

Hong Kong

Potential 2035 economic impact of the metaverse

US\$7-14_B per year

Hong Kong

Hong Kong's lead as an international business hub could be furthered with the metaverse. The city's sound policies and investments have created a favorable environment with high internet accessibility and a strong startup scene for businesses.

While the government has been taking a cautious approach towards the metaverse, it is committed to creating a conducive environment for innovation and technology developments. It is looking for metaverse-related technologies to guide its digital transformation to a smart city, including the use of digital twin technologies, such as in the development of the Hong Kong International Airport (HKIA),¹ and smart sensor networks across the city.² Companies, like Meta, are responding to its business-friendly environment by tapping on the city as a testing ground for metaverse initiatives.³

Metaverse technologies provide opportunities especially for the real estate and luxury goods and fashion industry in the city. Hong Kong-based startup Animoca Brands has a growing portfolio of metaverse businesses, including popular metaverse platform, the Sandbox.⁴ Mega City, a cultural hub in the Sandbox metaverse, is one example of a burgeoning virtual real estate sector.⁵

Hong Kong is also leveraging on its position at the intersection of culture and technology to make an impact in the metaverse. Its marquee offerings like Art Basel Hong Kong, Christie's Hong Kong Auctions, are being complemented by the emergence of digital art in the metaverse.⁶

Within this year, there have been over 10 NFT-related events in the city, including "A Woman's World", a NFT art showcase by domestic female artists, Asia's largest NFT exhibition "ARTAVERSE" with more than 100 exhibitors, and K11 MUSEA's "META VISION", exhibiting more than 200 NFT works.⁷

“Currently, Hong Kong already possesses excellent information and communication technology infrastructure and business environment, allowing local industries and research institutions to develop related virtual user experience and technologies.”

Alfred Sit, Former Hong Kong Secretary for Innovation and Technology

1. OpenGov Asia, "[HKIA Develops Digital Twin](#)", accessed October 3, 2022.

2. Business Environment Council, "[Smart And Sustainable City Development: Hong Kong and International Experiences](#)", 2022.

3. Jiaxing Li, "[Zuckerberg's Meta To Push Metaverse Initiatives To Hong Kong Cafes and Schools as Interest In Virtual World Hots Up](#)", South China Morning Post, June 14, 2022.

4. Animoca Brands, "[About Us](#)", accessed October 3, 2022.

5. *ibid.*

6. RCommon Affairs, "[Hong Kong Heads Into The Future With Digital Art](#)", accessed October 4, 2022.

7. *Ibid.*



Macroeconomic Determinants

- Hong Kong is overwhelmingly a service-based economy (93.4% of GVA). It has three key industries: financial and insurance services, trading and logistics and education. These are expected to be impacted by the metaverse in the near term.
- Hong Kong is ranked 14th in the world, based on the Global Innovation Index 2022, suggesting a strong propensity for innovation potentially in the form of new services and business models in the metaverse.
- Hong Kong has a high GDP per capita, suggesting that affordability of required immersive hardware on average may be less of a limiting factor on the economic impact of the metaverse.

HONG KONG IN NUMBERS

Potential 2035 economic impact of the metaverse:

US\$7-14B per year, 1.3-2.4% of GDP

2020 GDP:

US\$368B

Per capita
(Constant 2017 US\$):

US\$55,918
(high income)

Key sectors:



ICT sector:



Population:

7.48M



Global
innovation index:

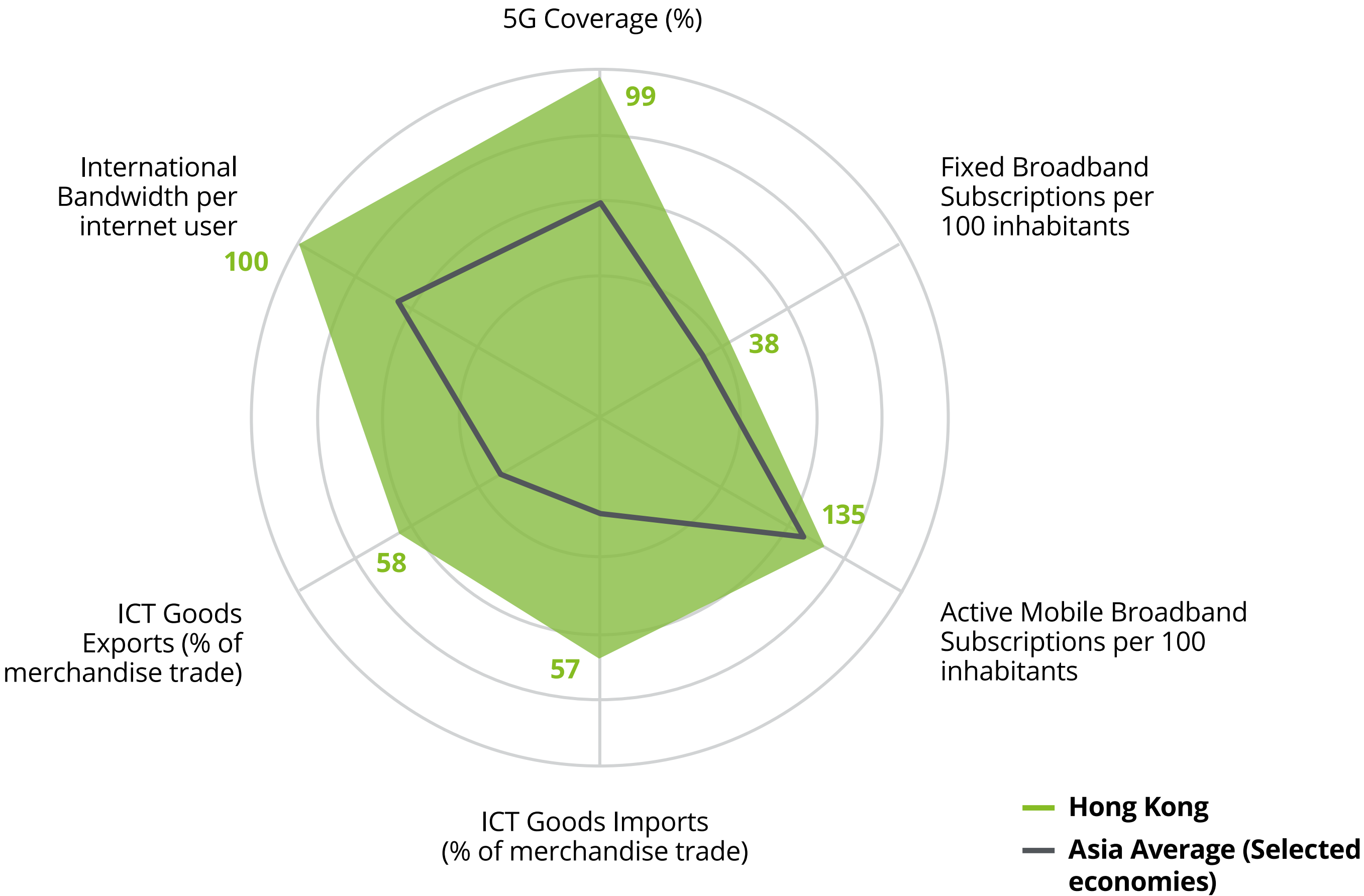
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Sources: World Bank World Development Indicators 2020, Our World in Data 2017, ITU Digital Development Dataset 2019, World Bank Global Index, UN Data
Note: Hong Kong is not ranked on the EIU Business Environment Ranking and Digital Readiness Index

Technology Fundamentals

- Extensive 5G coverage and a high number of active mobile broadband subscriptions will help propel metaverse applications.
- In e-commerce, digital wallets are expected to overtake credit cards and comprise 40% of the city's online transaction value by 2025, which bodes well for the adoption of payment rails in the metaverse.⁸
- Digital skills gap is limiting the uptake of new technologies for more than a third of domestic businesses surveyed by the Hong Kong Government.⁹
- Its Smart City Blueprint 2.0 includes initiatives which can be enhanced with metaverse technologies, such as intelligent transport and traffic management, the use of blockchain technology to enhance traceability of pharmaceutical products, and the use of IoT sensors for pest control, among others.¹⁰

8. JChartered Public Accountants Australia, "[Hong Kong Businesses Embrace Digital Transformation Yet Talent Shortage Bites](#)", press release, August 10, 2022.
9. Hong Kong Government, [Hong Kong Smart City Blueprint 2.0](#), 2020, p. 17
10. Korn Ferry, "[Hong Kong Must Use Its Competitive Advantage To Close The Skills Gap](#)", accessed October 3, 2022.



Sources: GSMA Mobile Connectivity Index 2021, ITU Digital Development Dashboard 2020, UNCTADStat 2019

Ecosystem Enablers

Digital Skills

Hong Kong is home to one of the world’s leading technological ecosystems, ranking 2nd out of 64 economies in the IMD World Digital Competitiveness Ranking second in 2021. However, due to reduced international labor flow and talent displacement, Hong Kong could face a shortage of 746,000 workers by 2030 due to skill gaps, out of which 8.4% could be in its technology industry.¹¹

The government has been taking action to uplift its digital skills training, partnering with industrial stakeholders, like IBM, to train vocational institute students with the latest digital skills like AI and blockchain.¹² It also continues to nurture a pipeline of talent through the Research Talent Hub and STEM Internship Scheme.¹³ The Chinese government will also support Hong Kong’s talent cultivation, in its efforts to develop the city into an international innovation and technology hub in its 14th Five-Year Plan (2021-2025).¹⁴ Prospects remain bright for metaverse developments as its educated youth base has shown a fair amount of interest in the metaverse, which could be a starting point for more talent to flow into championing metaverse developments.¹⁵

Competition within the metaverse

In the technology sphere, the city has a proven track record of producing unicorn startups, including SenseTime, Lalamove, WeLab and Klook. The strong startup scene is underpinned by the city’s provision of reliable IT infrastructure, financial ecosystem and its proximity to large pools of potential customers in Mainland China.¹⁶

On the metaverse frontier, Hong Kong-based startup Animoca Brands, continues to grow its portfolio of household names in the metaverse, which includes Axie Infinity, Opensea, Yield Guild Games and Dapper Labs (NBA Top Shot). Kikitrade, a cryptocurrency investment platform is attempting to reinvent the experience by making its platform social-driven.¹⁷ It has also partnered with other platforms under the Hong Kong Metaverse Industry Alliance to promote innovations in the Web 3.0 space, and in the science and technology space.¹⁸ Whatsquare, an AI chatbot platform, has promised to facilitate “conversational commerce” in 32 different languages in Asia.¹⁹ Combined, these developments contribute to an emerging scene that will continue to boost metaverse developments locally, and therefore will increase competition and players within the metaverse.

11. Korn Ferry, “[Hong Kong Must Use Its Competitive Advantage To Close The Skills Gap](#)”, accessed October 3, 2022.

12. Vocational Training Council, “[VTC and IBM announce collaboration to promote digital skills training in Hong Kong](#),” press release, November 30, 2021.

13. Alpha Beta, “[Transforming Hong Kong Into A Smart City: The Economic Opportunity Of Digital Technologies and Skills, And Google's Contribution](#)”, 2021, p. 7.

14. Cao Qingqing, “[Hong Kong On Highway To Become Global Tech And Innovation Hub 25 Years On](#)”, CGTN, July 3, 2022.

15. Hong Kong Federation of Youth Groups, “[Tapping Into The Economic Opportunities Of The Metaverse](#)”, accessed October 4, 2022.

16. Greenhouse, [Hong Kong Startup Ecosystem Report](#), 2021.

17. Tech Node Global, “[Hong Kong Social Crypto Investing Platform Kikitrade Nets \\$6 mil Funding Co-led By Appworks and Media Asia](#)”, accessed October 4, 2022.

18. Hexun Hong Kong, “[Hong Kong Metaverse Alliance Opening Ceremony](#)”, accessed October 4, 2022.

19. “[Whatsquare](#),” accessed October 3, 2022.

Sectors to Watch

Built Environment

Home to one of the world’s most expensive real-estate markets, property tycoons and individuals alike are now venturing into virtual land. The average price for a plot of virtual land on Sandbox rose as high as US\$20,000 at one point, and has since fallen to around US\$5,000.²⁰ The first phase of a sprawling ‘Mega City’ has been built in the Sandbox, with partners from the Hong Kong property, film, music, entertainment, professional services, finance, and gaming sectors coming together to co-create this cultural hub.²¹ Combining the rich experience in real estate development and entertainment fields, how these collaborators develop their virtual plots to host events, games, or social hubs will serve as an inspiration for how activities in traditional commercial real estate developments could be moved into the virtual realm.

The built environment sector also stands to benefit from digital twins that could be created in the metaverse. Midlands Holdings, one of the largest real estate brokerages operating in Hong Kong and China, has utilized digital twins to create virtual 3D experiences for its entire portfolio of properties.²² The HKIA has also developed a live 3D digital twin linked to real-time data from IoT devices that will facilitate “holistic airport management, predictive decision making and maintenance” for the full life cycle of its buildings.²³ In the future, advanced biometrics powered by facial recognition could allow passengers to move through checkpoints without the need for document checks.²⁴ Metaverse technologies is set to change how firms, customers and users come to interact with the built environment.

20. Xinmei Shen, “Animoca Brands launches new season for The Sandbox amid plunging metaverse real estate prices”, South China Morning Post, August 19, 2022.
21. TechNode Global, “The Sandbox expands cultural hub in the metaverse with major Hong Kong partners unveiled in Mega City 2”, accessed October 3, 2022.
22. Matterport, “China and Hong Kong-Based Residential Real Estate Company Midland Holdings To Digitalize Its Property Portfolio With Matterport”, press release, February 14, 2022
23. Hong Kong International Airport, “AAHK Sustainability Report 2018/19: Smart Airport”, accessed October 3, 2022

Culture and Art

The world of culture and art is increasingly influenced by metaverse technologies. As the region’s cultural center, its marquee offerings like Art Basel Hong Kong, Christie’s Hong Kong Auctions, as well as West Kowloon Cultural District and the M+ Museum are adapting to the rise of digital art in the metaverse.²⁵ The Hong Kong Museum of Art and the Affordable Art Fair have included digital art within their line-up.²⁶

Attempts to integrate developments in the metaverse extends to the adjacent world of fashion and luxury and Hong Kong consumers are shifting consumption towards e-commerce.²⁷ For example, I.T., a leading multi-brand fashion house in Hong Kong, recently commissioned digital fashion house The Fabricant to represent an entire collection solely in digital form.²⁸ Through this move to embrace AR and VR technologies in their business model, customers of I.T could interact with shoes and apparel through web browsers and VR headsets. The metaverse is a space conducive to the vigor of the creative industry, and developments in metaverse technologies will only present further opportunities for the industry to experiment and innovate.

24. ibid
25. Common Affairs, “Hong Kong Heads Into The Future With Digital Art”, accessed October 4, 2022
26. Sue Hua, “Disruption, Digitalization and Connectivity: Asia’s Art Market in Transformation,” Arts 2022. 11, no.3 (2022).
27. Hong Kong Business, “Treat Yourself: Hong Kong’s Wealthy Buy More Luxury Items After COVID”, accessed October 3, 2022
28. The Fabricant, “I.T Hong Kong And The Fabricant Create Luxury Retail Game Changer”, accessed October 3, 2022

