Design(outer)

I focused on the possibility of modularisation of the outer casing, the device could also be worn standalone without a pouch. Further reconciliation needed with team.

Interaction Conception

As our plan until now is likely to proceed, we want the interactions to not seem like direct influence. Rather passive influence that offers the patient alternatives and directs them in directions that prevent them from something happening in the first place. This interaction can of course get a little more active once they are closer to getting themselves into danger and can then ultimately lead to the device contacting someone or helping directly when imminent danger is on its way.

The context definition and the fine tuning of when the device does what is crucial and would most likely require testing since our thought of scenarios are not complex enough.

Sensors

As we want to limit our prototype to the core of our idea, by now we will only include following sensors:

A camera for the vision, a GPS for the location, a accelerometer and gyroscope for movement and fall detection, a microphone for the voice interaction THERMOMETER

->Conclusion, talk with team members

Formfactor

The lighter the better, the less technical it looks the better.

Making it always look like a pet could become an issue for some, which is very unwanted. It adds to the companion thing, but we should really talk about it once more. Maybe having the option to make it not look like a pet would be very appealing to some, which could also slightly change the formfactor again.

->Conclusion, Talk with team

->Loading station stuff for nighttable

Is it likely to be worn?

I would base the probability of it being worn on the following criteria:

Comfort:

In any case we must try to not make this device a burden for anything, something hard to achieve,

->conclusion, ask grandma

Grandma says it’s most likely not a problem to be uncomfortable to her, especially when it helps her. She says that most devices that older people need are not really not accepted because people don’t like them, but rather because they are impractical. Example: wheeled walker and stairs

Design Appeal:

We should again focus on the device seeming like something cute and fun, rather than strict and technical. If at achieves a similar appeal to the wearer as a pet, they are likely to like it

->conclusion, do experiments with older people, ask grandma

Okay so Grandma said, it would be important to her that it matches her clothes if she is supposed to wear it every day. And she doesn’t think that a cute plush like thing would be something she likes.

My idea: Make the device very neutral and have possibility to attach it into a plush like pouch. Therefore, both would be possible, and we could also offer different animals as pouches for it. Other Idea is to make it look a little like old jewellery.

Functionality:

As the functionality is rather something passive and not really something the wearer is likely to ask for themselves, it is hard to really find a way to make it fit to the wearer. I imagine that focusing on the friendly interaction between wearer and device makes it likely to be found nice.

->conclusion, continue as planned

Ease of Use:

Since we focus on primarily a language-based interface, we have to make sure that this communication works.

->Conclusion, we have to try to apply the knowledge we so far gathered about communicating with demented people and try to really apply it to the device itself

Durability and Quality:

The durability has to probably focus on battery life and device sturdiness. The battery life has to outlast at least 10h at moderate to medium activity and it the device should take a few blows, falling down etc. The build quality has to be solid, but we don’t require fancy stuff

->Conclusion, Solid device with a good battery life should work

Emotional and social appeal:

A few things could improve the likeliness of the device being worn.

Resonation on an emotional base, for example the wearer thinking of the device as admirable or cute, friendly or helpful would heighten this resonation. On the other hand, it is also possible that an impression of for example being surveyed would likely destroy or at least damage this emotional base.

If the device is aligning with the personal values of the wearer, they are way more likely to resonate with it. (Example: apple users and status quo) A quick research shows that older people value the following a lot: Good Health, Routine, Relationships, Community, Exercise, Comfort, Autonomy. Src:

https://startwithvalues.com/how-typical-core-values-change-based-on-age/

With the current state of our idea, I see the following opportunities in which the device could hugely resonate with the wearer.

Good Health >> Safety that’s been provided.

Routine >> The device is worn every day, routine reminder integration is easy when the rest is working.

Relationships >> One idea of us was that the device tries to build a relationship with the wearer so that it does not feel like a safety measurement.

Community>> The device is planned to be able to respond to the wearer, unconditional of the situation, a safety measurement or not

Comfort>> Scientific research shows that robotic pets provide comfort to the one they interact with especially elderly people (me too I would guess tho) <https://www.countryliving.com/life/kids-pets/a42586/animatronic-pets-provide-comfort-to-seniors-with-dementia/>

Autonomy>> Probably the hugest point in this, If the prototype works as planned, it would allow the wearer to be A LOT more free than before, not constantly being looked over and rather being supported in a very positive manner. We have to find out if this is already sort of an intrusion and makes them feel less autonomous than without, but I see huge potential.

->Conclusion, if we focus on these aspects, try to do further research and make them align with most people, this could be a huge difference to the perception of and use of the device

Price of the device:

If our final price would be too high, people would probably fear to destroy the device. Therefore, not wearing it. If the device seems too cheap to them, which is unlikely, they could possibly mistrust it and take it for garbage (toys etc.)

->Conclusion, the item must be valued by the wearer, although they should not fear to lose or damage it because they wear it, a safekeeping scenario could result in them hiding it or simply not wearing it (as behaviour example reports have shown for valued items). Perhaps the Device shall not be perceived as own property, but rather something handed upon oneself.

What functions are the most important?

Safety is number one, integration is second most important!

The interaction quality is essential, also the applicability to different users is important.

->Therefore, image recognition and the auditory interface are the most important features

Addendum:

We have to think about if an auditory interface is sufficient to make all the adjustments to the device, like personal info, contact information, home location etc.

Is the device also an option for deaf people (almost deaf people with hearing aids could be included via induction to their hearing aids.)