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MARIO

Managing Active And Healthy Aging With the Use Of Caring Robots.

Professor Dympna Casey

National University of Ireland Galway

- My name is Professsor Dympna Casey; I come from Ireland

- I apologise but I do not speak Italian

- Anna is here to translate for me today

- I hope you find our MARIO project as interesting and exciting as we do

- Il mio nome è Dympna Casey ; Vengo dall'Irlanda

- Mi scuso ma non parlo italiano

- Anna è qui per tradurre per me oggi

- Spero che troverete il nostro progetto MARIO come interessante ed emozionante come noi

MARIO: Managing active and healthy aging with the use of caring service robots

- Many people with dementia live meaningful lives and preserve many abilities if a supportive environment exists.

- However people with dementia report that dementia affects their confidence to engage in social activities, leaving them lonely and isolated.

- The impact therefore is life limiting and places significant burden on individuals and support systems within society.

- MARIO aims to address these difficult challenges

The Partners

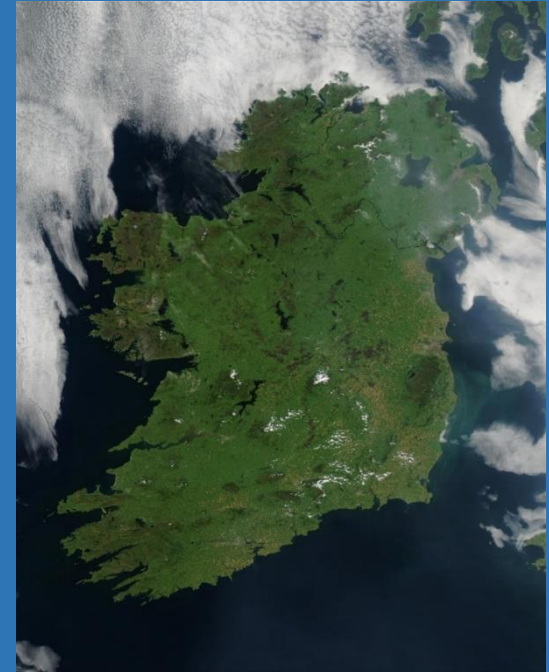| Name	Short Name	Country
Stockport Metropolitan Borough Council	STOCK	United Kingdom
R.U. Robots Limited	RUR	United Kingdom
Universitat PASSAU	PASSAU	Germany
National University of Ireland, Galway	NUIG	Ireland
ROBOSOFT Services Robots	ROBO	France
Ortelio Ltd	ORTELIO	United Kingdom
Fondzione Casa Sollievo Della Sofferenza	IRCCS	Italy
Conisglio Nazionale Delle Ricerche	CNR	Italy
R2M Solution SRL	R2M	Italy
Caretta-Net	CNET	Greece

€4 million   over 3 years .   February 2015- February 2018

The Pilot Sites

1. Residential nursing homes in Ireland,

2. Community settings in Stockport, UK,

Italian Pilot site

- Daniele Sancarlo
- Antonio Greco
- Francesco Giuliani
  (IRCCS)

- Acute hospital setting in Casa Sollievo Della Sofferenza Hospital,

The Robot - MARIO Kompai

http://www.robosoft.com/news/kompai-at-the-2nd-wic-award/index.html

Perceptions of people with dementia and carers on robot companion (MARIO)

- The work so far has focused on developing the functionalities (how MARIO will work)

- An important part of this work is finding out what the users - people with dementia , caregivers and families feel about having a robot companion and what they would like this robot to have

- Today I want to share with you what participants in the Irish pilot sites told us

Methodology

- Three focus group interviews with people with mild/moderate dementia.

- 2 Focus groups with health care staff in nursing homes

- Qualitative content analysis was used to analyze the data

- Criteria identified by Lincoln and Guba (1985) was used to ensure and maintain rigor

- Ethical approval obtained

Demographics of People with dementia

- Nursing Home A (n-8)
- Female (n=5)   Male (n=3)   Majority > 80 Year (n=7)
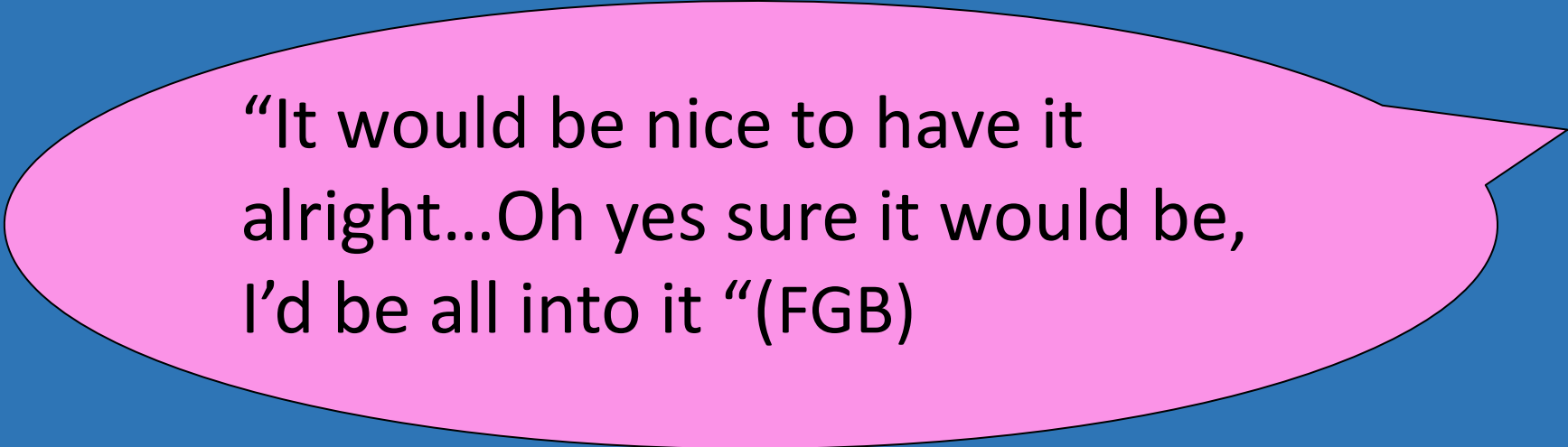
- Nursing Home B (n=5)
- Male (n= 5)   Majority >80 yrs (n=4)

- Community (n=9)
- Male (n=5)   Female (n=4)   All > 65 yrs

Findings

- The majority of participants welcomed the idea of having the robot companion Mario Kompai

"It would be nice to have it alright…Oh yes sure it would be, I'd be all into it "(FGB)

What I would like Mario Kompai to do for me

- Recognise peoples voices and remind me of daily and weekly events;
- Store my phone numbers and important events like birthdays and anniversaries;
- Store and play my favourite music and movies;
- Remind me to take my medications, and to eat and drink;
- Contact medical help if I fall or am unwell;
- Know the lay out of my home so he can direct me e.g. to the bathroom;

- Locate my keys or handbag

- Read me my favourite book

- Have games that I would enjoy and would help me retain my abilities for longer

- Recognise faces so he could prompt me as to who people were.

- Interact with and regulate other technologies in my home

"*Maybe putting on a television…You want the channel or something. This yoke is, how do I get the channel, you know, it's not easy…but if you had something that would say ok just give me a tip again about how to get BBC6 if there was such a thing…Because some of these remotes are so complicated, you'd want to be in the full of your health to follow them, I have to say". (FGC)*

- Motivate me and deliver words of encouragement e.g. 'lets do it" "Don't give up" " come on have a go" .

- Play soothing music to me at night and to gently wake me in the morning .

- Remind me that I had visitors earlier in the day and who they were as sometimes I forget and think no one has visited?

Appearance

- Speak more like a human
- The voice needs to be clear, he needs to speak slowly and a bit loudly so we can hear
- To have more softer or warm features, soft to touch 'he is like a fridge'
- Could he have some hair? Can we put some clothes on him to make him a bit more friendly in appearance?
- Can he appreciate humour and 'have a laugh' with us.

Concerns

- He needs to be robust so we cannot knock him over

- Where will he hold all his information, on a 'chip in his head?

- Will 'my secretes' be safe with MARIO?

- Who will have access to the information that I give to MARIO

- Will he share my secrets with someone else?

Staying Connected

- Most participants felt that Mario Kompai could keep them connected to family and friends

- Wanted him to have skype so they could connect to their friends and family

"…I could talk to my girls on skype" (FGA)

- Wanted MARIO to know about their life history/life story, their interests and hobbies and use this information to create conversations and reminisce about events that they could remember more easily.

- It is clear that that Mario Kompai has to really get to **know the person** and their daily routines

"…{Its} building in the person's routine so it's like you're getting up, you've got to go to the toilet, you've got to brush your teeth, you're going to have your breakfast now so it's the routines as well as the memories but the routines I think are important…"(FGC)

Demographics of health professionals

- Nursing Home A (n=23)

- Female (n=20)   Male (n=2)   1 did not answer
- Majority (n= 17) >40 yrs.
- 13 RGN's   6 HCA   2 Activity Cord. 1 Physio. 1 OT.

- Nursing Home B (n=26)

- Male (n=4) Female (n=21) 1 did not answer
- Majority (n=18) >40 yrs.
- 15 RGN's   7 HCA   1 Activity Cord. 1 Physio. 2 OT.

What we would like in Mario Kompai

- **All welcomed the idea of MARIO and were keen to meet him in person!**

- Have MARIO undertake some of the Comprehensive Geriatric Assessment,

- Have a falls detection sensor; Sensors to pick up the residents physiological status;

- Voice activation and face recognition

- Ability to skype ; take photos of the resident to share with family members

- Record visitors names and details when they visit?
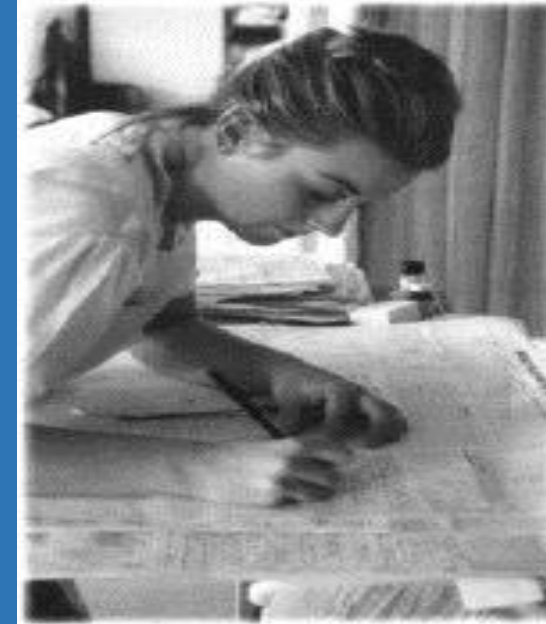
- Orientate residents to time place and date ;

- Must have the persons life story
- Be able to read the local parish newsletters, show local football games on his TV screen; the horse racing etc.
- Identify someone in distress in terms of their emotional wellbeing
- Could he smile, express some emotion, appear to make eye contact
- Needs to speak like a human not a computer
- Maybe give him a wig and put clothes on him, make him more friendly

Concerns

- Space
- Privacy and confidentiality of the information stored in MARIO.
- Needs to be robust as they could hit him and knock him

  over

- Who will be responsible for MARIO? , what if his system crashes while he is here, how does he reboot?
- **Will MARIO replace the need for a nurse ?**

What Next in the project?

- **Translating the wish list into reality**

- Finalising the functionalities and architecture for Mario Kompai

Stay up-to-date on the MARIO Project at:

- https://www.facebook.com/mario.project.eu
- https://plus.google.com/116012490277146118083/posts
- http://www.mario-project.eu/portal/
- https://twitter.com/mario__project
- https://www.youtube.com/channel/UCdxaxbf9BLZjl698HCuTyBQ

La ringrazio molto per l'ascolto Thank you very much for listening