

**Transcript of Opening Remarks delivered by Mr Tan Kiat How,
Senior Minister of State,
Ministry of Communications and Information,
on “Regulatory Bridge Between Physical Economy & Metaverse”
at Business China’s Singapore Digital Economy Forum (23 Aug)**

Mr Lee Yi Shyan, Chairman, Business China,
Ms Tin Pei Ling, CEO, Business China,
Distinguished Guests,
Ladies and Gentlemen.

Good afternoon. I am pleased to join you today at the inaugural Business China’s Singapore Digital Economy Forum 2022. I was asked to speak about the regulatory bridge between the physical economy and the metaverse. This afternoon, let me speak briefly on three topics:

1. Regulatory bridge – how we think about regulating the activities and the players in the metaverse.
2. Ecosystem bridge – which includes ancillary services supporting the digital economy.
3. Talent bridge – this is one of the biggest issues that we face across the digital economy today.

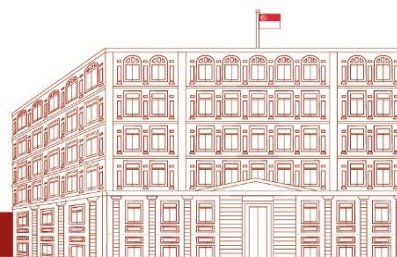
Metaverse and Web3.0 is growing around the world and in Singapore

1. There are many growth projections by different consultancy firms and they tend to be bullish. Even if you discount these projections, the opportunities are still very significant.
2. Whether in gaming, entertainment, manufacturing or creative industries, there are significant opportunities in how we use these technologies to transform current business models and work processes.
3. However, we have to be mindful that there are downsides as well. There are increasingly mounting concerns regarding Metaverse and Web3.0.

a) Harms *in* the metaverse:

i) Non-consensual, deceptive, or otherwise problematic avatar interactions have been recorded. In May this year, a researcher reported being virtually raped on Meta’s social networking platform Horizon World when she was subject to sexually suggestive and abusive behaviour from other avatars.

ii) Users of metaverse platforms have also recorded instances of racist and sexist speech on these online platforms, as well as minors circumventing age controls. Given the greater immersiveness and sense of presence provided by virtual environments, we need to consider if these will undermine pro-social norms to a greater degree than social media.

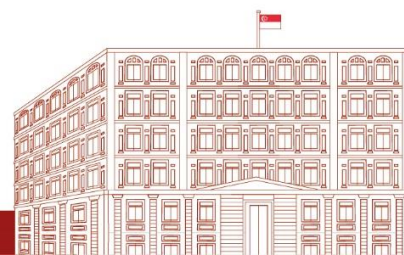


b) Harms of the metaverse:

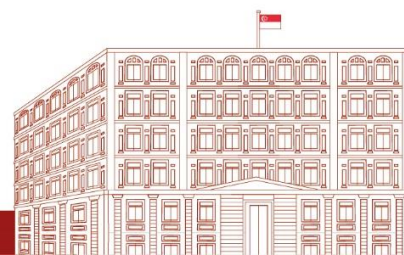
- i) Data and privacy. While pervasive data capture is already part of our daily lives, AR and VR technologies add another layer to this, as they can track users' gaze data and physical responses to various stimuli.
- ii) Financial risks. Some speculators have tried to own metaverse assets, including land, as investments. However, the value of these assets is very volatile and poses a real risk to all but the most risk-friendly investors.
- iii) The legal status of metaverse assets. It is unclear if current IP protections apply to metaverse reproductions of real-world objects, or if property laws apply to metaverse assets more generally.

Some regulation will be needed to address these concerns in the Metaverse and Web3.0

- 4. These examples show that some level of regulation will be needed. But there is still much uncertainty about how this is to be done.
 - a) As of today, no Government has passed laws or formulated regulations specifically designed to address concerns arising from the metaverse.
 - b) We have to be mindful in balancing regulations with allowing innovations, while also being sensible and pragmatic about it.
- 5. Similar to the physical world, the Government will seek to balance between these different considerations - promoting economic vitality, preserving social stability and protecting public security in the digital domain.
- 6. Minister Josephine Teo, in her keynote address to you this morning, spoke about the building blocks that the Government has put in place, so that our people and businesses are ready to seize opportunities that emerge with Metaverse and Web3.0. These building blocks included the Government's commitment in (a) building digital infrastructure, (b) investing in R&D, and (c) investing in our people, (d) while at the same time ensuring regulations and policies keep up to better protect our people and businesses from harms.
 - a) One example is our current personal data protection regime and whether it is adequate with the advent of Web3.0.
- 7. For example, one priority area for data driven services as we embrace emerging tech like Metaverse is the Privacy Enhancing Technologies (PET). Last month, we launched the **PET Sandbox at the Personal Data Protection Seminar**. PETs are borne out of the need to harness technology to strengthen data protection.
 - a) For instance, banks can pool data and build AI models for better fraud detection, while protecting their customers' identity and financial information.
 - b) Our learnings from the sandbox will inform our policies, help set standards and best practices, and promote the development of a safer and more innovative data ecosystem for all.



8. We would like to work with the private sector and the industry innovators - on how to design standards that are workable and effective.
 - a) Industry-wide initiatives, such as the Metaverse Standards Forum, are welcome developments as they help to pool concerns and build some degree of consensus around how to combat them.
 - i) We also have to keep in mind that there are potentially many kinds of metaverse with each having its own set of legitimate communal norms.
 - ii) Would it be more appropriate to take into consideration the users who are in that particular metaverse? For example, are they adults of legal age or are they young children? What is the reach and the impact of that metaverse? These are some of the many factors we have to consider when we look at the regulations and other types of content.
9. Regulations and best practices have to be developed by working closely with the industry and private sector.
10. It has to be context-based and we need to assess the impact of the metaverse by working together so that we can promote innovation, economic growth opportunities, and protect our users at the same time.
11. So that's about regulation and our approach to how we're thinking about it. And I look forward to many more discussions with all of you as we develop this emerging sector together. I'd like to briefly just touch on two other developments or bridges that I mentioned earlier.
12. One is about ecosystem bridge. Some of you have heard about Digital Economy Agreements (DEA) that Singapore started with like-minded partners around the world.
13. Why do we have digital economy partnership agreements or digital economy agreements? The fundamental belief is that like in the physical world, no one country is an economy by itself and can be self-sufficient, certainly not Singapore. We rely on the rest of the world for market access, for talent, for innovation, for the ability to create better opportunities for people and businesses that are in Singapore.
14. Like in the physical world, we invest in connectivity, Prime Minister in the recent National Day Rally spoke about how we are investing in long term for physical infrastructure. In Singapore and the mega port in Tuas, we are starting the process of looking at Changi Airport Terminal Five.
15. We are also a connectivity hub - not just ports airports, and submarine cables, but also our network of Free Trade Agreements with other countries. We have to think of what sort of connectivity infrastructure or ecosystem enablers we need to build in the digital economy. This was the basis for the DEAs.
16. For instance, how do we think about data exchange across different markets, jurisdictions with different regulatory regimes around data protection and cybersecurity? How do we bring together various groups of ecosystem players such as financiers, intermediaries etc?
17. How can we have the trusted flow of data and information with like-minded companies and partners around the world?



18. DEAs gave us the opportunity to work together with like-minded countries to develop this set of connectivity enablers for the digital economy. Because this space is new and rapidly developing, there was a strong emphasis of trying and learning together.
19. We will continue to build up this network of Digital Economy Agreements with like-minded jurisdictions around the world. And to us that is a way of how Singapore can continue to be a vibrant global node in the digital economy.
20. Lastly, I want to talk about talent. At the recent National Day Rally, Prime Minister talked about how we must remain open to the rest of the world. That was our DNA since independence, absorbing and bringing in people from all the world that can contribute to Singapore and be part of our Singapore Story.
21. And we have to be open to top talent from around the world to continue to work with us in many new, exciting spheres. The digital economy, including the Metaverse, are examples. More details will be shared by MOM, MTI and the economic agencies, but I'd like to also make a pitch to all of you here that we want to continue to work with you to bring good talent to Singapore to build up an ecosystem here, generate more opportunities, create good jobs for Singaporeans.
22. While at the same time, we have to be welcoming to these talents, and tap on their networks and access to different markets, so we can continue to grow our ecosystem in Singapore. I hope that you can keep a look out for some of these announcements later on.
23. I spoke about regulatory bridges, ecosystem bridges, talent bridges, but ultimately, I think it's also about people-to-people bridges. So I want to thank Business China, for organising this Digital Economy Summit Forum so that friends can meet and share ideas, get to know each other, get to make new friends, new partners, and continue to build this network that we have here today.
24. I wish you a pleasant afternoon and a fruitful session. Thank you so much.

