

Developing sustainable service design for a pay-per-use dryer

Master Thesis **Shengling Wei** 

# **Appendix 1 - Monthly Email**

From: Homie Pay-Per-Use Notification <noreply@homiepayperuse.com> Reply to: Homie Pay-Per-Use <info@homiegroup.com> Date: Monday, 2 March 2020 at 18:59 Subject: Colin - Your monthly wash overview for February



## Dear Colin,

February has come to an end, which means it is time for your Homie update. We would like to inform you about some changes we've made and show you what changed in your washing habits over the past month. Enjoy!

- 1. Free 90-degree cleaning wash.
- 2. Give us some feedback on our new website.
- 3. Your washing behaviour in the previous month.

## 1. Free 90-degree cleaning wash.

Winter coats, tick woollen sweaters and padded trousers. Your washing machine had a tough time during these cold winter months, so give the machine some extra love.

Empty the soap dish tray, polish the outside of the washing machine and clean the door rubbers. Last but not least, run a 90-degree wash!

A 90-degree wash helps clear out any bacteria or detergent residue that have gathered inside the machine's drum over time.

That's why during this month, Homie offers you one 90°C wash for free. Make sure your machine is online, so we are able to automatically change the price of the 90°C wash into €0!



## 2. Give us some feedback on our new website.

As you probably know we have been working hard on a fresh, new look for Homie. A new font, a new slogan and everything in the magical and creative color purple with a hint of cheerful yellow. Since a few weeks our new website is online. We are happy with the look and feel, but we know there are always things that can be better. Have you noticed something about our website that needs to be changed? Please let us know by email!



## 3. Your washing behaviour in the previous month

The following graphs provide you with information on your washing behaviour for the last few months.

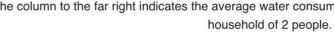
### # of Washes & Wash Temperature:

Below you can see your total number of washes per month and a breakdown of wash cycle temperatures. For comparison we added a bar on the far right with the average for a Dutch household of 2 people.



Click here to give us some feedback

### Total water consumption (Liters):





We hope that this email has provided you with a clear overview of your Homie washing machine use, and we would like to wish you another fresh month!

Kind regards,

Colin Bom CEO at Homie

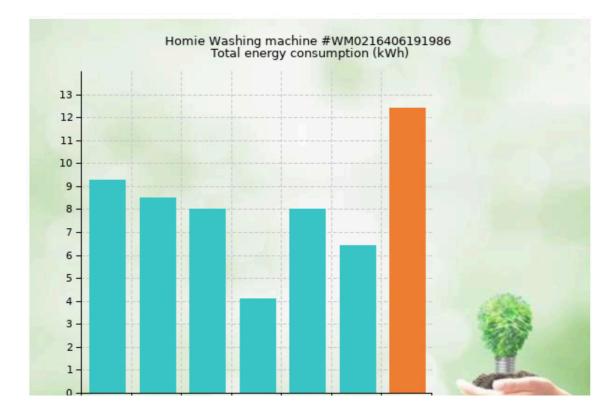


## Programmes:



### Total energy consumption (kWh):

The column to the far right indicates the average energy consumption for a washing machine in a Dutch household of 2 people.



The column to the far right indicates the average water consumption for a washing machine in a Dutch

# **Appendix 2 - Usage Webpage**

| <b>431(0) 15760 1615</b> Mon-Fri, 08.00h - 17.30h | 5     |              | 4.9 of 5 on Trustpilo | ŧ         |         |  |
|---|-------|--------------|-----------------------|-----------|---------|--|
| homie   | HOMIE | HOW IT WORKS | ORDER HOMIE           | OUR STORY | CONTACT |  |
|   |       |              |                       |           |         |  |

Usage Overview

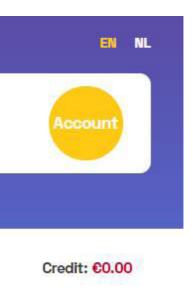
You currently have 5 unpaid cycle(s) , for total of €9.79. Please click here to pay.

| Dryer                           | Invoice  |   | Date           | Programme    | Price | Status    |
|---------------------------------|----------|---|----------------|--------------|-------|-----------|
| 3017                            | 10272150 |   | 12:44 20.07.20 | Tijd         | €1.63 | Finished  |
| ( )                             | 10272128 | V | 12:13 20.07.20 | Tijd         | €1.49 | Finished  |
| =                               | 10272125 |   | 12:13 20.07.20 | Synthetica 🔅 | €1.89 | Cancelled |
| Zanussi                         | 10272030 |   | 10:26 20.07.20 | Katoen 💥     | €2.09 | Finished  |
| #DR0216701203243<br>SN:01210119 | 10271755 |   | 20:15 19.07.20 | Synthetica 🗮 | €2.29 | Finished  |
| Online                          | See more |   |                |              |       |           |

homie

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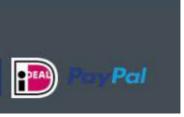


Pay now

Pay now

Pay now

Pay now



# **Appendix 3 - Interview Guide**

User Interviews Duration: 20-30min Purple text are additional guestions for HOMIE customer

## Introduction

1. Introduce myself (& HOMIE.)

2. Briefly introduce this project. To develop the service, it is important to understand your needs and concerns of the sustainable dryer using. Emphasize that there's no wrong answer.

3. Would you mind if I record this interview? I promise your information will only be used for this research and the transcripts would be shared anonymously.

## **Basic information**

- 1. Check household size (how many people live with you?)
- 2. Who is usually responsible for doing the laundry?
- 3. Are you always responsible for laundry drying?
- 4. How long have you been using the HOMIE dryer?

## **Topic 1 - Laundry process**

## **Opening question:**

1. Overview of laundry journey (steps): Could you describe your usual process when you do your laundry drying?

## Sub-questions:

- 1. How often do you use the dryer (per week?) Why?
- 2. When do you usually dry your laundry? Why?
- 3. How do you dry your laundry?
- 4. Which % of your laundry do you use the dryer for?
- 5. Process (ask them to go through the dryer use process step by step, what & why):
  - a. How do you decide which laundry to put in the dryer?
  - b. How do you prepare the laundry before using the dryer? (or even before the washing?) Would you measure the load? How do you measure the load? Why?
  - c. How would you move the laundry into the dryer (when, load)
  - d. After the dryer finished(when, how)
- 6. When choosing the programme & dryness level, what would you concern about? How would you decide?
- 7. Which programme & dryness level you use the most frequently? Why?
- 8. What do you think of the ECO mode? How often do you use that? Why?

## **Topic 2 - Motivation & barriers**

## **Opening question:**

1. What are the positive aspects of using your current dryer? What are the negative aspects of using your current dryer?

## Sub-questions:

- 1. What are your reasons for using the dryer?
- 2. What kind of things do you think are important while using the dryer?

4. What do you want to avoid during the laundry drying process? What do you think are the difficulties

during this process? - have you tried to avoid these difficulties?

## Topic 3 - Sustainable dryer using

## **Opening question:**

1. What do you think of the environmental impact of dryers? (If the full score is 10, how many scores do you want to give to your current dryer?)

## Sub-questions:

- 1. (If HOMIE customer)
  - a. Which parts of the Homie service do you like/enjoy?
  - b. Which parts of the service do you think could be improved? it?
  - other)
  - f. Are there any tips you would like HOMIE to give you? (before, during, after using)
- 2. What factors/behaviour regarding dryers usage do you think influences the environment the most? Why? 3. Have you ever thought of doing laundry (expecially using dryers) in a more sustainable way? Why or why not?
- 4. What do you think can help you use the dryer in a more sustainable way?

## Endina

Thanks a lot for your help! Your answers are really useful. Is there anything you want to share/add?

c. What do you think of paying for use? What do you think are the positive and negative things about

d. Since using the HOMIE pay-per-use dryer, have you changed your dryer using behaviour? How? e. What kind of feedback would you like HOMIE to give you? (on-line webpage, email, monthly email,

# **Appendix 4 - List of Statements**

| Preparing   | Washing   |
|---|---|
|   |   |
|   |   |
| Collecting dirty laundry  | Separating laundry by types or colours while washing            |
| Trying to do a full load  | Depending on how I feel that day                                |
| Having several places to collect laundry                                    | Setting a timer/reminder for the wash                           |
| Forgeting to collect some laundry when have multiple places to collect laun |   |
| Washing pets' beds separately   |   |
| Going through clothes quite quickly when having kids                        |   |
|   |   |
|   |   |
|   |   |
|   |   |
|   |   |
|   |   |
|   |   |
|   |   |
|   |   |
|   |   |
|   |   |
| Move Prepare  | Select programmes   |
|   |   |
| finding out the clothes made of special materials                           | Choosing the programme according to cloth lables                |
| tracking the cloth labels   |   |
|   | Don't want to damage clothes                                    |
| Moving the laundry out of after wash soon<br>Being afraid of awful smells   | Getting the clothes completely dry                              |
|   | Get the job done as as soon as possible                         |
| Having wet clothes laying around for a long time won't be an option         | Always choosing longer time because not sure                    |
| Increasing the life of my clothes   | Choosing standard level because believe that's the best setting |
| Don't want to damage clothes  | Choosing super dry for heavy materials                          |
| no instructions/regulations about the proper load and the limit             | Caring about hygiene  |
| Filling a half of the dryer when drying heavy materials                     | Running an extra cycle if necessary                             |
| Not putting in too less because I have to pay for it                        | Drying moisture clothes in the air                              |
| Not putting in too much to all go load                                      | Saving energy   |
| Cleaning dust box and water tray  | Being sustainable   |
| Drying the laundry in the air instead of in the dryer                       | Learning from HOMIE pay-per-use washing machine                 |
| Using dryer balls   | Choosing the programme with lower price                         |
|   |   |
| Flatening the clothes a bit   | Sticking with the same programme                                |
|   | Don't want to waste money                                       |
|   | Don't want to waste time  |
|   | No wrinkles   |

| laundry drying   | after drying/move out        |
|--|------------------------------|
| Seeing the dryer starts and leave  | Sometimes forgetting to take |
|  |                              |
|  |                              |
|  |                              |
|  |                              |
|  |                              |
|  |                              |
|  |                              |
| Views on Sustainable   |                              |
|  |                              |
|  |                              |
| Changing the behaviour is not  | t the core issues maybe      |
| Trying to dry the clothes in th  | <mark>e air more</mark>      |
| Manufacturers produce mach   | ines that save more energ    |
| Consuming human labor  |                              |
| Consuming electricity  |                              |
| Consuming heat   |                              |
| Sometimes need the clothes §   | get dried immediately        |
| Doing other things while dryir   |                              |
| Knowing the energy cost  | <b>'6</b>                    |
| Knowing the proper load to b   | e sustainable                |
| Knowing the how to do laund  |                              |
|  | ry more sustainably          |
| Knowing the now to do launu  |                              |
| Sharing dryer with others  |                              |
|  | for manufacturers            |
| Sharing dryer with others  | for manufacturers            |
| Sharing dryer with others<br>Thinking it's the responsibility  | for manufacturers            |
| Sharing dryer with others<br>Thinking it's the responsibility<br>Financial consideration                     |                              |
| Sharing dryer with others<br>Thinking it's the responsibility<br>Financial consideration<br>Being convenient |                              |

|         | Eco mode  |
|---------|---|
|         |   |
| dry out | Don't understand ECO mode   |
|         | Just not that important to use the Eco mode   |
|         | Can't see the difference  |
|         | Show me the fact that it's really really sustainable  |
|         | the Eco mode can only dry the clothes made cotton so I can hardly definitely dry the clothes. |
|         | Taking time to figure out how does ECO mode work  |
|         | ECO mode costing longer time  |
|         | Using ECO mode when not in a hurry to dry everything  |
|         | Following the recommendations from the installers   |
|         | ECO mode works well   |
|         |   |

## Views on the dryer

easy to use

don't understand how the program works

The machine has noise

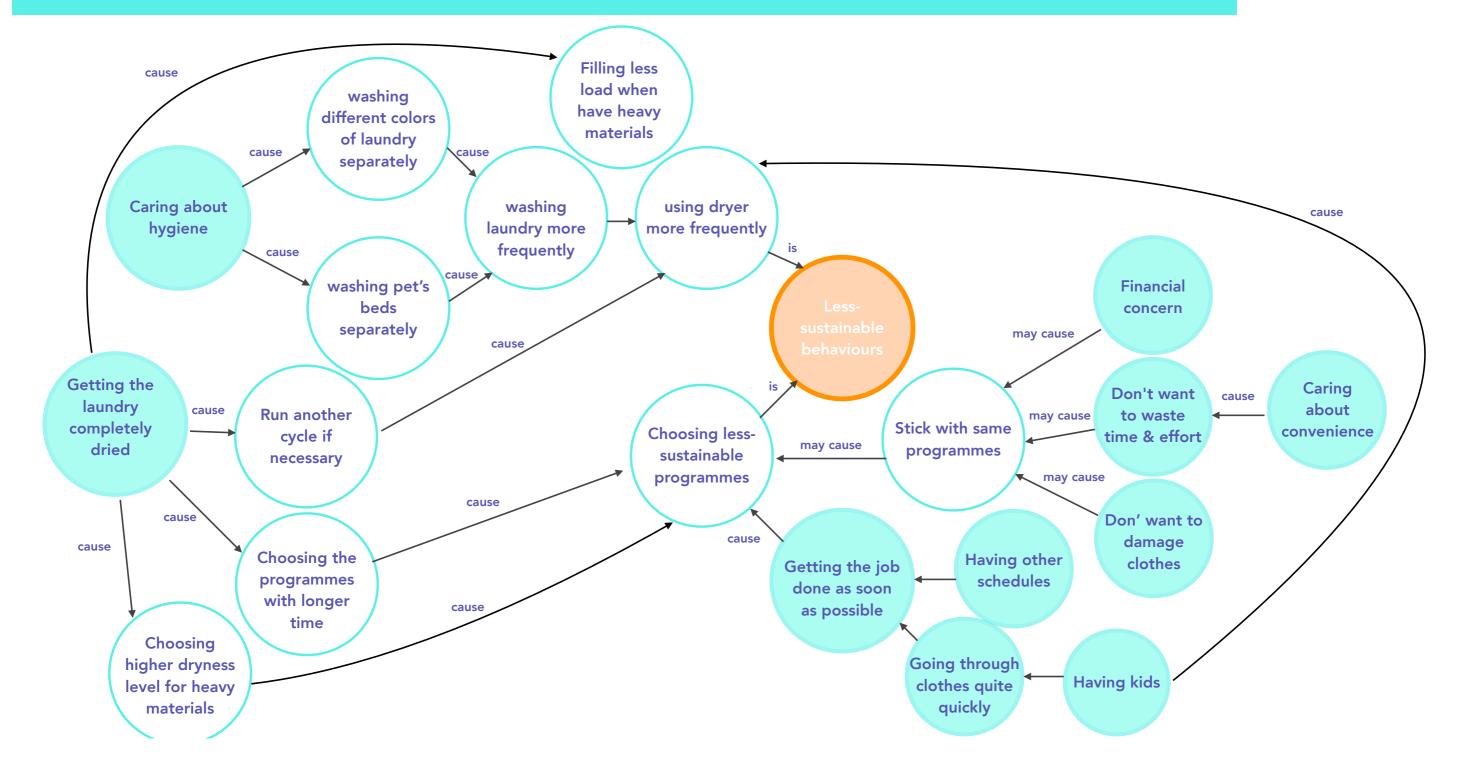
Don't know what's going on inside

| Views on feedback & service  |                            |
|--|----------------------------|
|  |                            |
| n't even remember what they showed me  |                            |
| ways have to be checking my phone and m<br>netimes they get a lot of emails. And this go |                            |
| on't look at the patterns because I know ho  | w it is that I use my drye |
| <mark>tra offer</mark>   |                            |
| king more steps than direct debit request  |                            |
| ing to Homie's website for topping up mon  | ey                         |
| owsing the website and get some updates v  | when top up the money      |
|  |                            |

Appendix 4 - List of Statements

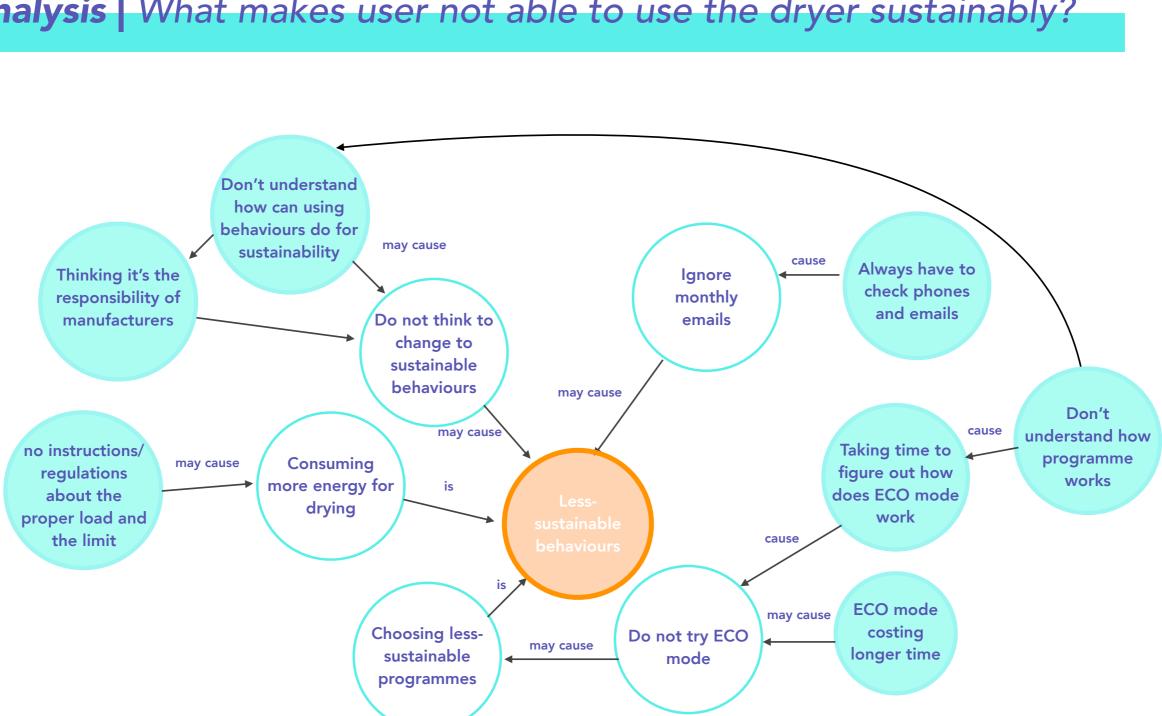
# **Appendix 5 - Influencing Factor Clusters**

## **Data Analysis** | What makes user not willing to use the dryer sustainably?



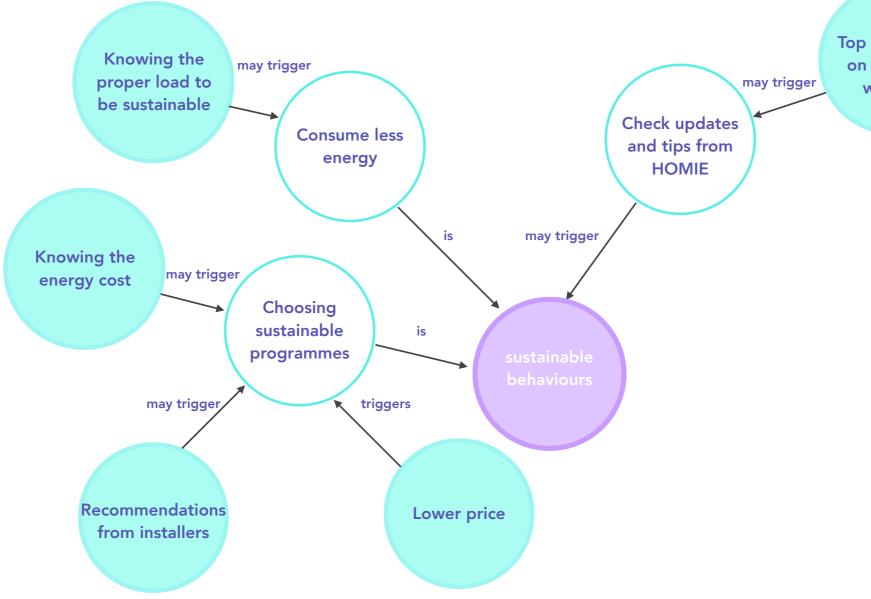


## **Data Analysis** | What makes user not able to use the dryer sustainably?



Appendix 5 - Influencing factors clusters

## **Data analysis** | What makes user act to use the dryer sustainably?



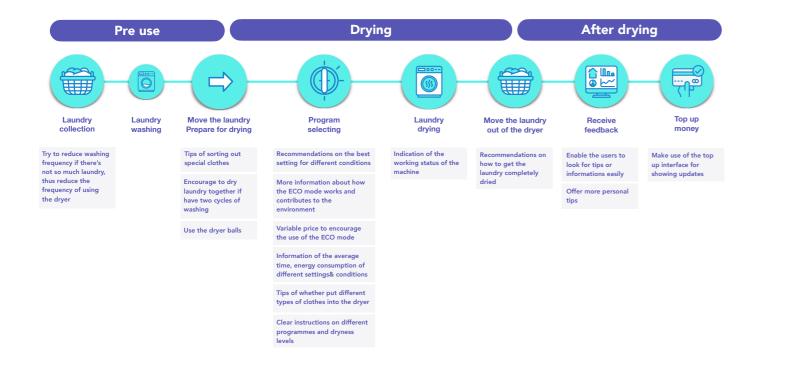
Appendix 5 - Influencing factors clusters



Top up money on HOMIE's website

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# **Appendix 6 - Design opportunies along customer journey**













# Appendix 7 - Order Form

| homie  | MIE HOW IT WORKS ORDER HOMIE OUR STORY CONTACT  |
|--|---|
| Create an account                                |   |
| Already have an account? <u>Then log</u>         | <u>gin first</u> before you order a new product.  |
| First Name*                                      | Infix Last name*  |
| Street name*                                     | House number + addition*  |
| Postcode*  | Town/City*  |
| The Netherlands                                  | •   |
| E-mail*  | Mobile*   |
| Please select your preferred language            | *   |
| Password*  | Confirm Password*   |
| Ves<br>No, instead                               |   |
| which floor will the appliance be place          | d?  |
| Ground Floor                                     |   |
| <ul> <li>1st Floor</li> <li>2nd Floor</li> </ul> |   |
| Other  |   |
|  |   |
| w can we reach your house?                       |   |
| Via lift/elevator                                |   |
| 🔿 via stairs                                     |   |
| · ·  |   |
| Both not applicable                              |   |
| ve you got a preference for a specific c         | <b>day or time of day?</b><br>en 09.00am and 6.00pm. After you have finished filling out this form, we will contact you asap to |

| Product selection          | Personal details             | Delivery  | Extra questions | Confirmation |
|----------------------------|------------------------------|-----------|-----------------|--------------|
| Extra questions            |                              |           |                 |              |
|                            | o use the dryer on average p | per week? |                 |              |
| Select V                   |                              |           |                 |              |
|                            |                              |           |                 |              |
| How dry do you usually wa  | nt your laundry to be?       |           |                 |              |
| Iron-dry                   |                              |           |                 |              |
| Cupboard-dry               |                              |           |                 |              |
| Strong-dry                 |                              |           |                 |              |
| Extra-dry                  |                              |           |                 |              |
| What do you usually use th | e dryer for?                 |           |                 |              |
| O Cotton clothes           |                              |           |                 |              |
| Synthetic clothin          | ng                           |           |                 |              |
| O Woolen clothing          |                              |           |                 |              |
| O Towels                   |                              |           |                 |              |
| Bed linen                  |                              |           |                 |              |
| Other, namely              |                              |           |                 |              |
| (                          |                              |           |                 |              |
| Household size             |                              |           |                 |              |
| Select 🔻                   |                              |           |                 |              |
|                            | Level 0                      |           |                 |              |
| w did you find out about H | iomie <i>?</i>               |           |                 |              |
| Google                     |                              |           |                 |              |
| Marktplaats                |                              |           |                 |              |
| Social media               |                              |           |                 |              |
| From a friend              |                              |           |                 |              |
| I am/was a Homie           |                              |           |                 |              |
| In a store, namely.        | •                            |           |                 |              |
|                            | mor nomely                   |           |                 |              |
| Via a Homie custor         | ner, namery                  |           |                 |              |
|                            |                              |           |                 |              |
| Other, namely              |                              |           |                 |              |

| HOMIE HOW IT WORKS ORDER HOMIE OUR STORY CONTACT Account  |  |
|---|--|
| This is your order  | I understand that ticking the "Confirm" button automatically leads to placing an order with Homie and includes the obligat to pay fees in accordance with the contract and the payment methods as provided |
| Products Price Quantity Total cost  |  |
| Homie Dryer €0,00 (1 ▼) €0,00 🔟   | Finally, is there something else we should know?   |
|   | Optional: additional information   |
|   | Please check your information  |
| Extra services  | Delivery address Edit Contact details  |
| Free delivery and placement   |  |
| Connect to a normal power socket €0,00  |  |
| Connect to a trekeansluiting €0,00  | The Netherlands  |
| Do we need to take back an old appliance for recycling? (at no additional charge) €0,00<br>Please make sure that your appliance is disconnected and ready for pick up | Total €0,0<br>back   |
| HOMIE HOW IT WORKS ORDER HOMIE OUR STORY CONTACT Account  |  |
| e still need to know this   | homie de everywhere in TheHomie the How IT WORKS ORDER HOMIE OUR STORY CONTACT Accour  |
| How can the appliance be connected to wireless internet?<br>Please contact Homie before confirming your order, if wireless internet is not available.                 |  |
| Via a WiFi router<br>Please note: our appliances only work with a standard 2.4GHz WiFi network.   | ORDER HOMIE  |
| Via a WiFi hotspot from a smartphone or dongle  |  |
| Please note: it is the customer's responsibility to put the device online at least once a month.  | Click here to see our  |
| I am over 18 years old, and   | February combo deal  |
| I accept the general conditions and agree with the terms of the Homie contract  |  |
| I have checked and confirm the information I have supplied  | Thank you, we have received your order (# 10517)   |
| I understand that ticking the "Confirm" button automatically leads to placing an order with Homie and includes the obligation   | You will be contacted within 1 (working) day with a proposal for a suitable delivery date and time.  |
| to pay fees in accordance with the contract and the payment methods as provided   | Click here to add credit to your Homie account.  |

# **Appendix 8 - Evaluation Assessment**

Participant 1

|   | Environmental             |   |            |   |   | Business                    |                            |                               | User                         |  |   |   |   |   |  |
|---|---------------------------|---|------------|---|---|-----------------------------|----------------------------|-------------------------------|------------------------------|--|---|---|---|---|--|
| 1-5 score<br>1: not effective<br>3: neutral (ok)<br>5: very effective | Decrease<br>unnessary use | Decrease<br>unnessary<br>high dryness<br>levels | the use of |   | Fit value<br>proposition<br>(sustainable, cheap,<br>worry-free, supportive) | Increase user<br>engagement | Create new<br>value stream | Different from<br>competitors | Convenient<br>(time, effort) | Achieve<br>effective laundry<br>drying results | Clear<br>instructions, tips<br>and feedback |   |   |   | Let customers<br>feel empowered<br>when using the<br>dryer<br>(be supported) |
| Concept 1 -<br>HOMIE All in<br>Hand                                   | 3                         | 4   | 3          | 3 | 4   | 3                           | 3                          | 2                             | 3                            | 4  | 5   | 4 | 4 | 3 | 5  |
| Concept 2 -<br>HOMIE Planner  | 4                         | 5   | 3          | 3 | 4   | 2                           | 4                          | 4                             | 1                            | 4  | 4   | 3 | 4 | 4 | 3  |
| Concept 3 -<br>HOMIE Smart<br>Dryer                                   | 2                         | 4   | 5          | 1 | 5   | 5                           | 4                          | 3                             | 5                            | 4  | 3   | 4 | 2 | 4 | 4  |
| Concept 4 -<br>HOMIE Free for<br>Future                               | 2                         | 3   | 4          | 5 | 2   | 5                           | 4                          | 3                             | 3                            | 3  | 4   | 3 | 4 | 5 | 4  |

|   | Environmental             |   |                                     | Business  |   |                             |                            |                               |                              | User   |   |   |   |                   |  |
|---|---------------------------|---|-------------------------------------|-----------|---|-----------------------------|----------------------------|-------------------------------|------------------------------|--|---|---|---|-------------------|--|
| 1-5 score<br>1: not effective<br>3: neutral (ok)<br>5: very effective | Decrease<br>unnessary use | Decrease<br>unnessary<br>high dryness<br>levels | Encourage<br>the use of<br>ECO mode | resources | Fit value<br>proposition<br>(sustainable, cheap,<br>worry-free, supportive) | Increase user<br>engagement | Create new<br>value stream | Different from<br>competitors | Convenient<br>(time, effort) | Achieve<br>effective laundry<br>drying results | Clear<br>instructions, tips<br>and feedback |   | Emphasize the<br>achievements of<br>performing<br>sustainable<br>behaviours | role of operating | Let customers<br>feel empowered<br>when using the<br>dryer |
| Concept 1 -<br>HOMIE All in<br>Hand                                   | 3                         | 3   | 4                                   | 4         | 4   | 4                           | 3                          | 4                             | 3                            | 3  | 3   | 4 | 3   | 4                 | 3  |
| Concept 2 -<br>HOMIE Planner  | 3                         | 3   | 3                                   | 3         | 3   | 4                           | 3                          | 3                             | 4                            | 3  | 3   | 3 | 3   | 3                 | 4  |
| Concept 3 -<br>HOMIE Smart<br>Dryer                                   | 4                         | 3   | 3                                   | 3         | 3   | 3                           | 4                          | 3                             | 4                            | 4  | 3   | 3 | 3   | 3                 | 4  |
| Concept 4 -<br>HOMIE Free for<br>Future                               | 3                         | 2   | 4                                   | 4         | 4   | 4                           | 4                          | 5                             | 4                            | 3  | 3   | 3 | 4   | 4                 | 3  |

|   | E                         | nvironmental                                    |                                     |           |   | Business                    |                            |                               |                              |  |   | User |   |   |  |
|---|---------------------------|---|-------------------------------------|-----------|---|-----------------------------|----------------------------|-------------------------------|------------------------------|--|---|------|---|---|--|
| 1-5 score<br>1: not effective<br>3: neutral (ok)<br>5: very effective | Decrease<br>unnessary use | Decrease<br>unnessary<br>high dryness<br>levels | Encourage<br>the use of<br>ECO mode | resources | Fit value<br>proposition<br>(sustainable, cheap,<br>worry-free, supportive) | Increase user<br>engagement | Create new<br>value stream | Different from<br>competitors | Convenient<br>(time, effort) | Achieve<br>effective laundry<br>drying results | Clear<br>instructions, tips<br>and feedback |      |   |   | Let customers<br>feel empowered<br>when using the<br>dryer |
| Concept 1 -<br>HOMIE All in<br>Hand                                   | 3                         | 3   | 5                                   | 4         | 4   | 3                           | 3                          | 4                             | 4                            | 3  | 4   | 5    | 5 | 5 | 4  |
| Concept 2 -<br>HOMIE Planner  | 4                         | 5   | 4                                   | 3         | 5   | 5                           | 3                          | 3                             | 5                            | 5  | 5   | 5    | 4 | 4 | 5  |
| Concept 3 -<br>HOMIE Smart<br>Dryer                                   |                           | 5   | 3                                   | 3         | 4   | 5                           | 5                          | 5                             | 5                            | 5  | 4   | 2    | 2 | 2 | 2  |
| Concept 4 -<br>HOMIE Free for<br>Future                               |                           | 5   | 5                                   | 4         | 5   | 5                           | 3                          | 5                             | 4                            | 4  | 4   | 3    | 5 | 5 | 4  |

|   | E                         | nvironmental                                    |                                     |           |   | Business                    |                         |                               |                              |  |   | User                       |   |   |  |
|---|---------------------------|---|-------------------------------------|-----------|---|-----------------------------|-------------------------|-------------------------------|------------------------------|--|---|----------------------------|---|---|--|
| 1-5 score<br>1: not effective<br>3: neutral (ok)<br>5: very effective | Decrease<br>unnessary use | Decrease<br>unnessary<br>high dryness<br>levels | Encourage<br>the use of<br>ECO mode | resources | Fit value<br>proposition<br>(sustainable, cheap,<br>worry-free, supportive) | Increase user<br>engagement | Create new value stream | Different from<br>competitors | Convenient<br>(time, effort) | Achieve<br>effective laundry<br>drying results | Clear<br>instructions, tips<br>and feedback | Easy to access information |   |   | Let customers<br>feel empowered<br>when using the<br>dryer |
| Concept 1 -<br>HOMIE All in<br>Hand                                   | 3                         | 3   | 4                                   | 5         | 3   | 4                           | 3                       | 2                             | 3                            | 4  | 4   | 5                          | 5 | 4 | 4  |
| Concept 2 -<br>HOMIE Planner  | 5                         | 4   | 4                                   | 3         | 4   | 4                           | 3                       | 3                             | 4                            | 4  | 5   | 5                          | 3 | 4 | 4  |
| Concept 3 -<br>HOMIE Smart<br>Dryer                                   | 4                         | 5   | 4                                   | 3         | 2   | 3                           | 3                       | 5                             | 5                            | 5  | 4   | 3                          | 3 | 3 | 4  |
| Concept 4 -<br>HOMIE Free for<br>Future                               | 4                         | 4   | 5                                   | 4         | 5   | 5                           | 3                       | 4                             | 2                            | 3  | 4   | 3                          | 4 | 5 | 3  |

|   | E                         | nvironmental                                    |   |           |   | Business                    |                            |                            |                              |  |   | User |   |                   |  |
|---|---------------------------|---|---|-----------|---|-----------------------------|----------------------------|----------------------------|------------------------------|--|---|------|---|-------------------|--|
| 1-5 score<br>1: not effective<br>3: neutral (ok)<br>5: very effective | Decrease<br>unnessary use | Decrease<br>unnessary<br>high dryness<br>levels |   | resources | Fit value<br>proposition<br>(sustainable, cheap,<br>worry-free, supportive) | Increase user<br>engagement | Create new<br>value stream | Different from competitors | Convenient<br>(time, effort) | Achieve<br>effective laundry<br>drying results | Clear<br>instructions, tips<br>and feedback |      | Emphasize the<br>achievements of<br>performing<br>sustainable<br>behaviours | role of operating | Let customers<br>feel empowered<br>when using the<br>dryer (be<br>supported) |
| Concept 1 -<br>HOMIE All in<br>Hand                                   | 2                         | 2   | 3 | 4         | 3   | 4                           | 2                          | 2                          | 3                            | 3  | 4   | 4    | 4   | 4                 | 3  |
| Concept 2 -<br>HOMIE Planner  | 3                         | 3   | 4 | 4         | 4   | 4                           | 3                          | 3                          | 3                            | 4  | 5   | 4    | 3   | 4                 | 5  |
| Concept 3 -<br>HOMIE Smart<br>Dryer                                   | 3                         | 4   | 4 | 4         | 5   | 3                           | 4                          | 5                          | 4                            | 4  | 5   | 4    | 3   | 4                 | 5  |
| Concept 4 -<br>HOMIE Free for<br>Future                               | 3                         | 3   | 5 | 4         | 4   | 5                           | 4                          | 3                          | 3                            | 3  | 3   | 4    | 4   | 5                 | 3  |

| 1-5 score<br>1: not effective<br>3: neutral (ok)<br>5: very effective | Decrease<br>unnessary use | Decrease<br>unnessary<br>high dryness<br>levels |   | Use brand resources | Fit value<br>proposition<br>(sustainable,<br>cheap, worry-free,<br>supportive) | Increase user<br>engagement | Create new value stream | Different from<br>competitors | Convenient<br>(time, effort) | Achieve<br>effective laundry<br>drying results | Clear<br>instructions, tips<br>and feedback | Easy to access information |   | role of operating |   |
|---|---------------------------|---|---|---------------------|--|-----------------------------|-------------------------|-------------------------------|------------------------------|--|---|----------------------------|---|-------------------|---|
| Concept 1 -<br>HOMIE All in<br>Hand                                   | 2                         | 2   | 2 | 4                   | 3  | 3                           | 3                       | 2                             | 3                            | 3  | 2   | 2                          | 3 | 2                 | 2 |
| Concept 2 -<br>HOMIE Planner  | 3                         | 3   | 3 | 2                   | 4  | 3                           | 2                       | 4                             | 3                            | 4  | 3(less feedback)                            | 2                          | 2 | 3                 | 3 |
| Concept 3 -<br>HOMIE Smart<br>Dryer                                   | 4                         | 4   | 4 | 4                   | 4  | 4                           | 3                       | 5                             | 4                            | 4  | 4   | 3                          | 4 | 4                 | 4 |
| Concept 4 -<br>HOMIE Free for<br>Future                               | 3                         | 4   | 4 | 4                   | 5  | 5                           | 4                       | 5                             | 3                            | 4  | 4   | 4                          | 4 | 4                 | 5 |

|   | E                         | nvironmental                                    |            |   |  | Business                    |  |                               |                              |  |   | User |   |                   |  |
|---|---------------------------|---|------------|---|--|-----------------------------|--|-------------------------------|------------------------------|--|---|------|---|-------------------|--|
| 1-5 score<br>1: not effective<br>3: neutral (ok)<br>5: very effective | Decrease<br>unnessary use | Decrease<br>unnessary<br>high dryness<br>levels | the use of |   | Fit value<br>proposition<br>(sustainable,<br>cheap, worry-free,<br>supportive) | Increase user<br>engagement | Create new<br>value stream<br>(new business<br>mode) | Different from<br>competitors | Convenient<br>(time, effort) | Achieve<br>effective laundry<br>drying results | Clear<br>instructions, tips<br>and feedback |      | Emphasize the<br>achievements of<br>performing<br>sustainable<br>behaviours | role of operating | Let customers<br>feel empowered<br>when using the<br>dryer |
| Concept 1 -<br>HOMIE All in<br>Hand                                   | 3                         | 3   | 3          | 4 | 4  | 3                           | 2  | 3                             | 4                            | 3  | 4   | 4    | 3   | 3                 | 3  |
| Concept 2 -<br>HOMIE Planner  | 4                         | 4   | 3          | 3 | 3  | 5                           | 3  | 5                             | 2                            | 4  | 3   | 2    | 3   | 4                 | 3  |
| Concept 3 -<br>HOMIE Smart<br>Dryer                                   | 2                         | 3   | 3          | 2 | 3  | 3                           | 5  | 4                             | 4                            | 4  | 3   | 4    | 3   | 3                 | 2  |
| Concept 4 -<br>HOMIE Free for<br>Future                               | 3                         | 4   | 5          | 3 | 4  | 5                           | 4  | 5                             | 3                            | 4  | 5   | 3    | 3   | 5                 | 4  |

| 1-5 score<br>1: not effective<br>3: neutral (ok)<br>5: very effective | Decrease<br>unnessary use | Decrease<br>unnessary<br>high dryness<br>levels | Encourage<br>the use of<br>ECO mode | resources | Fit value<br>proposition<br>(sustainable,<br>cheap, worry-free,<br>supportive) | Increase user<br>engagement | Create new value stream | Different from<br>competitors | Convenient<br>(time, effort) | Achieve<br>effective laundry<br>drying results | Clear<br>instructions, tips<br>and feedback |   |   |   | Let customers<br>feel empowered<br>when using the<br>dryer |
|---|---------------------------|---|-------------------------------------|-----------|--|-----------------------------|-------------------------|-------------------------------|------------------------------|--|---|---|---|---|--|
| Concept 1 -<br>HOMIE All in<br>Hand                                   | 3                         | 3   | 3                                   | 2         | 4  | 3                           | 2                       | 2                             | 4                            | 4  | 4   | 5 | 4 | 4 | 4  |
| Concept 2 -<br>HOMIE Planner  | 4                         | 4   | 4                                   | 2         | 4  | 5                           | 2                       | 4                             | 4                            | 4  | 5   | 5 | 4 | 4 | 4  |
| Concept 3 -<br>HOMIE Smart<br>Dryer                                   | 4                         | 4   | 3                                   | 4         | 4  | 3                           | 3                       | 4                             | 5                            | 5  | 4   | 5 | 3 | 3 | 4  |
| Concept 4 -<br>HOMIE Free for<br>Future                               | 4                         | 4   | 5                                   | 4         | 5  | 5                           | 3                       | 4                             | 4                            | 4  | 5   | 4 | 5 | 5 | 5  |

|   | E                         | nvironmental                                    |                                     |   |  | Business                    |                         |                               |                              |  |   | User                          |   |   |  |
|---|---------------------------|---|-------------------------------------|---|--|-----------------------------|-------------------------|-------------------------------|------------------------------|--|---|-------------------------------|---|---|--|
| 1-5 score<br>1: not effective<br>3: neutral (ok)<br>5: very effective | Decrease<br>unnessary use | Decrease<br>unnessary<br>high dryness<br>levels | Encourage<br>the use of<br>ECO mode |   | Fit value<br>proposition<br>(sustainable,<br>cheap, worry-free,<br>supportive) | Increase user<br>engagement | Create new value stream | Different from<br>competitors | Convenient<br>(time, effort) | Achieve<br>effective laundry<br>drying results | Clear<br>instructions, tips<br>and feedback | Easy to access<br>information |   |   | Let customers<br>feel empowered<br>when using the<br>dryer |
| Concept 1 -<br>HOMIE All in<br>Hand                                   | 2                         | 2   | 2                                   | 3 | 4  | 2                           | 4                       | 2                             | -                            | -  | 4   | 3                             | - | - | -  |
| Concept 2 -<br>HOMIE Planner  | 4                         | 3   | 3                                   | 2 | 2  | 4                           | 4                       | 4                             | 2                            | 2  | 3   | -                             | - | 4 | -  |
| Concept 3 -<br>HOMIE Smart<br>Dryer                                   | 2                         | 4   | 4                                   | 2 | 3  | 2                           | 4                       | 4                             | 4                            | 4  | 3   |                               | - | 4 | -  |
| Concept 4 -<br>HOMIE Free for<br>Future                               | 3                         | 3   | 3                                   | 5 | 3  | 5                           | 4                       | 4                             | 2                            | -  | 5   | 4                             | 5 | 5 | 5  |

|   |                           | Environmental                                |                                     |                        |   | Business                    |                         |                               |                              |  |   | User                       |   |  |   |
|---|---------------------------|--|-------------------------------------|------------------------|---|-----------------------------|-------------------------|-------------------------------|------------------------------|--|---|----------------------------|---|--|---|
| 1-5 score<br>1: not effective<br>3: neutral (ok)<br>5: very effective | Decrease<br>unnessary use | Decrease<br>unnessary high<br>dryness levels | Encourage the<br>use of ECO<br>mode | Use brand<br>resources | Fit value<br>proposition<br>(sustainable,<br>cheap,<br>worry-free,<br>supportive) | Increase user<br>engagement | Create new value stream | Different from<br>competitors | Convenient<br>(time, effort) | Achieve<br>effective laundry<br>drying results | Clear<br>instructions, tips<br>and feedback | Easy to access information |   | Emphasize the<br>role of operating<br>the sustainable<br>dryer use<br>system |   |
| Concept 1 -<br>HOMIE All in<br>Hand                                   | 3                         | 3  | 4                                   | 4                      | 4   | 4                           | 3                       | 3                             | 3                            | 3  | 5   | 4                          | 3 | 3  | 4 |
| Concept 2 -<br>HOMIE Planner  | 4                         | 4  | 4                                   | 4                      | 3   | 3                           | 3                       | 3                             | 4                            | 4  | 3   | 3                          | 2 | 2  | 3 |
| Concept 3 -<br>HOMIE Smart<br>Dryer                                   | 5                         | 5  | 3                                   | 3                      | 4   | 3                           | 4                       | 4                             | 4                            | 4  | 3   | 3                          | 2 | 2  | 2 |
| Concept 4 -<br>HOMIE Free for<br>Future                               | 3                         | 4  | 5                                   | 5                      | 4   | 4                           | 4                       | 4                             | 3                            | 3  | 4   | 4                          | 4 | 4  | 4 |

# **Appendix 9 - Break-even point**

## Break-even point calculation of HOMIE STAR service

| cost(per machine)    | item                                    | notes   | month 0 (€)       | month 1(€) | month n(€)             | n=          |
|----------------------|---|---|-------------------|------------|------------------------|-------------|
|                      | Dryer                                   | Current machine price (without discount)  | €499              | -          | -                      |             |
|                      | Delivery                                | Roughly estimated   | €50               | -          | -                      |             |
|                      | App(/amount of customers)               | Price for app development €72,600. The estimated amount of customers is 3000(as HOMIE has 1349 customers till March, 2020)  | €24.2             | -          | -                      |             |
|                      | HOMIE ECO voucher per machine(customer) | <ul> <li>40% of customers are estimated to reach 40% ECO mode goal and gain 2 ECO credits (0.2 free cycle);</li> <li>40% of customers are estimated to reach 60% ECO mode goal and gain 5 ECO credits (0.5 free cycle);</li> <li>20% of customers are estimated to reach 80% ECO mode goal and gain 10 ECO credits (1 free cycle);</li> </ul> | €0.816            | €1.632     | €0.816*n               |             |
|                      | Total investment per machine            | -   | €574.016          | €575.648   | €574.016 +<br>€0.816*n |             |
|                      |   |   | (1.0.(0))         |            |                        |             |
| revenue(per machine) | stream                                  | notes   | month 0 (€)       | month 1(€) | month n(€)             | n=          |
|                      | Dryer use fee                           | €1.7 * 7.92 per month   | 0                 | €13.464    | €619                   | 45.38393422 |
|                      | Dryer use fee + Data sharing            | €128 per person   | 0                 | €13.464    | €612.70                | 35.26375712 |
| Balance              | Dryer use fee                           | Revenue - cost  | <i>-</i> €574.016 | -€562.184  | €7.448                 | 46          |
|                      | Dryer use fee + Data sharing            | Revenue - cost  | <i>-</i> €574.016 | -€562.184  | €9.308                 | 36          |