

R.D. VAN DER VLIES, M. BRINK, J.E.M.H. VAN BRONSWIJK. *Performance design for aging in place. Gerontechnology 2010;9(2):258; doi:10.4017/gt.2010.09.02.282.00* **Purpose** Aging in place can be supported by smart homes. Smart homes incorporate a broad field of 'intelligent' (automated) electronic or mechanical devices in the home (domestic) environment. Creating smart homes is technically possible, though still not common. The user perspective has been studied frequently^{1,2}. In this contribution, 15 user needs concerning home automation are identified based on a literature survey. Afterwards, principals' and suppliers' awareness of these user needs is identified based on three workshops of three sessions each. Approximately 14 organizations participated in each workshop. In total, 38 organizations were involved. Some organizations participated in two workshops. Workshops included both principals and suppliers. The supplier function proved to be distributed over a number of organizations: architect, electrical engineer, main contractor, electrical installer and the manufacturers of components (switches, cables, home servers, etc.)³. Some electrical contractors specialized in installing home automation. One of the four principals involved did not use the word 'domotica' (Dutch for home automation). He associated it with a technology push approach, not taking into account user needs. Participants expressed awareness that home automation should be compatible with user needs. Seven of the 15 user needs were mentioned in the workshops, five of which in some detail (*Table 1*). No user needs were mentioned in full detail. The following eight user needs are not mentioned by any: aesthetics, low latency, maintainability, reliability, reliable installation, secure communication, user feedback, and user control. However, participating building professionals did express that they do not know well what the user needs are. Therefore, building professionals ask principals for instructions regarding what to build. While on the other hand, principals express that they do not know all technical possibilities and look at building professionals for advice on what is required. The roll-out of smart homes is hampered by the lack of adequate performance design. We will develop tools to match building performance with user needs.

References

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Address: Eindhoven University of Technology, Netherlands; E: r.d.v.d.vlies@tue.nl

Table 1: understanding of user needs (- not mentioned, + mentioned with no detail, ++ mentioned in some detail, +++ mentioned in full detail)

	Principal	Architect	Engineer	Builder	Installer	Supplier
Accuracy	++	++	-	-	++	++
Extendability	++	+	+	+	+	++
Compatiblity	++	+	-	+	-	++
Easy to learn and use	-	+	+	+	+	++
Affordability	++	-	-	+	+	+
Adaptability	-	+	+	+	+	+
Safe in use	+	-	-	-	-	-