Enhancing dog and human relationship by developing a dog-human centric concept design

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ABSTRACT

Since the beginning of time, it is human nature to develop tools or system to simplify complex matters. Stone age people created tools for hunting and survival purposes. While in this era our brains evolved a greater capacity for complex thoughts. We continue to invent to simplify our life and deliver a level of convenience we did not know we needed. To the point where there is a massive technological leap from our early human ancestors.

We moved from creating products for individual needs to inventive products that are more inclusive for everyone to participate equally. The computing power allows us to develop relatively more advanced products to meet any needs we may have. We observe future trends and found the common ground of "humanizing technology" in every technological aspect whether it is the digital world, the design or the system. It seems we have reached a point at which efficiency and automation are no longer enough. It is not a matter of finding new technologies but rather creating a more humanized technology. With that in mind, we explore the potential ideas for the thesis. This idea exploration and experimentation later leads to an unusual design frameworks which ultimately develop into a dog-human centric concept design that consists of both digital and physical products.

1. Introduction

After analysing the data we found, based on the common ground "humanizing technology", we introduce the concept "The paradigm change of media". Traditional channels of media consumption are becoming obsolete. Communications and media are an area of art and science that is changing constantly. This rapid change only exists because humans needs are not infinite and insatiable. This shapes the nature of media to always provide what we want and sets a new standard of expectation for consumers where everything is on-demand.

Internet speed improvements, learning algorithms, and several other factors have lead digital and media industry development. People want the media to recognize their immediate needs.

A good example of this shifting behaviour in media consumption is by Nielsen. People no longer view one screen at a time but the second, third and sometimes fourth screen is becoming a fundamental extension of the viewing experience. More than half of global respondents (58%) say they browse the Internet while watching video programming.

It is vital to explore the areas where this paradigm change is shifting towards to. This allows us to understand and design for different consumers' behaviours, expectations, and preferences.

2. Objectives

To research and explore potential ideas within the media field without limitations to the topic selection. The initial part of the thesis was the study of how humanizing technology can simplify human life over time from the traditional media to the big data. After the exploration, we can see that there is a clear trend towards utilizing computing power to further break down the barriers between technology and humans. Technology advances including Artificial intelligence, big data, digital experience design will shape the way we live now and for years to come.

However, there are some aspects of technology that may need to be closely examined. Many of these inventions have interfered with human interaction and relationships. Although there was a time where media allowed us to bond, how we would watch TV mutually to unwind after the end of the day or gather around a radio. Media today can be completely alienating and breaks our social bonds. Consider Netflix, streaming TV where everything on demand and everyone watches individually. The individualism that media provides us seems to be the potential cause of why we are feeling alienated.

3. Methodology

3.1 Eco-system research and insights

The first phase was to gather an in-depth understanding of media and its eco-system. The discipline investigates on insights and how users respond to the media paradigm change.

We analyzed different channels of media and devices and the key players of the market. The complete analysis and SWOT enabled us to define the user persona depending on the age range for different devices. By understanding which devices or digital platform drive users the most, we were able to create a benchmark and market mapping and learn how they are segmented.

Figure 1 Digital medias product benchmark

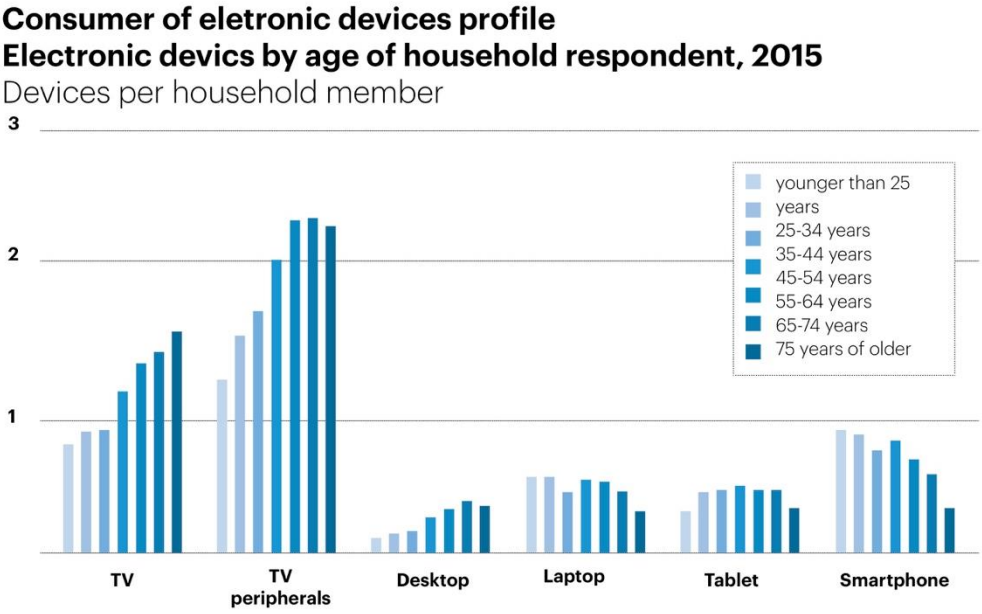

Figure 2 Electronic devices use by age range

3.2 User research and analysis

Besides this, we examined the user behaviour and how that relates to the environment.We explored further on different users, scenarios, and situations of how the media would be used. The method that was used was qualitative research.

We structured interview questions, which were distributed among a representative of each age group (12-65 and 65+). We were able to examine products usage through different generations and different countries through the interview. The issue about inclusive design was raised, how devices and media are not universal and easy enough for elders. Can a product always meet the needs? In order to answer the question, an analysis of potential needs and problems based on those environments was carried out.

3.3 Exploring possible areas for development

The possible areas for development for the project consist of 2 proposals. The first proposal is "Media for elder generations". User personas and potential problems were defined. Hypothetical cases were brought up including the improvements that could be added to reduce usability risks and increase security.

The second proposal is "Media with multiple environments". Specific user profiles such as binge watcher, screen addicts (multiple screen viewing experience) were created. These profiles were used to answer the main question "Can all users be satisfied?" The findings show that despite the changing in the environment, the use of devices stays the same. The idea of media devices adapting to appropriate circumstances and environments had to be explored. A rough brief and several ideas were listed based on the observations.

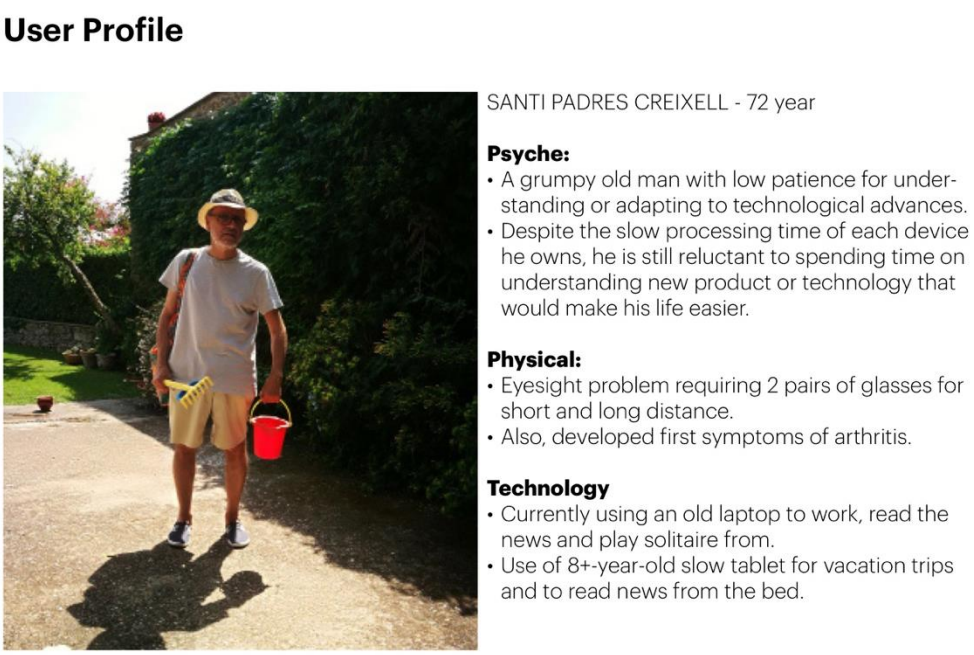

Figure 3 User profile definition after interview (65+ age group)

3.4 Market research and user profiles

Devices are standardized and are already adapted to the changing environment on the surface level. They come with limitations and there are some aspects that we could be explored further. A device itself sometimes cannot satisfy different user profiles. For instance, the size of a laptop has to be minimized but users have to compromise with the viewing experience. Through observations and collage of images, we were able to understand different user profiles. The personas or profiles were presented by a collection of images that would help identify each profile in a graphic and obvious manner. Some of these users are the binge watcher, the screen addict (multiple screen viewing experience), the decorative freak, the non-tv, the comfy, and the max.experience.

The user profile definition is an outcome of the surveys and the interviews. We organized an exercise where users were asked to select images that define their media experience from thousands of images. They also had to include reasons why they think these images represent them the most. This helped out the communication and the brainstorm process for further idea generation. The result of this exercise and the relative market research revealed a degree of connection between some user profiles which allowed us to create define 2 streams of design direction with connection to real market needs.

From there, existing product analysis based on the different user profiles which were defined was performed. The purpose of this part was to identify the gap in the diversity of user needs. Creating user profiles allowed us to balance the creative and business aspects of the work. The research process iterated from rational market findings to creative user definition exercises and explorations.

Figure 4 Creative exercise to identify user profiles

3.5 Integrating users profiles

We constructed a market research for existing products to have an understanding of a degree of the abilities these products can provide. By combining user profiles, two main lines of design direction for idea generation were created. The first direction integrated user needs from the 'maximum experience profile', 'the decorative freak' and 'the hide function profile'. After the definition and sketching brainstorm of this design direction new questions were raised. "What if this combined profile is linked to 'the portability' and 'comfort' user profiles?" These questions helped fill in blanks and develop new design ideas in complete different directions which had not been explored before. The second main design direction aimed to satisfy the user profiles of 'portability' with 'comfort' and 'decorative freak'. We explored further on how certain types of environment would affect the mutual needs of this integrated user profile.

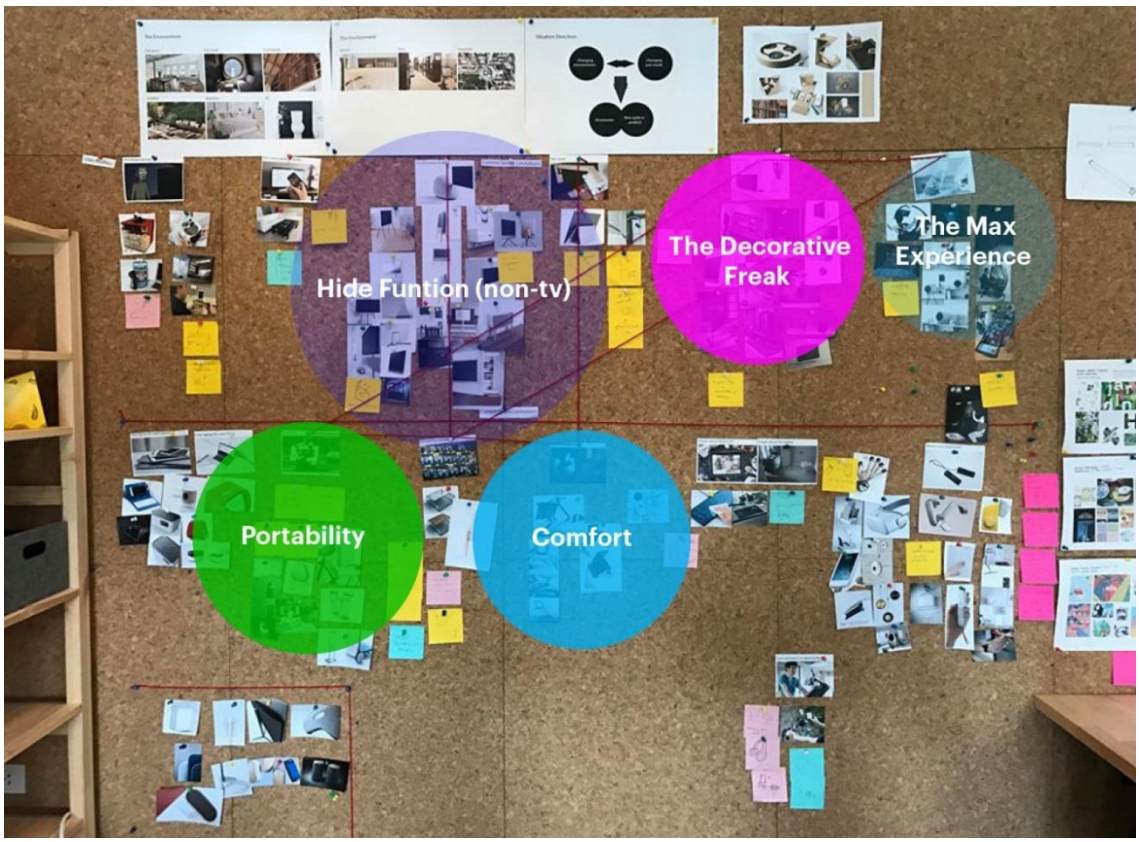

Figure 5 User profiles grouping for design idea exploration

3.6 Concept Exploration

The market mapping analysis and the insights we have gathered allowed us to find new opportunities. We added some user profiles with completely different needs to generate new ideas. The market analysis was put aside and we tried to create an understanding of how devices are connected to the environments. Several concepts were

created, however, they were linear. Our focused attention on media for home use was preventing us from seeing the big picture. On the other hand, some conclusions we found might be interesting for the marketing perspective.

Figure 6 Sketching concept explorations

4. Concept development

4.1 Concept out of context

The past process was unique and it filled in the blanks. However, we decided to take a new approach. This time we took some potential ideas without creating limitations or putting constraints on them and reframed the context. Applying a concept outside of the context to which it belongs. Media consumption was no longer limited to only the household market.

For instance, a media device of motorbike taxi could be developed to improve the relationship between drivers and the clients. Another example is a device designed for entertainment and education in remote areas.

We started to consider new possibilities, trends, and uncertainties. We started to envision what a desirable future might look like. One particular idea that we would like to explore further was a media for dogs. A device that keeps a dog entertained or automates exercise or activities for when the owner is not there. Today, in this connected world, technology strengthens the relationships with those we love. So it's no surprise developments in technology extend to our pets.

It is clear that many major companies and investors are now taking an avid interest in the industry. Millennial pet owners are helping to drive this surge. In the US, one in three pet owners is tech-savvy millennials.

4.2 Defining extreme users

An idea that suits an extreme user will nearly certainly work for the majority of others. Extreme users can spark creativity by exposing you to use cases, hacks, and design opportunities that you'd never have imagined. Based on the idea of the smart dog house, we redefined 4 extreme potential users for 4 extreme potential users to develop dog related products. Apart for identifying the basic needs and behaviour of dogs, we also looked into satisfying the needs of these users.

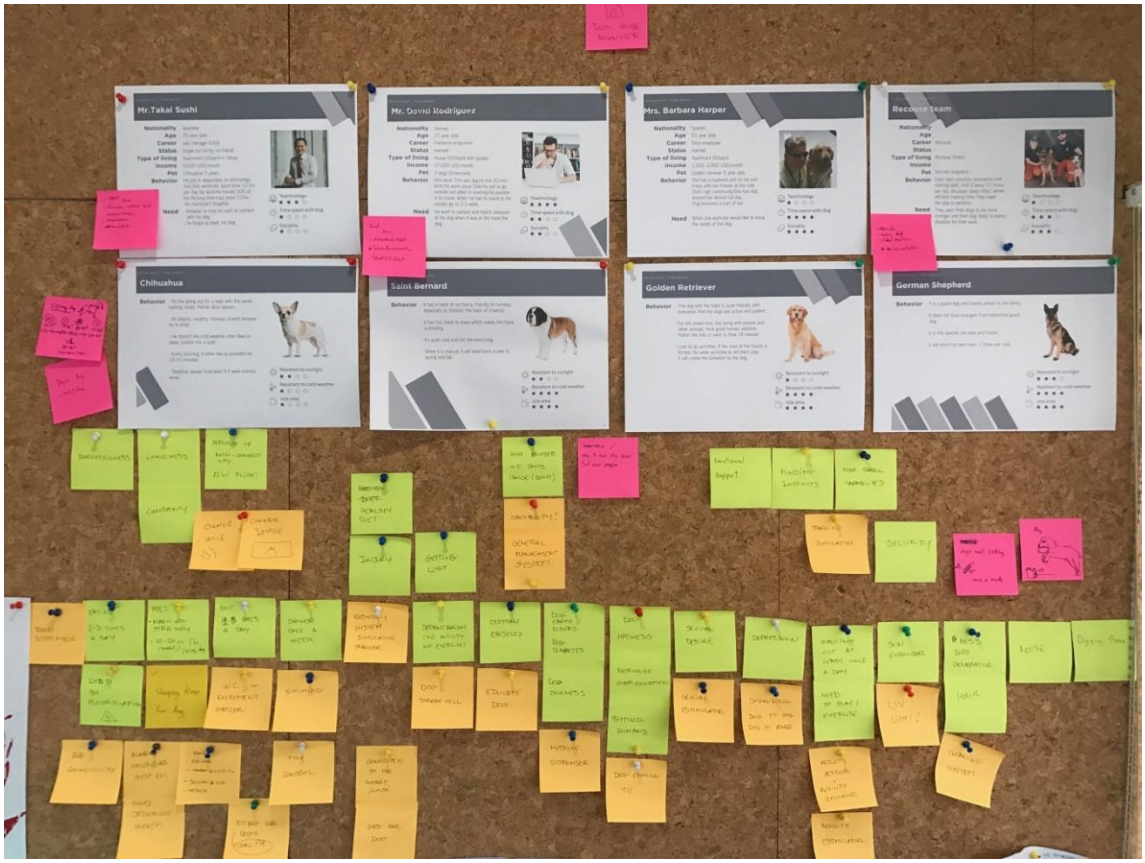

Figure 7 Mind mapping exercise

4.3 Validation from experts

We conducted expert-interviews with a veterinary and a dog psychologist. From there we were able to indicate psychological and physical dog problems and the factors that were causing them. We started mapping and grouping areas that could be connected to find new solutions.

Then the opposite approach of what we did for the initial part of the project was taken. The idea generation process came prior to the market research. The design directions were divided into two which are digital applications and devices. Based on the evaluation of the market, a set of ideas were funneled and validated again by the experts. The next step was to test the ideas as a matter of making the right observations.

4.4 Design direction and concept development

Their answers have provided insights, a range of opinions and ideas based on their experiences with dogs. This project concept exploration aims to work on developing a physical product and a digital experience that helps improve the relationship between humans and dogs. The relationship has historical precedents and it has been shaping in time to adapt to specific human needs. This study aims to explore and raise questions about this relationship in the present time. The existing products in the market do not put consideration into developing something that satisfies both users (humans and dogs). We purposed seven storyboarding concepts that covered the holistic aspect to enhance the relationship between humans and dogs. These concepts were then shown to dog owners and field experts to verify the design direction we should be moving towards.

To illustrate, the five senses communication device would allow the owner and the dog to connect remotely. It gives both owner and dog the full experience. The smell, the voice, the video, and the owner's artificial touch feature would decrease the separation anxiety. Similarly, the food tracking app and the delivery service concept is a time-saving solution for every dog owner. It is a system where dog owners can stay informed and keep track of their dog's health. The diet plan would also be adjusted throughout the dog's life allowing dogs to live a longer and healthier life.

The result was WOOF, a dual user-centric solution. Not only it provides convenience for humans, it also provides health benefits for dogs. More than just automatic feeding app, WOOF allows you to connect with veterinarians online so your pets can be diagnosed with professionals while paying only a fraction of the cost you would pay for a traditional vet visit. It is an integration of physical and digital products. The UX development according to the feedback from the user survey allows us to create an easy to use platform for every user. The previous insights we have received from experts and dog owners were also used to develop physical product concepts which eventually turned into WOOFED (automatic feeding machine with built-in camera) and WOOFIT (activity tracker).

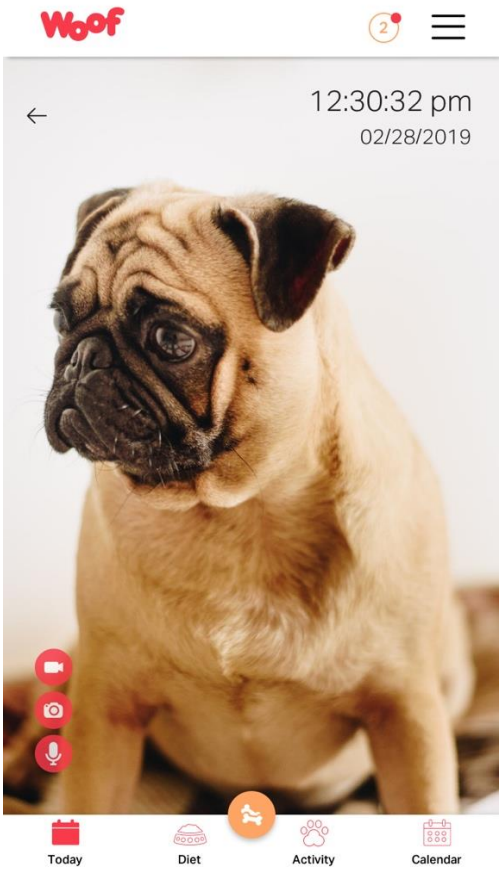

Figure 8 WOOF digital product development

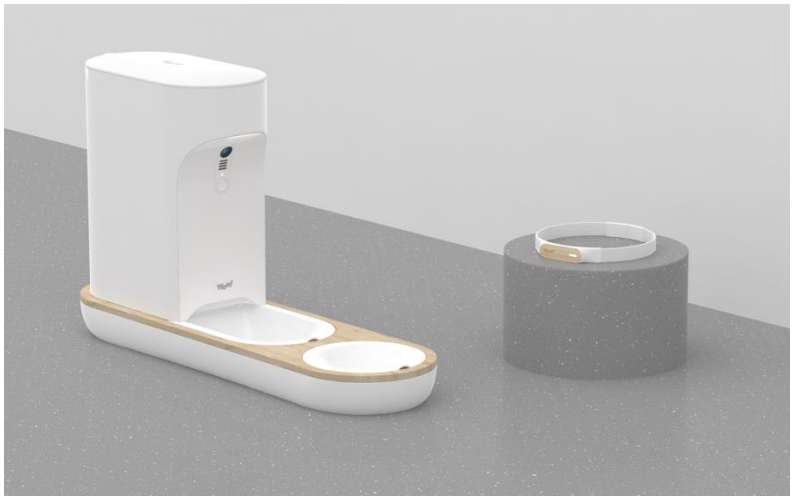

Figure 9 WOOFED and WOOFIT physical products development

5. Conclusions

The objective is to find technology to disrupt. As a way to explore ideas and identify potential concepts, we used a unique technique to go out of context to enhance the creative process. This methodology embraces the idea of iteration. It acknowledges that the process is never done. This practical path we are taking guides us through the steps of empathizing with users and the problem first, then diverging to brainstorm numerous ideas for solutions. Part of the process was the funneling of idea on different stages of the process by consulting user, experts or through market research and mind mapping. We also need to examine the different aspects of these concepts based on feasibility and realistic factors.

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