Technology for tomorrow’s silver-economy challenges

**CHALLENGES FOR THE SILVER ECONOMY**

- **Comfort, wellness, and leisure**
  - Personalized physical activity, design and ergonomics, travel, social networks, cultural activities, food, cognitive stimulation

- **Independent living**
  - Compensation systems for the disabled, in-home diagnostics, personalized medicine, treatment; e-healthcare

- **E-services and data security**
  - E-healthcare, secure remote data transfer, big data, service traceability, digitalization of content, administrative tasks

- **New urban services**
  - Public and shared transportation, signage, ground surface indicators, information displays, accessibility

- **In-home safety**
  - Home automation, detection systems for personal monitoring and falls, geolocation, safety systems, connectivity, indoor environmental quality

- **Assisted living**
  - Remote monitoring, logistics, connected objects, in-home assistance, remote medicine, communicating task alert systems, robotics

**CEA Tech technology**

- Software applications
- Data security and management
- Information and communication technology
- Diagnostics and medical systems
- Sensor interfaces and integration
- Robotics and cobotics
- User-centered design

**CEA Tech can help the following businesses:**

- Manufacturers targeting the silver economy
- Systems manufacturers and the integrative industries
- Manufacturers of in-home and independent/assisted living equipment
- Transportation equipment manufacturers
- IT services companies
Here are some of the ways CEA Tech can support your development:

**Sensor systems and the associated services**
Integration of physicochemical sensors into textiles and other materials for the development of services like geolocation, alerts, and fall detection

**Communicating systems**
Remote patient-to-caregiver communication, medical data transfer, e-healthcare

**Data security**
Encryption for data transmission, smart-card security and certification

**Interactive simulation**
Simulation to optimize infrastructures and transportation, to identify disabilities or altered performance, to design equipment for caregivers

**HMI (virtual and augmented reality)**
Simplification and centralization of in-home user interfaces and cultural interfaces

**Vision systems**
Fall detection, video protection, search for missing persons, in-home surveillance and security

**Lighting**
Integration of LEDs into homes and infrastructures for low-power illuminated surface and walkway indicators

**Construction**
Appropriate building design for the elderly, improved occupant comfort, control of home automation systems like lighting and security

**Materials**
Surface treatments for the elderly (non-slip, for example); materials for depollution; prosthetics

**Big data and data analysis for e-services**
Medical records, personalized services via social networks, early alerts triggered by events (weather, epidemics), preventive medicine

**Labs-on-chip**
Portable physiological fluid analysis

**Robotics and cobotics**
Rehabilitation, assistance for patients with impaired motor skills, assistance with everyday tasks, assistance for caregivers

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