A CONNECTED WORLD

DESIGNING NEW METHODS, TOOLS AND SOLUTIONS TO LINK PEOPLE TOGETHER AND SAVE THE PLANET

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MOBILE APPS AND GENDER EQUALITY. WHY IT IS RELEVANT THE DESIGN OF INCLUSIVE DIGITAL INTERFACES

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ABSTRACT

Designing digital interfaces that deliver an inclusive user experience should be the goal of any designer, regardless of the type of service or target audience. This concept is related to the fact that any service on the face of the earth should offer a satisfying, smooth experience that invites the user to repeat it in the future. In this context, it is crucial to prevent generating feelings of frustration or exclusion even among a small percentage, usually defined as a minority, of people. Therefore, inclusiveness and accessibility are fundamental requirements and should be considered from the earliest stages of designing a product or service. The MUV case study shows how it is possible to design a digital service that is inclusive and thoughtful for each gender.

1. INTRODUCTION: WHAT IS INCLUSIVE DESIGN?

The British Standard Institute defines Inclusive Design as:

«The design of products or services accessible to, and usable by, as many people as reasonably possible…without the need for special adaptation or specialised design.»

Designing a product, service or experience that is fully inclusive implies an in-depth understanding of human diversity and building on this to make design decisions. The relationship between the diversity of people and the design choices and, consequently, the user experience is therefore, central since every design decision has the potential to include or exclude customers **[1]**. This awareness concerning the impact of each individual decision is essential, as it underlines the direct responsibility of each designer. Quoting Stephen Frost, founder of the diversity and inclusion consultancy Included:

«Unless you consciously include, you will unconsciously exclude.»

2. USER DIVERSITY: WHAT STOCK PHOTO PEOPLE CAN TEACH US

Hence, Inclusive Design focuses on user diversity, a distinctive trait of humanity. It can be defined as the entropy of users within a certain cluster. Naturally, the more users a cluster has, the greater the diversity.
There are so many aspects that distinguish people that it is almost impossible to list them all. Below is an attempt to list the top twelve in strictly alphabetical order:

1. Age
2. Culture & customs
3. Diet
4. Disabilities
5. Education level
6. Ethnicity
7. Gender
8. Income
9. Sexuality
10. Shape
11. Size
12. Spoken languages

For the sake of reflection on the diversity of users, a fitting example describes the evolution in the representation of a very special group of people, extraordinarily photogenic and well-known, even if not exactly famous. It is Stock Photo People (aka SPP). SPP are real people, but far from any person one has ever met and are portrayed in poses and situations very different from any photo one would ever take. They are usually beautiful, smiling, and energetic people whose pictures can be bought for a few dollars. Up to a short time ago, they were the main stars of websites, presentations and even advertisements.
Until a few years ago, all these images had distinct features, as the following two figures indicate.

Figure 1. *A classic Photo Stock of a business team corporate. Courtesy of crushpixel.com*

Figure 2. *Stock Photo of happy, funny people. Courtesy of dreamstime.com*

The first represents a working environment. Everyone here looks young, good-looking and well-dressed; everyone has a confident expression and is in great shape. In the foreground are the men, then the women and only at the back can some non-caucasian employees be identified.

In the second one, there is a very different group of people, all of whom are slim, smiling, and with a considerable sense of rhythm. Of course, they are also all young and white.

Stock Photos are relevant as they are widespread and contribute to highlighting and reinforcing our sexual, racial and ethical labels on a visual and immediate level.

Fortunately, nowadays, there is more sensitivity towards these issues, which has naturally also influenced the Stock Photo People who now look more like the image below. Different ages, ethnicities, shapes and even tastes in clothing.
There is indeed more entropy

in this shot than in the previous ones, and this contributes to more inclusive imagery with which different people are more likely to identify.

3. THE GENDER DIMENSION

Within this framework of attention towards user diversity, the gender issue can be addressed. Gender-inclusive design is one important dimension of inclusive design. Of course, it is not the only one, and it is not the most important. However, since designing a product or experience that is fully inclusive can be overwhelming to imagine, a starting point is needed. In the words of Vale Querini, designer and gender inclusion expert: *«Gender is a great place to start!»*

Gender is undoubtedly a significant part of our identity and concerns us all. Designing for all gender identities means acknowledging this and creating experiences that do not discriminate based on gender **[2]**.

Figure 4. *Unisex logo designed by Pekka Piippo including both symbols for fe/male, fluid definitions, gender re-assignment or genderless people. Courtesy of: https://uxspot.io/designing-for-gender-neutrality.html.*

Figure 3. *A modern-day Photo Stock community.*

A lovely example of this is represented by the Unisex Logo designed by Pekka Piippo, which includes all the different gender types in one single element [3]. Creating experiences that are always enjoyable, regardless of gender identity, is also one of the challenges that MUV B Corp has decided to embrace since its inception.

4. THE MUV PROJECT

MUV, an acronym for Mobility Urban Values, is a sustainable mobility entertainment platform. It has been a Horizon 2020 project, developed between 2017 and 2020, which, thanks to the impressive results achieved, became a startup and B Corp in mid-2020 [4]. MUV was born trying to answer a question as simple as it is challenging: *how might we let citizens & organisations play an active role in a more sustainable future?*

The solution focused on citizens' behaviours by nudging more conscious everyday mobility choices and promoting a greener and more active lifestyle.
It consists of a digital game that turns sustainable urban mobility into team sport and citizens into athletes competing with each other in open challenges and tournaments.
MUV's game mechanics are pretty simple. Players can track their sustainable trips and earn points through the mobile app. Points depend on the length of the trip and the chosen means of transport, and at the end of each travel, a short report shows the impact of one's mobility choice. The points collected are exploited in various game dynamics inspired by sports, such as individual training sessions, community challenges and team tournaments.

Another key aspect of our service is the use of data. Besides developing a certified algorithm to calculate the CO_2 reduction generated by users simply by playing, all the mobility data gathered are exploited to support companies, universities or schools in drawing up mobility management plans and public administrations in enhancing their sustainable mobility policies.
MUV has proven effective and generated a significant impact in terms of CO_2 savings as
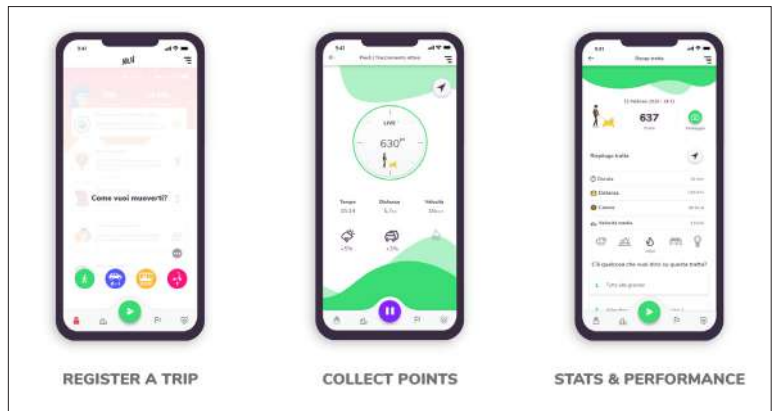

Figure 5. *Screenshots summarising MUV's game mechanics: track a trip, collect points and get info on one's mobility choices.*
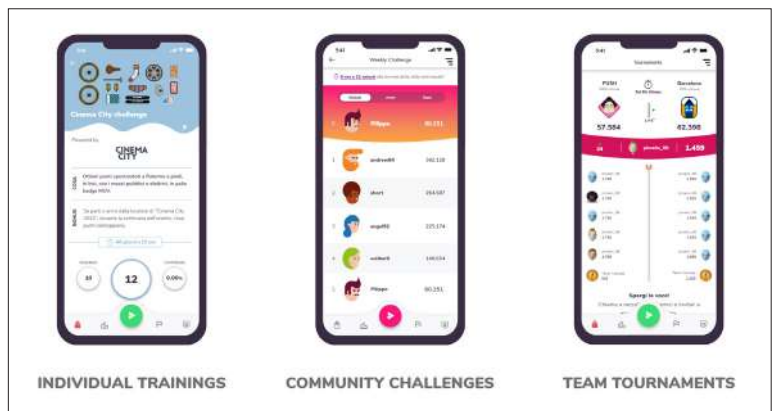

Figure 6. *Screenshots summarising MUV's game dynamics: training sessions, community challenges and team tournaments.*

active users have reduced their emissions by 32% during their involvement in various competitions **[5]**.

5. CASE STUDY: HOW MUV IS DESIGNED FOR EACH GENDER

Significant effort was invested during the design and development of MUV to make it as inclusive a service as possible. Three basic principles have been adopted from the earliest stages and consistently over time to achieve this result. They are *inclusion by design* (1), i.e. envisioning an experience that is not categorised by gender; *continuous improvement through user feedback* (2), which means constantly asking people how to get better and listening to their requests; and *fostering a growth mindset* (3), by learning from mistakes and fixing things as soon as arising.

All the efforts can be sorted into three macro activities:

1. Asking for gender, or more precisely, sex.

2. Using gender-inclusive language with particular attention to microcopy.

3. Crafting an inclusive vision suitable for the app, website and communication materials.

Asking for ~~gender~~ sex
Knowing the gender of MUV

players is not much helpful information because this does not affect the game, mobility habits or calculation of impacts. On the other hand, knowing their sex allows for refining the calculation of calories burned which is one of the pieces of information used to show the impact of mobility choices. So in the personal data section within the settings, the item "sex" allows you to select the options *Intersex*, or *I prefer not to say*.

Using gender-inclusive texts and microcopy
The MUV service is available in two languages, Italian and English, and in both cases, great care has been taken to use inclusive language. Gendered words and pronouns were avoided. In particular, any passive verbal form has been carefully avoided since every past participle in Italian has a desinence that identifies masculine or feminine.
In this context, UX writing, i.e. creating texts for the interfaces

of digital products (as websites or mobile apps), is vital. It includes the text on buttons, menus, error messages and more. These little pieces of text are named microcopy **[6]**. Creating inclusive microcopy is a fundamental step toward inclusive digital products.

Crafting an inclusive vision
MUV relies on avatars to visualise its athletes. No names are shown to avoid cases where the chosen name does not match the legal one. A total of 73 avatars were designed to ensure a wide choice. Of these, 30 are male, 32 are female and 11 unsexed. In addition, MUV is based on a varied, plural graphic identity that does not reinforce stereotypes regarding colours, clothing and activities. The aim is to portray an active, vibrant community represented by a mix of genders to give room for every identity. This graphic language has been used not only within the MUV mobile app but also on the website and social media.

Figure 7. *An example of MUV's graphic identity.*

6. CONCLUSIONS: LESSONS LEARNED SO FAR AND A FINAL OPEN QUESTION

Designing inclusively is undoubtedly hard work, which requires a lot of attention and empathy, which never has an endpoint, but that one can always try to improve a little more. Moreover, everything is highly subjective; therefore, no matter how hard one tries to be inclusive, sometimes individual perception or bias is the real obstacle to overcome.

To explain this concept well, a real-life episode related to MUV activity may be helpful. Among the communications elements recently produced for a client, a graphic has been developed to convey a sense of teamwork and commitment to sustainability.

After receiving it, the client asked for a slight adjustment as the image needed to be considered more inclusive. As they highlighted, this aspect was considered very important for the company. They stated:
«A big topic for our company is gender, diversity and inclusion issues, and we would like to have these aspects respected in everything we do.»
«Could you change one person (the one standing on the left) to female?»
After acknowledging that the character in question was a

Figure 8. *Graphics created to promote MUV within a corporate community.*

woman, the following request was:
«Could you please make it more recognisable, maybe even with a dress?»
The final result can be seen in the image below.

Therefore, the final open question arising at the end of this work is, *"is a woman wearing trousers or a dress more inclusive?"*. The answer, probably, is in the eye of the beholder.

Figure 9. *Final graphics created to meet specific requests.*

REFERENCES

[1] **Inclusive Design Toolkit**. University of Cambridge. www.inclusivedesigntoolkit.com.
[2] **How to Design for Every Gender**. V. Querini. https://careerfoundry.com/en/blog/ux-design/design-for-every-gender/.
[3] **Designing for gender neutrality**. E. Schicker. https://uxspot.io/designing-for-gender-neutrality.html.
[4] **MUV website**. https://www.muvgame.com/.
[5] **MUV: A Game to Encourage Sustainable Mobility Habits**. S. Di Dio, E. Lissandrello, D. Schillaci, B. Caroleo, A. Vesco, I. D'Hespeel.
[6] **What Does a UX Writer Actually Do?** Y. Keshtcher. https://careerfoundry.com/en/blog/ux-design/ux-writing-what-does-a-ux-writer-actually-do/.