

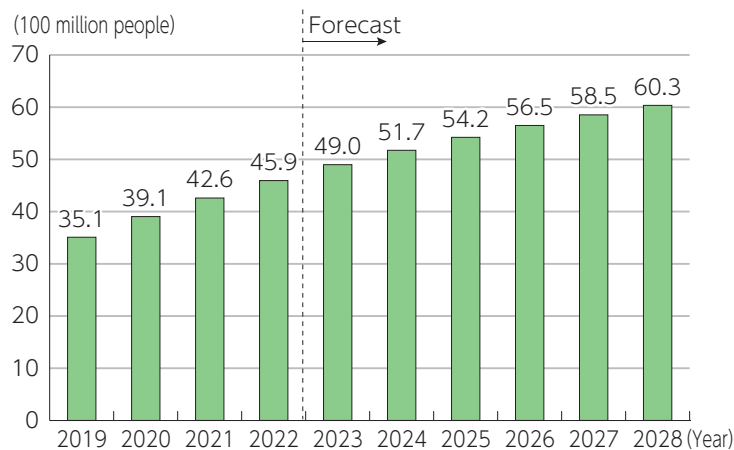
Section 7 Trends in the ICT services and contents & application services markets

1. Social media

The number of social media users globally¹ is forecasted to increase from 4.59 billion in 2022 to 6.03 billion in 2028, and besides its use as a communication tool, its use for social commerce, which combines social media and e-commerce, and the demand for e-commerce, such as live commerce, which expanded due to the COVID-19

pandemic, are driving the expansion of its use. In addition, short video content, such as TikTok and Instagram stories and reels, has become popular, and by extension, AR and VR content on social media is expected to become popular (Figure 4-7-1-1).

Figure 4-7-1-1 Changes and forecast in the number of global social media users

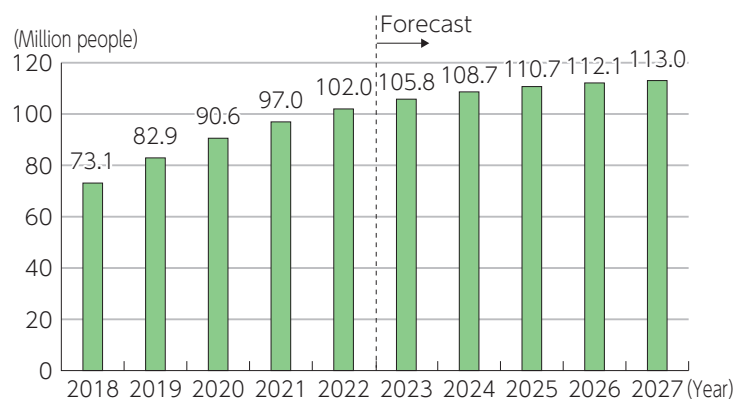


(Source) Statista²

The number of social media users in Japan is forecasted to increase from 102 million in 2022 to 113 million

in 2027 (Figure 4-7-1-2).

Figure 4-7-1-2 Changes and forecast in the number of social media users in Japan



*Number of people who use social media sites and applications at least once a month, with or without an account

(Source) Statista³

2. EC

Sales in the global EC market have been on an upward trend and are forecasted to increase to 751.8 trillion yen (up 31.4% from the previous year) in 2022.

By country, the compound annual growth rate from 2023 to 2027 will be high in Brazil and India, followed by

China, the U.S. and Japan. European countries (UK, France and Germany) are forecasted to grow by 8%, while South Korea is forecasted to grow by as little as 3.5%.

¹ Internet users who use social media sites through some kind of device at least once a month

² <https://www.statista.com/forecasts/1146659/social-media-users-in-the-world>

³ <https://www.statista.com/statistics/278994/number-of-social-network-users-in-japan/>



Figure (related data) Changes and forecast in sales in the global EC market

Source: Statista (eMarketer)

URL: https://www.soumu.go.jp/johotsusintokei/whitepaper/eng/WP2023/data_collection.html#f00222
(Data collection)



Figure (related data) Growth rate of EC market by country (2023 to 2027)

Source: Statista [Statista Digital Market Insights]

URL: https://www.soumu.go.jp/johotsusintokei/whitepaper/eng/WP2023/data_collection.html#f00223
(Data collection)

3. Search services

While Google has a strong share of the global desktop search engine market, it has gradually declined in recent years and in December 2022 its share was 84.1%, with Bing growing to 9.0%. Google also maintains a very high share of the global mobile search engine market, and all other search engines remain at less than 2%.

In Japan, as of September 2022, Google has the high-

est share for personal computers, and as of December 2022, its share is 70% or higher for both smartphones and tablets. There are also differences between devices, with Bing's share of the PC market in excess of 15% and Yahoo!'s share of the smartphone and tablet market at around 20%.



Figure (related data) Changes in global market share of search engines (Desktop)

Source: Statista (StatCounter)

URL: https://www.soumu.go.jp/johotsusintokei/whitepaper/eng/WP2023/data_collection.html#f00226
(Data collection)



Figure (related data) Changes in global market share of search engines (mobile)

Source: Statista (StatCounter)

URL: https://www.soumu.go.jp/johotsusintokei/whitepaper/eng/WP2023/data_collection.html#f00227
(Data collection)



Figure (related data) Market share of search engines in Japan

Source: Statista (StatCounter)

URL: https://www.soumu.go.jp/johotsusintokei/whitepaper/eng/WP2023/data_collection.html#f00228
(Data collection)

4. Video streaming, music streaming and e-books

The global video streaming, music streaming, and e-book markets have maintained and expanded demand captured by the spread of flat-rate services and the in-

crease in the number of hours spent at home due to the spread of COVID-19, and in 2022, the markets totaled 19.865 trillion yen (up 37.3% from the previous year).



Figure (related data) Changes and forecast in size of global video streaming, music streaming and E-book market

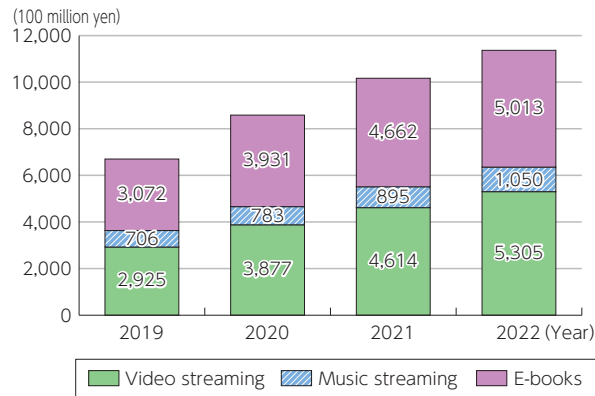
Source: Omdia, Statista

URL: https://www.soumu.go.jp/johotsusintokei/whitepaper/eng/WP2023/data_collection.html#f00229
(Data collection)

In addition, like the global market, the markets in Japan also grew, and in 2022 the video streaming market was 530.5 billion yen (up 15.0% from the previous year), the music streaming market was 105.0 billion yen (up

17.3% from the previous year), and the e-book market was 501.3 billion yen (up 7.5% from the previous year) (**Figure 4-7-4-1**).

Figure 4-7-4-1 Changes in the size of the Japanese video streaming, music streaming, and e-book markets



(Source) Prepared based on GEM Partners' "Video Streaming (VOD) Market Forecast for Five Years (2022 - 2026) Report,"⁴ the Recording Industry Association of Japan's "Japan Recording Industry 2023,"⁵ and the All Japan Magazine and Book Publisher's and Editor's Association and Research Institute for Publications' (2023) "Publishing Monthly Report."⁶

5. New trends in ICT services and content and application services markets

(1) Services using location information (spatial information)

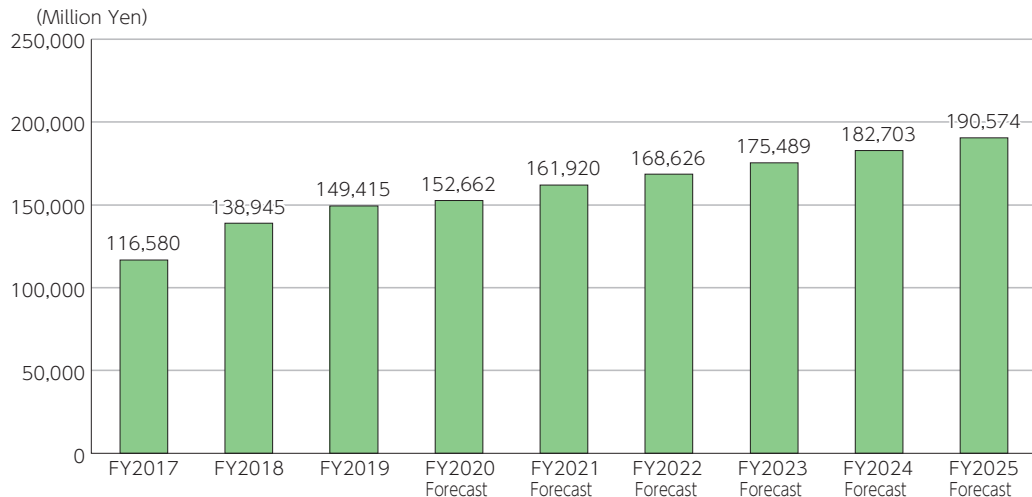
Services that utilize location information (spatial information) are widely used, and include map apps, car navigation, marketing, people flow tracking, taxi dispatch apps, games that utilize location information, and apps that share location information with family and friends.

The size of the market for (outdoor) location and geographic information in Japan was 152.7 billion yen in fiscal 2020 and is forecasted to increase to 190.6 billion

yen in fiscal 2025 (Figure 4-7-5-1).

In addition, driven by office demand due to the spread of hot-desking and other work style reforms, the size of indoor positioning solutions market is forecasted to increase to approximately 7.6 billion yen in fiscal 2024, and although the size of the market is smaller than the outdoor market, it is expected to grow by approximately 20% annually from fiscal 2021 onward (Figure 4-7-5-2).

Figure 4-7-5-1 Transition and Forecast of Domestic Location and Geographic Information Service Market Size



*1 Based on sales by business operators.

*2 The values for fiscal 2020 and later are forecasts.

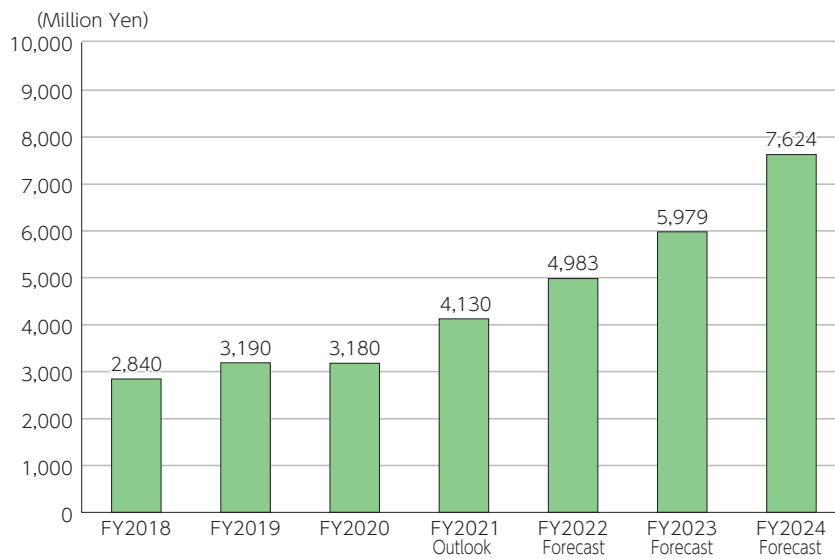
*3 Market size was calculated based on (1) map databases, (2) GIS engines, and various GIS applications ((3) traffic related location applications, (4) store development/location advertisements, (5) spot store information/coupons/check-in, (6) location game applications, (7) IoT location applications, (8) delivery/logistics related location applications, (9) Industrial location applications, (10) location applications for infrastructure development, (11) traffic jam prevention location applications, (12) disaster prevention location applications).

(Source) Yano Research Institute Ltd., "Location and Geographic Information Service Market in Japan: Key Research Findings 2020", November 5, 2020

⁴ <https://gem-standard.com/columns/674>

⁵ <https://www.riaj.or.jp/t/pdf/issue/industry/RIAJ2023.pdf>

⁶ <https://shuppankagaku.com/wp/wp-content/uploads/2023/01/%E3%83%8B%E3%83%A5%E3%83%BC%E3%82%B9%E3%83%AA%E3%83%AA%E3%83%BC%E3%82%B92301%E3%80%80.pdf>

Figure 4-7-5-2 Transition and Forecast of Indoor Positioning Solutions Market Size

*1 Based on the sales of indoor location information service and solution providers

*2 Market size was calculated based on services and solutions that utilize indoor location information utilization using indoor positioning technology and indoor map information.

*3 The value for fiscal 2021 is an estimate, and the values for fiscal 2022 and later are forecasts.

(Source) Yano Research Institute Ltd., "Indoor Positioning Solutions Market in Japan: Key Research Finding 2021", January 7, 2022

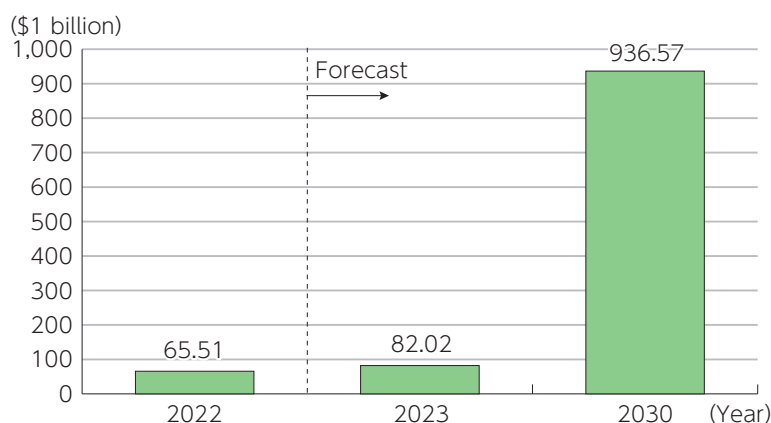
(2) Metaverses

As the speed of communications and the rendering performance of computers have improved, virtual spaces on the Internet called metaverses,⁷ where users can communicate, have started to spread, and economic activities such as the purchasing of goods in metaverses are attracting considerable attention.

The global metaverse market (total of infrastructure, hardware, software, and services) is forecasted to expand from 8.6144 trillion yen in 2022 to 123.9738 trillion yen⁸ in 2030 (Figure 4-7-5-3).

The Japanese metaverse market (total for metaverse

platforms, non-platforms (content, infrastructure), and XR (VR, AR, MR) devices) is expected to reach 182.5 billion yen in fiscal 2022 (up 145.3% from the previous fiscal year) and is forecasted to expand to 1.0042 trillion yen in fiscal 2026 (Figure 4-7-5-4). Due to the continuation of the COVID-19 pandemic, its use is expanding for purposes such as virtual exhibitions that provide virtual spaces for corporations, online events such as in-house events, education and training, and customer service and shopping experiences in online shopping.

Figure 4-7-5-3 Changes and forecast in the size of the global metaverse market

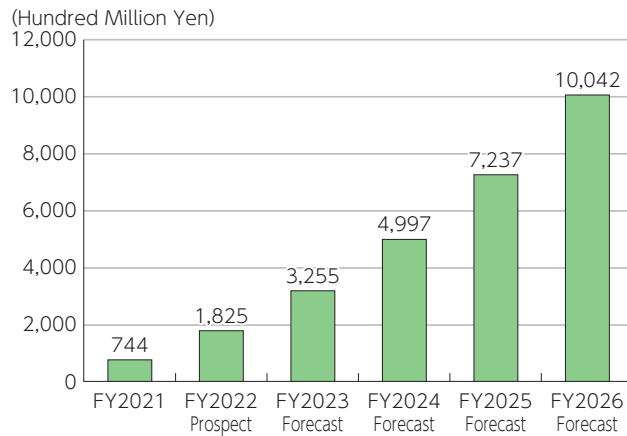
(Source) Statista⁹

⁷ Interim Summary of the MIC Study Group on the Utilization of Metaverse Towards Web3 Era (summary of discussions so far) https://www.soumu.go.jp/main_content/000860618.pdf

⁸ Calculated using the average exchange rate for January to March 2023.

⁹ <https://www.statista.com/statistics/1295784/metaverse-market-size/>

Figure 4-7-5-4 Domestic Metaverse Market Size Forecast



*1 Based on sales by business operators.

*2 The value for fiscal 2022 is an estimate, and the values for fiscal 2023 and later are forecasts.

*3 The total market size is the sum of metaverse platforms, non-platforms (content, infrastructure, etc.), and XR (VR, AR, MR) equipment. Note that XR (VR, AR, MR) equipment is calculated on a sales price basis.

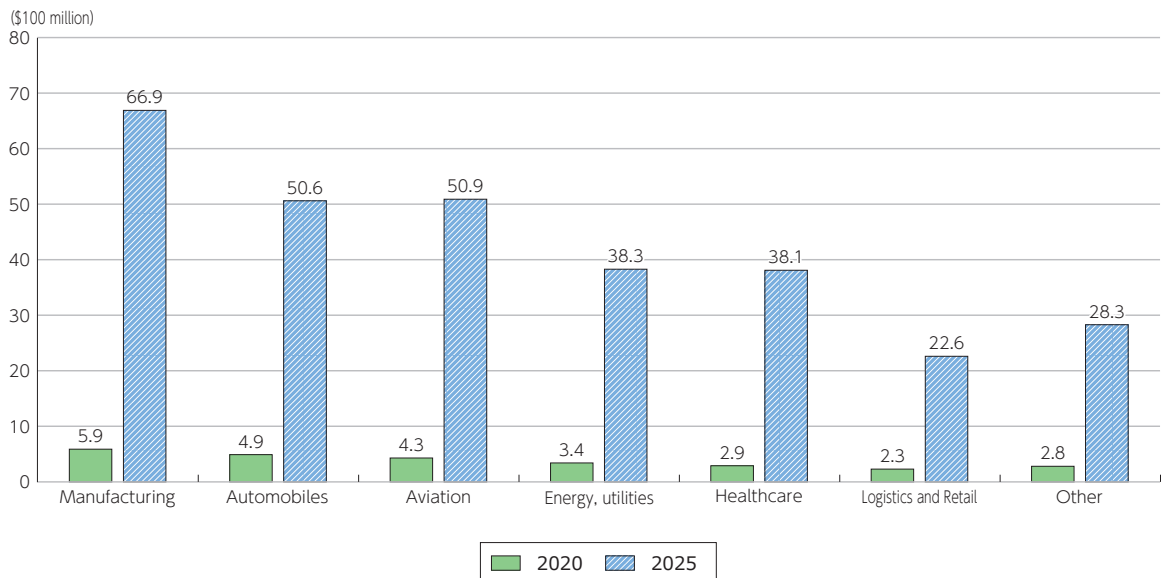
(Source) Yano Research Institute Ltd., "Metaverse Market in Japan: Key Research Findings 2022, September 21", 2022

(3) Digital twins

A digital twin is a virtual twin of an object or situation in real space recreated in a virtual space.¹⁰ Digital twins are increasingly being used for simulation, optimization, and evaluation of effects, impacts, and risks in a variety

of fields including manufacturing and healthcare, and the size of the global digital twin market is forecasted to grow from 283.0 billion yen in 2020 to 3.9142 trillion yen¹¹ in 2025 (Figure 4-7-5-5).

Figure 4-7-5-5 Size of the global digital twin market (by industry)



(Source) Statista (BIS Research)¹²

¹⁰ Interim Summary of the MIC Study Group on the Utilization of Metaverse Towards Web3 Era (summary of discussions so far) https://www.soumu.go.jp/main_content/000860618.pdf

¹¹ Calculated using the average exchange rate for January to March 2023.

¹² <https://www.statista.com/statistics/1296187/global-digital-twin-market-by-industry/>