

# INNOVATION AND APPLICATION



The current health context is marked in particular by an aging population, climate change, the rise of urban concentration with increasingly frequent population movements, and the emergence of new forms of risks and threats (cyber-terrorism, extreme weather events, etc.).

Digital technologies are gradually investing in the healthcare system by acting on major issues:

- \* ensuring access to health technologies for the entire population
- \* facing the challenge of aging
- \* participating in the defense against epidemics
- \* helping developing countries.

Moreover, certain sectors of e-health exploit satellite systems: Earth observation satellites (e.g. Spot, Envisat and Pleiades), radiocommunications (e.g. Inmarsat, Astra and Eutelsat) and positioning/navigation (e.g. GPS, GNSS and Galileo).

**The objective of MEDES is not only to innovate for the health of astronauts, but more generally to contribute to innovations in health by promoting synergies with the space sector.** The targeted innovation themes are digital health, medical devices designed to contribute to medical monitoring, prevention and care in isolated or extreme situations, life support or environmental control technologies (in particular for microbial control), and more generally support for medical research or R&D activities, using space simulation models or the unique properties of the space environment.

The projects in which MEDES participates have generally been funded by CNES, the European Commission, ESA, or the WHO. MEDES also signs cooperation agreements with SMEs proposing projects.

***For these projects, MEDES acts as a laboratory for innovation and incubation, and offers the following services:***

- Laboratories for tests and specifications,***
- Assistance during deployment and evaluation phases,***
- R&D laboratory for generic solutions,***
- Integrator of solutions/Prototyping on request,***
- Exploitation and transfer.***

In this way, MEDES contributes to the development of applications for the benefit of society as a whole, services and technologies derived from the knowledge and experience acquired from space activities, in the fields of medicine, public health, biomedical instrumentation, and information and communication technologies.

**MEDES has carried out numerous projects, many of which have provided lasting solutions.**