

# *Involvement of elderly people in RTD for assistive technologies*

## *in the Living Lab Schwechat*

*W. Hlauschek<sup>1)</sup>, P. Panek<sup>1,2)</sup>, W.L. Zagler<sup>1,2)</sup>*

*<sup>1)</sup> CEIT Central European Institute of Technology, Schwechat, AUSTRIA*

*<sup>2)</sup> Vienna University of Technology, Institute Integrated Study*

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# Important objectives

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- Assistive technology
- Acceptance
- usability

# Actors of the AAL-LL Schwechat

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- CEIT - Central European Institute of Technology
- municipality of Schwechat
- senior centre of the city of Schwechat
- local social service providers
- organisations of senior people
- citizens of Schwechat (“research-citizens”)
- enterprises

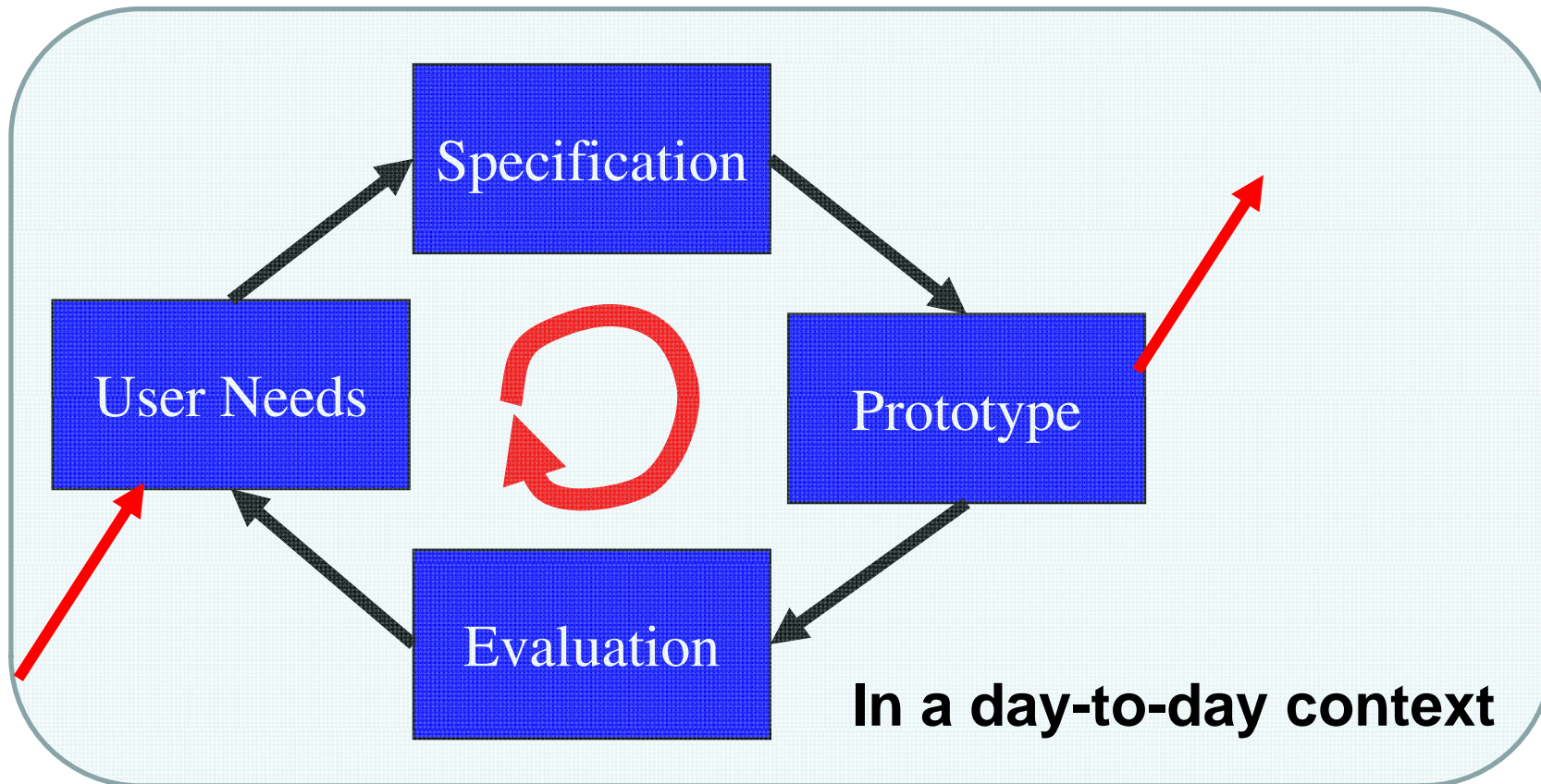
# CEIT's approach

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- user oriented R&D in the AAL area
  - continuous involvement of users & user centred interactive design
  - multidisciplinary approach
  - integrating social science aspects of technology: ethics of new technologies, analyses of the real needs, wants and wishes of users
    - Ethical sound involvement of users
      - Protection of vulnerable users
      - Informed consent procedure
      - Continuous ethical review
    - Ethics in the new device
      - Example: balance between privacy and additional safety provided by monitoring system
- ➔ technology to support the human to human contact (not as a replacement)

# Iterative Development Process

- User Needs -> Specifications -> Prototype -> Testing -> Updating specifications -> improved prototype a.s.o.



# Interactive Picture

- intuitive voice and video communication platform for Senior Citizens
- based on touchscreen-PC
- development, test & evaluation in Living Lab Schwechat
- In cooperation with



# ..at the beginning



# 1st trials



# redesign / improvement

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# real life tests



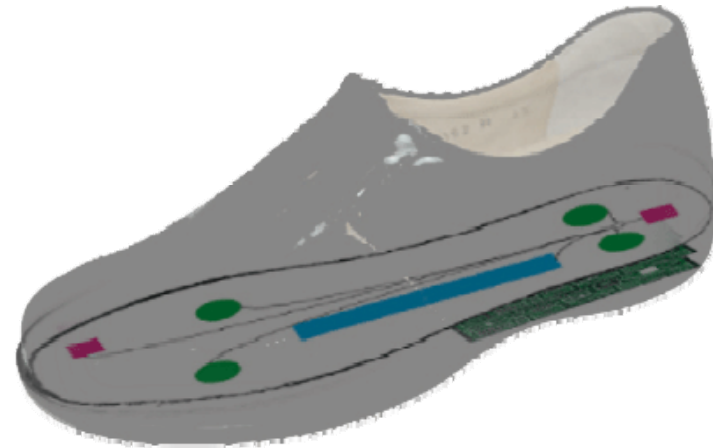
# project VITALshoe

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instrumental  
Applied and  
ICT based

gait analysis  
using an  
**instrumented  
shoe**

objective:  
**fall prevention**

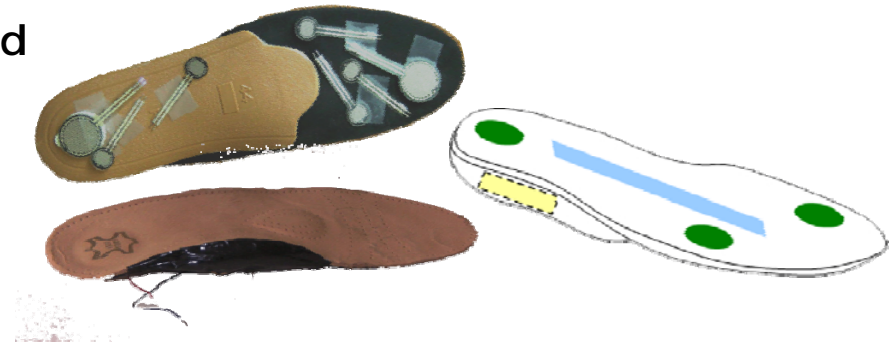


# participative R&D in living lab

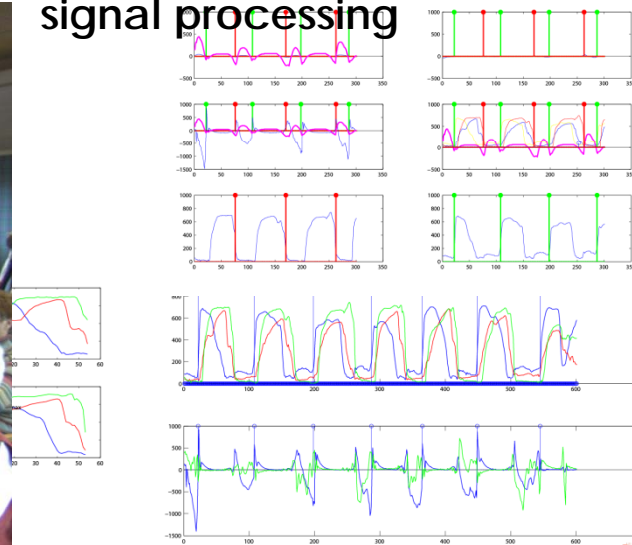
user involvement



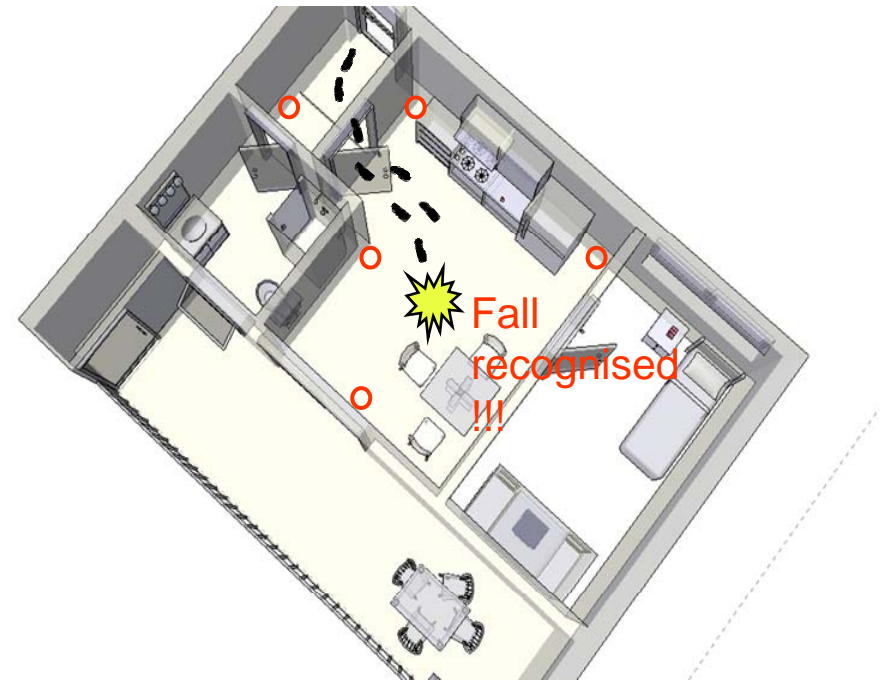
Instrumented  
sole



embedded computing  
signal processing



- **objectives:**
  - Improving personal safety and quality of life in senior's own home
  - Wireless (ZigBee) sensor network
  - recognition of critical situations
  - recognition of falls
  - monitoring safety-critical areas  
sicherheitsrelevanter Wohnbereiche (e.g. cooker)
  - automatic alarm generation for getting external help
  - enabling elderly people to stay in their own home as long as possible
- in cooperation with
  - Vienna University of Technology
  - TREVENTUS MECHATRONIK GmbH
  - Kapsch CarrierCom AG



# AAL - Demo-apartment

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- Located in the senior's centre of Schwechat („Seniorenzentrum“)
  - show room for already available assistive technologies and barrierfree design
  - test- and demo-bed for new developments
  - project status:
    - „on air“ since end of May 2009
  - cooperation with service organisations for elderly people
  - partnerships with companies
  - supported by the municipality of Schwechat



**SCHWECHAT**  
[www.schwechat.gv.at](http://www.schwechat.gv.at)

# Acknowledgement

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Schwechat

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and „Seniorenbeirat“ in Schwechat

thank you

**Walter Hlauschek**, managing director

**CEIT RALTEC**

**– Institute of Rehabilitation and Assistive Technologies**

Am Concorde Park 2

A-2320 Schwechat,

AUSTRIA

Tel.: +43 (1) 90 360 / 1220

Fax: +43 (1) 90 360 / 1299

Email: [office@ceit.at](mailto:office@ceit.at)

Web: [www.ceit.at](http://www.ceit.at)