



Voice Controlled Assistive Care & Communication Services for the Home



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## What is vAssist?

vAssist creates multilingual natural voice controlled home care and communication services for two target groups: seniors suffering from (fine) motor restrictions and/or chronic diseases. vAssist strives for enhancing the quality of life of senior European citizens by balancing user needs, business aspects and technical issues.

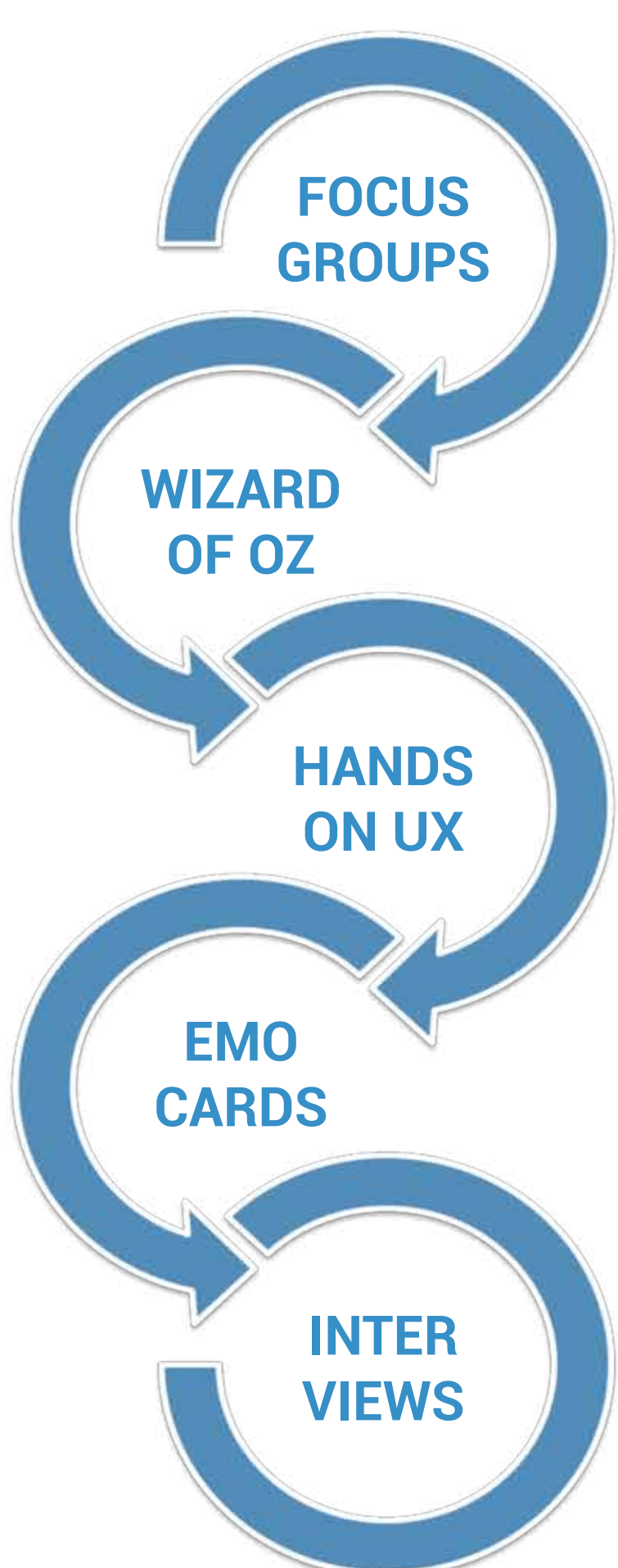
## How can vAssist help?

- **NATURAL SPEECH INTERACTION:** Compensating (fine) motor restrictions when interacting with ICT and supporting seniors with little or no ICT experience since no new form of interaction has to be learned.
- **CHANNEL INDEPENDENCE:** Enhancing the perceived quality of supportive services by reducing costs related to their production and delivery so that existing hardware in the homes of seniors can be used.

## What is natural speech interaction?

Specific forms of user interfaces are spoken dialogue systems. These systems are based on voice in- and output and enable a near to reality turn-by-turn interaction with humans applying natural language.

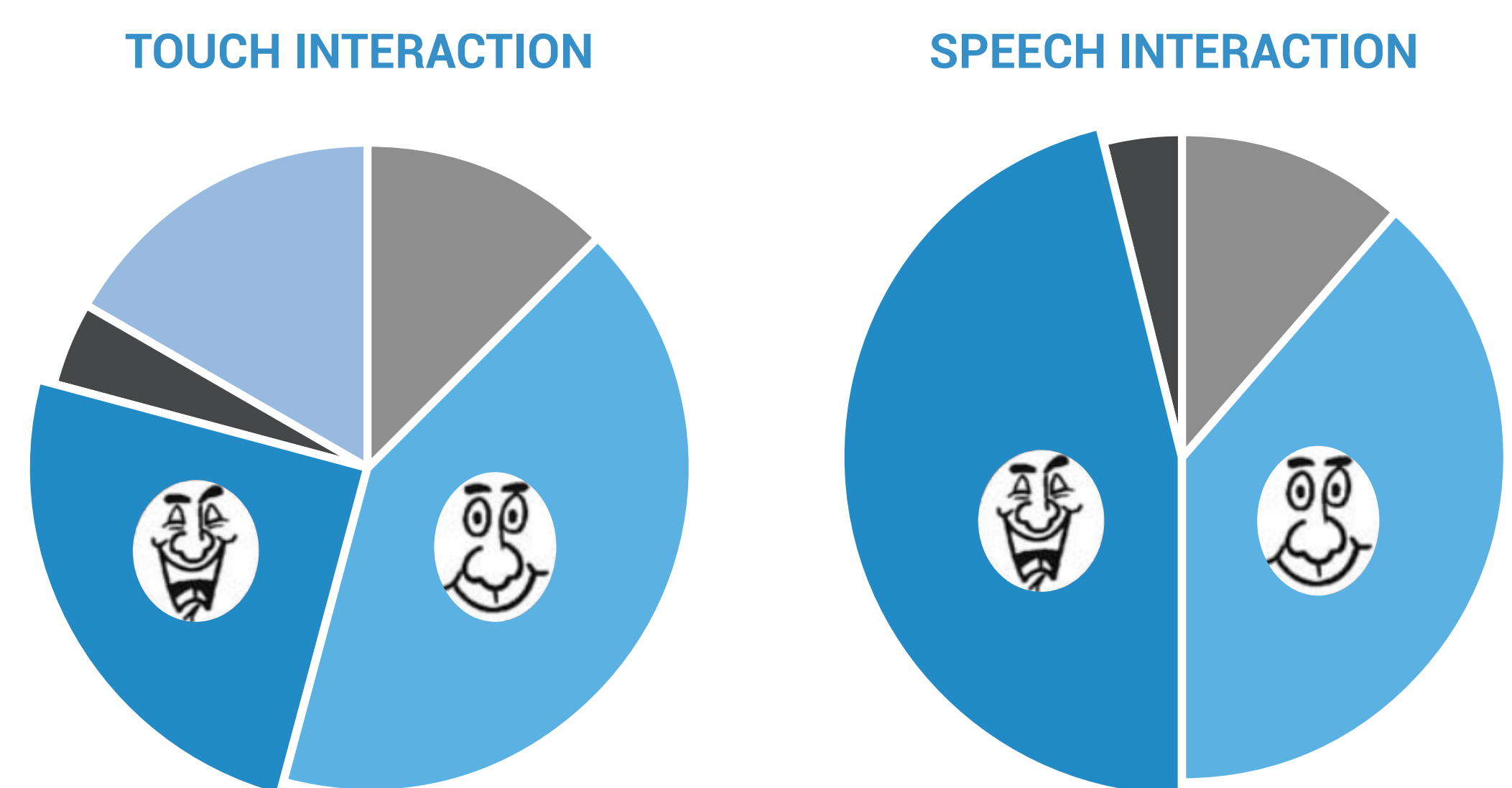
## User-centered & technical approach



- **USER-CENTERED MARKET-ORIENTED DESIGN:** Covering perspectives from seniors, family members, health professionals and future stakeholders by considering user, technical and economic constraints.
- **NATURAL SPEECH INTERACTION:** Applying language-specific speech models and optimized service-specific recognition grammars that allow older users to interact with services in a natural way.
- **CHANNEL INDEPENDENCE:** Providing clearly defined interfaces that separate the infrastructure (speech in/output) from the services provided to the seniors.

## First results

- **DEVICES:** Services are expected to be available on static and mobile devices.
- **INTERACTION:** Natural language must be accompanied by graphical interactions for situations where speech control fails.
- **POTENTIAL OF NATURAL SPEECH INTERACTION:** Seniors show a positive emotional attitude towards speech control as an alternative interaction technique.



Emotional attitude towards touch (left) and speech (right) interaction

- **COMMUNICATION:** Audio and text based services are the main information exchange channels between seniors and family members.
- **HOME CARE:** Emergency calls and a well-being diary for managing and exchanging physiological parameters, drugs, physical activity and sleep/pain quality between seniors and health professionals.
- **BUSINESS:** Service packages have to be open for individualization offering low, mid and high cost models differing in the number of included services.

## PARTNERS



## FUNDED BY

