

Industrial metaverse highest among technologies expected to generate new businesses by 2030

Fully automated driving, industrial metaverse expected to alleviate labor shortages

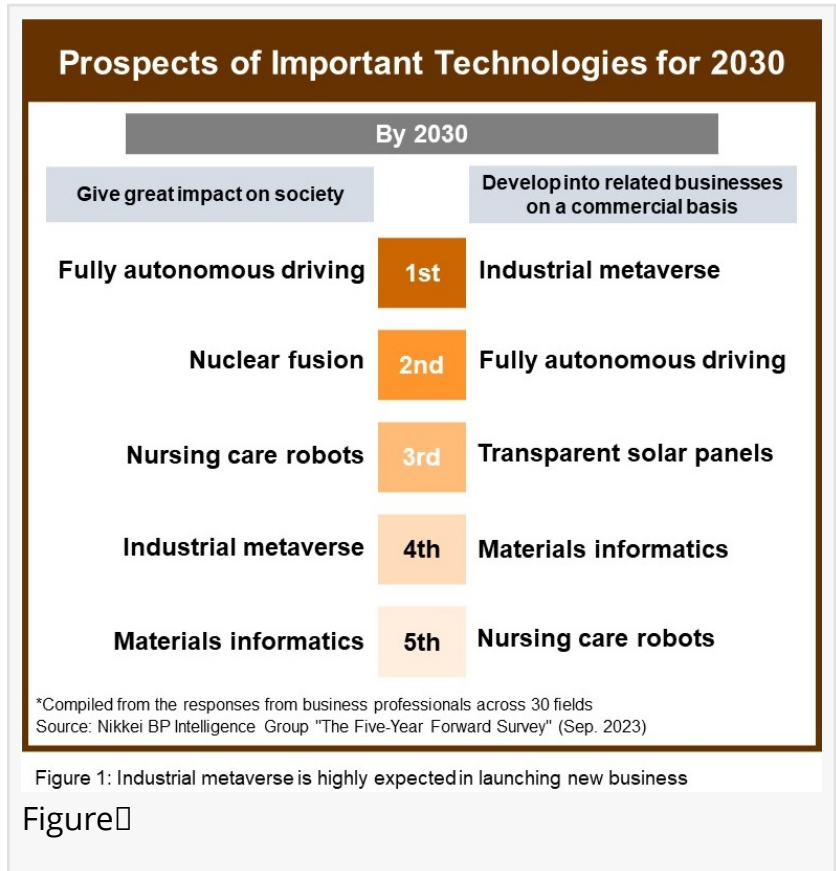
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/EINPresswire.com/ -- The future, as envisioned by business professionals, is undergoing significant changes. According to a large-scale survey project, the Five-year Forward Survey, conducted by Nikkei BP Intelligence Group, respondents rated the industrial metaverse as the top-ranked technology for creating new businesses by 2030.

Solving social issues is a crucial theme for the development and application of technologies for 2030. The promising technologies for addressing four key issues—labor shortages, energy, the environment, and security—are generating significant expectations.

According to the Five-year Forward Survey conducted by Nikkei BP Intelligence Group in September 2023, the technology expected to have the greatest societal impact by 2030 was fully automated driving, and the top technology for creating new businesses by 2030 was the industrial metaverse (Figure 1). There are high expectations for both technologies in helping to address labor shortages in the face of Japan's declining population and aging society.

In the Five-Year Forward Survey, a comprehensive questionnaire listed 100 technologies across seven fields: health, medical, food, and agriculture; mobility and transportation; place and space; lifestyle and workstyle; IT and communications; fundamental technologies; and artificial intelligence. The survey then focused on a total of 14 technologies in each field, including the top



two technologies that respondents rated as "the most crucial in 2030." From these 14 technologies, respondents were asked to choose up to three technologies expected to have "a massive social impact globally by 2030" or expected to "develop into businesses on a commercial basis." Respondents were asked to prioritize these technologies based on their societal impact, ranking them from 1st to 3rd place.

Expectations for labor-saving

In the Five-year Forward Survey, Japanese business professionals were asked to choose the top three technologies expected to have a significant societal impact by 2030. Coming top were fully automated driving, nuclear fusion, and nursing care robots, in that order. There are high expectations that fully automated driving (ranked 1st) and nursing care robots (ranked 3rd) will contribute to mitigating the worsening labor shortage by providing labor-saving solutions. Additionally, technologies such as the industrial metaverse, materials informatics, and delivery drones—all of which ranked in the top 10—are also expected to contribute to achieving labor-saving goals.

The labor shortage in various industries such as logistics/transportation, tourism/food and drink, nursing care, and construction in Japan is expected to worsen over the next decade. This issue is not unique to Japan, but is an ongoing challenge for many countries and regions worldwide. As we approach 2030, the global competition for talent acquisition will become more intense. It will be necessary not only to create an environment to welcome workers from overseas but also to consider the potential increase in labor outflow and migration from Japan to other countries.

Expectations for new businesses

In the Five-Year Forward Survey, Japanese business professionals chose the top three technologies expected to produce new businesses by 2030. The top-ranking technologies were the industrial metaverse, fully autonomous driving, and transparent solar panels. Respondents selected comparatively practical options that could be commercialized in the near future, over technologies with a massive societal impact. However, respondents still showed high expectations that technologies addressing wider societal issues such as the labor shortage, energy, and the environment may lead to significant commercialization opportunities.

The industrial metaverse enables the transfer of advanced business skills and expertise from experienced professionals to younger workers using metaverse spaces. In Japan, approximately 60 percent of companies are encountering challenges in passing on skills from experts to younger employees, and it seems that many other countries and regions are facing similar issues. Meanwhile, transparent solar panels are expected to provide a crucial solution for achieving carbon neutrality, by generating power when fixed to the walls and windows of high-rise buildings.

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