



South Korea to Boost its Robot Industry with a New Development Initiative

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Introduction

Starting 2017, robots can readily be seen in South Korea at shipping centres or at hospitals for the benefit of patients' rehabilitation. During the Pyeongchang Winter Olympics of 2018, robots will act as receptionists or security guards. On November 15 2016, the Ministry of Trade, Industry and Energy (MOTIE) held a policy meeting with relevant government sectors to discuss the robot industry and to announce the Joint Robot Industry Development Initiative. This is a more detailed version of what was discussed in last October 2016 during the Robot Industry Development Roundtable. During the roundtable, the government announced that it will invest 400 million euros in the next five years and promote 80 public projects within the top 4 promising industries by the year 2020. After receiving feedback from experts and consulting with other government sectors, MOTIE came up with the Joint Robot Industry Development Initiative. This programme reflects the fervent wish on the part of the South Korean government to grow the robot industry as one of the new export industries. In order to do so, five to ten robots will be placed in the National Rehabilitation Centers to assist in patients' rehabilitation, and another ten to fifteen robots in general hospitals to assist in the transfer of patients. By 2018, a further five to ten social robots with AI will be placed in local post offices, while three to five surgical robots will be distributed among national hospitals.

MOTIE will focus on expanding the demand base for robots through market creation and system maintenance. It also intends to enhance robot service and platform distribution capability by promoting specialised companies, securing core technologies, building the workforce and creating proper infrastructure. Efforts will be made to grow the demand for advanced manufacturing robots by providing and expanding smartphone factories, as well as by creating public demand for service robots. In order to secure distribution capabilities, MOTIE will select ten to fifteen research institutes to be affiliated with robot companies as Advanced Robot Commercialization Centers to promote companies specialised in robots, creating a total investment of 80 million euros.

Creating demand for service robots

Medical and rehabilitation use, unmanned transport, social works and security are the four promising sectors in which the government sectors attempt to initiate 90 public projects and promote them by the year 2020. In the case rehabilitation robots, for which market vitalisation is urgently required, MOTIE and the Ministry of Health and Welfare will jointly host a Rehabilitation Robot Symposium (30 November 2016) to implement system modification.

Revising Robot Act

To expedite the creation of a market for robots, MOTIE will also begin revising the Intelligent Robot Development and Distribution Act recommending robot use to public institutions. Such institutions will be advised to provide an annual purchasing plan and submit a performance report.

Humanoid robot

In December 2016 MOTIE set up the Humanoid Robot Research Center at KAIST to build the workforce and initiate world leading technologies in the field of humanoid robots, which have the largest ripple effect. As KAIST was selected to host the new centre October 2016, it will receive 12 million euros in investments until 2020. The centre requires research and development for element technology as well as key components to realise humanoid robot platforms with great speed and output, in addition to the training of 100 researchers.

Grass-roots research

Research funding for university researchers will be extended to enable grass-roots research, which will pioneer the new field through creative and innovative ideas as well as build the foundations of a future market. A new programme will be introduced to provide around 18 to 24 million euros in research funds for all junior- and senior-level researchers over a period of five years. This funding will also be linked to the Support Program for Basic Research run by the Ministry of Science, ICT and Future Planning. In order to promote sharing of research information, utilising the results and supporting R&D, a Grass-roots Research Workshop will be held regularly to allow junior level researchers to participate and explore various research ideas (the first Workshop was held in December 2016). Procedures and standards will be established with a basis in creativity and innovativeness when selecting the programme to be funded and evaluating its results.

Roadmap

In order to respond effectively to the fourth industrial revolution, a roadmap will be established linking industry and academia in order to propose a mid- to long-term direction and investment strategy for robot technologies. Six robot research organisations (KIMM, KITECH, ETRI, KIST, KIRO and KETI) will head the Roadmap Establishment Committee to determine and publish the roadmap by February 2017.

Robot components

To produce robot components such as a reducer domestically, producing and buying companies will jointly found a Robot Components Association to enable high-cost production and measurement facilities. Currently, a majority of robot components amounting to about a half of the production cost are imported, which makes it difficult to maintain competitiveness. A rough planning will be made by January 2017, so that after a thorough preparation period the Robot Components Association can be established in the first half of 2017.

Overseas sales and international cooperation

In order to step into the overseas market and accelerate the industrialisation of exports, the Korean government will support overseas test beds for 50 innovative robots by the year 2020. This process includes the manufacturing of robots as part of an investment in the manufacturing industries of newly developed areas such as China and Southeast Asia. In addition, developing and selling service robots such as walking assistance and floor cleaning robots will be concentrated in areas including the United States, Australia and Europe. Strategic support will be given through visits of business delegations to other countries, the creation of a Korea pavilion during exhibitions and conducting business matchmaking meetings with foreign buyers. In addition, joint R&D and technology cooperation will be continued with leading countries in robotics. For instance, the Kickoff Meeting of the Korea-US Joint Research on Disaster-Response Robot Technology was held in October 2016 to finalise the establishment of 6 million dollars in the funding on this project.

Source

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http://www.motie.go.kr/motie/ne/presse/press2/bbs/bbsView.do?bbs_seq_n=158818&bbs_cd_n=81