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Fit4WORK

SELF-MANAGEMENT OF PHYSICAL AND MENTAL FITNESS OF OLDER WORKERS



CO-FUNDED BY



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SELF-MANAGEMENT OF PHYSICAL AND MENTAL FITNESS OF OLDER WORKERS

Project coordinator: Poznań Supercomputing and Networking Center, ul. Jana Pawła II 10, 61-139 Poznań, Poland, email: fit4work@fit4work-aal.eu

Feedback from Pilot Trial 1

Ambient Assisted Living Joint Programme project no. AAL-2013-6-060

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1. Introduction

To be able to involve end-users in the development of Fit4Work, the system is tested twice in an iterative process. The results of the first stage of testing will be described in this document and actions to improve the system will be explained.

The results of the first stage are based on an early prototype that was tested in a period of two months by eight test-users in the Netherlands. This stage of testing was used to evaluate the usability of Fit4Work among a variety of users in the actual field setting (see Figure 1.1). This explorative stage took place at the same time as the developments of the system, which required frequent exchange in information between test-users and developers. This way of developing makes it possible to connect the desires and wishes of the end-users with the final product.

At first, a description of the test-users is given in which descriptive statistics obtained by a questionnaire are presented. Second, the method of feedback collection is described where after the obtained feedback is summarized and desired actions concerning development of the system are concretized.

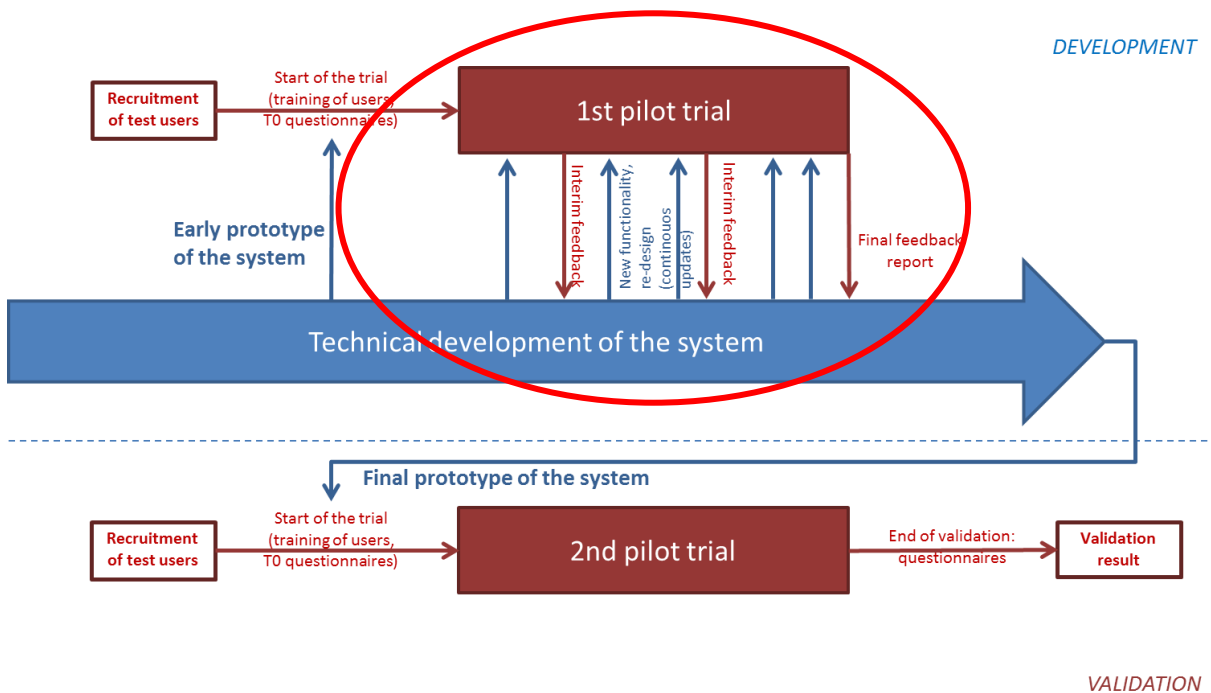


Figure 1.1 Process of piloting Fit4Work solution

2. Test users

All approached participants needed to read and sign the informed consent before becoming a test-user (see Appendix). The informed consent contained information regarding the project, the aim of study, the duration of the testing-period, the material on loan, the measured data and information concerning privacy and anonymity.

After filling in the informed consent the test-users filled in a baseline questionnaire that contained questions concerning: socio-demographic characteristics; health status; work and daily activities; experience, interest and attitude towards technology. The higher the score of a scale, the more of the mentioned variable is meant.

Table 2.1 Descriptive statistics of test users

		<i>Mean</i>	<i>Range</i>
Age		59	49-72
Female		75%	
Sedentary work (1-5)		4,7	
Education	Low	0	
	Middle	20%	
	High	80%	
Health	General	4,2	4-5
1 - 5	Physical	3,7	3-5
	Sight	3,8	3-5
Work	Hours a week	22	6-36
1 - 5	Mental stress	2,8	2-3
	Psychic discomfort	1,2	1-2
Lifestyle	Housekeeping	7,4	2-12
1 (no hours spend) –	Walking & biking	2,7	2-4
7 (24+ hours spend)	Watching TV	4,2	2-6
	Reading	3,5	2-6
	Sports	2,3	2-4
	Computer usage	6,2	2-7
	Listening to music	2,7	1-5
Technology	Interest elderly	4,2	3-5
1 - 5			
0 - 4	Positive attitude	3,8	3-4
0 - 6	Constraints	2	2

***Description of eight test-users*

The average test-user was 59 years old, high educated and healthy (see Table 1). In terms of work, one test-user had a voluntary job of six hours a week, as the rest worked in a paid job at least 24 hours a week. All mentioned to be mainly in a sitting position while working, which means that very little physical activity is done while working.

Overall, the participants mentioned to use the mobile phone on a daily basis. Other devices, like tablets and laptops, were also used frequently, which indicated that the participants were familiar with technologies. Interest for technologies concerning elderly among the participants was rather high. Also, when thinking about possibilities of technological innovations, the respondents agreed overall that technologies are very useful. Technological innovations can help, except the elderly, also lives when in danger and the quality of life. The willingness to learn new unfamiliar technologies was also high among the test-users.

Possible restrictions of technological innovations might be that technological innovations are too hard without training or education, which was mentioned by three test-users. Also three times mentioned was that technologies can be intrusive and change the household environment. Three times, intrusion of privacy is mentioned as problematic. So, also concerns that come with technological innovations were mentioned, but these were much less when comparing with the possibilities. The overall attitude towards technological innovations of the participants can be described as rather positive.

3. Feedback of test-users

The feedback was collected by sending the test-users a short questionnaire that they needed to fill in twice. The form, that is included in the Appendix, contained four questions and in addition the users had the opportunity to give additional feedback.

Throughout the testing period the test-users were able to reach out to the project leader when troubles emerged. Communication was possible through the phone or by email. The project leader asked the respondents to add additional comments about the operation of the Microsoft-band and the Fit4work application. Also, the participants were asked to provide screen-shots or pictures supporting their troubles while using the system. The collected feedback is presented and summarized in this chapter in the way the questions were asked during the testing. Additional information given over the phone or by email were included in these categories.

From the initial seven test-users, one respondent ended their participation in this study because of inconvenience and fear of electro-radiation of the materials.

3.1. Feedback first period of pre-test

Six test-users participated and provided feedback during the first week of pilot testing

1. Is the intention of the pre-test clear?

The purpose of the test is quite clear to all respondents. The intention could be more specified before the test starts.

The following additional comments are made:

- What is now being measured exactly?
- Confusing is:
 - o There are two Apps (fit4work and Microsoft band) that apparently measure the same, but the results of the two applications are different;
 - o The use of the "bracelet" is not really necessary because the smartphone also records the data.

2. Is the way the Microsoft Band 2 works clear?

The operation of the Microsoft Band 2 is sufficiently clear. And also the possibilities and the use are attractive.

The following additional comments are posted:

- Setting, linking and installing was easy.
- The band has many options. The Band provides interesting information about for example performance. Some of these functions are not (yet) usable with the Fit4work App.
- The actual steps and the measured steps do not match (margin is more than 20%). That does not make the measurement reliable.

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- The band does not fit the wrist (“stubborn”, “irritating”, “not attractive”).
- The battery is empty too fast. The band has to be charged daily. If the battery is empty, measured data is lost.
- The Band does not always synchronize with the smartphone.

What is the framework of the stated goals? Where are the goals based on (concerning cycling/walking/sleeping). For example: Is two hours of 'deep sleep' a normal sleeping pattern?

3. What do you think of the Fit4Work app?

The respondents gave different answers and opinions about the App. There is more explanation needed about how it works and how to be used. Especially regarding the added value in comparing with other App's (the added value is not yet clear in this test phase).

The following additional comments are posted:

- Working with the App makes you more aware of your own vitality and invites you to become active.
- I did not work with it because there were synchronization problems
- I only worked with Microsoft Band App because that does record data. The fit4work app does not register data!
- The app is not working well yet. The functionalities seem alright, but do not work.
- It's not motivating when the App indicates that you need to put the Band on your wrist, while having it on.
- How is it possible that on the first day of the week you achieved only 50% of your daily target and right away 100% of your week target? (incomprehensible)
- Unclear: What does the notification of Fit4Work Service include? (see Figure 3.1).

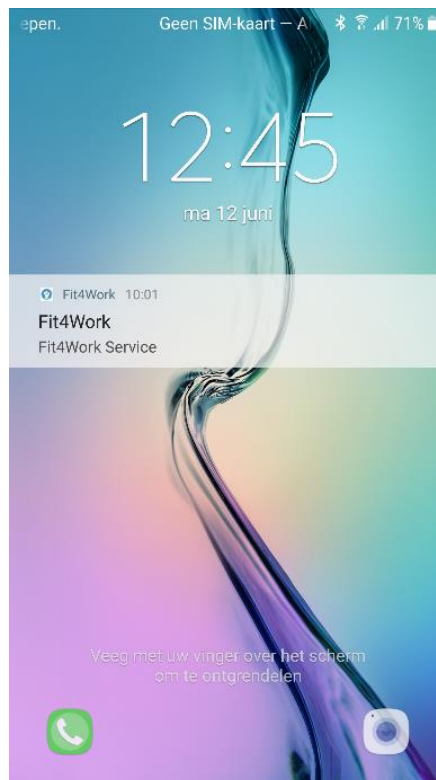


Figure 3.1 Fit4Work Service notification

4. What feedback do you currently have for the developers of the app?

(Tips and tops)

It is widely stated that the App is not yet ready to be tested. The testers need more background information: what is the purpose of the app, which functionalities are there and how do they work? What are the goals / targets (day and week) based on? What is the connection between the two?

The following additional feedback is given:

- Concerning functionalities:
- In the calendar I would like to select the day and get background information about that day.
- I would like to test the app on my own smartphone (now I carry two smartphones with me).
- I would like to see and set my own goals.
- Concerning the opening screen of theFit4Workapp (see screenshot on the next page)
 - o I miss the app's name and explanation. "Huidige toestand" is the current state, perhaps the name of the day and date and time is better.
 - o The blue bar is the instruction bar. I got that later. Explain the bar and what you can do with it.
 - o Once you see an icon, you need to click and take action. To do this, you must have the Fit4Work app open.
- + Tip: It would be nice if the message is supported by a sound or thrill.
- + Tip: Make all icons visible and indicate with a color if action is desired.
 - o How long a desired action will remain open? For example: "You have to get up and walk a bit". What if I only walk after an hour? How long should I walk? When is the action completed?
 - o The function of the calendar is limited to showing performance (color green etc.).
- + Tip: Make it possible that the calendar can also be used to plan activities
- + Tip: show information dates of past days (by clicking on it)
 - o (4), (5) and (6): Probably are the performance of my physical activities are measured here (5), environmental prescriptions, humidity, temperature etc.? (4) and stress (6). The last two components of Fit4Work are not yet active. (see Figure 3.2)
- Not (yet) active in the App are: exercises, relaxing and trophies.

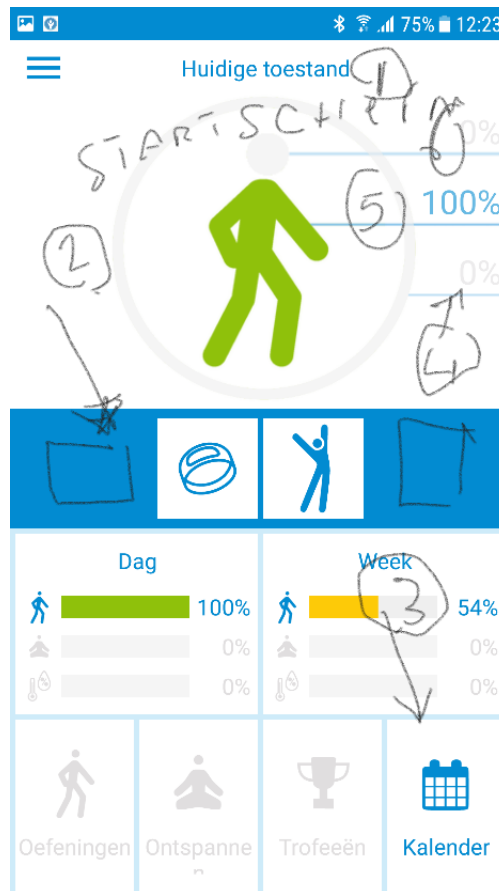


Figure 3.2 Tips of end users concerning the design of the Fit4Work application

5. Other comments

Good project, makes you think and act!

Nice and functional visual design with colors flooding from red to green in the body (physical) and soon the head (mental) and circle (environment). A short explanation what the different aspects mean is desired.

Additional comments regarding the use of the App Fit4work:

- a) Unclear (or inconsistent) information:

Figure 3.3 shows the information of two consecutive weeks. Both have reached 41%, while no activities have been done in the week of 29th of May to 4th of June.

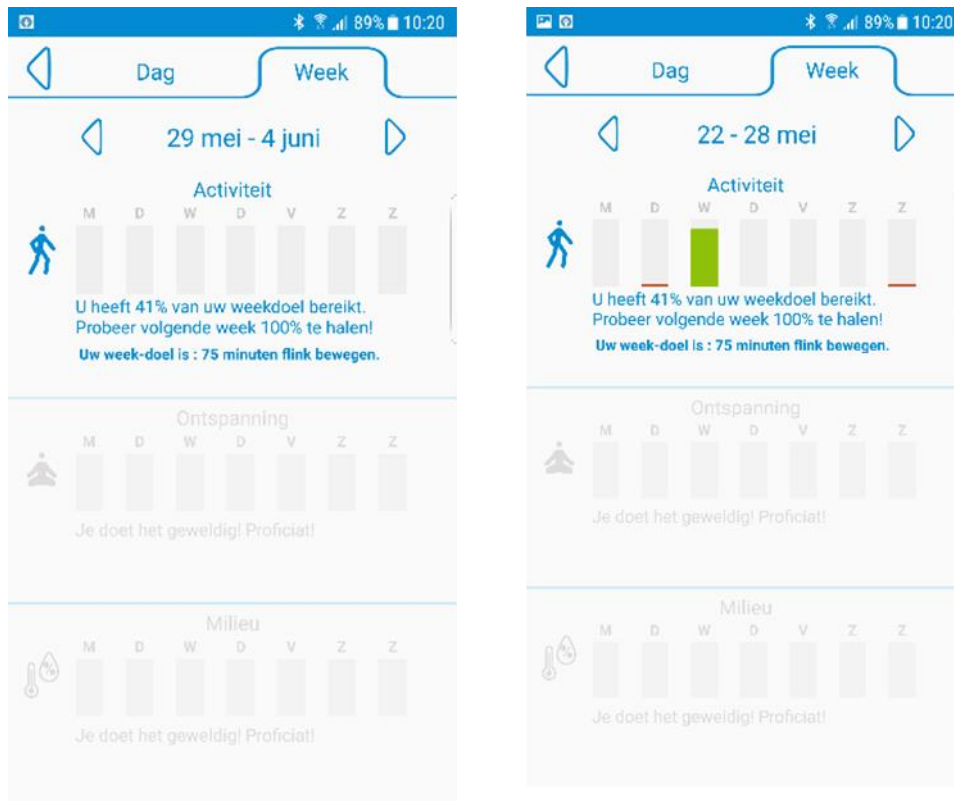


Figure 3.3 Calendar view feedback

- b) Switch from week to day to get information

Figure 3.4 shows the information of activities during week 22-28 may. It is not possible (to be seen) from the week information to view the detailed information of Wednesday 24 May. To view the 24th of May, you must click back to the desired day (24th of May) from the “Huidige Toestand” = current situation (day).

- c) Incorrect information concerning the band (see Figure 3.5).

The band is around the wrist, while Fit4Work reports: Your band is not around your wrist.

- d) Incorrect message concerning 0% activity

Message: You're great! Congratulations! While 0% activity was undertaken (see Figure 3.6).

- e) Incomprehensible information concerning 100% of day target

100% of day target. However, Fit4Work's asks to get up and running. Why should I, I already have achieved my goal? (see Figure 3.7)

- f) Differences in information on the band and the app

Information from the Band and the App are not the same. This is incomprehensible to the user (ses Figure 3.8).

g) Bad translation

Please change the word “naast” to the word: “volgende” . The translation is now incorrect (see Figure 3.9).

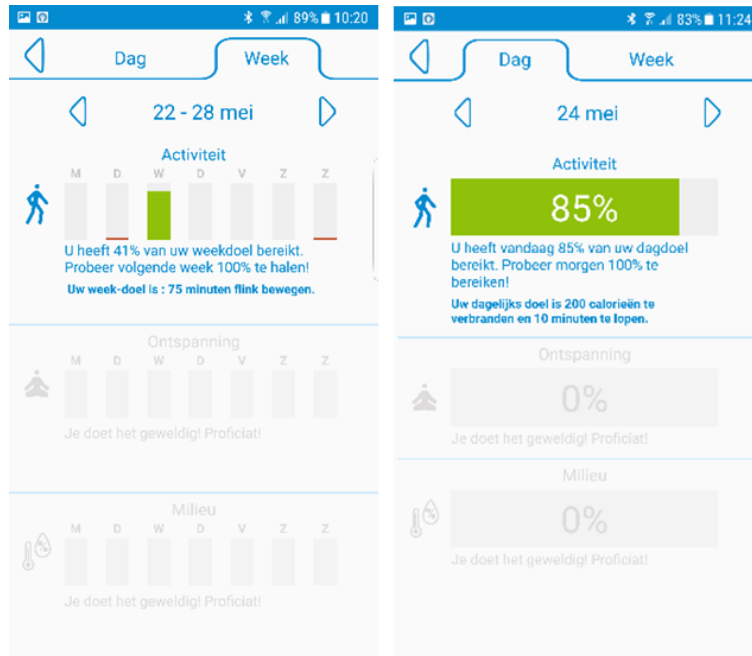


Figure 3.4 Feedback concerning switching from week to day views



Figure 3.5 Incorrect notification nconcerning the wrist band



Figure 3.6 Incorrect message concerning 0% activity



Figure 3.7 Incomprehensible information concerning 100% of day target

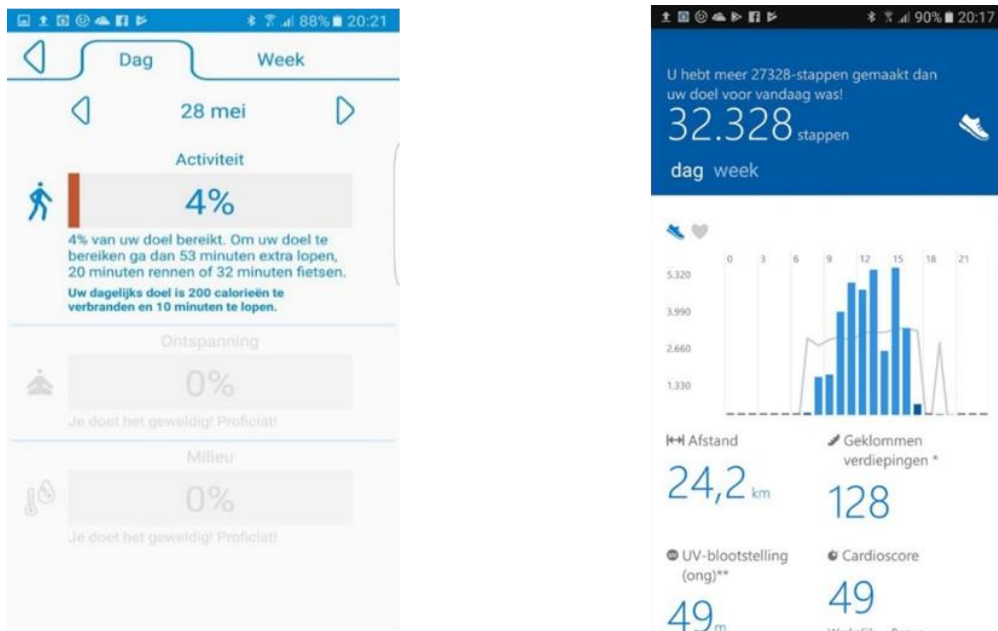


Figure 3.8 Differences between information on Fit4Work app and wrist band's manufacturer's app

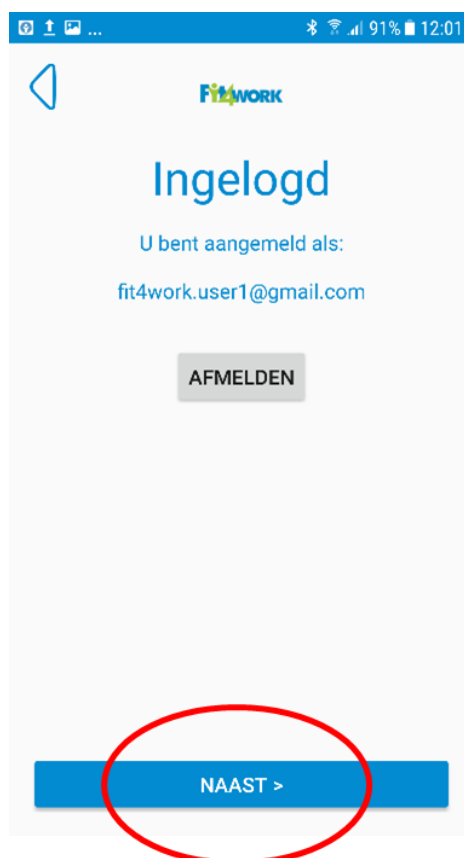


Figure 3.9 Wrong translation.

3.2. Feedback of second period of pre-test

Following the first week of the pilot, during which 6 respondents gave feedback based on questions, the project leader asked the respondents to add additional comments about the operation of Microsoft Band and the Fit4work application during the following few weeks.

Five out of six respondents submitted additional comments. These comments are described in this Section. They should be seen as a supplement to the previous feedback (i.e. the feedback from the first, initial week of pre-testing).

1. Is the purpose of the pre-test clear?

Supplement to previous feedback:

- There have not been visible adjustments or changes in the Fit4work-application during the testing period:
 - o Only the physical activities could be tested and not the environment and the stress functions. Environment and psychic (stress) factors are not measured and therefore do not light up. Other functions (exercises, relaxation, trophies) are also disabled.
 - I can see day OR week details
 - Advice: Make clear what the difference is between actions and exercises!
 - Advice: Make clear that three actions cannot be performed at the same time. To prevent confusion.
 - Advice: Make visible what progress is in requested actions, e.g. in percentage. I know then what I have to do.
 - Advice: Remind the user by a signal (vibration / message) that actions are requested. In an inviting way.
- It is not clear how precise my goals are and how they are determined. Is there an opportunity to set or adjust the goals yourself?

2. The way the Microsoft Band 2 works?

The operation of the Microsoft Band 2 is sufficiently clear. The possibilities and the use are also attractive. See the comments in the previous feedback form.

Additions:

- It should be emphasized that many respondents indicate that the battery is quickly empty (often within 1 day) and that data are lost. This is frustrating and does not work motivating.
 - o Advice: Indicates the user's ability to limit the power need (e.g. brightness screen) in settings.

3. What do you think of the Fit4Work app?

The way the Fit4Work app works is insufficiently clear (especially the meaning of goals and activities). Comments given in the first form still count, because not much has been changed.

Additions:

- The battery of the smartphone is empty in a short time. Within a day. Point out that in settings power need can be adjusted (e.g. display brightness)
- The Fit4Workapp is hard to find in the Play Store. Give a short description and explanation.
- Respondents are curious about the mental- and environmental part of the application. They have not been tested yet and do not function at all.

4. What feedback do you currently have for the developers of the app? (Tips and tops)

The main issue of the former feedback remains: the app is not yet ready to be tested:

- The testers need more background information
- What is the purpose of the App, what functionalities are there and how do they work?
- What are its goals (day and week) based on?

The loss of information due to battery discharges or the ability to turn on devices or applications should not occur. Users want to see an action / effort that is "appreciated" in information on the "band" or Fit4workapp.

5. Other comments

As earlier stated: Good project, which also stimulates thinking and acting

Advice for starting the pilot:

- Make sure all functionalities are ready
 - o Test the functionalities once more (especially consistency, e.g. relationship actions and goals)
 - o Provide a good introduction and manual

Monitor the pilot with a clear question framework

4. Conclusions

The test-users were overall very excited prior to the study about the system and about participating in the study. The test-users were also willing to try their best using the system despite malfunctions. It was a pity that only the physical part of the application could be tested and that the mental and environmental part were left out in the analysis. Although their willingness to try out the prototype of the system and knowledge about the state of the app, the expectation towards the system were higher than the system could offer at that time. The progress of the system during the testing period was minimal which resulted in mainly negative feedback and distrust towards the system from the test-users.

The key towards improving the system was to finalize the basic functionalities first. This means that the three parts of monitoring need to start working and the shown data in the application need to be correct. Also, the given recommendations need to make sense in a way, so the users can take advantage from it and start seeing its possibilities and meaning.

The system is thought of as innovative, useful and important for elderly that are working, so the idea is perceived as promising. This needs to be elaborated to be able to look into the system further and find out more about possible effects on the well-being and stress level of elderly users.

Annex A. Fit4Work field trials informed consent

Fit4Work is een project gefinancierd door het AAL programma van de Europese commissie. Dit programma stimuleert projecten en innovatieve ideeën waardoor senioren langer zelfstandig en comfortabel kunnen blijven functioneren. Fit4work is een driejarig project en wordt eind van dit jaar afgesloten. Het project richt zich op oudere werknemers en vrijwilligers.

Fit4Work is een applicatie voor de smartphone die door middel van verschillende sensoren de mentale en fysieke stress van een persoon kan identificeren. Deze applicatie monitort werknemers en vrijwilligers tijdens het werk om stress niveaus te kunnen analyseren. Als er te veel mentale of fysieke stress wordt geïdentificeerd, worden er suggesties gedaan om het stress niveau omlaag te brengen. Zoals bijvoorbeeld een bepaalde fysieke oefening of een ademhalingsoefening.

Doel van het onderzoek

Het doel van het onderzoek is het testen van het prototype app dat ontwikkeld is binnen het project Fit4Work. Doel van het project is het ondersteunen van oudere werknemers en/of vrijwilligers om hun werk vol te houden door het managen van fysieke en mentale stress.

Duur

Dit onderzoek gaat van start op 3 april 2017 en eindigt op 30 mei 2017.

Gevraagd wordt om gedurende kantoortijden tussen 9.00 en 17.00 uur een monitorband om te houden en te kijken naar aanbevelingen op de smartphone en deze zoveel mogelijk op te volgen. Bij aanvang, tussendoor en na afloop wordt gevraagd een korte vragenlijst in te vullen.

Materiaal

De deelnemer krijgt gedurende de tijdsduur van het onderzoek de volgende apparaten in bruikleen van de KBO-PCOB:

Galaxy S6 smartphone

Microsoft armband 2

Verloop van het onderzoek:

1. Week 14, 15 en 16 (3 april t/m 21 april)

Monitoren van fysieke activiteiten en het krijgen van aanbevelingen

Gemeten wordt:

Smartphone:

- acceleratie

Dit houdt in dat de mate van versnelling wordt gemeten dus of u loopt, fietst, in een ander vervoermiddel zit of stil zit.

Microsoft band:

- Acceleratie, zie hierboven

- Het hart ritme

- RR intervallen, de variatie in tijd tussen hartslagen

- Huidweerstand (Galvanic skin response) Bij toenemende inspanning gaan mensen iets meer zweten waardoor de huidweerstand afneemt
- Huid temperatuur

2. Week 17, 18 en 19 (24 april t/m 12 mei)

Monitoren van mentale stress en het krijgen van aanbevelingen daarvoor

Gemeten wordt hetzelfde als hierboven beschreven bij de fysieke activiteiten.

3. Week 20 en 30 15 mei t/m 26 mei

Monitoren van de omgeving

Gemeten wordt:

Netatmo:

- Lucht temperatuur
- Luchtvochtigheid
- Luidruchtigheid
- Luchtkwaliteit

Privacy en anonimiteit

U krijgt een account op een nieuwe smartphone op basis van anonimiteit. U naam wordt niet verbonden met de meetgegevens. Ook wordt uw locatie niet verzameld.

De data die verzameld worden gaan naar een server in ...

Worden bewaard gedurendeen gebruikt voor het onderzoeksverslag van het project Fit4Work.

Annex B. Baseline questionnaire - field trials

Subject Identification code:

Date of compilation:

NL

A) Socio demographic questions

1. What is your age?

_____ years old

2. Gender

Male

Female

3. What is your level of education?

No education

Primary education

Secondary education

Tertiary education (further higher education level or university)

Other

Prefer not to say

B) Health status

4. How would you rate your health status at the moment?

Excellent

Good

Fair

Poor

Very poor

5. How would you rate your physical fitness at the moment?

Excellent

Good

Fair

Poor

Very poor

6. How would you rate your eye sight (with good light if necessary with glasses) at the moment?

Excellent

Good

Fair

Poor

Very poor

C) Work and daily activities

7. What are your main activities during a week?

- a. have a paid job for hours a week
- b. have a voluntary job for hours a week
- c. If other.....*go to question 9*

8. What are your main activities during your (voluntary) job?

During my job...	Very often	Often	Sometimes	Rarely	Never
a. ...I sit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. ...I stand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. ...I walk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. ...I carry heavy load	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. ...I have to think	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. ...I use a computer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. ...I experience mental stress	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. ... I experience physical inconvenience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Do you have an approximate idea of the number of hours each week you have undertaken the following activities, during the last month.

0 = zero; 1 = < 1 hour; 2 = 1-3 hours; 3 = 3-6 hours; 4 = 6 to 9 hours; 5 = 9-15 hours; 6= 15-24 hours, 7= > 24 hours

	0	1	2	3	4	5	6
9.1 Preparing food, cooking and washing up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.2 Shopping for food and groceries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.3 Shopping and browsing in shop for other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.4 Walking and biking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.5 Cleaning the house	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.6 Doing the laundry and ironing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.7 Watching TV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.8 Reading books, newspapers, etc...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.9 Using PC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.10 Listening to music	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.11 Doing gymnastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.12 Playing active sports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section D) Experience, interest and attitude towards technology

10. General Questions about the Usage of Technology

How often do you use:	At least 1x per day	At least 1x per week	At least 1x per month	Less often	Never	Do not know
a land-line phone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a mobile phone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a mobile phone (Smartphone)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a Tablet (e.g. iPad)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
an eBook-Reader (e.g. Kindle)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a computer/laptop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a TV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
an activity tracker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. How would you rate your interest in technology innovation for elderly support?

Very low	Low	Medium	High	Very high
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. Expectations and attitudes (multiple answers possible)

- I think technology innovations can help elderly to satisfy their needs and problems
- I think that technology solutions can save my life in case of unfavourable circumstances or accident
- I think that I could use some assistive device to improve my quality of life
- I'd like to learn using simple technological tools, if they can help me in case of problems

13. Barriers (multiple answers possible)

- The technology solutions are too difficult to use without training
- I fear that a device would take people's place in helping me
- I fear that a device could be more intrusive and/or could modify my home environment
- I fear that some devices could represent a restriction of my privacy
- I have some concerns about the security of new technology devices
- I think technological supportive devices for elderly are too expensive

Annex C. Materials responsibility form

Naam:

Heeft ten behoeve van pretest AAL project in bruikleen:

- 1 Samsung S6 Smartphone
- 1 Microsoft Band 2
- 1 Samsung oplader met twee bijpassende snoeren

Datum:

.....

Handtekening:

.....

Retour op:

Datum: :

Handtekening projectleider:

Handtekening deelnemer pre test: