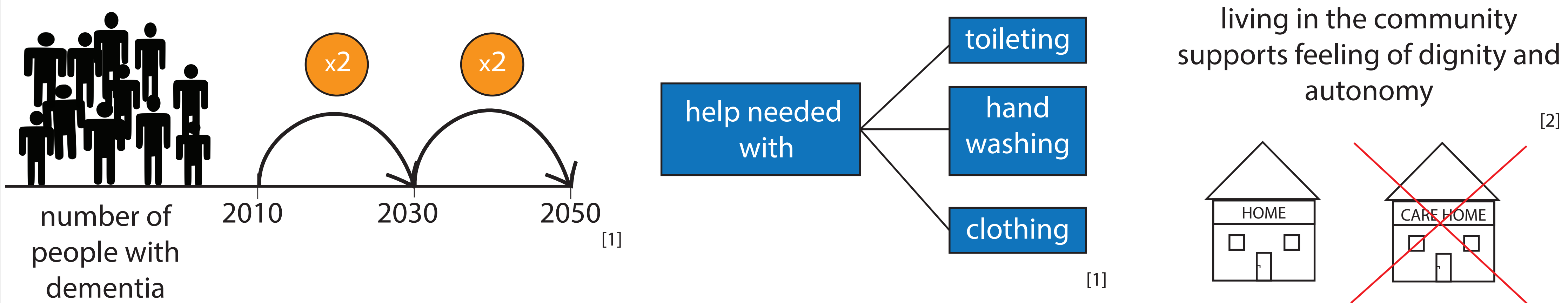


WCBuddy: Using the toilet more autonomously via ICT

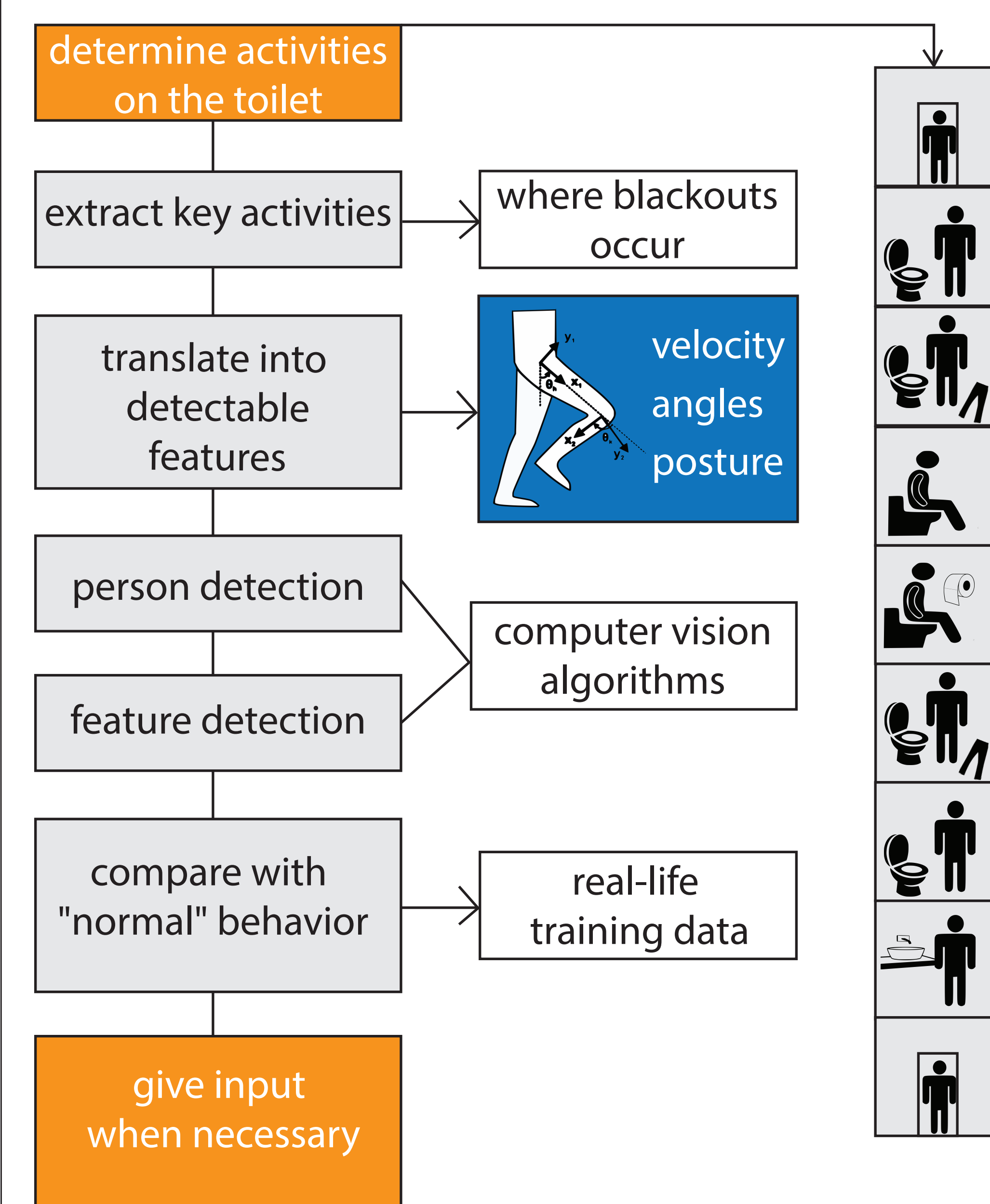
Institute of Visual Computing & Human-Centered Technology
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Introduction

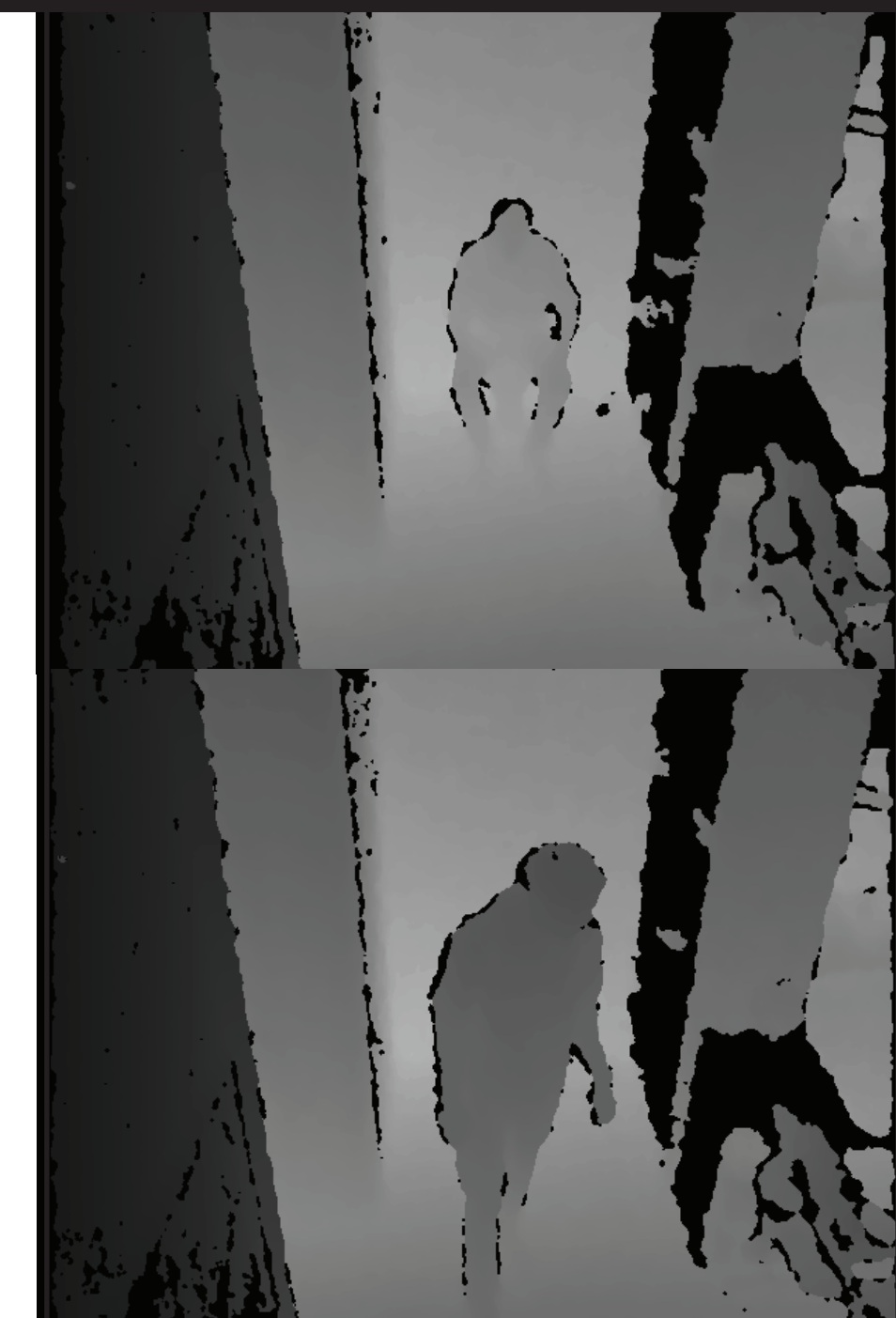


Methods



Privacy

- depth images to ensure privacy protection
- based on distances between objects
- real-time data processing
- depth data is not stored or transmitted

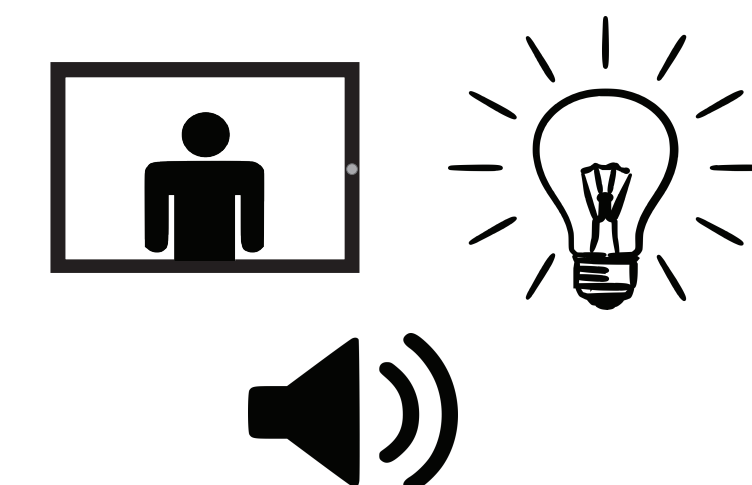


the intelligent fall sensor fearless is the basis for behavior analysis in the bathroom

Evaluation

different dialog components are tested:

- voice
- light
- avatar



demonstrator is evaluated by dementia experts

key activities that can be detected robustly (e.g. sitting, standing) are analyzed

instruction is given if:

- order is incorrect
- time threshold is exceeded

Data

- training database for machine learning approach
- data recording in care home

Functionalities

- toilet activity analysis
- give instructions when needed
- detect falls
- toilet visit reminders

[1] World Health Organization (WHO) report, „Dementia: A public health priority“, 2012.

[2] I. E. van Gennip, H. R. W. Pasman, M. G. Oosterveld-Vlug, D.L. Willems & B. D. Onwuteaka-Philipsen, „How dementia affects personal dignity: A qualitative study on the perspective of individuals with mild to moderate dementia“ in Journal of Gerontology, 71(3), 491-501, 2014.