



# GERONTECHNOLOGY LABORATORY

Monash University Malaysia's Gerontechnology Laboratory is a research platform that undertakes interdisciplinary research focused on developing technology for the ageing population. The platform aims to translate research into new products and services as well as shape public policies to improve the health and well-being of older people.

Researchers apply scientific approaches to understand the challenges and opportunities of longevity. They provide in-depth and comprehensive insights into the real needs of the ageing population, design age-friendly products and services, and promote an active and independent lifestyle.

## EXPERTISE

- Artificial intelligence and data science
- Better governance and policy for longevity economy
- Sustainable development for healthy ageing

## KEY INSTRUMENTATION

- Age simulation suit
  - The age simulation suit is a modular design suit that can be worn by students, scientists, researchers, product developers, marketing personnel, caregivers and others to experience the physical conditions associated with ageing. The age simulation suit has been calibrated to approximate age-related impairments such as joint stiffness, narrowing of the visual capacity and reduced grip ability.
- Laevo and EksoWorks exoskeleton
  - Laevo is a wearable chest and back support exoskeleton that adapts to every posture, transferring force from the rest to the thighs. EksoWorks is an upper body exoskeleton that evaluates and supports the worker's arms to assist them with tasks ranging from chest height to overhead.
- Health monitoring devices
  - We use sensors and wearables to collect and analyse health data as well as provide early warning of disease onset.
- Gerontechnology volunteer database
  - We have established a network to recruit subjects for experiments and participants for survey research on ageing. We work in partnership with housing communities, non-governmental organisations (NGOs) and local hospitals and physicians to recruit a diverse range of older adult volunteers.

## WORKING WITH US

- Collaborative research
- Consultancies
- Training
- Fee for service

## SPECIALIST SERVICES

We engage students and researchers across Monash and partners in universities, business and government, locally and internationally. We have a pool of multidisciplinary research capabilities in engineering, robotics, information technology, usability, social science, psychology, health and medical fields that are of relevance to older adults.

### Specialist Service #1: Research And Development

- Conduct translational research and infuse human element into research and development for people to live well and age well in their last third of their adults' lives.

### Specialist Service #2: Education And Training

- Provide education and training, assessment and consultation concerning gerontechnology, home safety and independent living environment.

### Specialist Service #3: Research Network

- Expand the research network and foster the multidisciplinary research collaborations in Monash and beyond.

### Specialist Service #4: Engagement And Impact

- Develop innovative social engagement and community outreach as well as forward-looking policies to support ageing communities.

### Specialist Service #5: Open Platform

- Serve as an open platform that engages the general public with various technologies and provides trials for the visitors.

#### GERONTECHNOLOGY LAB

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