

A futuristic robot with a white and blue body is floating in a digital space. The background features a cityscape at night with glowing lights and a network of blue lines and dots, suggesting a metaverse or digital environment. The robot has its right arm raised and is looking towards the right.

Shaping the metaverse through international standards

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

7 July 2023



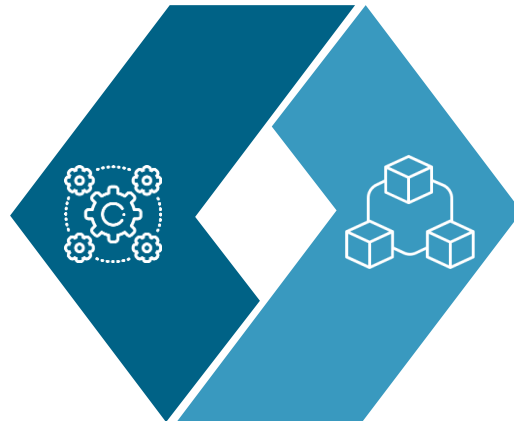
The importance of standards in the metaverse

**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



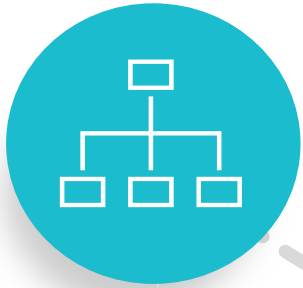
50+ planned deliverables (06 July 2023),
including Technical Specifications & Reports



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

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**
(Greece)

Manuel Barreiro
(Aston Group,
Mexico)

Cristina Martinez
(European
Commission)

Stella Kipsaita
(Communications
Authority, Kenya)

Natalia Bayona
(UNWTO)

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 **1st time** that a deliverable has been approved at the 2nd Focus Group meeting.

- Technical Report, “**Exploring the metaverse: opportunities and challenges**”

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.

FG-MV encouraged ITU to organize a **UN Metaverse Week** in 2024.

FG-MV encouraged ITU to establish a **Digital Coalition on CitiVerse**.

TSB was requested to follow up on this action and to report back to the next FG-MV meeting.

39 new work items have been approved.

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

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 on Industrial metaverse
	• TG-design criteria and metrics with incentives for sustainable metaverse
WG9 - Collaboration	• TG-metaverse social safety
	• 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

FG-MV roadmap



First meeting
8-9 March 2023,
Riyadh, Saudi Arabia



Second meeting
4-6 July 2023,
Shanghai, China



Special session
12 September 2023,
Arusha, Tanzania



Third meeting
3-5 October 2023,
Geneva, Switzerland



Special session
18 October 2023,
Riga, Latvia

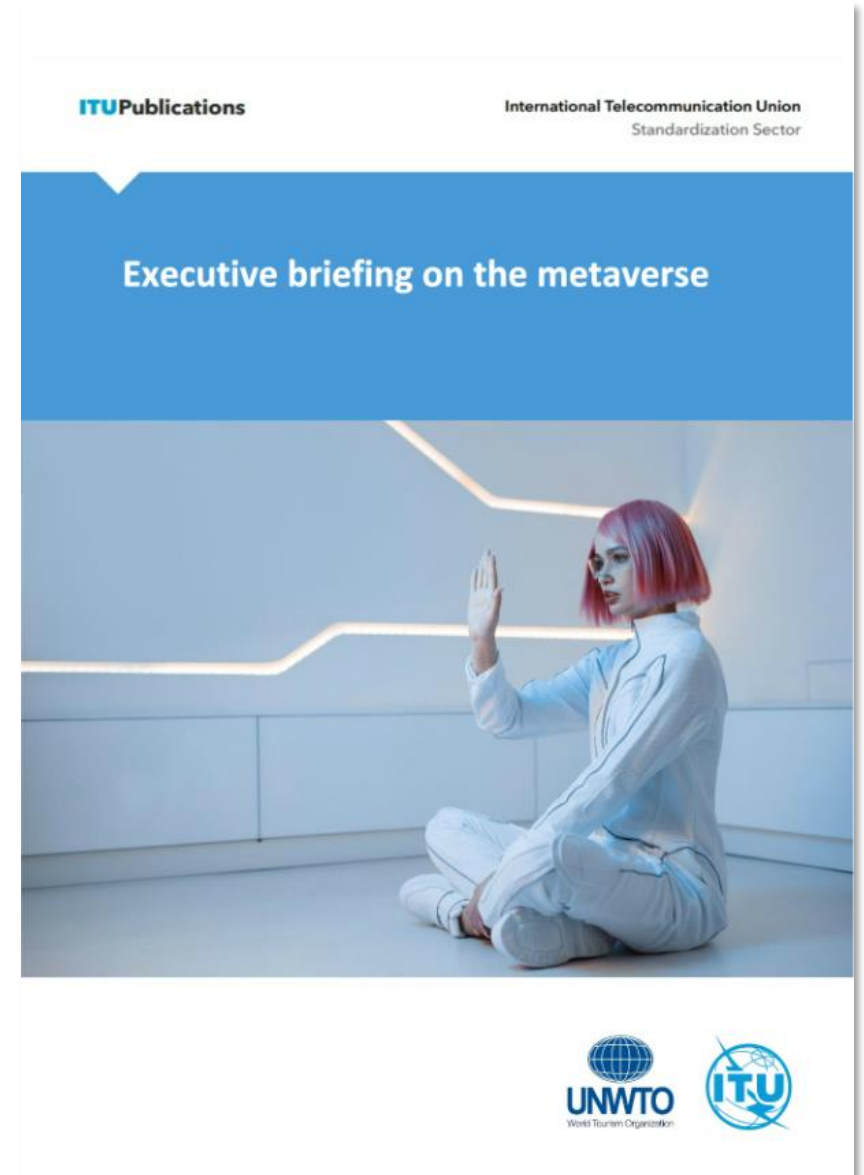


Fourth meeting
4-7 December 2023,
Geneva, Switzerland

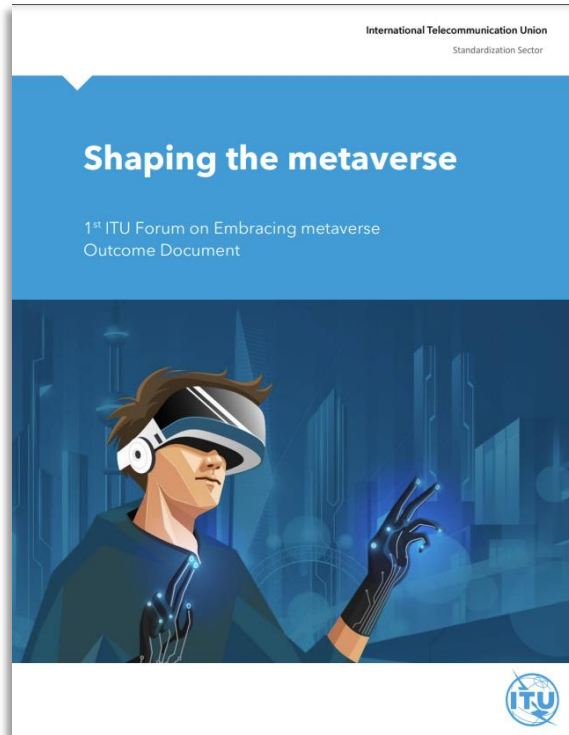
Executive briefing on metaverse

- 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*



1st ITU Forum on metaverse



Outcome document

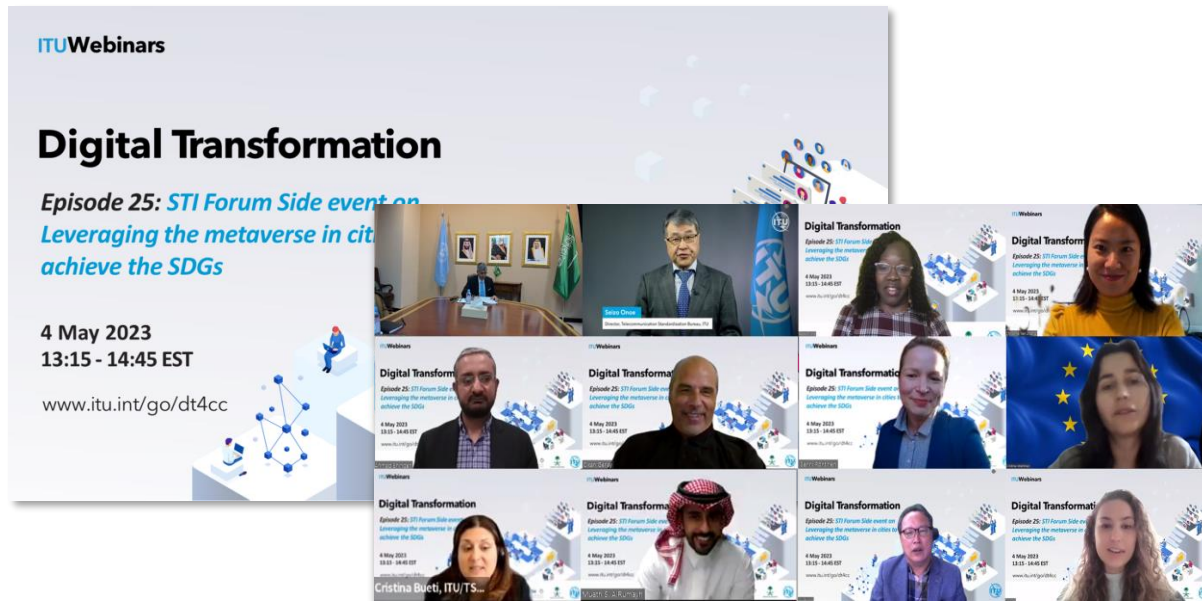
650+
Participants in person
and online

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



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**

8 June 2023, Sharm El-Sheikh, Egypt

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

Upcoming events on metaverse



13 July 2023, Virtually

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



**13 September 2023,
Arusha, Tanzania**

3rd ITU Forum on “Cities and the metaverse: Shaping a citiverse for all”



2 October 2023, Virtually

Webinar on “Fashioning” the metaverse to accelerate digital transformation: what has gone out of style

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

Metaverse is coming, Are you ready?



Email

tsbfgmv@itu.int



Website

www.itu.int/metaverse