibility requirements for metaverse services supporting IoT	Yong Jick LEE (Center for Accessible ICT, Korea)
Technical Report	Interpreting in the metaverse	Binhua WANG (University of Leeds)
Technical Report	Guidelines to assess inclusion and accessibility in metaverse standards development	Gayoung PARK (The State University of New York, Korea), Neal DREAMSON (The State University of New York, Korea)
Technical Specifications	Accessible products and services in the metaverse	Estella ONCINS (UAB, Spain), Carlo EUGENI (University of Leeds)

Outcome of the 2nd FG-MV meeting (4~6 July, 2023)

Technical Report	Accessibility for a Sustainable Metaverse	Sarah Anne MCDONAGH (UAB, Spain)
Technical Report	Guidance on how to build a metaverse for all	Christina Yan ZHANG (The Metaverse Institute), Pilar ORERO(UAB, Spain)
Technical Specifications	Use of metaverse as a mitigation strategy for people with cognitive development difficulties in flood regions	Ashwini SATHNUR (Zero Hunger Champion)
Technical Specifications	Requirements and design criteria for sustainable metaverse systems	Daniela TULONE (CNIT, Italy), Antonio PULIAFITO (CINI, Italy), Gustavo MARFIA (University of Bologna, Italy)
Technical Specifications	Incentive strategies to boost high-impact sustainable metaverse applications	Daniela TULONE (CNIT, Italy), Antonio PULIAFITO (CINI, Italy), Gustavo MARFIA (University of Bologna, Italy)
Technical Specifications	Metrics and indicators to drive the design of sustainable metaverse applications	Daniela TULONE (CNIT, Italy), Antonio PULIAFITO (CINI, Italy), Gustavo MARFIA (University of Bologna, Italy)
Technical Report	Metaverse Social Safety: Mitigating Harassment in the Metaverse	Gabrielle PANTERA (Heroic Robots)
Technical Report	Gap analysis on metaverse standardization	Leonidas ANTHOPOULOS (University of Thessaly, Greece)

Roadmap of FG-MV and Forum



Executive briefing on metaverse

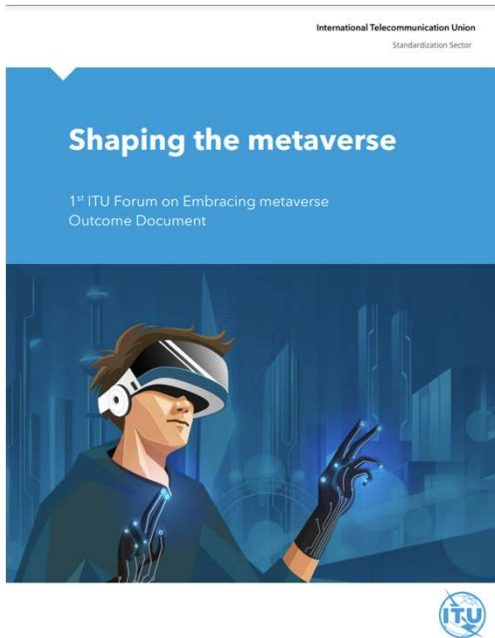
- Co-published by ITU and UNWTO
- Contributed and reviewed by more than **40 experts** of the FG-MV management team from **Africa, Asia, the Americas** and **Europe** with a background in **industry, government, academia**, and **UN agencies**

To download the executive briefing, please visit:
www.itu.int/metaverse



ITU's activities on metaverse – www.itu.int/metaverse

1st ITU Forum on metaverse



[Outcome document](#)

650+
Participants in person
and online

30+
speakers from
governments, industries,
UN agencies, SDOs



7 March 2023, Riyadh, Kingdom of Saudi Arabia

A series of physical and virtual ITU events on metaverse

ITUWebinars

Digital Transformation

Episode 25: STI Forum Side event on Leveraging the metaverse in cities to achieve the SDGs

4 May 2023
13:15 - 14:45 EST

www.itu.int/go/dt4cc

STI FORUM | Science, Technology & Innovation for the Sustainable Development Goals

4 May 2023, Virtually

Side event on **Leveraging the metaverse in cities to achieve the SDGs**

A series of physical and virtual ITU events on metaverse



8 June 2023, Sharm El-Sheikh, Egypt

GSR Session on **Harnessing the Opportunities of the Metaverse**

A series of physical and virtual ITU events on metaverse



2023 **High-Level Political Forum**
on Sustainable Development

13 July 2023, Virtually

HLPF Side event on Exploring the metaverse:
A New World of Possibilities for Cities & Communities

Upcoming events on metaverse



ITUEvents

**3rd ITU Forum
on Cities and the
metaverse: shaping a
civerse for all**

13 September 2023
Arusha, Tanzania

The banner features a stylized illustration of a person wearing a VR headset and holding a glowing digital object, set against a blue, futuristic background with circuit-like patterns.

13 September 2023, Arusha, Tanzania

ITU Webinars

Digital Transformation

Episode 32 *"Fashioning" the Metaverse
to Accelerate Digital Transformation:
What has gone out of style*

2 October 2023
14:00 - 15:00 CEST

www.itu.int/go/dt4cc



2 October 2023, Virtually

And more...

Join us! – Let's shape the future of the metaverse!



FG-MV

Recently, metaverse has become one disruptive area of innovation with great potential to change our economy, way of living and communicating and society. In this nascent phase of the metaverse, the industry has not converged towards common terms and definitions. The metaverse concept has attracted considerable public attention.

The ITU-T Focus Group on metaverse was established under TSAG on 16 December 2022. The group will analyse the technical requirements of the metaverse to identify fundamental enabling technologies in areas from multimedia and network optimization to digital currencies, Internet of Things, digital twins, and environmental sustainability.

It will also provide a collaboration platform for dialogue, for identifying stakeholders with whom ITU-T could collaborate, and for enabling the inclusion of non-members to contribute to the technical pre-standardization work. The Focus Group work will be enriched with the identification of relevant use cases.

The **FG-MV Workplan** including the FG-MV structure, the list of deliverables along with information concerning the designated Chairmen and Vice-Chairmen for the Working Groups (WGs) and Task Groups (TGs) is available [here](#).

Participation in the Focus Group is **open to any interested stakeholder willing to contribute** — to sign up, please [join our mailing list](#)!

Parent Group: TSAG

- [Terms of reference](#)
- [A.7- Focus groups: Establishment and working procedures](#)
- [Press release](#)
- [FG-MV Chairman's video message](#)

Meetings and related events

2nd FG-MV Meeting
Shanghai, China, 4-6 July 2023

- [Announcement](#)
- [Registration](#)
- [Draft Agenda \(rev. 3\)](#)
- [Remote participation platform](#)
- [Documents](#)
- [Practical information](#)
- [Venue: Zhangjiang Science Hall](#)
- [Deadlines:](#)

- [Request for visa support letters: 20 June 2023](#)
[Request form](#) and necessary documents to be sent to jjajun.yao@sh-aia.com
- [Contribution: 27 June 2023](#)
To be submitted by email at tsbfgmv@itu.int
- [Pre-registration: 29 June 2023](#)

- The FG-MV meeting will be followed by the **2nd ITU Forum on "Creating a metaverse for all through international standards"** that will take place on 7 July 2023.

The report of the first meeting of the Focus Group on metaverse (FG-MV) (Riyadh, 8–9 March 2023) is available [here](#).

UPCOMING E-MEETINGS, MEETINGS AND RELATED EVENTS

- [Working Group and Task Group meetings](#)
- [The list of Working Group and Task Group meetings and e-meetings is available \[here\]\(#\).](#)
- [Planned Focus Group on metaverse \(FG-MV\) Meetings & Special Sessions of the FG-MV](#)

- [Press release](#)
- [FG-MV Chairman's video message](#)

MANAGEMENT TEAM AND CONTACTS

Chairman:

- [Shin-Gak Kang](#) (ETRI, Rep. of Korea)

Vice-Chairmen:

- [Andrey Perez](#) (Brazil)
- [Hideo Imanaka](#) (NICT, Japan)
- [Per Fröjdh](#) (Ericsson, Sweden)
- [Shane He](#) (Nokia, Finland)
- [Vincent Affleck](#) (United Kingdom)
- [Yuntao Wang](#) (China)
- [Leonidas Anthopoulos](#) (University of Thessaly, Greece)
- [Manuel Barreiro](#) (Aston Group, Mexico)
- [Cristina Martinez](#) (European Commission)
- [Stella Kipsaita](#) (Communications Authority, Kenya)
- [Natalia Bayona](#) (World Tourism Organization (UNWTO))

Secretariat:

- [Cristina Bueti](#), Counsellor
- [Yining Zhao](#), Junior Communication Officer
- [Chiara Co](#), Secretariat
- [Bohan Leng](#), Intern
- Email: tsbfgmv@itu.int

WORKING GROUPS AND TASK GROUPS

The Focus Group on metaverse (FG-MV) has established 8 working groups that are tasked to carry out a series of deliverables.

- [Task Group - collaboration](#)
Mailing list: fgmv-tg-collaboration@lists.itu.int

Working Groups (WGs)

- [WG1 - General](#)
Mailing list: fgmv-wg1@lists.itu.int
- [WG2 - Applications & Services](#)
Mailing list: fgmv-wg2@lists.itu.int
- [WG3 - Architecture & Infrastructure](#)
Mailing list: fgmv-wg3@lists.itu.int
- [WG4 - Virtual/Real World Integration](#)
Mailing list: fgmv-wg4@lists.itu.int
- [WG5 - Interoperability](#)
Mailing list: fgmv-wg5@lists.itu.int
- [WG6 - Security, Data & Personally Identifiable Information \(PII\) Protection](#)
Mailing list: fgmv-wg6@lists.itu.int
- [WG7 - Economic, regulatory & competition aspects](#)
Mailing list: fgmv-wg7@lists.itu.int
- [WG8 - Sustainability, Accessibility & Inclusion](#)
Mailing list: fgmv-wg8@lists.itu.int

Planned Focus Group on metaverse (FG-MV) Meetings & Special Sessions of the FG-MV

- [2nd FG-MV meeting \(Shanghai, 4-6 July 2023\)](#)
- [2nd ITU Forum on Creating a metaverse for all through international standards \(Shanghai, 7 July 2023\)](#)
- [Special session on FG-MV \(Arusha, 12 September 2023\)](#)
- [3rd FG-MV meeting \(Geneva, 3-5 October 2023\)](#)
- [Special session on FG-MV \(Riga, 18 October 2023\)](#)

Past events

- [1st ITU Forum on Embracing the metaverse \(Riyadh, Kingdom of Saudi Arabia, 7 March 2023\)](#)

TEMPLATES AND MAILING LISTS

Collaboration site:

- Documents are available at the [Collaboration site](#) (A free ITU Account is required to access relevant documentation and participate).

Mailing lists:

- [List of FG-MV, Working Groups and Task Groups mailing lists](#)
- Please subscribe to the FG-MV mailing list (fgmv@lists.itu.int) to receive news, updates, invitations, and access the e-meetings:

- [Sign up for a \(free\) ITU account](#), if you do not already have one.
- Account holders [log in here](#): [select](#)

Planned FG-MV Working Groups and Task Groups e-/meetings

Planned FG-MV Working Groups and Task Groups e-/meetings

*To attend and participate in the meetings listed below, please visit <https://remote.itu.int/>.

- **Mid/end of July 2023**, 14:00-16:00 hours, Geneva time, e-meeting, **WG9**
- **21 August 2023**, 09:00-11:00 hours, Geneva time, e-meeting, **TG-power metaverse (WG2)**
- **25 August 2023**, 12:00-15:30 hours, Geneva time, e-meeting, **WG6**
- **28 August 2023**, 13:00-15:00 hours, Geneva time, e-meeting, **WG4**
- **29 August 2023**, 09:00-11:00 hours, Geneva time, e-meeting, **TG-media coding (WG2)**
- **29 August 2023**, 13:00-14:30 hours, Geneva time, e-meeting, **TG-sustainability (WG8)**
- **30 August 2023**, 16:00-18:00 hours, Geneva time, e-meeting, **TG-building confidence and security in the metaverse (WG6)**
- **Early September 2023**, 14:00-16:00 hours, Geneva time, e-meeting, **WG9**
- **1 September 2023**, 15:00-17:00 hours, Geneva time, e-meeting, **TG-accessibility & inclusion (WG8)**
- **1 September 2023**, 08:30-10:30 Geneva time, e-meeting, **TG- Generative Artificial Intelligence in the metaverse (WG2)**
- **6 September 2023**, 15:00-17:00 hours, Geneva time, e-meeting, **WG8**
- **7 September 2023**, 09:30 – 11:00 Geneva time, e-meeting, **WG1**
- **7 September 2023**, 9:00-11:00 hours, Geneva time, e-meeting, **WG3 & WG5**
- **7-8 September 2023**, 09:00-12:00 hours, Geneva time, e-meeting, **WG5**
- **11-12 September 2023**, 9:00-11:00 hours, Geneva time, e-meeting, **WG2**
- **14 September 2023**, 16:00-17:00 hours, Geneva time, e-meeting, **TG-medical metaverse (WG2)**
- **20 September 2023**, e-meeting, **WG8**
- **22 September 2023**, 15:00-17:00 hours, Geneva time, e-meeting, **TG-design criteria and metrics with incentives for sustainable metaverse (WG8)**
- **27 September 2023**, 13:00-14:30 hours, Geneva time, e-meeting, **TG-sustainability (WG8)**
- **29 September 2023**, 15:30-17:00 hours, Geneva time, e-meeting, **TG-metaverse social safety (WG8)**
- **12 October 2023**, 16:00-17:00 hours, Geneva time, e-meeting, **TG-medical metaverse (WG2)**
- **19 October 2023**, 9:00-11:00 hours Geneva time, e-meeting, **WG3**
- **25 October 2023**, 13:00-15:00 hours, Geneva time, e-meeting, **TG-building confidence and security in the metaverse (WG6)**
- **1 November 2023**, 08:30-10:30 Geneva time, e-meeting, **TG- Generative Artificial Intelligence in the metaverse (WG2)**
- **2 November 2023**, 13:00-14:30 hours, Geneva time, e-meeting, **TG-sustainability (WG8)**
- **2 November 2023**, 9:00-11:00 hours Geneva time, e-meeting, **WG3**
- **3 November 2023**, 15:00-16:30 hours, Geneva time. e-meeting, **TG-accessibility & inclusion (WG8)**
- **6 November 2023**, 13:00-15:00 hours, Geneva time, e-meeting, **WG4**
- **6-7 November 2023** , 9:00-11:00 hours, Geneva time, e-meeting, **WG2**
- **9 November 2023**, 09:30-11:00 hours, Geneva time, e-meeting, **WG1**
- **9 November 2023**, 16:00-17:00 hours, Geneva time, e-meeting, **TG-medical metaverse (WG2)**
- **November 2023**, 9:00-12:00 hours, Geneva time, e-meeting, **WG5**
- **10 November 2023**, 15:00-17:00 hours, Geneva time, e-meeting, **WG8**
- **16 November 2023**, 9:00-11:00 hours Geneva time, e-meeting, **WG3**
- **17 November 2023**, 15:30-17:00 hours, Geneva time, e-meeting, **TG-metaverse social safety (WG8)**
- **20 November 2023**, 15:00-17:00 hours, Geneva time, e-meeting, **WG8**
- **23 November 2023**, 15:00-17:00 hours, Geneva time, e-meeting, **TG-design criteria and metrics with incentives for sustainable metaverse (WG8)**
- **November 2023**, 15:00-16:30 hours, Geneva time, e-meeting, **TG-accessibility & inclusion (WG8)**

Metaverse is coming, Are you ready?



Email

tsbfgmv@itu.int



Website

www.itu.int/metaverse