

The number of patients with mobility restrictions is growing across Europe, as the population ages. 16% of Europe's population is over the age of 65, and this figure is expected to reach 25% by the year 2040, i.e. over 150 million persons. Aging is also affecting nurses and caregivers. As the average age of the hospital personnel increases, so does the demand for assistive mobility systems that allow nurses to work effectively more years.

The in-bed positioning of patients with limited mobility is of major importance in order to prevent the worsening of their health condition and improve their comfort. The lack of autonomy to undertake basic movements and postural changes causes anguish and discomfort in these patients and directly affects their quality of living.

Nowadays, nurses need to change manually the position of patients every 2 to 4 hours. Manual handling is not only a discomfort for patients but is also reported to cause an outstanding amount of work-related back injuries; with 85% of nurses suffering back injury at some point in their career. These injuries account for 15 billion working days lost each year; bringing annual costs to approximately 6 billion Euros for European hospitals.

In summary, there is a need in the market for an assistive technology aimed at improving the living conditions of patients with reduced mobility. This new technology must reduce or eliminate the current dependency of patients when they desire to change their posture in the bed. The technology must also contribute to improve the work conditions of caregivers by reducing the need of periodic manual positioning of patients.