

Workshop 3d

Assisted Living Technology Project

Speakers: Kathryn Trainor, NIHE
Ciaran Downey, Hive Studios

Chaired by: Norfolk

Room: Simon Lowe



NHMF
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2020

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Background to the NIHE

- Established by statute in 1971
- Functions of 65 local authorities/ housing bodies transferred to NIHE by 1973.
- Strategic Housing Authority for Northern Ireland
- 1,250 hectares of undeveloped land
- 2nd largest landowner in Northern Ireland
- Owned 202,000 homes at high point
- Currently is the largest public sector landlord in UK with approx. 87,000 homes across 800 estates

Current Provisions for People with Disabilities

Over the past 10 years the NIHE has made provision for;

- Over 1,600 Major Adaptations for People with disabilities
- Over 2,500 lifts for People with disabilities
- Over 55,000 Minor Adaptations for People with disabilities

Spend for 2018/19

- MAPD's £8.32m
- Lifts £1.52m
- Minor APD's £5.30m
- **Total £15.14m**

Alternative Options

- Applications for adaptation works is increasing annually
- Market for the delivery of adaptation work is becoming saturated
- Physical alterations may not always be suitable
- Increased appetite to utilise new technologies available
- Advances in technology and reduction in costs

Initiation of the Assisted Living Technology Project

- Project aim:

“To determine if and to what extent the use of the technology would allow tenants to live more independently, to improve tenants’ quality of life in their homes and enhance their sense of well-being.”

To achieve the project aim a full collaborative approach was adopted, involving the NIHE, Western Health and Social Care Trust Occupational Therapist, a NIHE Community Enterprise - Hive Studios and tenants.

“Technologies are most effective when they are collaboratively selected and shaped to meet and enhance a consumer’s particular functional and social needs, not when they are prescribed as an isolated means of addressing a physical limitation” (Scherer & Glucckauf , 2005)

Who to Include?

Tenants on the NIHE waiting list for some element of adaptive works were reviewed for compatibility and inclusion by NIHE Staff.

This list was then reviewed by the OT's and Hive Studio Staff for suitability

Result:

13 households

(including 2 members of the same household)

Introducing Some of the Tenants

- **Client 8** – Homeowner with limited mobility
 - Primary use – Door entry system, to see who is at the door and let them in, without having to walk to the door.
- **Client 9** – Powered wheelchair user, with limited use of hands.
 - Primary use – Control of in-home appliances and entertainment systems via voice control.
- **Client 12** – Autistic child, who requires constant supervision
 - Multiple Echo devices with Drop-In video calling allow remote supervision from different rooms in the household, with a door alarm sounding if the child tries to leave the home unsupervised.

Introducing Some of the Tenants

- 5 tenants lived with their family, with the remaining 4 living alone.
- 3 tenants had lived between 20 - 30 years at their home, with the remainder living there between 1-5 years.
- 8 tenants resided in an urban area
- 4 tenants lived in a bungalow, with 5 tenants living in a two storey house.

Smart Solutions

The solution developed by Hive Studios used Amazon Echo voice recognition systems to trigger the automation of a variety of functions using connected smart devices which allowed hands-free operation of activities such as :-

- Door lock and intercom/release with video
- Smart lighting
- Heating system
- Smart Plugs



Matching the Technology to the Tenant

- Potential clients were originally selected by the Ots
- Staff from Hive Studio, along with OTs, then met with selected clients to discuss their needs
- Each system was then designed based around individual clients' needs, and OTs' recommendations

The Technology Used

- Amazon Echo Device (Show, Spot, Dot, Plus, etc.)
- Ring Video Doorbell 2
- Nuki Smart Lock
- TP-Link Smart Plugs
- Philips Smart Bulbs
- Logitech Harmony Hub
- Nest Learning Thermostat

All voice controlled or alternatively, app-controlled

Early Life Support

- After installation, clients were left with written instructions, and a follow-up meeting was scheduled to get feedback on the system
- Clients were also given Hive's contact information, to get in touch if there were any issues with the system

Common Issues

- User error – improved instructions
- Installation error
- “Settling in” period
- Software improvements

Benefits – Improved Independence

“I have no night vision so I can ask for the lights to be turned on, whereas before we had to leave all the lights on. Also we can dim the lights or can brighten them up. If it is dark we can dim the lights if watching television and if I want to get up I can brighten them up by voice command.”

“Yes there is a huge difference in my day to day life. I don't have to call in other people to help me. Before, I had to get a lot of people to do things for me.”

Benefits – Sustain Tenancies

“Alexa has helped me to stay in my home. My mother has Alexa as well and even though she doesn’t live near me, she can see me and know that I am well.”

“Yes it has helped me to stay here. This was temporary accommodation. I was offered an apartment which I turned down because by that time Alexa had arrived. Where I am now is much better.”

Benefits – Address Mobility Challenges

“It helps me to get things done which are hard due to lack of mobility. I think it is brilliant. It meets my needs, I can tell Alexa to switch on the kettle. I can use it for the bedside lamp which I need if I get up through the night.”

Benefits – Improved Home Security

“I do feel safer. There is a camera at the front so I can say to Alexa show me the door and I can see who is there. If you are on your own, you can call Alexa, there are numbers set up if there is an emergency and they can be contacted. For someone on their own, it is a real benefit.”

“I am now safe in my home. My family have peace of mind. My future is no longer scary thanks to this innovative technology”.

Benefits – Reduce Social Isolation

“It takes real effort for me to get to the door, so with Alexa I know who it is. I can see who is at the door and if it is someone I know I can say give me five minutes to get to the door.”

Benefits – Improve Quality of Life

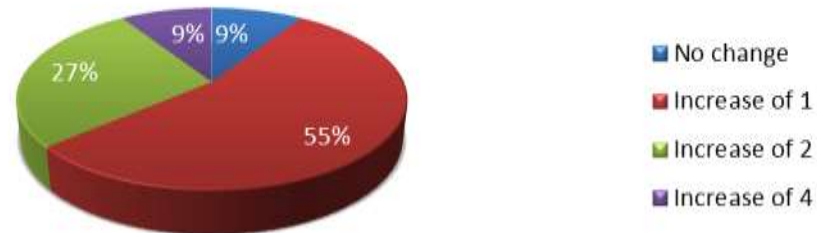
“To be able to use the equipment to turn on the bedroom lamp gives her comfort. There is a camera, an alarm in the bedroom so that her carer can hear her shouting if she needs help getting up, which means that she is not stuck there.”

Benefits – Impact Assessment by OT

Improvement in Activity level Score

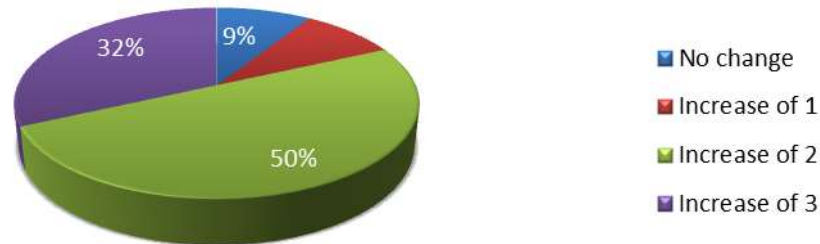


Improvement in Participation Scores

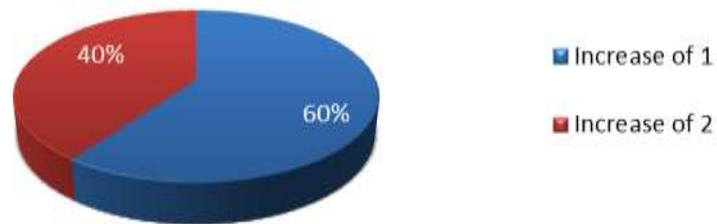


Benefits – Impact Assessment by OT

Improvement in Client Well-being Score



Improvement in Carer Well-being Score (for 5 cases)



Limitations

- **Speech impairments** - where manual dexterity was not an issue, Hive configured a non-verbal interface.
- **Broadband connection** – a dongle could be used instead to provide internet connection
- **Knowledge/understanding of the technology engaged**
– initial training and continued backup and support offered by Hive Studios
- **Not a cure-all** – This is a low-impact adaptation, not suitable for every use case

Achievements

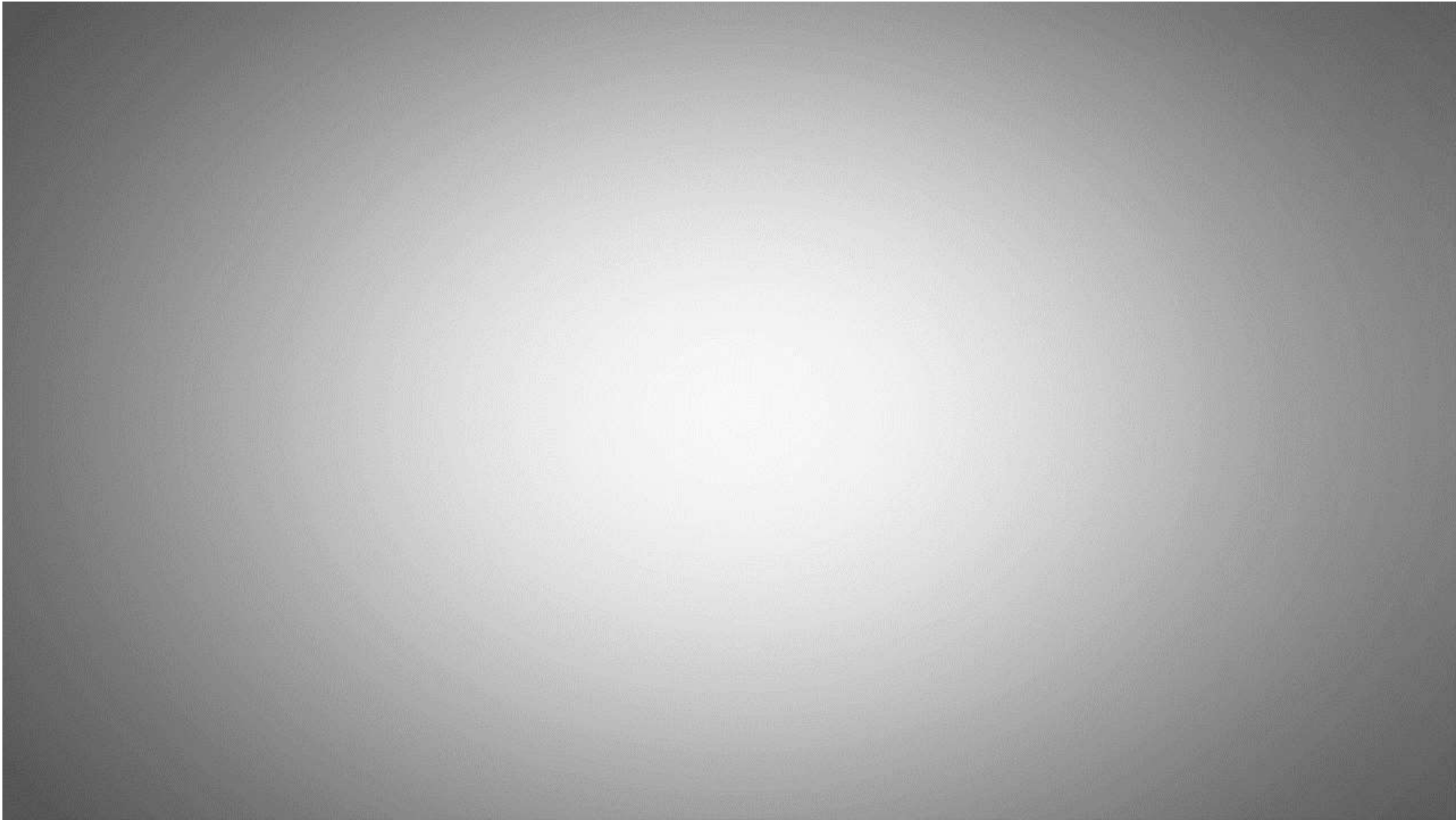
We are in the process of completing the evaluation for the possible implementation.

In February 2019 we received the Northern Ireland Chartered Institute of Housing - Working in Partnership Award.



Achievements

But the best reward comes from the tenants...



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Questions

Speakers:

- Kathryn Trainor, NIHE
- Ciaran Downey, Hive Studios

Thank you.

**See you at the
next conference!**



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