



⊕ **Hardworking, Submitting and Ignoring the Messy Surroundings**

# Industrial Robots Accelerate Industrial Automation

**Who is ever willing to engage in boring, tedious, repeated, messy and dangerous work without complaint? The answer is "industrial robots."**

Robotic arms have played an important role in the history of industrial automation development. The advanced technology of robotic arms is closely linked to the degree of automation. In the early 21st century, the semiconductor and display industries were thriving and robust under the Taiwan government's support. Automation equipment hence became needed to improve the manufacturing process.

With the assistance of MIRDC, the Forever Group Precision Industrial Co., which provides automation equipment to panel manufacturers, developed the LCD substrate handling robot arm with horizontal multi-joints in 2005 and the high-stroke five axes with horizontal multi-joints and strong rigidity robot arms in 2006. In 2008, these robot arms went into mass production and sales orders of nearly NT\$3 million imported equipment were placed. The ultimate goal is to enhance the overall competitiveness of panel factories.

In addition to the panel industry, MIRDC also helped the casting industry to build a casting automation system. The traditional casting process used a three-shift manual operation system. However, the working environment used to be hot, loud and highly polluted so that few employees were willing to work in it. Through automation and

technical control, a fully automated production line is capable of 24-hour operation. Both goals of saving manpower and improving production efficiency can be reached.

The Executive Yuan approved the "Intelligent Automation Industry Development Program" in 2012. Since then MIRDC has held a series of activities, including the "international symposium on automation engineering technology," and the "matching conference on business opportunities of intelligent automation engineering technology service." Meanwhile, MIRDC, industry and academic sectors together have established the "cross-industry intelligent automation innovative application community in the food industry," which currently has more than one hundred manufacturer members.

Through these kinds of cross-industry alliances, MIRDC assists manufacturers with reinforcement of the R&D capabilities and processing technologies, introduction of advanced equipment, and customized development capabilities. The ultimate goal, of course, is to facilitate the overall development of industries.