

# Fit 4 Sustainable Employability



**HanzeResearch**  
University of Applied Sciences

# Goal

*Developing bio feedback loops to increase employability  
and labour productivity*

# Stakeholders



The system continuously provides transparency about the (physical) ability of employees related to job activities, work environment and work place.

Advice and support from service providers about methods for implementing adjustments or to reorganise work and work environment, helps **employer and employee** to improve employability and labour productivity. The technology and database also support quantifiability and measurability of these services.

Small service providers and SME's got the opportunity to buy a license for using the technology and database, instead of buying it themselves. This opens up a new market for system operators.

Translating the use of this technology and database to other markets and applications creates a set of opportunities, for HRM professionals and psychologist for example.

For **Municipalities** and **Provinces** the system has added value for it stimulates participation in the region. This project is beneficial to the vitality of employees, which will increase labour productivity. In the long run increased vitality and labour productivity can even lead to economic growth and a reduction of health care costs.

# Interventions

The starting point of our concept is transparent work ability through continuous measurement by sensor technology, smart algorithms and database, displayed by the outer circle.

Diverse interventions (advice, attention, prediction, coordination, exchange & comparison for example) can be made by the technology, employer, service provider or employee, to adjust behaviour/life style and work (conditions).

In this way, the qualities and possibilities of employees can be exploited to place, time and nature.

The continuous measurement of physical ability also indicates the impact of interventions.

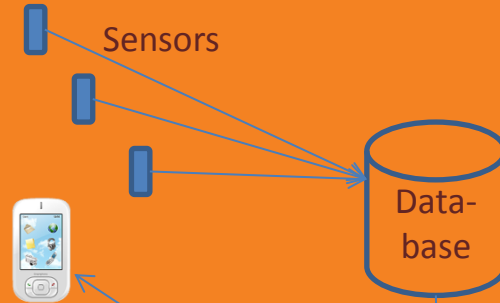
Precise and effective adjustments enhance employability and labour productivity.

The circle of quantifiable and measurable physical ability



# Technological Concept

An interface for employees to view their own information and suggestions to improve working habits and/or lifestyle, typically made available via a smart phone or tablet and/or website



A database that stores output of all the sensors in use by employees.

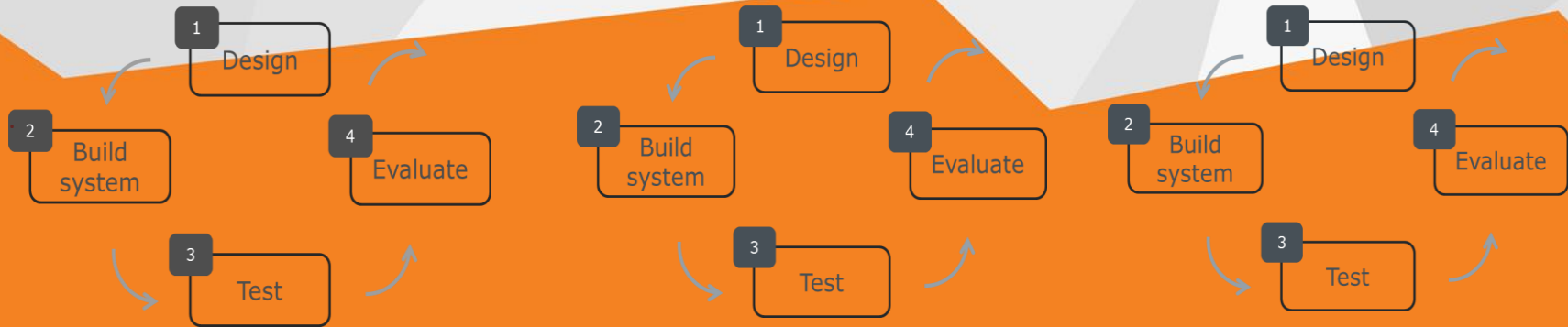
A web based interface for employers to view aggregated information on employees' overall fitness and to offer suggestions for possible HR interventions



Analytics

A tool that analyses the sensor output data to distil relevant information from this data and to provide feed back for employees and employers

# Projectdesign



Step 1: participation system users	Step 2: participation system developer and operator	Step 3: participation users	Step 4
Parameters	Build system	Testing system prototypes in real life situation for evaluation.	Evaluation system
Research & validation tool	Hardware	Testing the first prototype in one business on a small scale	Technical experiences
Data collection	Database and interface	Testing the second prototype on a larger scale	User experiences
Design system	Adjustments	Testing the BIO feedback tool on employees in at least three companies	Input for the next development cycle or end result

# Results

- Sensor platform for data collection and presentation
- Best practices for employers, employees, Provinces and Municipalities
- Security – research and advice
- Privacy issues – research and advice
- Business model for SME's and HRM professionals / Lifestyle coaches

# Partners

- Hanze University of Applied Sciences Groningen – The Netherlands – Research, privacy, coaching
- Quantified Self Institute, The Netherlands – Research, data analyses, data presentation, security
- Abertay University, Scotland – Data analyses, data presentation, security

## Interested

- Region East Flanders, Belgium – Implementation, coaching
- Region Hamburg, Germany – Implementation, coaching



# Hanze University of Applied Sciences

Professorships New Business & ICT and Labour Participation combine research and education at the Hanze UAS.

By cooperation on the intersection of these different disciplines, new areas of expertise arise. These areas need to broaden and deepen and also need to develop practical en relevant knowledge to become useful for business and education purposes. By exploring technical possibilities for new entrepreneurship and labour participation, new insights develop on the way employability and labour productivity can be enhanced.

Professor Hugo Velthuisen and Professor Louis Polstra work together with private parties, lecturers and students for pursuing this.



Hugo Velthuisen  
h.velthijsen@pl.hanze.nl



Louis Polstra  
l.polstra@pl.hanze.nl

## Features

*Largest university for applied sciences in the north of the Netherlands:*

24.000 students, 2.600 employees, 70 education programs

*Best university of applied sciences in the north of the Netherlands (Elsevier 2013)*

*Cooperation businesses and institutions:*

27 professorships and 6 centres of expertise

*Regional market focus in education and research*

Healthy Aging, Energy and Entrepreneurship

## *Related projects and experience*

- *iAge*
- *Itract*
- *Wearable Technology*
- *Quantified Self Institute*