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## Foreword

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Minister of Education, Culture, Sports, Science and  
Technology

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Japan faces various social issues, such as advancement of an aging society with a declining birthrate, widening of regional disparities, and increased intensity and frequency of large-scale natural disasters. In order for Japan to develop under such circumstances, a “new strength” will be essential, and science, technology, and innovation will be a major key to creating that new strength.

The 6th Science, Technology and Innovation Basic Plan, entering its fourth year in FY2024, calls for realization of “Society 5.0,” which is “a society that is sustainable and resilient against threats and unpredictable and uncertain situations, that ensures the safety and security of the people, and that enables each and every individual to realize diverse forms of well-being.” The whole government is making concerted efforts to achieve this goal.

Artificial intelligence (AI) technology, one of the key technologies that will support the realization of such Society 5.0, has made rapid progress in recent years, and there are growing expectations for its potential use in diverse fields. Therefore, there is a need to develop and disseminate safe, reliable, and advanced AI systems so as to enable a greater number of people to benefit from AI technology.

Japan launched the “Hiroshima AI Process” for discussing the ideal governance and other matters concerning generative AI, based on the G7 Hiroshima Summit which it hosted under its G7 presidency, and also played a leading role in compiling the documents of achievement in December 2023. In addition, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) works on initiatives including research and development (R&D) for securing the transparency and reliability of generative AI models, developments and shared uses of AI foundation models for scientific research, and broadening of opportunities for outstanding young researchers and doctoral students.

Part I of this year's white paper features domestic and global trends in the development and utilization of such AI technology and the impact of AI technology, introducing not only the government's responses, but also examples of unique initiatives by universities, research institutions, private companies, etc. inside and outside Japan. I hope that this white paper will help the people deepen their understanding of science, technology, and innovation policies, and that it will also serve as a useful reference for future initiatives for not only people who are involved in AI R&D, but also those who promote the utilization of AI in various fields.