Creating medical and care-related industries based on well-known technologies of robotics, information technology, and virtual reality in the Gifu and Ogaki regions

**Cluster Vision**

Japanese medical care in the 21st century requires quality and safety from the patient's perspective, while views from the medical perspective and those of the Japanese national government are for increased effectiveness and reduced cost of medical care. In fulfilling the vision that inspires the Robotics Advanced Medical Cluster, we engage in actualizing advanced medical diagnosis, sophisticated medical devices, and quality medical care. We pursue the research and development of medical education and training systems that are effective in disaster response and prevention, including health, welfare, and nursing care support systems. It is our aim to establish a technical innovation cluster by integrating fields of medicine and engineering, based on the technological capabilities of industries located in the Gifu and Ogaki regions related to robotics, information technology, and medical education.

**Project Overview**

Companies both within and from outside the area have gathered and participated in this project using the area’s prominent research potential, potential as a core, including robotics, virtual reality technology, information technology and other relevant capabilities, in order to promote the research, development, and commercialization of systems ranging from medical education to practical medical and nursing care applications.

1. Establishing a system to promote cooperation among industry, academia, and government in order to construct an integrated cluster

   In addition to promoting the sophistication and accumulation of robotic-related industries in Gifu Prefecture, we have been pursuing establishing a system that supports cooperation among industry, academia, and government.

   Working primarily with the Gifu Prefecture Robotics Industry Promotion Council that aims to construct area seedbeds (robotic clusters) to create the next-generation robotics industry that is expected to realize significant future growth, we have continued to support systems for commercialization among 40 relevant companies both within and outside the area, and established a network of cooperation featuring industry, academia, and government through study groups for businesses providing support for life and care, and of medical and welfare devices.

2. Promoting commercialization and forming ventures with the purpose of establishing business clusters foundation

   By setting goals for commercialization based on medical and nursing needs, and promoting the joint study of medicine with engineering and industry with academia using commercialization road maps, we have promoted speedy technology transfers, successfully commercialized innovations, and proactively promoted the creation of business ventures in universes.

3. Establishment of the internationally superior integration of intelligence

   By promoting research and development, mainly involving cooperation between wide-ranging fields of medicine and engineering, we have achieved results in sophisticated, advanced research and development of medical education themes, and promoted the establishment of the internationally superior integration of intelligence.

**New Industries Based on Medicine, Health, and Welfare**

Based on core technologies in the Gifu and Ogaki regions and thanks to the massive efforts and support from many companies, universities, research institutions, municipal governments, and related government offices, the Robotics Advanced Medical Cluster of the Gifu and Ogaki regions, which aims to create a new industry of advanced medical devices, has made great efforts and will soon complete its first stage.

Following are some results of this cluster project:

1) Establishment of a system of cooperation in this area featuring industry, academia, and government, such as study groups and networks aiming to develop future clusters.

2) These study and development results have guided many businesses (25 cases) and ventures under university research initiatives (8 companies), and established a foundation for future business development.

3) The study and development results have accumulated in the form of integrated intelligence of internationally superior high technology, such as patents (258 applications) and expertise that have become a technical foundation for the development of future businesses.

In addition to these achievements, further effort is required by us in order to ensure this cluster becomes entrenched in the area and progresses as a new industry. The achievements and technological needs that have been culled in the cluster will be succeeded by the City Area Program (currently in the development stage). We expect that the Advanced Medical Cluster of the Gifu and Ogaki regions will be promoted further by these activities.