



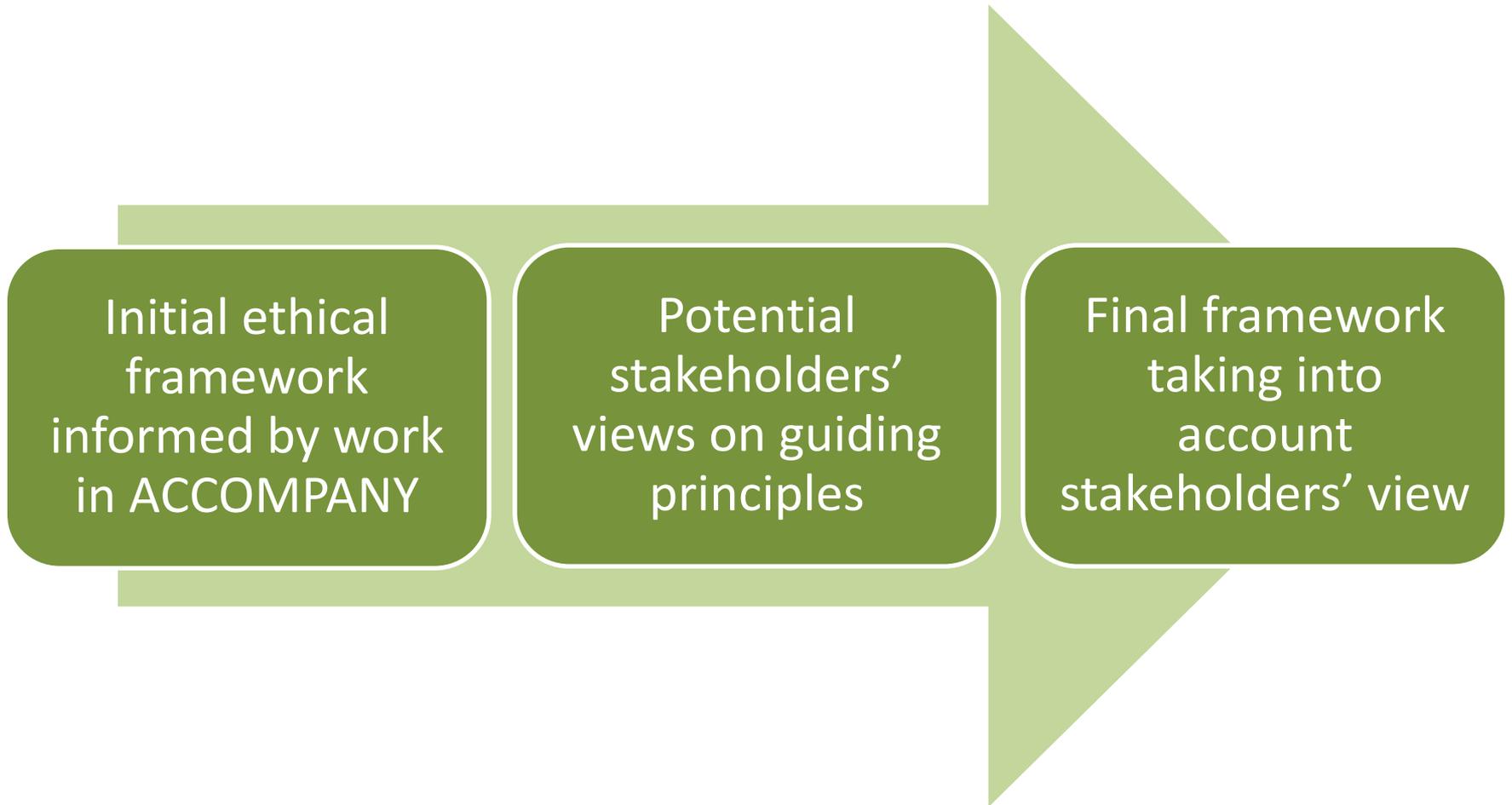
# **ACCOMPANY Project: robotic companion providing services to older users in their own homes**

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# Three phase ethical evaluation



**Phase two – getting reactions to values proposed and potential tensions between them: method and results**

# Scenario development

- Four scenarios constructed to expose predictable tensions between the values
- Reflected possible uses for, and functions of, the ACCOMPANY robot
  - NB this was based on scenarios at the end of 1<sup>st</sup> year
- Sufficiently open to allow for new values to emerge

## **1. Marie**

Enablement being autonomously resisted, privacy and disclosure to a healthcare professional involved in care

## **2. Frank**

Autonomy and resistance to possibility of social connectedness afforded by online resources

## **3. Nina**

Enabling politeness in human-human interactions by encouraging politeness to the robot

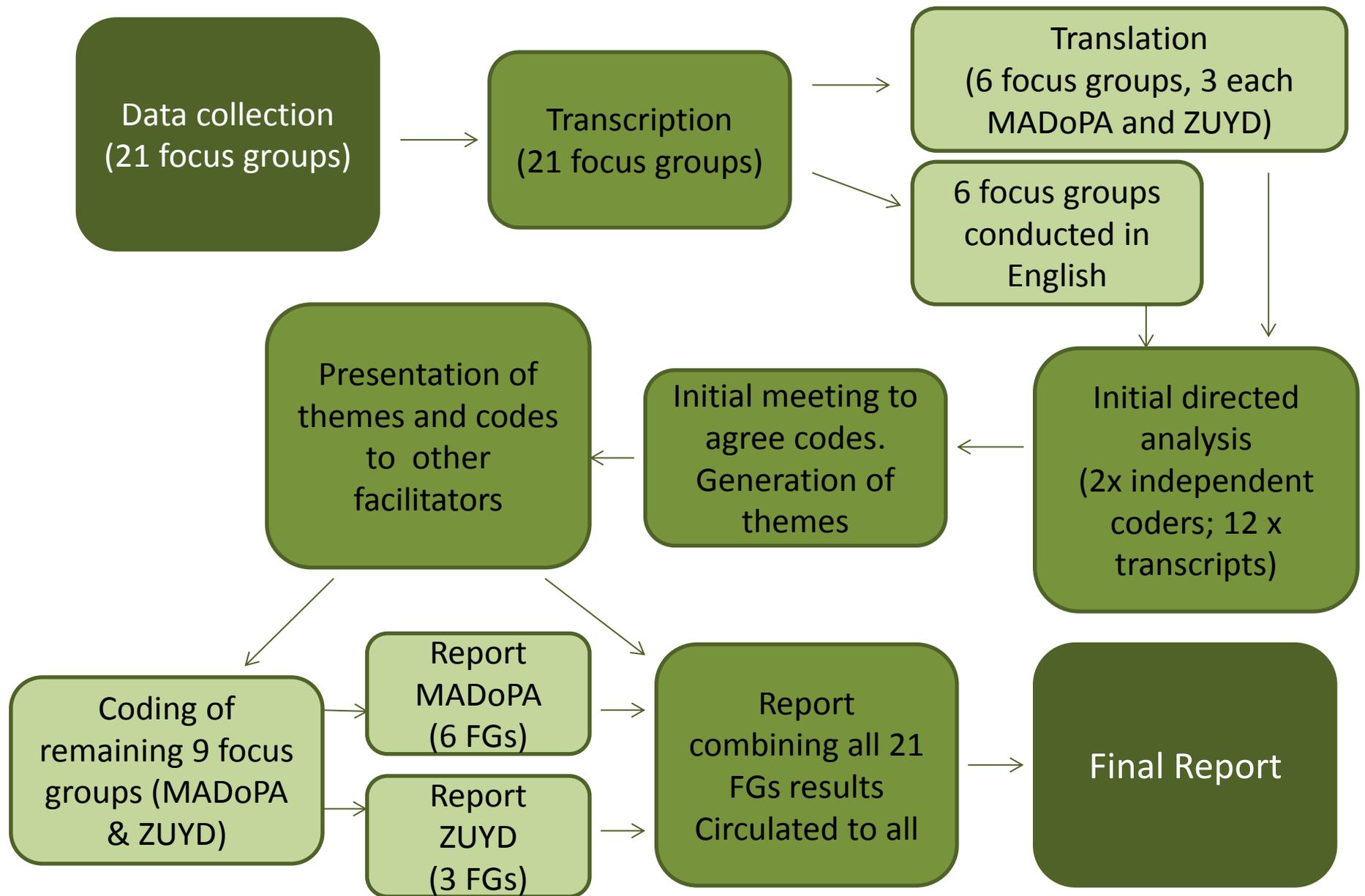
## **4. Louis**

Autonomy in tension with safety in relation to falls (he doesn't want people alerted to his falls) and life-style choices (he likes to gamble online)

# Data collected using focus groups

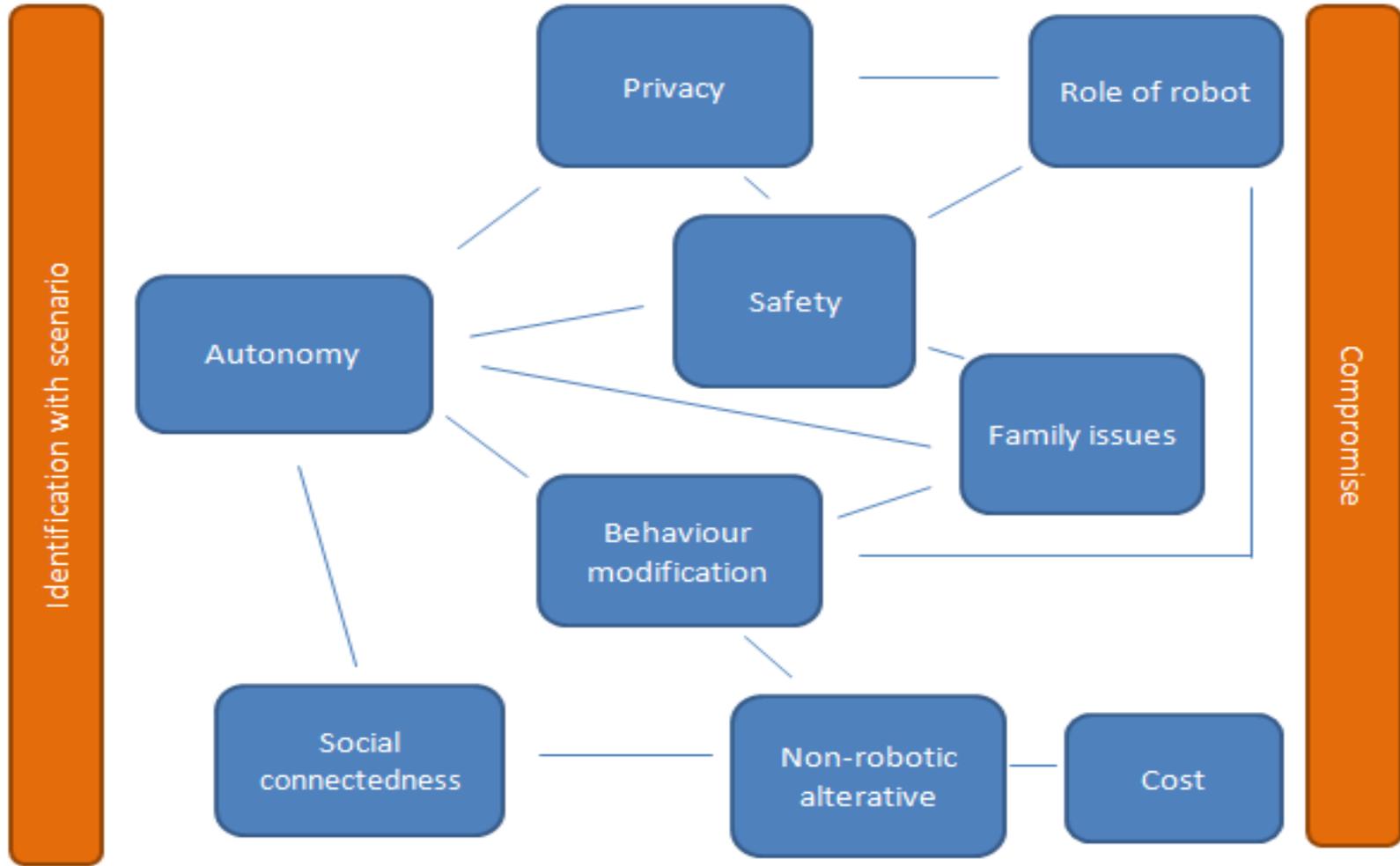
- 21 FGs  
(9x older people (OP);  
6 x informal carers (IC);  
6 x formal carers (FC))
- Total 123 participants
- Ran in UK, the  
Netherlands, France
- During 2013
- 4 scenarios +topic  
guide

	Older people	Informal carers	Formal carers
MADoPA	3 (7,8,4)	3 (7,5,3)	3 (7,7,4)
Zuyd	2 (7,3)	2 (6,5)	2 (6,7)
UH	1 (5)	1 (4)	1 (6)
UB	3 (7,7,7)	n/a	n/a
Total	9 (55)	6 (30)	6 (37)

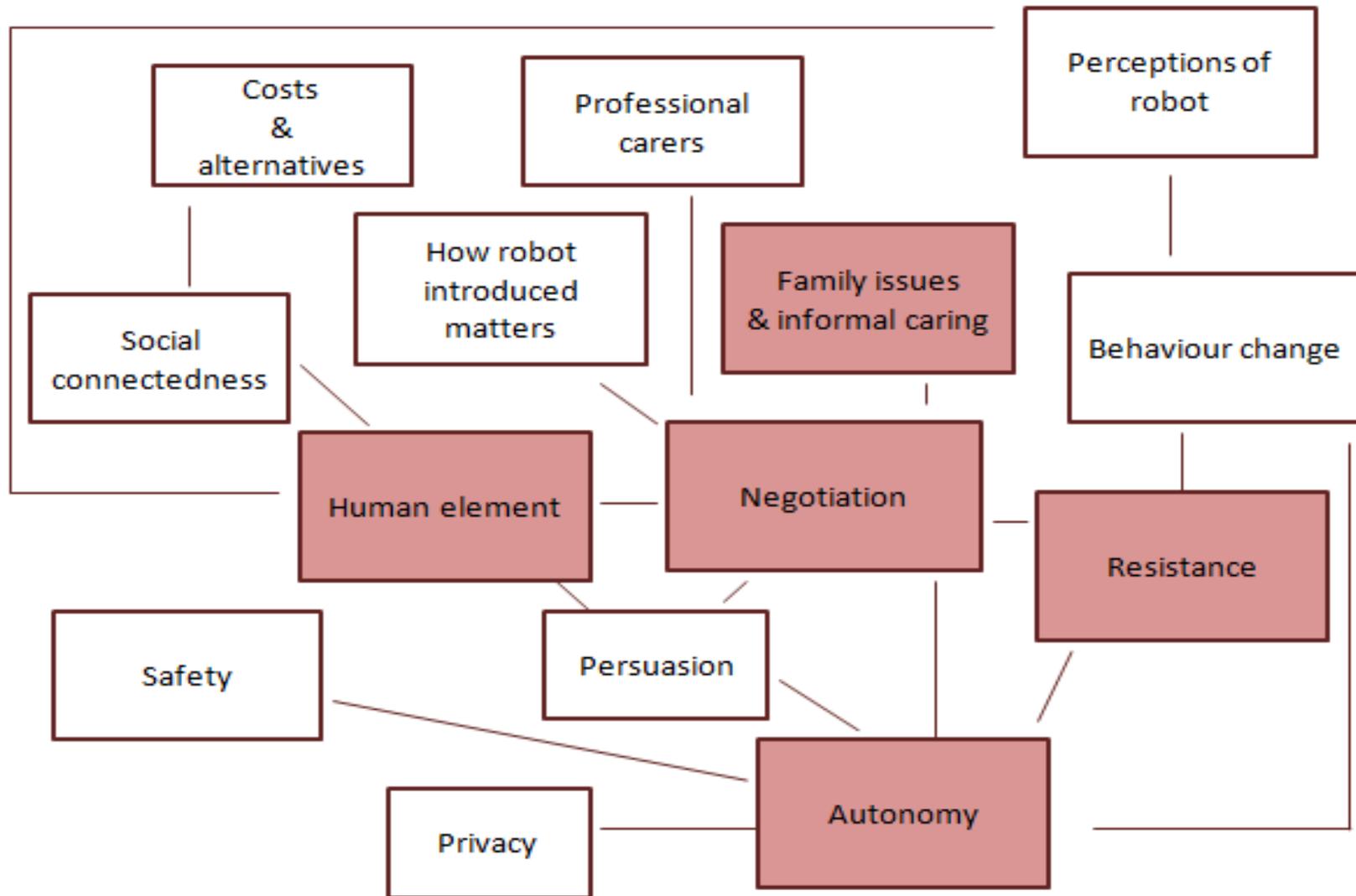


# Findings

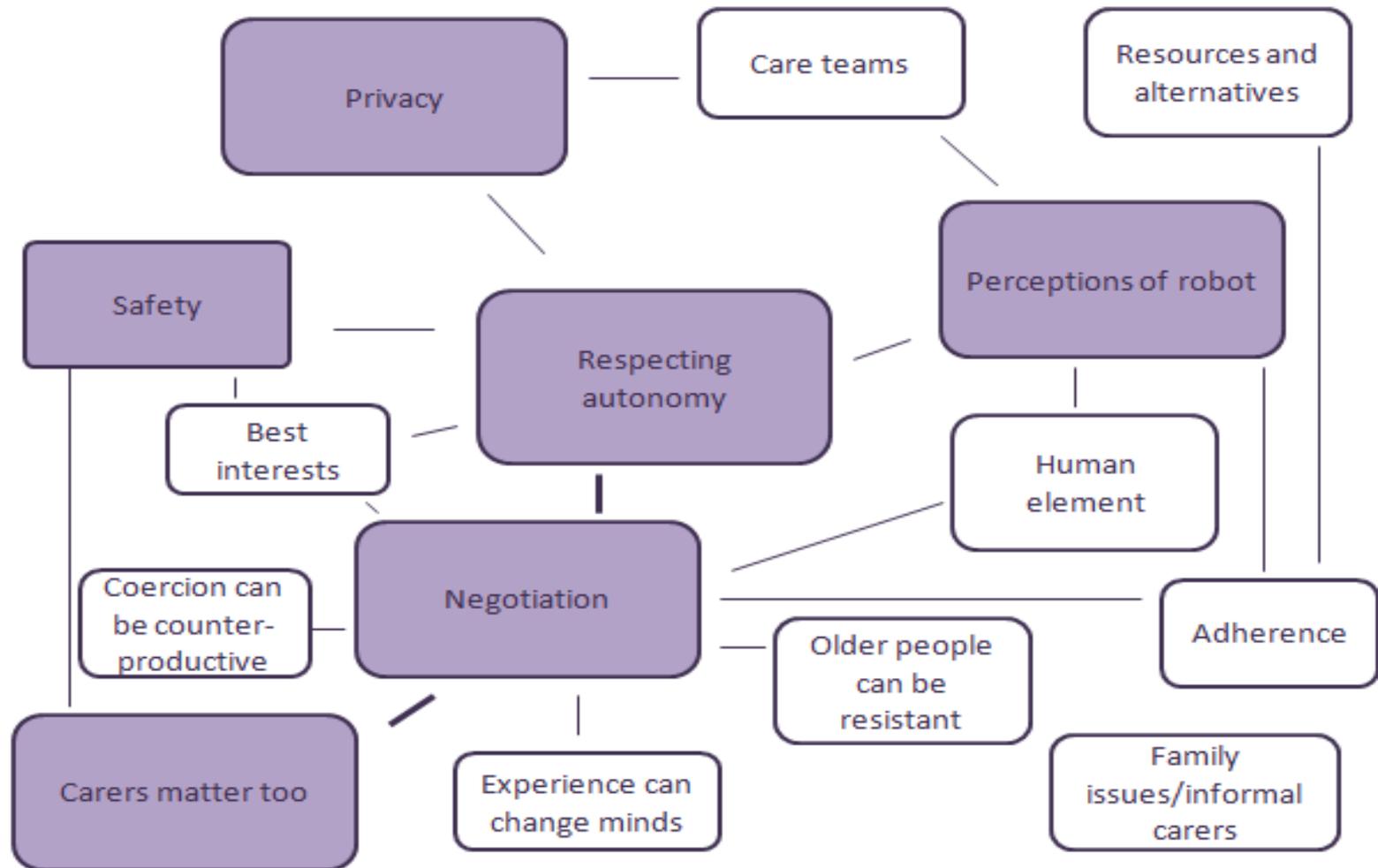
# Older people groups



# Informal carers



# Formal carers



# A rich data set!

## Have reported other themes as follows

1. Draper, H., et al **Ethical Dimensions of Human-Robot Interactions in the Care of Older People: Insights from 21 Focus Groups Convened in UK, France and the Netherlands.** In: Beetz, M., Johnston, B., Williams, M.-A. (eds.) ICSR. LNCS (LNAI), vol. 8755, pp. 138–147. Springer, Heidelberg (2014)
2. Draper, H. and Sorell, T. **Using robots to modify the demanding or impolite behavior of older people.** In: Beetz, M., Johnston, B., Williams, M.-A. (eds.) ICSR. LNCS (LNAI), vol. 8755, pp. 126–135. Springer, Heidelberg (2014)
3. Jenkins, S. and Draper, H. **Robots and the division of healthcare responsibilities in the homes of older people.** In: Beetz, M., Johnston, B., Williams, M.-A. (eds.) ICSR. LNCS (LNAI), vol. 8755, pp. 177-186. Springer, Heidelberg (2014)
4. Draper, H., et al **What asking potential users about ethical values adds to our understanding of an ethical framework for social robots for older people.** AIBS50 Congress 2014; Goldsmiths, London, UK

## **Phase 3 – Discussion and conclusions**

- In interests of keeping presentation manageable, have not illustrated all points with quotations from participants
- Following will concentrate on results related to
  - a) how participants responded to the tensions
  - b) how the values we had indentified were used
  - c) our conclusions based on philosophical + empirical work

**Resolving the tensions between values**

1. Processes of compromise, persuasion and negotiation giving weight to all values and all personal interests in tension; or
2. Assigning specific roles to the robot and then discerning an order of priority of values related to the requirements of fulfilling that role (e.g. carer, servant); or
3. By hypothesising an agreement under which the robot was introduced into the older person's home under certain conditions or for certain purposes that would give priority to one or another value in a given scenario

- Most frequently applied roles were servant, healthcare provider, extension of a healthcare provider, as well as companion.
- Sometimes intuitions were based on the robot being merely a machine (just like any other household appliance)
- At other times on its being a fairly sophisticated machine (more than just a common household appliance).
- No consistent role was applied but rather a role was applied that enabled the participants to argue towards a particular conclusion about which of competing values in a scenario should be given most weight.

- Value framework that promotes autonomy, safety (broadly conceived), social connectedness, privacy, enablement and independence **with autonomy as the organising value** likely to reflect the view of potential stakeholders
- But further work may be needed to ensure that additional values are not needed

**Autonomy:** General agreement in all 3 groups that age alone should not be used to determine whether someone free to chose how to live

*Elderly people still have their personal freedom and if they say no it should be no, shouldn't it?" (MADoPA OPFG1 P1)*

*they are still capable of making their own decisions. (ZUYD IC1 M3)*

*It always comes back to the fact that what the professional care worker needs or wants is not necessarily what the user needs or wants. Our priority is the user's need or want and we have to take it into account. We aren't going to do anything without the user; if he or she doesn't want to do something, we can't force them to do so against their wishes. (MADoPA PC1 P6)*

**Independence** not as prominent a value in FGs as autonomy.

Some participants noted that the **presence of the robot itself may encourage dependence.**

*“I pay to have someone do things for me”. My response is, “Yes, you pay, but you pay to have someone help you do things”, which people don’t like hearing because for them it’s a case of, “I pay therefore you do it instead of me”.  
(MADoPA PC1 P4)*

*In her situation I wouldn’t actually program the robot at all to get her the treats. Because there isn’t actually a need in her normal state (UH IC P1)*

- See Bedaf et al – the robot widening the care gap

- The extent to which individuals should be free to erode their own independence may be limited, especially in welfare states where dependency above a certain threshold generates needs that co-citizens have to meet through taxation revenue.
- It may be unjust to add to burden through willing loss of independence. It may be equally unjust to expect family members to meet the needs generated by willing loss of independence.
- ACCOMPANY robot conceived as a means to reablement as well as an aid to implementing autonomous choices. So it may not be designed for a care agreement that allows for the easy surrender of independence. See later comments on operationalising values

**Safety** is also a concern – second to autonomy

- Life-threatening harm is unlikely to be outweighed by any benefits so it may have priority even where autonomy is at stake. Incapacitating harm, especially foreseeable and avoidable incapacitating harm, also has a lot to be said against it, even when the decision to risk it or suffer it is autonomous.
- Safety was therefore ranked highly in the values framework.
- This was general position was reflected in the views of the participants – who were alive to the tension between autonomy and safety.

P7: *It should at least raise the alarm. According to this example, we're dealing with a gentleman who falls a lot but generally manages to get up again by himself, but the day he didn't manage, the robot didn't do anything.*

P1: *Precisely!*

P7: *The robot should have raised the alarm. (MADoPA PC1)*

M5: *Or the robot should only warn his daughters in law when he is unable to get up.*

M1: *When he is on the floor for a certain period. If the robot could do anything it should be able to do this.*

M4: *Well, if he is still on the ground after 10 minutes that it's time to send the alarm.*

M1: *Because if you're on the ground for 10 minutes he won't be able to get up. I think.*

M4: *Maybe there is a certain time they can all agree on... that if you're not up after 15 minutes someone should be warned.*

M6: *Would you like it if there is still someone warned?*

M4: *Most people who experienced being on the floor for hours never ever want to experience that again. They will do everything to prevent it from happening again. (ZUYD IF1)*

*Now that he gets stuck on the floor and can't get up when he falls, after a certain amount of time, the robot should be re-programmed so that someone can come and help him. After all, he can't stay like that all day. (MADoPA OPFG1 P4)*

- Some participants in all groups thought older people had to be allowed to take risks

*People do fall. One of our things we are looking at the safety, sometimes the family would say 'Is it safe to still be at home on his own?' Sometimes very fine line isn't it? But you know that if you would move him or go into a care home, he would be completely miserable, might live for ages, but very unhappy. There is a risk management thing in this isn't it? (UH FC PE)*

And that “*wrapping them in cotton wool all the time*” (UH IC P4) may actually erode the quality of life of older people.

But risks seen in all scenarios e.g.

*Yes, well I was just thinking people on internet forums can indeed be horrible people (UB OPFG3 P7)*

- The capacity of the robot to enable users generated a mixed response
- In particular the extent to which users could resist being enabled which put enablement in tension with independence
- Views varied according to the type of behaviour change in question and the extent to which the robot needed to be assertive to secure cooperation

e.g. Monitoring fluid intake, or  
'bad' habits or encouraging  
movement or social interaction



Reminders  
medication

General health  
promoting activities

Change of  
'character'



- The **role assigned to a robot** is highly likely to generate expectations about its behaviour, which will be judged against the ethical norms governing humans occupying the same role. These roles therefore need to be carefully considered, and clearly defined and presented.
- Our participants used role norms to resolve tensions, e.g.

*it is a bit like the nurse coming in and saying 'Shall we have a game of poker?' isn't it. And you wouldn't expect that (UoB OP3 P7)*

- A clear distinction needs to be drawn between **persistence and persuasion/negotiation** in how the robot is designed to secure cooperation with the enablement agenda of older people
  - Our participants doubted a robot could persuade
- Human vs robotic enablement – can robots/machines replace humans in this role?
  - Discussed in Draper & Sorell (2014)

# **Designers should avoid replicating infantilising techniques for securing cooperation.**

- ‘Let’s do it together’ may fail to engage with the older person’s reasons for not wanting to perform an action or behave in a particular kind of way.
- Persuasion requires one to identify and take seriously any reasons for disagreeing. One does not just assume that the obstacle is stubbornness or timidity born of having to try something new without support.
- ‘Let’s do it together’ is not an expression of solidarity where the one making the suggestion can already do the task effortlessly
- Robot cannot share in the end.

- **The robot will operate in areas where there are existing ethical controversies**
  - Relationships and power plays within the care triad
  - Health promotion
  - ‘Patient’ responsibilities in the welfare state
- Designers need to be aware of where particular design features will situate robots within these controversies.

**Privacy issues** extend beyond the user to the human-carers of that older person. Some formal carers raised the issue of the robot being used to ‘spy’ on them, whilst other formal carers did seem willing to use the robot to check up on, as well as to reinforce, adherence to treatment regimes.

- All forms of human care intrude to some extent on the privacy of the recipient of that care. Robots may be less intrusive by comparison.
- As for adherence, it does not seem acceptable to use the robot’s data-recording capacities to confirm truthfulness of older user’s testimonies.

However, contrast the following:

*They could look at the print out together, that wouldn't be quite as invasive as the robot saying: 'Actually she didn't do that when I told her three times and she didn't get up!' (UH FC PF)*

*They cannot cheat, right?... That is the difference. The measures are taken and the robot sends them on to the physician. So there is no possibility to add a few degrees, or make it some degrees less. (ZUYD FC1 P2)*

- The value of the robot's capacity to retain and share information for the purposes of enablement is best maintained by ensuring that privacy norms are respected and the older person retains control of information that the robot gathers.

- **Putting the value framework into operation and the function of the agreement** under which robot introduced.
  - An agreement neutralises what might otherwise seem paternalistic
  - This is likely to be a process rather than event.
  - Some of the potential tensions, and difficulties like the ‘care gap’ address by adherence to the agreement
  - Information ownership and control
  - Periods where user can ‘turn off’ robot for privacy

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