

# Virtual2Actual Giga Map

Integration 5 | 5th Semester, 2020  
Design Management International  
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## Introduction

How might we facilitate the users' self-presentation and emphasize their dynamic and multifaceted personalities, as well as encourage interesting online interactions that are transitioned offline and developed into meaningful long-term relationships?

The Virtual2Actual is a platform for people looking for intimate, long-term relationships. It was developed with users that are interested in making the transition from virtual connections to actual relationships, with the understanding that trust can be mainly built through offline interactions.

The main objective of the platform is to support its users in finding a partner online. Facilitating the presentation of their multifaceted and dynamic personality, suggesting relevant matches, providing different communication channels and promoting face-to-face dates.

Virtual2Actual challenges the two-dimensional dating platforms, and attracts users to use the advantages of advanced technology and the three-dimensions of virtual reality to easily move towards actual reality with a few simple steps:

- 1 To ensure fair use of the platform and keep users accountable, the platform allows only verified users to log in.
- 2 Virtual2Actual challenges the traditional structure of the user profile, and helps users present their multifaceted and dynamic personality through a personal map based on their digital trace.
- 3 According to the personal maps, Virtual2Actual facilitates the connection between users by suggesting relevant matchmaking.
- 4 Virtual2Actual offers two types of communication between users: effortless communication via text, and direct communication using the benefits of convincing avatars.
- 5 Virtual2Actual encourages users to meet offline and partners with third parties to offer dating-friendly locations for meaningful dates.

## The Dater

With the current primary research we targeted residents of Switzerland, aged 25 to 35. However, from the secondary research we assume that the users of the virtual realm will resemble the offline population (Valkenburg & Peter, 2007), and will be even older than what we know today, as the median age of online daters might increase from 38 to 47 by 2050 (eharmony, 2017).

### The Onliners

The onliners are the user group that decides to keep their romantic relationships online. They see the advantage in the possibility to present themselves as their ideal-self and will enjoy experimenting with different identities. This will happen with the consent of both partners and will become a common practice among this user group.

### The Offliners

The Offliners include users that are interested in making the transition from the virtual environment to the actual environment. They are interested in meeting other users face-to-face with the goal of a long-term relationship. The topic of trust and honest online self-representation is significant for them. Our secondary and primary research shows that real human interaction is essential for the development of relationships. Therefore, we decided to focus on them as a target group.

## Self-presentation

### The Mirrorball

The new user profile will leverage machine learning to learn about the users from their own digital trace. The software will output a visual map that illustrates the users' lifestyle, values, and interests, all supported by relevant media. The users will approve their personal map and edit it as they see fit. This will increase the users' self-knowledge and control over what they share with others.

The AI is also trained by information collected through the eye-tracking of other users, to understand what they spend the most time on. In addition, the users will be able to see an integrated view of two maps, to see what parts of their map might complement the potential partner (does not have to be common).

## Verification

### Verification dependent sign up

According to the future scenario, the verification of profiles is a common practice that enhances the trust in online platforms in general. To facilitate the verification process, there is no need for documents, but fingerprints. The platform will only allow verified users to access it.

## Motivations

There are many motivations to use online dating platforms, some of them are not directly connected to relational goals, for example: use of dating platforms for entertainment, to meet locals when travelling or to ease loneliness. However, current research has focused on the motivation to find long-term intimate relationships.

## The Love Journey

The Love Journey shows the stages from the first step in the virtual environment to the last mile of actual face-to-face interaction. The journey begins with the motivation and desire to enter into a long-term relationship and find a suitable partner. During the registration process a verification system that allows only verified users to log in builds trust and safety. The new user profile uses machine learning to learn about the users from their own digital traces. Through that a visual map is generated that reflects a true self-presentation of the user. Thus, the software is able to identify relevant profiles. Filtering options will allow users to search for specific interests, values and similarities. Our AI agent will provide relevant personal information that will support a smooth start of a conversation and also enable communication via video or virtual avatars. The date assembly enables the transition to the offline environment and helps users to find a way to actually interact in the real world by helping them plan a physical date. Since we have found that Face-2-Face interactions are vital for actual bonding, we hope that the actual last mile will complete the heart for both parties and allow a relationship to be established that takes advantage on both virtual elements and real-life interactions.

## Connection

### Establishing meaningful connections

Targeted matchmaking is vital to increase the perceived value and decrease the sense of wasted time and effort. Our smart AI technology based on the users' personal maps is able to identify relevant profiles that are compatible and/or complementary to one's own. However, since some users might want to have more agency as well as to circumvent potential AI bias (Silberg and Manyika, 2020), there is the possibility to manually filter the search. The filter options will allow users to search for specific interests, world views, and value systems. These filters have more profound parameters that are more relevant for meaningful relationships. A limited amount of possible daily matches will urge users to dedicate more time to start conversations rather than collecting matches.

## Communication

### AI as wingwoman/man

Our primary research showed that many online daters are bored of small talk. To spice up conversation our AI agent will provide our users with relevant personal information (e.g. fun facts about themselves, interesting past experiences, weird fears, uncommon dreams) that could be helpful conversation starters and maintainers.

Furthermore, feedback reports could be added upon request (analyzing response time, lengths, etc. of matches as indicators for shown interest) to give users the opportunity to improve on their conversational skills.

### Asynchronous without non-verbal Cues

The ability to communicate via text allows users to communicate effortlessly and efficiently with multiple potential partners. Although this type of communication lacks non-verbal cues which are beneficial for building trust, it has the advantage of complementing the busy lives of the users, increasing convenience, and reducing the sense of pressure.

### Synchronous with non-verbal Cues

With the absence of intonation and other non-verbal cues (such as facial expressions), the intention of the message is not always easy to decipher (Mulliken, 2019). Therefore the platform will allow users to communicate via video or virtual avatars in real-time. This will bring back the meaning and emotion to the words that would otherwise be lost in the text.

## Interaction

### Date-Assembly

Date-Assembly is a feature that facilitates the technicalities of the transition from online to offline. The feature can be activated after the first interaction between two users, and it has three main functions: Three locations can be chosen for a date from a suggestion list that the software provides based on both users' location and interests. Three time slots will be suggested according to the users' calendars. Lastly, a meeting request will be sent to the intended user with the chosen details for a date. On the other side, the recipient can check the three chosen locations and time preferences and either reject or accept the invitation. In case of acceptance, both users' calendars are updated automatically.

### Going Offline

#### Partnerships

The company will partner with different leisure and gastronomy businesses around Switzerland like restaurants, dancing clubs, cultural events. The variety of partners will allow dating locations that are suitable for different types of dates according to the users' favorite activities.

#### Dating-friendly

Our partners will go through an approval process to become certified as dating friendly venues. This would mean that the staff will be briefed about what to do in case of an emergency (if one of the daters does not feel safe), and about sensitive communication with customers.

## Future Scenario

In the future, the virtual environment will be a socially accepted and adequate substitute for reality, and the transition between reality and virtual reality will be seamless and effortless. As a result, using VR technologies and verified user profiles would become a common practice. State of the art haptic devices will allow manipulation of the human senses to perceive warmth and touch sensation (Bailey, 2017). Users' location will not be a problem anymore.

The option to keep a relationship online will make the ability to edit the users' self-presentation and the creation of desirable avatars accepted. For some, the freedom of self-idealization and fantasy realization will dominate. This new type of relationship could prevent a full integration of the partners into each other's lives, a situation that complements the lifestyle of people that struggle with work-life balance (Davidson, 2018). However, some people will still be interested in transitioning relationships to the offline world, both to establish real trust in each other, and if desired later on, also have kids. As a result, the ability to authentically present themselves online will still be relevant for them.

## PESTEL Analysis

### Political

Switzerland is a democratic state. Freedom is promised as long as individuals do not harm others, and the government involvement in the residents' lifestyle will be minimal.

### Economical

The economic state of the country will be capitalistic, characterized by growth and increasing wealth. However, there will still be a gap caused by the inequality of wealth distribution.

### Social

People will be expected to spend a major part of their day at work to contribute to the ongoing growth of the GDP. This will lead to conflicts with the compatibility of work/life balance. In addition, a major part of life will be spent in the virtual realm. People will meet less in person, and although the virtual environment will be fairly convincing, the human touch will be lost. Different types of relationships will be acceptable including LGBTQI, polyamory, and human with the non-human.

### Technological

As a result of advanced technology, virtual environments are a fair substitute to reality. Haptic devices help stimulate the human senses and camouflage the fact that the interactions are carried out in a virtual space. Apart from nutrition, most products on the market would be digital.

### Environmental

There will be an increased amount of Electrical & Electronic Equipment Waste (WEEE). However, advanced technology solutions will be able to reduce negative impacts on the environment.

### Legal

Harassment of any kind will be allowed by law, including for the LGBTQI community. Technology companies will be under strong supervision by the government.

## Desirability | Properties | Features

### Verification dependent sign up

#### Desirability

- Increased sense of safety
- Holding the users accountable

#### Properties

- Fingerprint reader

#### Features

- Verification dependent access

### The Mirrorball

#### Desirability

- Highlighting the multifaceted nature of the human personality

"I choose pictures in different settings that present a broad range of activities that I like and what I look like" (Angela, 26)

- Capturing the dynamic change of the users' personality over time

#### Properties

- Increasing self-knowledge

"Every day steps I would think maybe I should add this sentence, mostly I change the pictures" (Nomi, 29)

- Approved connection to existing online platforms to form learnable datasets

- Transparent about the collected data of the user

"what helped you set up your profile? I looked back at my older pictures, what I experienced by knowing my hobbies" (Nomi, 29)

- Machine learning algorithms

- Supportive AI agent for the profile building process

- Eye-tracking analysis

#### Features

- Providing suggestions for relevant personal mapping

- AI offers long-term support with the process of setting up the user's profile

- Providing feedback and new suggestions to update the profile according to the user's new activities and eye-tracking of the map viewers

"It was not on one go, I developed it over time based on what I think was relevant, then I kept to see what works and what doesn't work, add and remove things" (Steffy, 35)

### Establishing meaningful connections

#### Desirability

- Relevant matchmaking with compatible and/or complementary users
- Giving users the ability to choose
- Breaking the bias

#### Properties

- Smart matchmaking based on AI technology

- Advanced filter options

- Limited daily matches

#### Features

- Filtering for more profound content rather than superficialities

- Quality of matches over quantity

"The superficialities make it hard, the whole thing becomes very non-comforted, you write then stop, ghosting is a thing... this makes it really hard to know who is actually interested in something serious" (Luona, 36)

"A true reflection? That's not possible because you're different in every context" (Andy, 34)

### AI as wingwoman/man

#### Desirability

- Making conversations more interesting
- Initiating and upholding conversations

#### Properties

- AI agent

- Feedback report

#### Features

- AI highlights interesting facts to start and uphold conversations

- Analysis to measure shown interest of the counterparty

"I'm ready to meet someone in real life after we had an interesting conversation online" (Joni, 24)

"I stop communicating with someone if the conversation is not flowing, or the other person is not showing interest" (Dani, 33)

### Asynchronous without Non-verbal Cues

#### Desirability

- Effortless communication
- Not time dependent
- Reduced pressure

#### Properties

- Traditional text messages

#### Features

- Providing the ability to communicate via text

"It was easier to text because there is no pressure to talk or write. You don't have to respond immediately, the real effort was the real meeting" (Clara, 29)

"If they have like those avatars online I get suspicious for example and you also get a feeling of the other person by chatting with them, how they articulate themselves" (Sophie, 28)

### Synchronous with Non-verbal Cues

#### Desirability

- Non-verbal cues increase trust and clarity

#### Properties

- Video meetings

- Avatars that mimic the users' body language

#### Features

- Allowing users to communicate via video
- Using the 3-dimensional virtual environment

### Date-Assembly

#### Desirability

- Encouraging quicker transition to the offline realm
- Facilitating the planning of a date at a place and time that is convenient for both parties

#### Properties

- Approved access to users data and calendar

#### Features

- Providing time suggestions according to users' calendar
- Providing place suggestions according to users' location and common interests

"The best way to know each other is to meet" (Aaron, 27)

"We need to change the idea about dating, to show that dating is more exciting in the real world" (Aaron, 27)

"I rather meet people sooner than later" (Vera, 30)

"I need to meet them a couple of times first, I have been through some really weird shit" (Eli, 35)

#### Properties

- Approved dating-friendly locations

- Staff training
- Emergency procedures

## Feasibility

### Virtual Reality (VR) technologies

Computer-generated simulations in which users can interact within an artificial three-dimensional environment using electronic devices, such as VR goggles and a remote/glove with sensors for the hands. The ability of the user to immerse within the virtual environment is high and it includes the ability to manipulate objects or perform different actions.

### Artificial Intelligence (AI) and Machine learning (ML)

AI focuses on developing computers that can make informed decisions independently. AI is possible due to the increased use of ML: the practice of using algorithms to parse data, learn from it, and make a determination/prediction about something or perform a task.

### Eye-Tracking

Eye-Tracking is a technology that can identify the point a user's gaze is focused on and track the user's eye movement. It gives information on what draws their attention and what they do not look at. Knowing this information, users can design their personal mapping in a way that draws the attention of other users to the things that are important for them the most.

## Sustainability

### Social

#### Moving towards meaningful connections

A study by the Arizona State University showed that 70% of their Tinder users on campus have never met their matches in real life (Tinder Revenue and Usage Statistics, 2020). Since meeting in real life is the next important step when it comes to the formation of trust and meaningful relationships. Hence, our goal is to create meaningful and profound connections that last. We highlight quality over quantity and get away from the mindless swiping culture to the formation of sustainable relationships.

#### Bias, data access and process transparency

**Bias**  
Research suggests that AI is prone to bias since the data set they are trained with are based on subjective human judgment (Knight, n.d.). User's sceptical about the potential of AI matchmaking and concerned about bias can therefore set the filter options themselves. This option supports free choice and respects our users' own agency.

#### Data access and transparency

We guarantee to make the analysis and synthesis of personal data only after previous accord by our users and keep the process transparent. Users are given the option to modify their personal map data at all times.

### Economic

#### Time is money

Conventional dating apps call for a big investment of time often with comparably little output. We value our users time and want to make it hassle free for our users. By crafting detailed and specific profiles and allowing for more targeted matchmaking facilitated through AI, we make the most of our user's time. Our proposal has a high price-performance-ratio. Since self-presentation is based on algorithms resulting in increased self-knowledge and awareness, and matchmaking is facilitated through AI as well, matches will be of high quality. From an economic perspective we can financially sustain ourselves because we earn commission from our partnerships.

### Environmental

#### Reducing our footprint

The information communications and technology industry is responsible for 2% of global CO2 emissions and could account for as much as 14% by 2040 (Patel, n.d.). Online dating contributes significantly to it since millennials spend approximately 10 hours per week on dating apps ("Millennials", 2018). Our goal to encourage users to proceed to offline relationships, can reduce their carbon footprint.

