

# New Robot Strategy

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Japan's Robot Strategy

- Vision, Strategy, Action Plan -

The Headquarters for Japan's Economic Revitalization

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## Section 8 Consideration of Robot Olympic (Provisional Name)

### (1) Background

It was decided that the Olympic and Paralympic Games are to be held in Tokyo in 2020 for the first time in 56 years.

In the Olympic Games of 56 years ago, construction investment for the development of competition facilities and transportation network (such as subways, Metropolitan Expressways, and Shinkansen) increased, and furthermore, travel demand for seeing competitions expanded and the penetration rate of color TVs rapidly increased. As such, the Olympic Games acted as a trigger for big changes in society and people's daily life.

By making best use of a worldwide event, Olympic Games, the research and development of robots will be accelerated and their broad introduction and diffusion in the Japanese society will be promoted, and at the same time, there are potential that the Olympic Games function as a driving force of "robot revolution" in which people's daily life is changed by robots, and the Olympic Games offer a great opportunity to show Japan, which transforms its society ahead of the world as the achievement of the robot revolution, to the people who visit from all over the world.

By accelerating activities aimed at the realization of the robot revolution and bringing "daily life with robots" to all over the country in the year of the Olympic Games, the state of Japan, where the whole city is integrated with robotic technology, will be shown to the world as a robot showcase. In addition to this, based on the fact that the Olympic Games are a historical festival to strongly deliver the value of human's challenge to limits, it is worthwhile gathering the leading edge achievements of home and abroad concerning robots and providing an opportunity to tackle the challenge of reaching a further height.

### (2) Concrete activities

As a method to accelerate the research and development of robots and to introduce and diffuse them into the real world, that is, to proceed the social implementation, competitions, verification experiments, demonstrations, that is, the Robot Olympic (provisional name) is to be carried out. It is not merely a competition to compete in robotic technology; instead, it solves actual issues in various areas, such as medical and health care, infrastructure inspection, agriculture, forestry and fisheries industry, manufacturing industry, service industry, and entertainment industry; it makes actually useful robots compete each other; and it shows to many people what robots are. The introduction and diffusion of robots will be promoted by making people feel familiar with robots and search how to solve real issues with robots, discuss their utilization methods, and think how to work and live a life with robots.

Concrete examples include the R&D and on-site verification projects for infrastructure

inspection robots and disaster-response robots, which are being conducted by the Cabinet Office, the Ministry of Economy, Trade and Industry, and the Ministry of Land, Infrastructure, Transport and Tourism. In the projects, infrastructure inspection robots and disaster-response robots are brought to the field for inspection. It is not a competition, but the inspectors, composed of ordering parties (the Ministry of Land, Infrastructure, Transport and Tourism and the like), users, developers (NEDO, the Ministry of Economy, Trade and Industry), researchers of robotics, civil engineering and the like, evaluate robot systems from various viewpoints to help improving the methods for research and development and operation.

Another example is the “Research and Development of Disaster-Response Robots” project of “The International R&D, Demonstration Project in Environment and Medical Device Sector/The International R&D and Demonstration Project on Robots/Research and Development of Disaster-Response Robots (USA)”, which has been carried out by NEDO since FY2014. This project develops disaster-response robots, participates in a robot competition hosted by DARPA in USA (Disaster Robotics Challenge), and also plans to carry out demonstrations in Japan.

In the future, while cooperating with the hosting entities of existing robot-related competitions, users and operators of robots, manufacturers, researchers and the like, the consideration will be carried out with Robot Revolution Initiative playing a central role. The executive committee will be started within this year to establish the system, the concrete style and competition items will be determined by 2016, and also a preparatory competition will be held in 2018. And then, the Robot Olympic will be held in 2020.

### (3) Goal for 2020

If industry, government, and academia share the common goal of holding the Robot Olympic (provisional name) concurrently with the Tokyo Olympic and Paralympic Games, the research and development of robots will be accelerated in five years to come. At the same time, it may serve as a trigger to actually introduce and diffuse robots into actual daily life and workplaces.

Robots that will participate in this Robot Olympic (provisional name) should be not only those for competition but also those that are actually used in various scenes and workplaces in society or those actually working. And it is important to continue the cycle of innovation such that even after the Tokyo Olympic and Paralympic Games, new robotic technology is continuously tested via these competitions, verified, and accepted in society.

We should aim at a society where visitors to Japan can see robots being utilized in various areas, and should establish the environment such that when new robots are developed, they are demonstrated and introduced in Japan for the first time in the world. That is what is meant by “to become a showcase for robot utilization”, which can be a

driving force of the robot revolution.