

# Committed to Solving Social Issues with Substantial Solutions



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Each country and region has its own problems that are closely interrelated. With the progress of globalization, what were once local problems are becoming global issues. This trend is making it crucial to consider the paradigms of international society from the point of view of sustainability. In addition, Japan has specific issues and concerns such as the aging of the population combined with a declining birthrate, and the depopulation of rural areas. Humankind needs to create a new paradigm of society in order to overcome these complex problems and create a society where people can live a satisfying and comfortable life while promoting sustainability on a global scale.

Under these circumstances, the Toshiba Group has established a Basic Policy on Technology Development that mandates the development of “substantial solutions” to solve social issues. With our long history of providing a multitude of products for various purposes, we have the advantage of being able to accurately understand the requirements of society and the expectations of customers. Under the watchword “substantial solutions,” we have pushed, and will continue to push, the limits to improve and enhance our hardware products, including systems and facilities, in order to maintain our advantage over other companies and utilize our extensive customer base to deliver complete solutions. The focus of our new technology policy is to individually and optimally solve the challenges of our diverse customers located in geographically diverse areas.

The following is a brief summary of our achievements in 2016.

First, our Technology Strategy emphasizes the use of innovative technologies to create substantial products offering high levels of functionality, quality, and cost competitiveness. This has led, for example, to the development of a three-dimensional (3D) flash memory fabricated using a 64-layer stacking process. We also contributed to the commencement of commercial operation of four high-head, high-capacity pumped storage units at the

Qingyuan Pumped Storage Power Station in China, and increased our capacity for the production of the SCiB™ lithium-ion rechargeable battery in order to promote its use in various products and systems.

Second, we have committed ourselves to the development of technologies to turn unique, substantial products into solutions, as exemplified by a demonstration experiment on the implementation of future autonomous driving using an onboard image processor for the processing of 3D data.

Third, we have directed our attention to the conversion of data into customer value using Internet of Things (IoT) and artificial intelligence (AI) technologies. As a result, we have launched new solution services including the “IoT Standard Pack,” which allows users to quickly realize the visualization and remote monitoring of industrial devices and equipment located worldwide, and the “Communication AI RECAIUS,” which supports various fieldwork activities.

Last but not least, our strategic focus areas include technologies that fully utilize synergies from multiple businesses and bring our core competencies to multifaceted development. One of our achievements in this area is a heavy-ion radiotherapy system that accurately tracks changes in the position of a tumor caused by respiratory motion. We completed the delivery of this heavy-ion radiotherapy system in March 2016 to the i-ROCK (Ion-beam Radiation Oncology Center in Kanagawa) facility at the Kanagawa Cancer Center. We have also developed a depalletizer, leveraging robot control and image recognition technologies, in order to help save labor in the logistics industry.

These are just a few examples of the technological innovations achieved by the Toshiba Group. We hope that you find *TOSHIBA REVIEW Science and Technology Highlights 2017* both informative and enjoyable to read, and welcome your feedback, suggestions, and comments.