



**XTIC**  
EXPERIENTIAL TECHNOLOGY INNOVATION CENTRE

# A perspective on **Japan's Metaverse Strategy**



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## Executive Summary

Japan's Metaverse Strategy, anchored in the creation of the 'Japan Metaverse Economic Zone' and the virtual infrastructure 'RYUGUKOKU,' reflects a multi stakeholder, industry led model of digital transformation. Rather than a centralized state plan, Japan's approach is a public-private consortium involving corporations such as Fujitsu, Mitsubishi UFJ Financial Group, Mizuho, JCB, Sumitomo Mitsui, and TBT Lab, in partnership with the government. This represents Japan's collaborative capitalism model, where innovation arises through coordination among firms, regulators, and technology developers.

The strategy emphasizes interoperability, open infrastructure, and ethical governance. RYUGUKOKU, envisioned as an RPG-inspired metaverse, integrates financial systems, identity authentication, and content creation tools to enable seamless cross platform interactions. Through components such as the Auto Learning Avatar (ALA), Pegasus World Kit (PWK), and Multi-Magischer-Pass (MMP), the platform merges entertainment, enterprise, and social applications in a user centric design.

Japan's key strength lies in its integration of gaming, fintech, and creative industries. The use of gamification and immersive storytelling enhances user engagement while leveraging Japan's strong cultural brand-anime, design, and interactive media-to extend its digital soft power. Its regulatory foresight, including government studies on avatar identity, privacy, and fraud prevention, positions Japan as a leader in ethical metaverse governance.

However, Japan's risk averse innovation culture and corporate hierarchies may slow adaptation and experimentation. Dependence on large conglomerates could marginalize startups and delay scaling new platforms. Talent shortages and demographic decline constrain digital workforce expansion.

Still, opportunities abound in cross border collaboration, digital inclusion, and standards setting. Japan's model aligns with global frameworks like GDPR and the EU AI Act, allowing it to play a bridging role in international digital governance. Its metaverse economic zone could become a testbed for global interoperability and

secure digital finance. By linking with Society 5.0, Japan positions its metaverse as a human centered, ethically grounded model of progress.

Japan's metaverse strategy emphasizes openness, interoperability, and service innovation, but its reliance on advanced digital infrastructure and financial ecosystems may limit immediate accessibility for emerging economies. Wider participation from the Global South will depend on cost effective deployment models and scalable capacity building efforts.

In conclusion, Japan's strategy represents a humanistic, interoperable, and culturally driven model of digital evolution. Its success will depend on sustaining collaborative innovation, simplifying governance, and nurturing agile talent pipelines-redefining Japan's role as a cultural technical hub for global digital ecosystems.

# Introduction

The eXperiential Technologies Innovation Center (XTIC) is established by IIT Madras, one of India's premier institutes. XTIC has recently constituted a committee to draft India's Metaverse Policy: the Metaverse India Policy and Standards (MIPS) Committee. This initiative brings together international standards agencies and various stakeholders to foster a global Metaverse that is pervasive, open, and inclusive.

The MIPS forum does not directly produce standards or policies. Instead, it coordinates resources and identifies needs to support the development of standards and policies within relevant organizations. This collaborative approach of all the stakeholders ensures that the evolving Metaverse ecosystem benefits from comprehensive and well aligned guidelines.

MIPS has recently been very active in contributing to new standards in ITU as part of few study groups in the field of Metaverse.



MIPS committee was tasked to analyse Metaverse policy of various other countries before formulating our own. In this process, MIPS is creating our perspective on Japan's Metaverse policy to understand its vision and approach in depth. This will help us gain insights that can guide the drafting of a well grounded Metaverse policy for India. We have several of our members from the MIPS committee that have contributed in creating this perspective.

The committee referred the definition and analysis of Metaverse from the ITU standards committee [1]

The committee analyzed the policy of Japan published by the Ministry of Internal Affairs and Communications (Japan) and Cabinet Office (Japan) [2].

Japan's Metaverse Strategy represents a distinctive and collaborative approach to digital transformation. Centered around the creation of the 'Japan Metaverse Economic Zone' and the metaverse infrastructure 'RYUGUKOKU,' the initiative demonstrates Japan's intent to fuse its technological sophistication with social innovation and economic diversification. The framework emphasizes open infrastructure, cross sectoral collaboration, and global expansion-bridging gaming technologies, financial services, and enterprise digitalization.

## Summary or Highlights of Japan's Metaverse Policy (ref[2])

1. Japan promotes the metaverse as a driver of digital and experience transformation (DX/EX), with a strong emphasis on business use cases, services, and user-centric experiences.
2. The strategy centers on creating a "Japan Metaverse Economic Zone," an open and interoperable metaverse ecosystem supported by major financial, technology, and industrial firms.
3. A shared metaverse infrastructure, "RYUGUKOKU," is positioned as a foundational platform enabling interoperability between multiple metaverse services and virtual worlds.
4. Identity, payment, and data portability are core priorities, supported through unified avatar systems, digital wallets, NFTs, and secure authentication mechanisms.
5. Gaming and gamification technologies are leveraged as a foundation for enterprise DX, public services, and consumer engagement across industries.
6. Financial institutions play a central role by enabling Web3 functions, digital assets, payments, insurance, and global expansion of metaverse services.
7. Government policy focuses on improving user convenience, clarifying legal and regulatory risks, and addressing issues related to privacy, avatars, identity, and platform responsibility.
8. International collaboration and ecosystem expansion are encouraged to attract global companies and position Japan as a hub for open, service-oriented metaverse innovation.



# Why did we study the strategy in detail and create our perspective?

This commentary is not an academic exercise but considered a very practical tool. It helps us in India as policymakers, businesses, and researchers understand global approaches to the Metaverse, compare strategies, and develop stronger and more context-appropriate policies in their own settings.

What we in India learn from the strategy:

- We learn, adapt, and improve policy and strategy design in our own contexts.

- It helps us identify best practices (what works well). Japan's policy gives us an excellent indication of how to integrate social innovation and economic diversification into a tech policy.
- As policies are not "one size fits all", we in India can ask ourselves "what can we adapt to our context". India might learn from Japan's open infrastructure, cross sectoral collaboration, and global expansion policies.
- To provide insights for future international cooperation,



especially within the European Union and other global forums.

- It helps us identifying Gaps and Risks for our own policy.

Below is a detailed perspective that looks at its strengths, challenges, opportunities, and vulnerabilities.

## Strengths

Japan's Metaverse Strategy displays a robust combination of technological expertise, cross industry coordination, and forward thinking governance design. Its core strength lies in the multi sectoral partnership model that underpins the Japan Metaverse Economic Zone. The participation of leading financial institutions, technology firms, and industrial giants ensures both financial stability and technological credibility. Unlike fragmented approaches elsewhere, Japan's framework is built upon collaborative innovation and mutual trust between public and private sectors. . Please refer to Appendix B for a listing of some leading Public and Private Sector Digital companies in Japan.

A major institutional strength is Japan's emphasis on interoperability. Through 'RYUGUKOKU,' the country envisions an open metaverse infrastructure that allows seamless movement of digital identities, assets,

and data across platforms. The inclusion of features like the 'Multi-Magischer-Pass' (MMP) for authentication, payment, and identity verification embodies Japan's commitment to user centric, secure digital ecosystems. Such mechanisms reflect a sophisticated understanding of digital sovereignty that balances freedom and responsibility. Please refer to Appendix A for a listing of some of Japan's top XR companies.

Japan's regulatory foresight also distinguishes its strategy. The Ministry of Internal Affairs and Communications and the Cabinet Office have actively initiated legal and ethical studies on metaverse use, addressing privacy, identity, and liability concerns. By anticipating these issues early, Japan positions itself as a responsible innovator, capable of building public trust in emerging technologies.

From a technological standpoint, Japan's fusion of gaming expertise

(via JP Games and the Pegasus World Kit) with financial and industrial technologies offers a unique competitive advantage. The country's cultural affinity for gaming, narrative design, and human-machine interaction translates naturally into immersive digital worlds. Japan's gaming expertise could be extended to develop important usecases in non gaming domains as well. This allows Japan to integrate entertainment, education, and enterprise solutions into a unified, experience driven digital ecosystem.

The strategy's soft power dimension should also be acknowledged. By framing the metaverse as a cultural and economic space rooted in Japan's creative industries, the policy leverages global fascination with Japanese pop culture and design. This enhances Japan's digital diplomacy and international brand, reinforcing its role as a bridge between East and West in emerging digital governance.





## Challenges

Japan's Metaverse Strategy might face a few internal challenges. First, its dependence on corporate alliances may create coordination concerns and uneven influence among participants. There is a requirement of a strong central regulatory framework as multiple ministries engage in metaverse governance to avoid dominance of large conglomerates.

Secondly, while Japan emphasizes open infrastructure, its cautious cultural approach toward risk and regulation may slow the speed of innovation. The Japanese innovation ecosystem, traditionally conservative and consensus oriented, must keep pace with fast evolving global metaverse trends driven by agile, venture backed ecosystems in the U.S. and South Korea.

Thirdly, Japan's demographic challenges-aging population and declining workforce-may limit both the demand for and the supply of digital talent. The success of the metaverse economy depends heavily on creative developers, designers, and entrepreneurs. Strong incentives are required to attract foreign talent or retain younger domestic innovators, Japan may face a digital labor deficit.

Fourthly, while Japan promotes an open and interoperable metaverse, high dependence on sophisticated infrastructure, digital identity systems, and financial integration creates barriers for the Global South. High costs, skills gaps, and limited localization pathways may restrict meaningful adoption in developing regions.

Measurable goals / metrics will have to be defined, else it will be hard to track progress and hold stakeholders accountable.

Metaverse capacity index (MCI) can be defined. MCI refers to various frameworks and initiatives designed to evaluate, measure, or index the development, adoption, and infrastructure capabilities of the metaverse defined.

Defining other indices may be necessary as well.

The Whitepaper that XTIC published last year [3] refers to three different Metaverse Indices:

1) Ethical Metaverse Index that includes interoperability, content moderation and privacy,

- 2) Responsible Metaverse Index that includes global connectivity, particularly to the global south, innovation and creativity, diversion and inclusivity, and sustainability,
- 3) Transparent Metaverse Index that includes trustability and platform governance.

Moreover, while the government's studies on privacy and ethics are commendable, clear implementation mechanisms are required. The deliberative nature of Japanese policymaking, though inclusive, can delay action. Japan's competitiveness depends on more decisive regulatory stances.

Finally, Japan's metaverse framework requires a cohesive narrative connecting its various technological components- RYUGUKOKU, ALA (Auto Learning Avatar), MMP, and PWK - into a unified value proposition for global markets. Clear messaging is required for Japan to position itself as technologically sound as well as strategically distinct.

# Opportunities

Japan's Metaverse Strategy presents significant opportunities to redefine digital economies and international collaboration. First, its focus on interoperability and open infrastructure could set a global standard for cross platform digital economies. By creating a metaverse that connects different ecosystems-financial, educational, and entertainment-Japan can offer a blueprint for digital pluralism that contrasts with both the centralized Chinese model and the fragmented Western model.

The creation of the Japan Metaverse Economic Zone also offers significant potential for economic revitalization. Regional DX and EX initiatives can attract investment to local economies, transforming underpopulated areas into virtual innovation hubs. Through gamification and telepresence, the metaverse can revitalize cultural heritage tourism, education, and

remote work-aligning with the government's goal of balancing urban and rural development.

Japan's strong financial ecosystem also enables new business models. With participation from major banks and insurance companies, Japan can pioneer trusted digital finance in the metaverse. Blockchain based settlements, secure ID verification, and digital asset rights management can create a compliant yet flexible framework for Web3 innovation. This gives Japan a comparative advantage in developing fintech enabled virtual economies.

Internationally, Japan has the opportunity to shape the ethical and legal standards of global metaverse governance. By participating in international dialogues alongside

frameworks such as the EU's GDPR, AI Act, and MiCA, Japan can influence global digital policy while maintaining its own cultural values of harmony, safety, and user respect. Its balanced regulatory approach could make it a preferred partner for ASEAN nations and other mid sized economies seeking digital alignment.

From an industrial strategy perspective, Japan's integration of AI, XR, and gaming into enterprise applications positions it well to compete in high value B2B metaverse sectors such as design, healthcare, and training. As remote collaboration becomes the norm, Japanese firms can export immersive work solutions and virtual experience platforms, reinforcing Japan's digital export capacity.



# Vulnerabilities

Japan's Metaverse Strategy also faces notable external and systemic vulnerabilities. Given Japan's reliance on global semiconductor supply chains, any disruption should be avoided that could hamper the development of immersive technologies and cloud infrastructure.

Competition from global metaverse ecosystems, particularly those led by U.S. tech giants and South Korean conglomerates should be observed carefully. While Japan's approach is more ethical and inclusive, it requires

the aggressive scaling capacity of its competitors.

Cybersecurity and data privacy risks also represent persistent vulnerabilities. As the Japan Metaverse Economic Zone integrates financial and personal data, retention of reputation and public trust should be ensured. The complexity of managing cross platform authentication, payments, and NFTs should be carefully managed.

Moreover, cultural resistance to immersive digital lifestyles could limit domestic adoption. Japan's

population, while technologically literate, values privacy and may be hesitant to engage in persistent virtual environments. Without strong social adoption, the economic viability of large scale metaverse infrastructures may remain limited.

Finally, environmental sustainability remains a latent vulnerability. The energy intensity of immersive 3D experiences and blockchain based transactions could conflict with Japan's carbon neutrality goals unless offset by green computing strategies.

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## Appendix A

Well-known XR / AR / VR / mixed-reality companies in Japan

1. Sony Interactive Entertainment	14. Dwango Co., Ltd.
2. Panasonic Corporation	15. Canon Inc.
3. NTT Data Corporation	16. Bandai Namco Holdings Inc.
4. GREE, Inc.	17. Fujitsu Limited
5. Kudan Inc.	18. KDDI Corporation
6. FOVE Inc.	19. ZOZO Inc.
7. STYLY Inc.	20. Triö Inc.
8. Nihon XR Center	21. Symmetry Dimensions Ltd.
9. GIANTY	22. AVATARUM
10. Mawari	23. Alt Inc.
11. Useya Co., Ltd.	24. ANYCOLOR Inc.
12. Goodpatch GmbH	25. Activ8 Inc.
13. COLOPL, Inc.	

# Appendix B

## Well Known Private and Public Sector Digital companies in Japan

1	NTT Inc. (Nippon Telegraph & Telephone)
2	KDDI Corporation
3	Fujitsu Limited
4	NEC Corporation
5	NTT DATA Corporation
6	Hitachi Ltd.
7	SoftBank Corp.
8	Rakuten Group Inc.
9	GMO Internet Group Inc.
10	ASAHI Net, Inc.
11	Sumitomo Corporation
12	DMM.com LLC
13	Digital Wallet Group
14	TIS Inc.
15	ITOCHU Techno-Solutions (CTC)
16	SCSK Corporation
17	Nomura Research Institute (NRI)
18	Toshiba Digital Solutions Corp.
19	iQPS Inc.
20	Astroscale Holdings Inc.
21	SB OpenAI Japan LLC



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