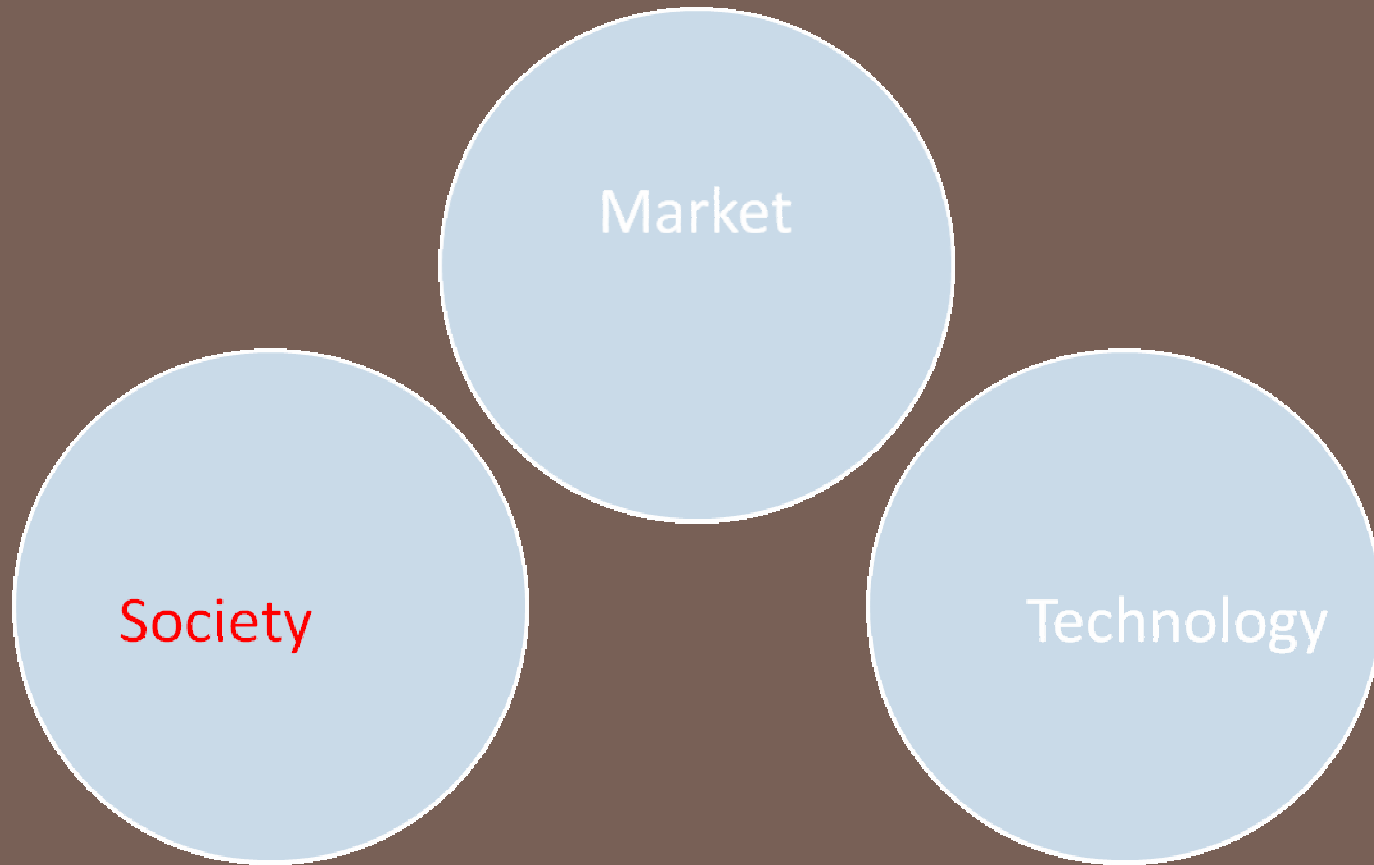


Michalis Nikolaidis, PhD

Centre for Research and Technology Thessaly

Living Lab Thessaly

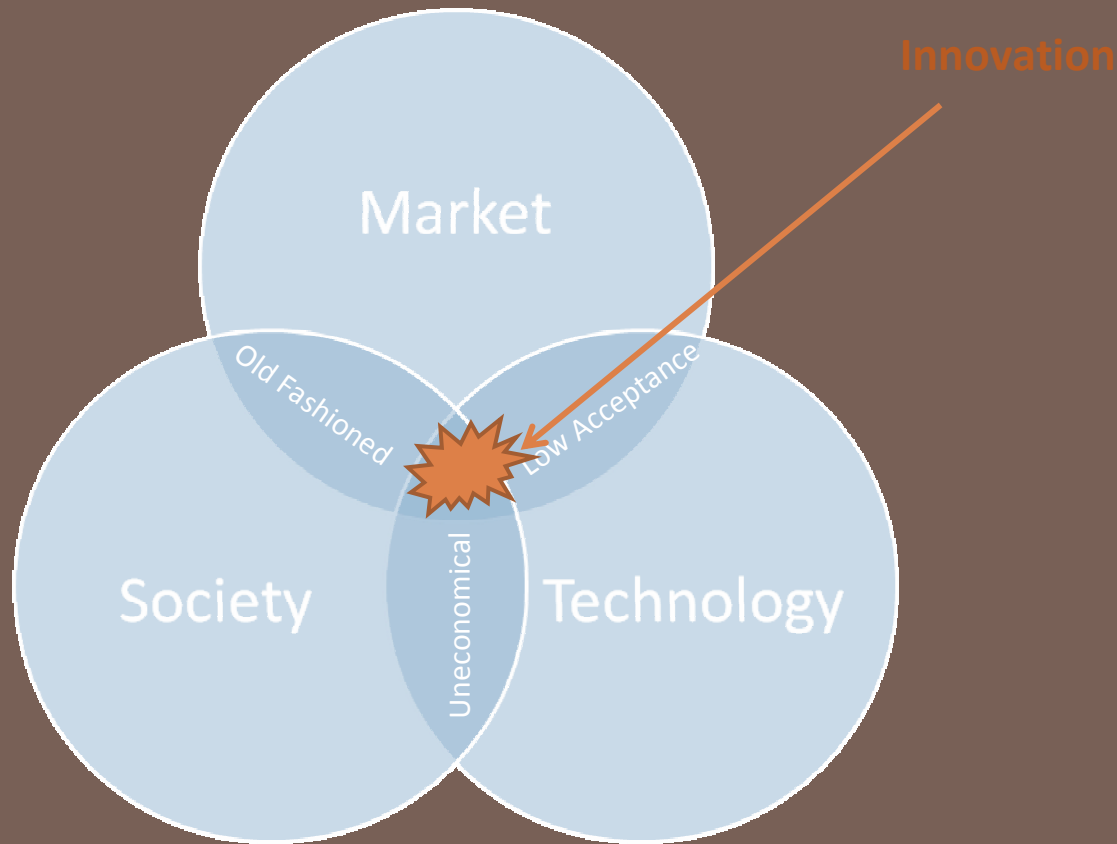
Elements



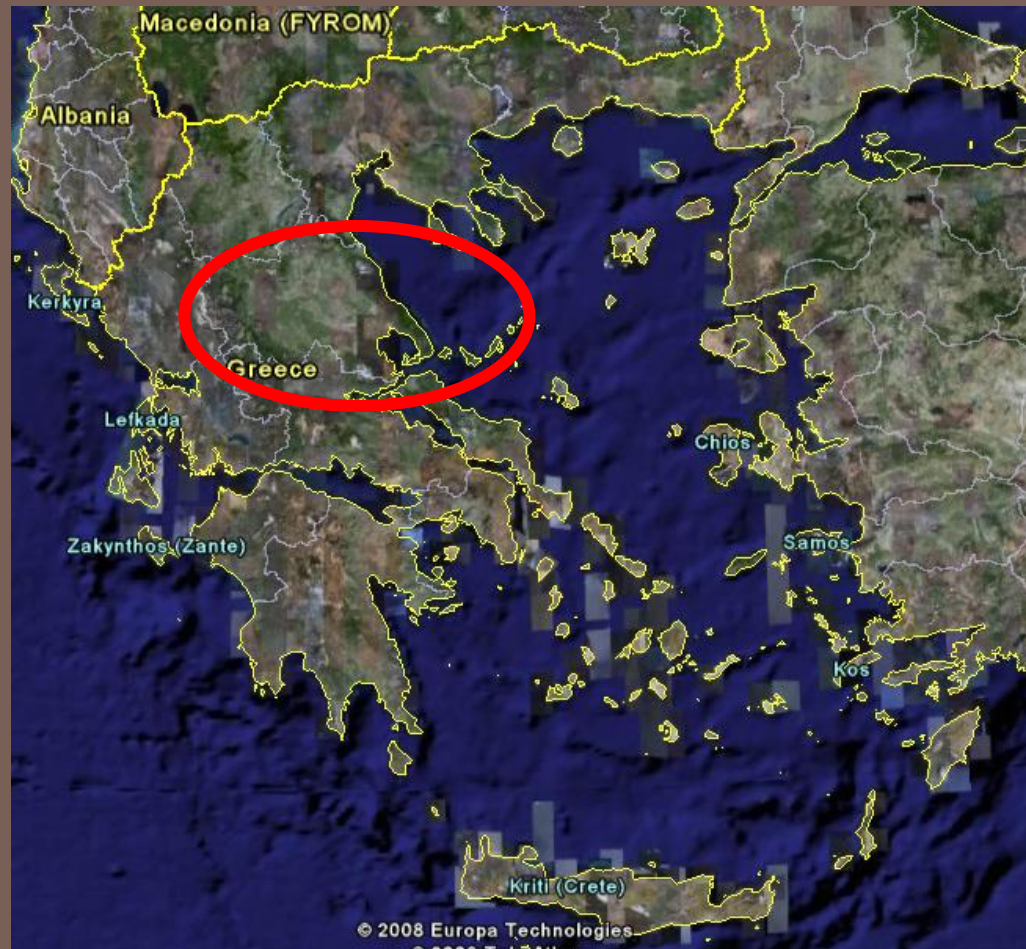
Aim

To develop / provide usable ICT based products and services

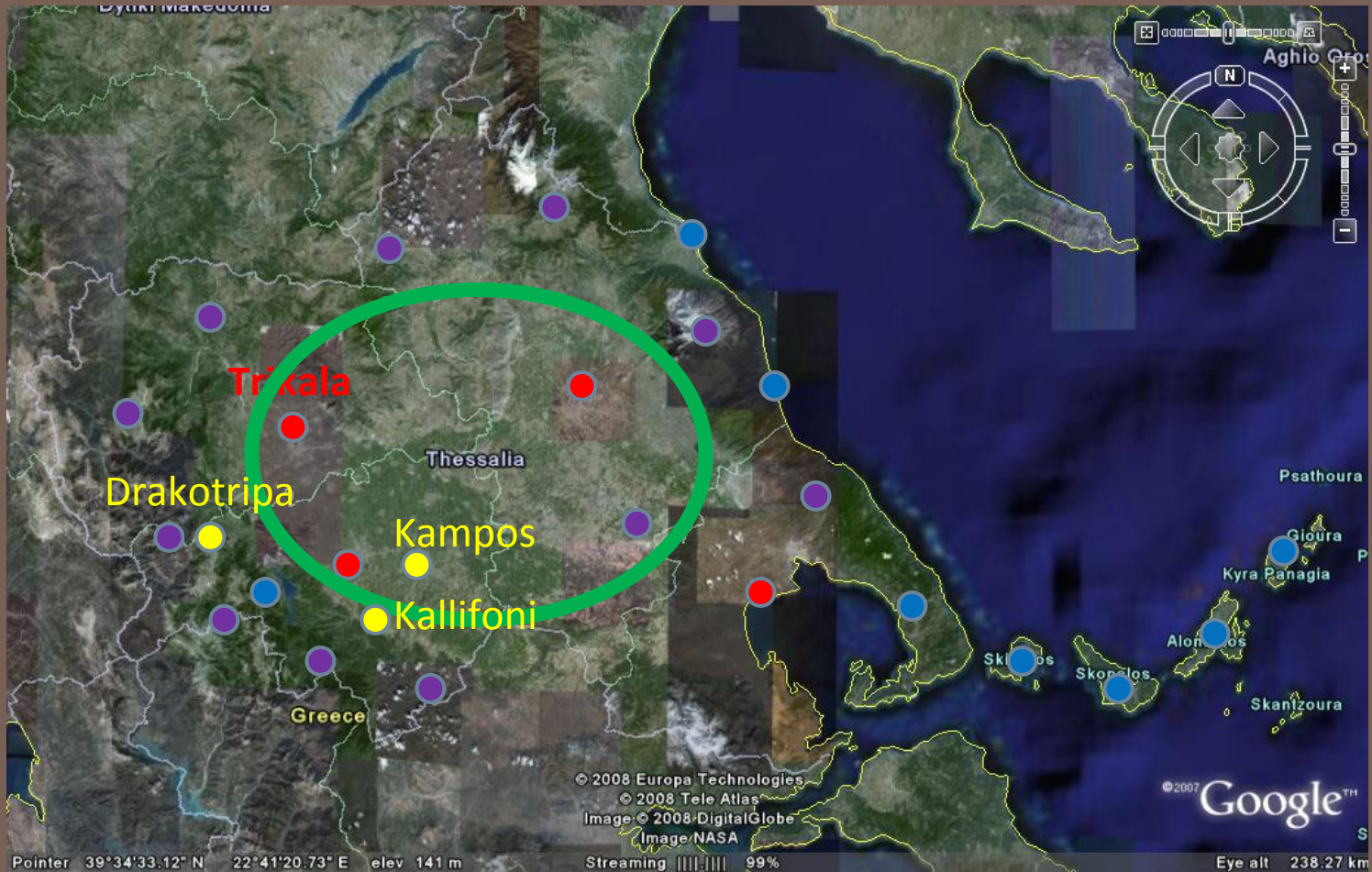
Model of the Future: the Living Lab approach



About Thessaly



About Thessaly



● Capitals

● Villages

Satellite Internet

● Lake, Sea

● Mountains

● Agriculture

In other words

- Smaller village in the network 100 citizens
- Larger city, 100,000 citizens

- An excellent representation of “core” South and Mid Europe Sample

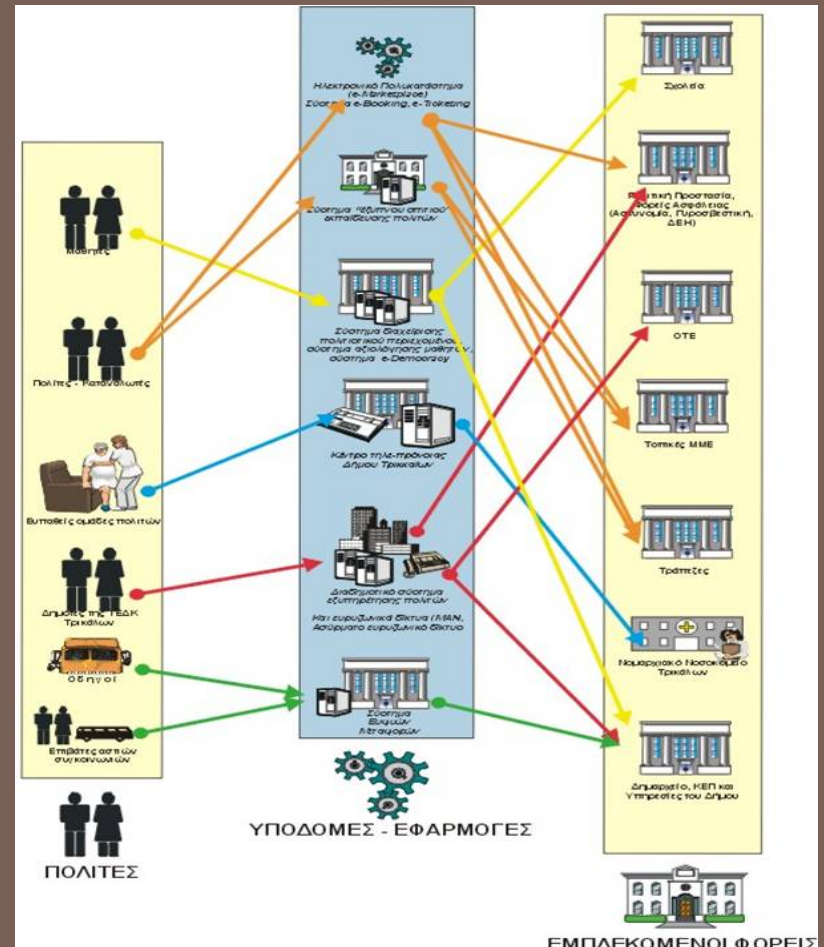
Citizens

- Municipality of Trikala
 - E-care
 - E-government - Dimosthenis
 - Mobipark
 - ...
- Kampos, Drakotrypa, Kallifoni

Trikala (1st Digital city in Greece)

- Population: 60,000
- WiFi platform: e-Trikala (**FREE** for all citizen)
- 6000 registered accounts
- Everyday activity: 500
- Increasing numbers

Composition of the 1st business plan for the digital city's operation



Advantages

- Manageable user size
- FREE internet access to every citizen
- Pole of innovation
- Represents the “core” of European population, not the high end. This is who we need to convince!

Research and Technology Organisation

- Centre for Research and Technology Thessaly
 - Biomed
 - Imtronics
 - IteMa
 - Perfotech

- University of Thessaly
 - Faculty of Engineering (4)
 - Faculty of Humanities (5)
 - Faculty of Health (3)
 - Faculty of Agriculture (2)
 - Independent Departments (2)

Income

- Research and Infrastructure programmes
 - FP6 & FP7
 - National Programmes (Information Society, Ministry of Development, etc)
 - Regional funds *

- Industry *

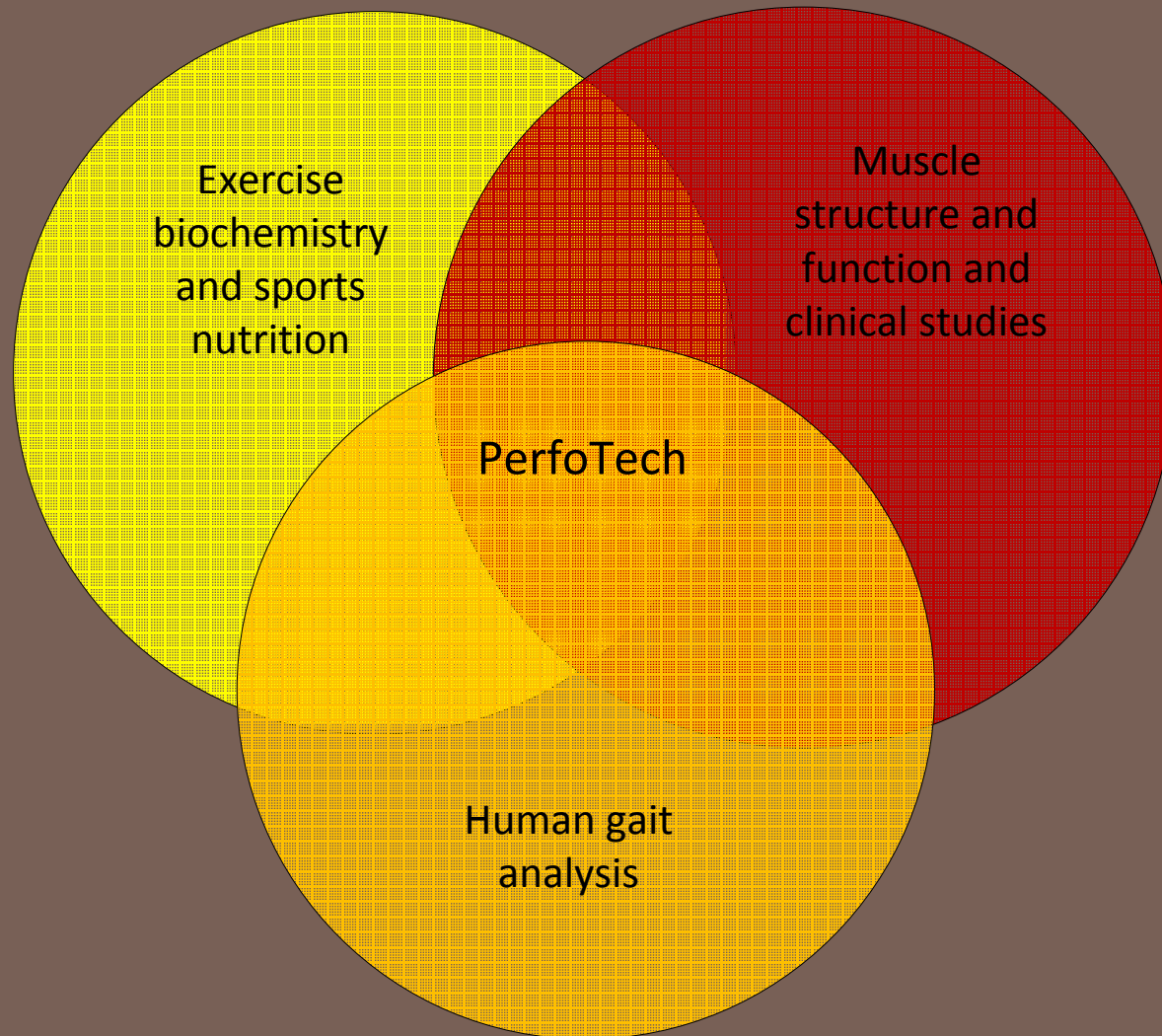
Primary Stakeholders

- CERETETH
- UNIVERSITY OF THESSALY
- MUNICIPALITY OF TRIKALA (e-Trikala)
- MUNICIPALITIES OF KAMPOS, MOUZAKI, KALLIFONI
- ZENON
- BIOMECHANICAL SOLUTIONS
- QSB2B
- PAPANIZOS
- CLOTEFI
- CETRI
- AMI
- TREDIT
- IMC
- IASON5
- regional hospitals - 1 university hospital
- Regional level companies

Activities areas of LLT

- Physical activity, health and rehabilitation
- Information Technology
- Agroecosystems
- Energy

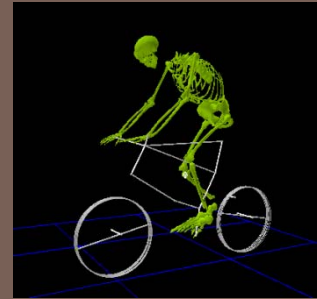
Institute of Human Performance & Rehabilitation



Institute of Human Performance & Rehabilitation

PerfoTech is organized in 3 Laboratories:

- **Exercise Biochemistry**
 - Effect of exercise on lipid profile and oxidative stress.
 - Effect of nutritional supplements on health and on free radical biology.
- **Muscle structure and function and clinical studies**
 - Exercise treatments for atrophy, diabetes, obesity and muscle weakness, muscle fatigue, and muscle damage.
 - Monitoring and evaluation of physical performance in elite athletes.
 - Rehabilitation from chronic diseases, treatments for counteracting muscle atrophy and weakness.
- **Human movement analysis**
 - Research in human gait mechanics.
 - Development of applications for improvement of human movement.
 - Person identification through gait analysis.



Structures in LLT supporting physical activity, health and rehabilitation

- Specialization in “Exercise & Health” for physical education students.
- Master in “Exercise & Health”.
- PhD in “Exercise & Health”.

The example of eccentric exercise



John Melville "Woman Walking Downstairs"

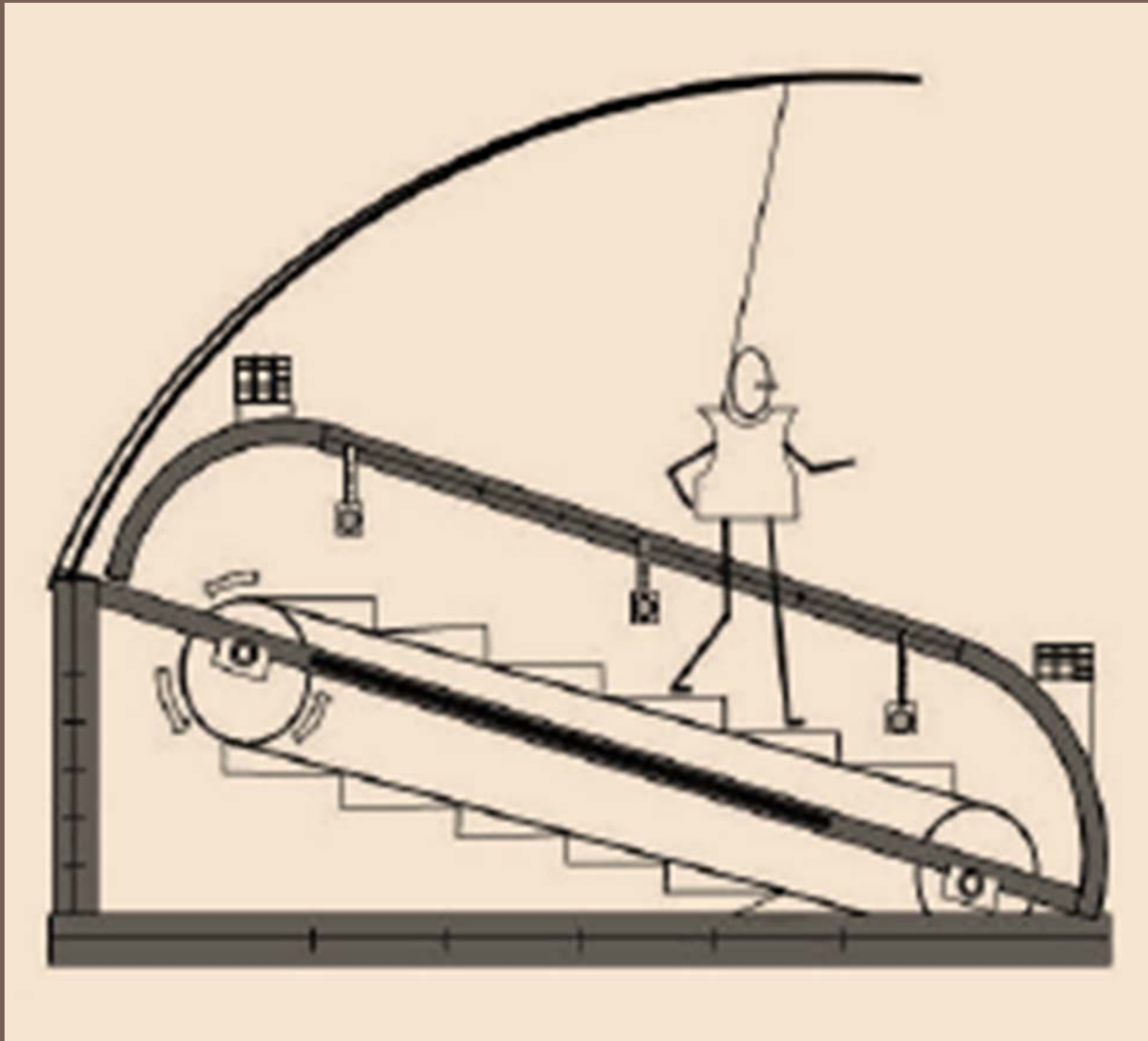
Lab-centric data



The health benefits of lab-centric eccentric exercise

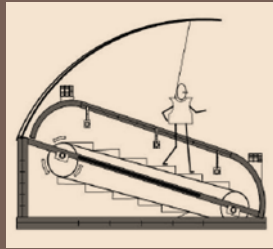
- Increases muscle mass
- Increases muscle strength
- Increases bone density
- Decreases body fat
- Increases functional fitness
- Improves quality of life

Human-centric data

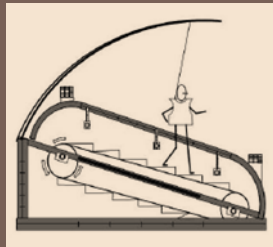


Living Lab-centric data

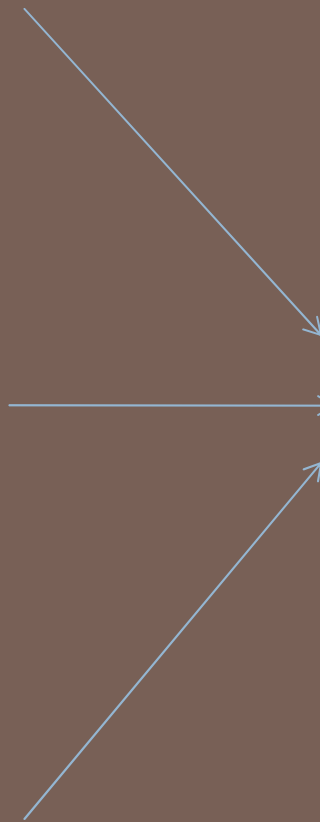
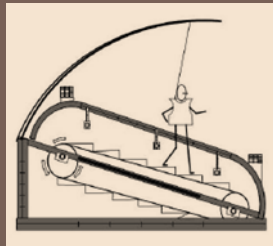
Fitness center



Physical therapist



Medical doctor



PerfoTech

Really SmartEscalator
Fitness machines industry

