

# Improving Hombli's ability to innovate by Design

## Appendices

Appendix A: NPS Score per product & interview guide Hombli users

Appendix B: Overview of competitors

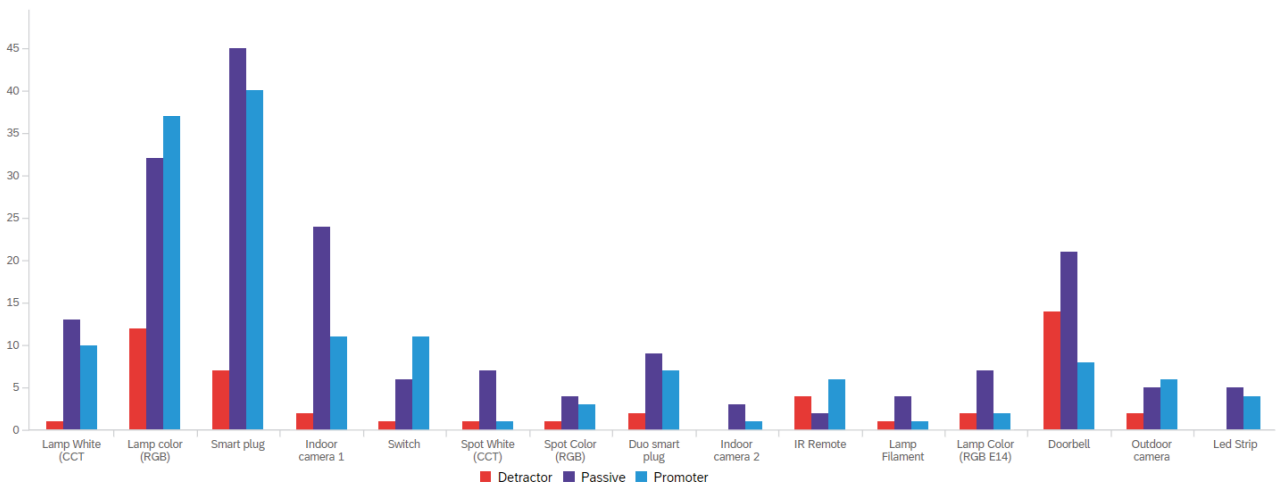
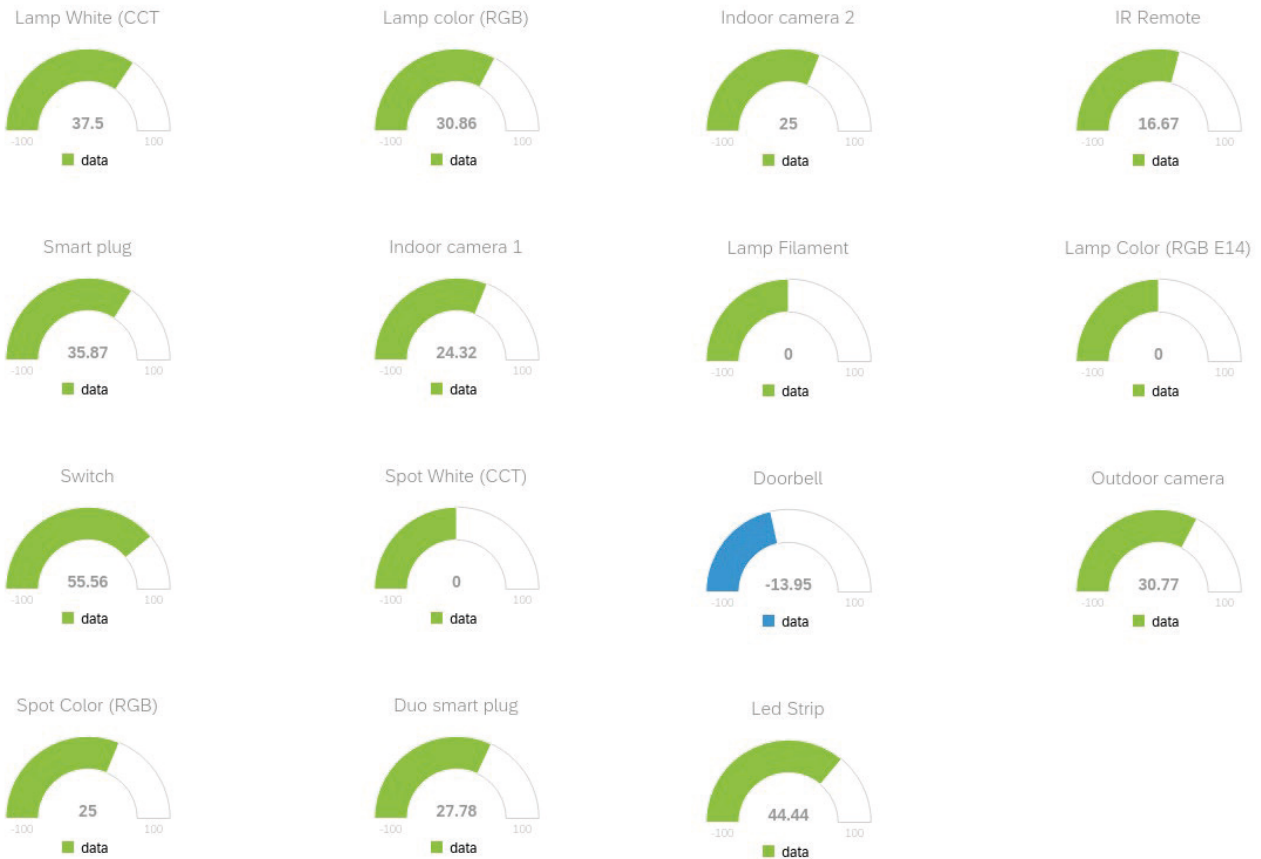
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Sven Bonte  
4362144

# Appendix A1: NPS Score per product



# Appendix A2: Interview guide Hombli interviews

Interview guide conversations with Hombli customers.

Purpose: what are the needs wishes of Hombli users with regarding to their home.

Good afternoon/tomorrow/evening

Thank you for speaking to me for my research.

About the user:

1. Can you tell us about your living situation: type of house, how many residents?
2. What do you think is the nicest place in your home? Where do you completely relax?

Probes: Why specifically that place? At what point during the day is that such a nice place? What elements in your living room make that such a nice place?

Why? Example when? → Suppose you come home after a long day, where do you go, why there, etc.

3. You indicated in the questionnaire that you like to ... Do you have examples of this?

You indicated in the questionnaire that you have a .... user / that you love ...:

4. Could you explain that? How come you thought you were thinking about this description: are there any other things in your house that point to this?
5. Do you feel that Hombli's current products fit in well with that? What other products do you have that match that description: does not have to be electronics, can also be decoration, color
6. What do you think of the Hombli devices?
7. Which device do you find most convenient, why?
8. Is your experience consistent with the expectations you had of smart products?
9. Can you think of other things in your home that you would also like to automate?
10. You indicated that your Hombli experience a 10/9/8 etc. could explain to you what you base this figure on.

# Appendix B: Overview of competitors

Brand		
Naam	What do they do/messaging	source
<u>Hombli</u>		<a href="https://www.hombli.com/#">https://www.hombli.com/#</a>
<u>CALEX</u>	Special lamps	<a href="https://www.calex.eu/series/smart-home/#">https://www.calex.eu/series/smart-home/#</a>
<u>HiHome</u>	Cheap	<a href="https://hihome.eu/nl/#">https://hihome.eu/nl/#</a>
<u>Silvergear</u>	Cheap	<a href="https://silvergear.eu/product-categorie/smart-home/#">https://silvergear.eu/product-categorie/smart-home/#</a>
<u>Marmitek</u>	Multimedia	<a href="https://www.marmitek.com/#">https://www.marmitek.com/#</a>
<u>LSC (Action)</u>	Cheap	<a href="https://www.action.com/nl-nl/brand/lsc-smart-connect/#">https://www.action.com/nl-nl/brand/lsc-smart-connect/#</a>
<u>Philips Hue</u>	Advanced	<a href="https://www.philips-hue.com/nl-nl/#">https://www.philips-hue.com/nl-nl/#</a>
<u>LIFX</u>	Fancy	<a href="https://www.lifx.com/#">https://www.lifx.com/#</a>
<u>Fibaro</u>	Robust	<a href="https://www.fibaro.com/nl/#">https://www.fibaro.com/nl/#</a>
<u>Klikaanklikuit</u>	No-nonsense	<a href="https://klikaanklikuit.nl/#">https://klikaanklikuit.nl/#</a>
<u>Kasa (TP-link)</u>	Solid	<a href="https://www.kasasmart.com/us#">https://www.kasasmart.com/us#</a>
<u>AVM (Fritz)</u>	Powerful	<a href="https://fritzshop.nl/21-smart-home#">https://fritzshop.nl/21-smart-home#</a>
<u>EVE</u>	Private	<a href="https://www.evehome.com/en#">https://www.evehome.com/en#</a>
<u>Ezviz</u>	Security	<a href="https://www.ezviz.eu/nl/#">https://www.ezviz.eu/nl/#</a>
<u>Innr</u>	Simple	<a href="https://www.innr.com/nl/#">https://www.innr.com/nl/#</a>
<u>Osram</u>	generic	<a href="https://smartplus.benelux.ledvance.com/nl/#">https://smartplus.benelux.ledvance.com/nl/#</a>
<u>Somfy</u>	Comfort	<a href="https://www.somfy.nl/producten/smart-home/tahoma-smart-home#">https://www.somfy.nl/producten/smart-home/tahoma-smart-home#</a>
<u>Trust</u>	No-nonsense	<a href="https://www.trust.com/nl/smarthome#">https://www.trust.com/nl/smarthome#</a>
<u>Wiz (van Signify/Philips)</u>	Creative	<a href="https://www.wizconnected.com/nl-NL/#">https://www.wizconnected.com/nl-NL/#</a>
<u>Cbyge</u>	Clean	<a href="https://www.cbyge.com/#">https://www.cbyge.com/#</a>
<u>Nanoleaf</u>	Creative	<a href="https://nanoleaf.me/en/#">https://nanoleaf.me/en/#</a>
<u>Mi</u>	Cheap	<a href="https://www.mi.com/us/yeelight-led-light-bulb#">https://www.mi.com/us/yeelight-led-light-bulb#</a>
<u>Ring</u>	Specialised	<a href="https://nl-nl.ring.com/#">https://nl-nl.ring.com/#</a>
<u>IKEA</u>	For-everyone	<a href="https://www.ikea.com/nl/nl/product-guides/ikea-home-smart-system/#">https://www.ikea.com/nl/nl/product-guides/ikea-home-smart-system/#</a>
<u>LifeSmart</u>	Premium	<a href="https://iot.ilifesmart.com/smart-home/#">https://iot.ilifesmart.com/smart-home/#</a>
<u>Sensibo</u>	Aiconditioning	<a href="https://sensibo.com/#">https://sensibo.com/#</a>
<u>Woox</u>	Cheap	<a href="https://wooxhome.com/#">https://wooxhome.com/#</a>
<u>Tado</u>	Climate control	<a href="https://www.tado.com/#">https://www.tado.com/#</a>
<u>Switchbot</u>	Unique	<a href="https://www.switch-bot.com/?lang=nl#">https://www.switch-bot.com/?lang=nl#</a>
<u>Orvibo</u>	Design	<a href="https://www.orvibo.com/en/product/easypackage.html#">https://www.orvibo.com/en/product/easypackage.html#</a>
<u>Aquara</u>	Cheap	<a href="https://www.aqara.com/us/home.html#">https://www.aqara.com/us/home.html#</a>
<u>HomeMate</u>	Cheap	<a href="https://homemate.co.in/#">https://homemate.co.in/#</a>
<u>Netatmo</u>	Security	<a href="https://www.netatmo.com/nl-nl/#">https://www.netatmo.com/nl-nl/#</a>
<u>Insteon</u>	Connectivity	<a href="https://www.insteon.com/#">https://www.insteon.com/#</a>
<u>Nedis</u>	Cheap	<a href="https://nedis.nl/nl-nl/category/smart-living#">https://nedis.nl/nl-nl/category/smart-living#</a>
<u>Josh</u>	Luxury	<a href="https://www.josh.ai/#">https://www.josh.ai/#</a>
<u>HomeWizard</u>	No-nonsense	<a href="https://www.homewizard.nl/#">https://www.homewizard.nl/#</a>
<u>wyze</u>	Bold	<a href="https://wyze.com/#">https://wyze.com/#</a>
<u>Govee</u>	Creative light	<a href="https://www.govee.com/#">https://www.govee.com/#</a>
<u>Arlo</u>	Security	<a href="https://www.arlo.com/nl/default.aspx#">https://www.arlo.com/nl/default.aspx#</a>

# Appendix C: DESTEP Trend list

## Demographic

Growing population. Population is expected to grow from 7.79 billion in 2020 to 8.55 billion in 2030. (Roser, 2019)

Greying population: By 2030, all baby boomers will be older than age 65. This will expand the size of the older population so that 1 in every 5 residents will be retirement age. (Jordan, 2018)

Post-industrial economies (Barilla Centre, 2019)

1. Progressive aging of the population
2. Decrease in the birth rate;
3. Increase in life expectancy;
4. Influx of new population through migratory flows

One-Person Households The one-person household is the fastest-growing household type in the world, particularly in Asia. The prevalence of one-person households is growing not only because of the rising widowhood and divorced population but also due to an increase in the never-married population and labor migration. (Wei-Jun, 2016)

Aging population

The world's population is aging; virtually every country in the world is experiencing growth in the number and proportion of older persons in their population. (United Nations, nd.)

The ratio of children to older citizens stands at about 3:1 but is declining. By around 2040, there will be more older citizens than children. By 2050, there will be twice as many older citizens as there are children. (Badkar, 2014).

## Economical

The internet of things (IoT) market is expected to grow to 75.44 billion connected devices by 2025 with a projected market value of \$1.1 trillion by 2026 (Daugherty, Carrel-Billiard & Blitz, 2020)

Advanced economies are projected to shrink 7 percent due to COVID19. (World Bank, 2020)

Subscription for physical products about to become more worth than digital subscriptions (Juniper Research, 2020)

## Social

Lifelong learning There continue to be a wide variety of trends emerging in the market for lifelong learning and continuing education and it's important to understand what impact, if any, each of these might have on your learning business. (Cobb, 2019)

Loneliness is an increasing problem in all ages affecting mental and physical wellbeing; among young people it is also rampant (Ipsos, 2020)

Working from home is and will remain more acceptable, people prefer a combination of home and office work (Volini et al. 2020; Masterson, 2020)

85% of people spend the same amount or more time at home as they did five years ago further increased by COVID19 (Earley & Vassileva, 2020; Deloitte, 2020)

Increase in stressed out people with burnout related symptoms: especially young people have these symptoms further increased by COVID (Volini et al. 2020)

Increased acceptance of technology (Volini et al. 2020)

Increased awareness and concern regarding data privacy (Daugherty, Carrel-Billiard & Blitz, 2020)

People spend 6.4 hours a day on the internet and its increasing (Daugherty, Carrel-Billiard & Blitz, 2020)

People demand information (TrendWatching, 2020)

Consumers are more health focussed. Mobile apps and health trackers are making people more aware of the food they consume. (Deloitte, 2019)

Protecting home: homeowners see surveillance as more necessary, since working from home becomes more prevalent further reinforced by COVID19 (Forbes, 2019)

Ordering takeaway is booming, further increased by COVID19 (Xinhua,2019)

People fear losing their jobs due to COVID19 (WEF, 2020)

Life long learning: people grow older and jobs are changing People need to learn instead of know (Fleming, 2020; Markovtiz, 2020; Sault, 2020)

Healthcare is focussing on prevention through for example diets (Yoon, 2020)

Half the People aged 18-34 are afraid they are too dependent on technology

## Technological

AI is more prominent in everyday life, making hard skills in some areas less important: simple coding, graphic design, copywriting/journalism (Daugherty, Carrel-Billiard & Blitz, 2020; Bit, 2020)

# Appendix C: DESTEP Trend list

Switch from physical finished products to parts of an ecosystem of experiences: "Beta burden" (Daugherty, Carrel-Billiard & Blitz, 2020)

Robots are becoming more prevalent in the workspace and people's homes, shown by companies like Roomba (vacuum cleaner) and Husqvarna (lawn mower) (Daugherty, Carrel-Billiard & Blitz, 2020; iRobot, 2020; Reportlinker, 2020)

AR, VR, XR are becoming a normal part of life (Trendwatching, 2020)

Online shopping and home delivery are expected to become a larger share of retail purchases. AR is anticipated to facilitate online shopping by projecting a digitally produced image onto the user's view of the real world. (FTI, 2020)

E-sports (competitive gaming) becomes increasingly popular and will boost the gaming industry and form a serious source of entertainment. (FTI, 2020)

Privacy issues of smart devices will increase. Where the intercommunication of data is something people see the danger. addressing security and privacy will become a fundamental concern that will shape this industry. (Forbes, 2019)

Hyperpersonalisation is made possible with 3D scanning and printing technologies. 3D knit wear is an example of this. (Rotteveel, 2020)

Personalization & Customization (Burns, 2019)

1. Consumers will prefer to use their voice to engage, research and buy
2. Marketers will loosen their grip and really begin personalizing with AI
3. Facial reactions will influence personalized experiences and recommendations
4. Dynamic websites will continue to be trendier than ever
5. Marketers will embrace personalizing AR experiences on mobile

Hydrogen fuel cells are coming up (Toyota, 2020)

People want products and services to fit and enhance their lifestyle they take functionality, positive brand image etc. for granted (Barilla Centre, 2019)

Voice assistant device use is projected to grow 1000% to reach 275 million in 2023. (Moar & Escherich, 2020)

Streaming services such as Netflix are widely accepted by people and will only grow further as the main means of entertainment. (Deloitte, 2018)

Personalised healthcare will become more standard in diagnosing, treating and preventing diseases, through data science

## **Environmental**

Pressure to be green: since more and more affordable and adequate environmentally conscious alternatives come to be, it is not a question of you 'joining' the eco move. It's about having to explain yourself and others when you don't. (Trendwatching, 2019)

Even oil companies are diversifying: alternative fuels, recycling (Dickson, 2020)

Growing demand for food, water energy (Weller, 2017)

## **Political**

Call for more equality, inclusion (BLM) (Sault, 2020b)

Companies are expected to have a positive impact on the world and not just make profit and companies are listening (Pomeroy, 2020)

People are distrustful when it comes to giving companies their data. (Earley & Vassileva, 2019)



# Appendix D: Patterns

The four most relevant patterns resulting in the chosen future scenario

### Home is where life is

**Working from home** is becoming more & more accepted  
**Online shopping** for food, groceries or products to your home will increase.  
Entertainment (**streaming**/gaming) will become the mainstream form of entertainment, all to be enjoyed from your home.  
Going out will become more of an event and **home is where life will take place.**

- Working from home is and will remain more acceptable, people prefer a combination of home and office work (Volini et al. 2020; Masserson, 2020)
- 85% of people spend the same amount or more time at home as they did five years ago; further increased by COVID19 (Earley & Kinshew, 2019; Deloitte, 2020)
- Ordering takeaway is booming, further increased by COVID19 (Xinhua, 2019)
- Online shopping and home delivery are expected to become a larger share of retail purchases. AR is anticipated to facilitate online shopping. (FTI, 2020)
- Streaming services such as Netflix are widely accepted by people and will only grow further as the main means of entertainment. (Deloitte, 2018)
- E sports (competitive gaming) becomes increasingly popular and will boost the gaming industry and form a serious source of entertainment. (FTI, 2020)

### Under pressure

Due to **performance pressure, financial uncertainty, increased stress**, people are more prone to have more **mental health related issues.**

- Increase in stressed out people with burnout related symptoms, especially young people have these symptoms a further increased by COVID (Volini et al. 2020)
- Loneliness is an increasing problem in all ages affecting mental and physical wellbeing; among young people it is also rampant (Ipsos, 2020)
- Advanced economies are projected to shrink 7 percent due to COVID19. (World Bank, 2020)
- People fear losing their jobs due to COVID19 (WEF, 2020)
- Greying population: By 2030, all baby boomers will be older than age 65. This will expand the size of the older population so that 1 in every 5 residents will be retirement age. (Jordan, 2018)

### The people & world demand

**Society** demands businesses to do more about social issues such as **inequality and climate change**. Just turning a profit isn't good enough anymore.

- Companies are expected to have a positive impact on the world and not just make profit; companies are listening (Pomeroy, 2020)
- Call for more equality and inclusion (BLM) (Saut, 2020)
- Growing demand for food, water energy (Weller, 2017)
- Pressure to be green: since more and more affordable and adequate environmentally conscious alternatives come to be, it is not a question of you joining the eco move, it's about having to explain yourself and others when you don't. (Trendwatching, 2018)
- Even oil companies are diversifying: alternative fuels, recycling (Dickson, 2020)
- Hydrogen fuel cells are coming up (Toyota, 2020)

### Healthy body, happy mind

People are **more aware of their health**, both physical and mental (more recent). People are actively looking to improve this.

- Preventative healthcare through diet/lifestyle is increasing (Yoon, 2020)
- Health insurance companies see opportunities in preventative healthcare motivating their customers to have a healthy lifestyle
- Personalised healthcare will become more standard in diagnosing, treating and preventing diseases, through data science (Roche, 2020)
- Consumers are more health focused. Mobile apps and health trackers are making people more aware of the food they consume. (Deloitte, 2019)

# Appendix E: Interview guide plant enthusiasts

## Interview guide

Purpose: Finding out about Plant enthusiasts likes and dislikes

## Intro about the project

I am currently graduating with a company and they want to discover new directions  
And I'm looking at indoor gardening.

1. Could you perhaps briefly tell me about your plants: have you been collecting them for a long time?
2. What do you love about having plants?
3. Is it something you also share with others or talk about? (online community?)
4. What kind of plants do you prefer: when is something a nice or good plant?
5. What do you take into account?
6. How do you take care of the plants? Do you know when and how much water they need?
7. Could you tell during the week what you do with the care of your plants?
8. What do you like about it or less? Why?
9. Do you happen to use an app or other tools? ( sensors
10. How does the purchase of plants and the tools you have to work with it go?
11. Do you know any other plant lovers I might be able to interview?