

Prospective Industry Technology Development Opportunities: A Case Study of Technology Managers Survey

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In the face of changes in the global political and economic situation and competition in industrial technology, it is crucial to grasp forward-looking key technologies and their development and application business opportunities. According to the "2023 Technology Manager Dynamic Observation Survey", most respondents believe that the technology fields with development business opportunities in Taiwan in the short to medium term (in the next 3 to 5 years) are smart factories and smart Internet of Things; detailed technologies include big data analysis, generative artificial intelligence, etc., all show that enterprises are closely related to artificial intelligence in the development of smart technology.

Due to the wide application of artificial intelligence, it is also regarded by all walks of life as an important driver of the growth of Taiwan's technology industry in 2024. At the Consumer Electronics Show in Las Vegas, the United States, in January, most of Taiwan's 180 exhibitors used artificial intelligence applications. As the main axis, it not only covers the fields of digital medical care, smart life and smart mobility, but also showcases the diverse aspects of Taiwan's development and application of artificial intelligence. Quanta's chairman also expressed optimism about the development of projects such as AI PC and AI automotive electronics in the open forum.

Therefore, this article puts forward the future prospects and related suggestions of the Taiwanese industry for R&D application projects such as personal computing devices, smart medical care, and smart transportation:

1. AI PC (AI personal computer): The layout of Taiwanese companies in this field ranges from IC design, chip manufacturing, memory to components, assembly plants to terminal brands, etc., to ultimately meet the needs of users to complete work efficiently and provide better multi-creativity and productivity; in the future, it should ensure that the relevant products it provides can grasp the usage scenarios of various users, and provide corresponding functions and experiences according to different scenarios. Continued commitment to

technology and product innovation will also help in the market Remain competitive.

2. Smart medical care: In addition to actively promoting the development of high-end smart medical materials, Taiwanese companies also provide accurate and efficient smart medical solutions, track the condition changes of the elderly and patients, and create silver economic business opportunities; in the future, more people who are familiar with medicine still need to be cultivated. Cross-field talents with science and technology integrate various professional knowledge, reduce cross-field communication costs, and provide more effective, convenient and in line with the needs of clinical medical and personal health management services.

3. Smart transportation: Taiwanese companies combine artificial intelligence with sensing facilities and signaling systems to achieve the goal of "intelligent roads." In addition, they have accumulated more than hundreds of patents related to self-driving cars, and through industry-research cooperation Produce research and development results such as self-driving minibuses; in the future, in response to the global net-zero emission trend, we will continue to strengthen the development of artificial intelligence charging technology for smart transportation vehicles, create a friendly charging environment for electric vehicles and motorcycles, and provide comprehensive energy management and smart charging services.

To sum up, Taiwan's industry has promising prospects for innovation by investing in emerging technologies such as artificial intelligence. This includes continuous investment in research and development, leveraging its strengths in information and communications technology, enhancing cross-domain and cross-border technological integration, and accelerating the application development of diverse technologies. We also focus on innovative services, identifying and addressing changing potential needs, and providing customized services and solutions to create business opportunities. Finally, by continuously innovating and developing emerging technologies, we aim to strengthen corporate competitiveness to meet unforeseen challenges and opportunities, consolidating Taiwan's position as an indispensable key partner in the global ecosystem.

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