

office ecosystem

Oeco.

office ecosystem.

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M1.1 project
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Acknowledgments

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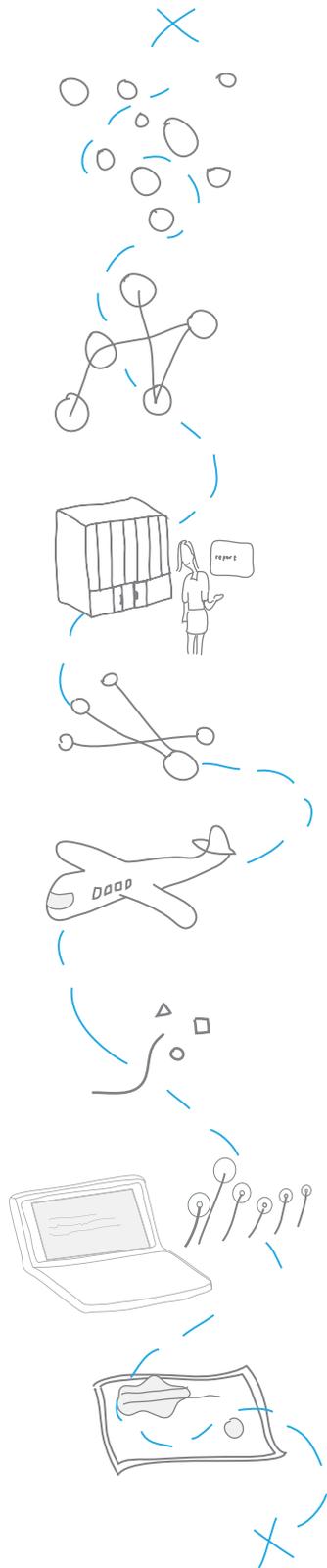
Finally I want to thank Lilha Williems, Gabriele Tempesta, Chitra Ayuningtyas, Fulya Yalvac and Ruo Cheng for user inputs and test, fellow students and staff at Department of Industrial Design for many facets of education.

abstract

Oeco is the prototype for my final design concept of the office ecosystem. It creates a narrative in a working environment for the experience of belonging. Belonging is a kind of emotion. I choose this direction to explore because I had a vision to bring valuable emotions into physical interfaces. My challenge in this semester is to exemplify a concept starting from a fairly inexplicable psychological feeling to concrete design. The compass of the design process in the absence of a specific client.

Report describes the highlights of 8 stages in my M1.1 semester. Because of the context is difficult to reach, a framework for research is made to guide and evaluate the design decision. The framework is enriched with concepts intrigued by feedback and heuristic discussions. I interviewed the people from office working environment in China to contextualize my concept of belonging about 'human bonding' at that stage.

I choose to create comfort zones to engage people in public spaces for the feeling of bonding, and thus the feeling of belonging. In the vision of designing emotional experiences, I created an interactive system using projection to augment the physical spaces, which I believe made the interaction more physical.



8 stages

Value in Office Environment(exploration)

Value-seeking for stakeholders in the context of a newly developed hi-tech zone. Field research of the motivation of office workers.

Framework of Belonging(envision)

Make the concept of belonging more concrete and operational, exemplify the Marlow's theory

Designer's opportunity (identity)

The role designers play in the design challenge

Bonding and territory(Scoping)

Concreting and ideation about the human bonding in actual design concepts

Moving the Studio(contextualization)

Experimental practice of bonding and escapism in office environment

Engagement in spaces (analysis)

Concreting motivations adjectives for engagement in spaces

A new scheme for belonging(synthesis)

Inspired by the 'habitat' place engagement, connecting virtual and reality in a non-intrusive way.

Reflection and perspective(reflection)

How this might contribute to further research and design for office community. The evaluation of the concept.

Value in Office Environment(exploration)



OVERRATING functionality for working environment shadows (overtone) its experience. Especially for office facilities, the term 'experience' mostly refers to usability and comfortableness. Product designs for working environment is a vivid example of 'form follows function'. We treat office environment as a indifferent place and yet never rely on that emotionally. Employees can be motivated by the working environment as long as the design really fits their motivation. When these motivations accumulate with time, para-develop with colleagues' and engage them with place, the experience gained in the environment can actually create a sense of belonging to the work space. It forms the win-win situation for both employees and employers.

Companies are likely to invest on working environment for either branding or functional need. These are the few items listed in their motivation. However, in the case of a newly developed high-tech zone, concerns about absorbing and retaining potential talents hit the list.

In the first chapter, overall layout of relationships of the stakeholders are introduced. I start my project from case study of Taicang industrial zone. Empathy is built when I traveled to the hi-tech zone during SDL week. Although there is no specific stakeholders in the design project, appeals of the estate developer in Taicang inspire me to focus on new experience. My design focuses on innovative, also rich experience which can add value for both the developer and employees.

current situation in newly developed hi-tech zone

Taicang industrial zone is a hi-tech zone 40 kilometers away from the center of Shanghai. There are 3 main stakeholders groups: estate developer, companies decide to invest there and professional employees following by. Estate developer wants to attract hi-tech companies to transform the structure of local economy, and to create working opportunities and to absorb professional people into local community.

Companies including start-ups, emerging corporations such as scientific institutes, media companies and communication enterprise, looking for opportunities and cooperation. They are all characterized as innovation, communication and creating values.

Most of the talents are fresh graduates, traveling everyday from home to the working place or rent a house near the zone. They pour into the industrial zone not only for a career but to start a life as well. They are passionate about life and career, working creatively to see their potentials. To snap up talents and to absorb investment, it is essential for the estate developer to build its own profile and the sense of belonging for these new comers.





original state of facilities

Most of the companies newly settle in the hi-tech zone are branches or departmental offices. Commercial zone and affiliated gym around has not setup yet around. The second wave of establishment is about to finish, waiting for further investment.

top-down preferential policy

Designers are invited for artistic branding proposals on its open public space. Up to now, investment in the hi-tech zone are mainly absorbed with top-down preferential policies. Meanwhile, developers want to establish their profiles as innovative, human-focused and full of chances.

Field research of employees

Four young employees are interviewed via skype about their working conditions and life patterns. These candidates are employed within or around Shanghai, and yet all working in creative and technological field.

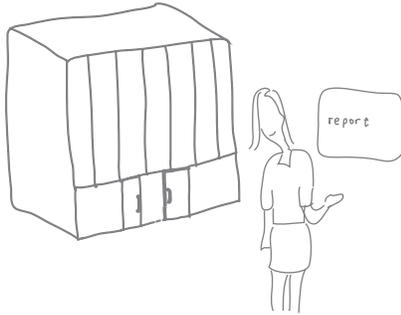
platform for social engagement

Two of them actively interact in the hobbit community of colleagues either voluntary or as company organized. Such activities provide a platform for them to spend time together. Compared to other two candidates, periodical office-wise social engagement cushions stress and depression better, scored higher with more positive descriptive compliments. Escaping themes such as short trip or role alternatives (dessert baking) are common interests. The compliments can even add a hint of admiration to the image of company, which I noticed during the interview. Young employees step into the career stage not only to work, but also to envision what kind of life-style their career might offer. They wanted their life trendy and successful. Mentorship coheres the certain group within the company. People feel profitable and capable. Capabilities of a certain kind are most appreciated among colleagues. This motivation make the fact fair: skill-acquired games(table football/Farmer) are warmly welcomed in the office. There is the keenness for capability.

multi-functional zones for activities in working

Without functional zones(gyms/relaxing room) employees cannot relieve stress or escape for from heavy load of work. Some of them choose to walk around building, such wandering is a passive way of relieving, passively motivated and socially estranged. On the other hand, one of the candidates, provided with working out facilities, regularly go with her colleagues after dinner, this relationship is more reliable for her, as she said.

Framework for Belonging(envision)



Background

What if to design a working environment catering to the main concerns of the real estate developer? What if to develop the role model lifestyle for these talents as their foreseeable future? Belonging holds the talents for developers, in addition to that, the design should also broadcast its innovation and creation as a model appealing to employees. Besides that, to maximize working efficiency and output smartly, it is important to look into the working experience of belonging and make it meaningful[11].

There is no elements of belonging for working experience at hand. I tried to build the framework by decomposing the sense of belonging into motivations and feeling of the users. Joints are made between the psychological state and motivations of employees to use it.

concepts for heuristic brainstorming of belonging

To exemplify sense of belonging effectively which users can feel and motivated, I try to define the experience. The framework is formed from literature researches by heuristic brainstorming and discussions of the concepts to evoke descriptive experience. I follow these steps because I want to illustrate and contextualize the feeling in the design language from the constituents to rich experience.

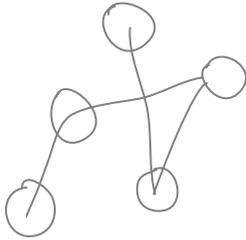
I start the framework from literature study following with concepts and then asking for feedback. As my empathy grows and framework expands, I assumed more points captured in the framework can breed a stronger sense of belonging.

My final design concept was tested based on how users perceive the experience of framework to define if the concept achieve the design goal.

Belonging in working environment

Belonging labels social needs in Marlow's hierarchical theory. But how to scope it to user's empathy and even the motivation is the goal and also the vision. However, there is a gap between belonging and users'(employees) motivation. Belonging is what employers want employees to feel and employees do not pursue it voluntarily. Employees are not highly motivated by belonging because once they are not estranged or marginalized typically to their working community, the need to feel safe and belonging is less apparent. In working situation, the constituent continues to step into next stage: doing work and being recognized; and competing and being excluded [11]. These parts can be users' motivation to get the feeling of belonging at some point.

Designer's opportunity (identity)



Design interactive system for emotion

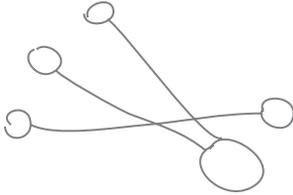
The designers' contribution to the subject is to build the bridge between developers' main concern and value created for users. There is dynamic scenario within this task (different people, different purposes). What designer can reach is a platform with dynamic approaches for the users to achieve the defined value, but not fixed motivation in dynamic scenario. This is the tricky and uncontrollable part of emotional design for emotion always stems from different reasons, as I reflect. I think it might be a better strategy is to let the users to customize the platform and grow the system.

vision and identity

I am personally involved within the project because the direction fits my future vision and innovation. I am interested in how in the future physical smart system can create a defined emotion for the users. Last semester I designed a perspective lighting system for dementia elders, where claims from clients completely align to the users'. The emotion of happiness is created by escapism simply satisfy the users' need. However, such simple layer of emotion is not compatible to most of the cases.

Projection as a inter-media for ambient information attracts me to join in the project. It augment digital information in the environment. Interactive ambiance can create engaging atmosphere and it's active for catering to different scenarios and motivations in the environment.

Bonding and territory(Scoping)



belonging : relationship part of the community³.

Belonging is a close and intimate relationship to a community. Although there is no long-term stable commitment working employees has to their employers, working might provide the social support maintained by community. Sense of belonging are achieved within a community which has two non-exclusive domains: territorial and geographical notion of community and human relationship[1]. Riger, LeBailly, and Gordon identified four types of community involvement: of feelingness of bondedness, extent of residential roots, of behaviorism of local facilities, degree of social interaction with neighbors [2]. Among these four types, the feeling types are more resilient to the threats and cruelty than behavioral type.

factors to sense of community

Commitment and satisfaction in working show more loyalty to the community[5].

Sense of Community Scale (SCS) is to probe communicative behaviors and attitudes at the community or neighborhood level of social organization [6]. Levels of high,medium,low sense of community is rated with factors[5]:

informal interaction (with neighbors),

safety (having a good place to live),

prourbanism (privacy, anonymity),

neighboring preferences(preference for frequent neighbor interaction)

localisms (opinions and a desire to participate in neighborhood affairs).

Attachments of an community

According to the definition of sense of community, there are four elements for interpersonal relationships in community [7], which include membership (sharing personal relatedness); influence(sense of mattering, making a difference to others); fulfillment of needs(resources received through membership); shared emotion connection(the commitment and belief that members have shared and will share history,common places, time together, and similar experiences).

Membership use boundaries to create personal space. There is common symbol system to create smooth functioning and integration [8]. The symbol can be social conventions (e.g. rites of passage, language, dress) to create social boundary between members and nonmembers [7]. Sense of community is viewed as an integral contributor to one's commitment to a neighborhood and satisfaction with it [9].

Influence of members in the community is characterized with 'sharing power' through the ownership by participating the voluntary association [5].

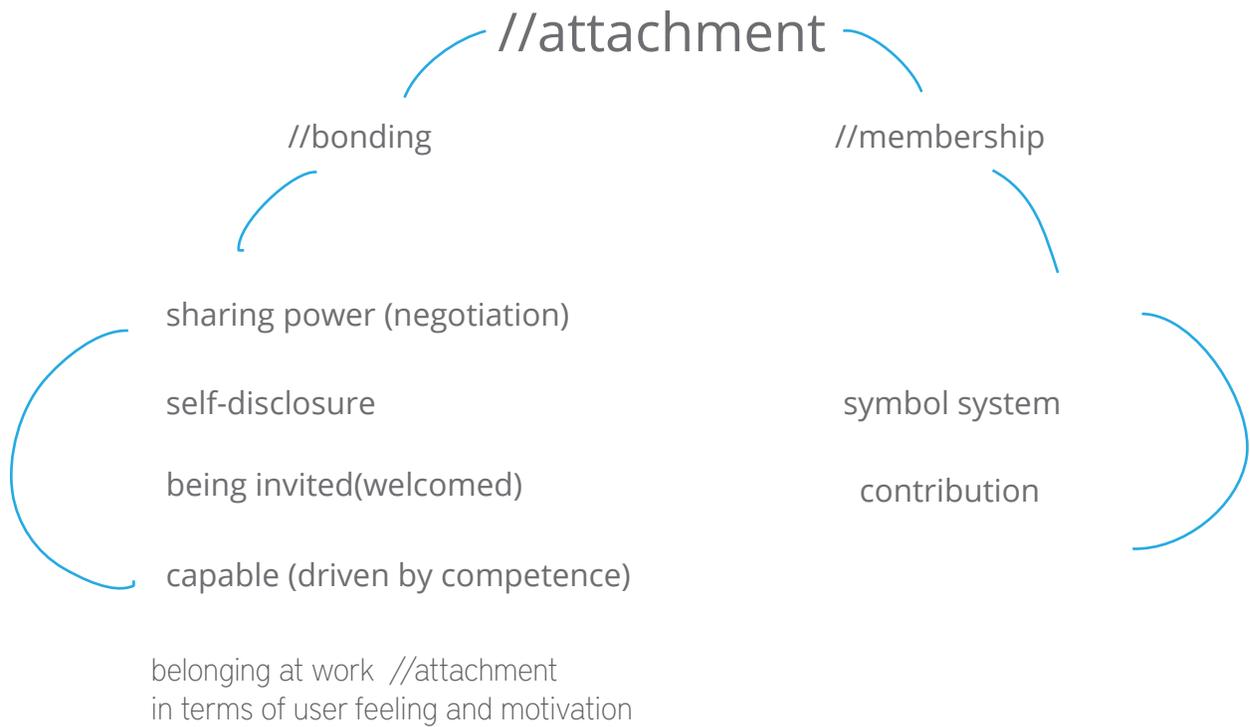
Fulfillment of individual needs reinforce the attachment, a positive sense for group to maintain positive togetherness. The extent individual needs are shared among group members determine how the community is organized and prioritized. Successful rewarding and competence are two main reinforcers. Competence as an interpersonal attraction is a reinforcer. People are attracted to others whose skills or competence can benefit them in some way. It is the rewards gravity among people and groups as person-environment fit [10].

Interaction of members for shared event and specification of the event determine the shared emotion connection followed by contact hypothesis, quality of interaction, shared valent event hypothesis, etc. Shared emotion connectiveness is the feeling of emotional rootedness in the community[1]. Contact hypothesis: The more people interact, the more likely they are to become close[2]. Quality of interaction: The more positive the experience and the relationships, the greater the bond. Success facilitates cohesion[5].

Shared valent event hypothesis: The more important the shared event is to those involved, the greater the community bond can be. For example, there appears to be a tremendous bonding among people who experience a crisis together[15].

Cloud of attachment is the characteristics of sense of belonging in terms of interpersonal status. The effectiveness of the attachment and belonging, on the other hand, rely on the reinforcer: fulfillment of individual need in the community.

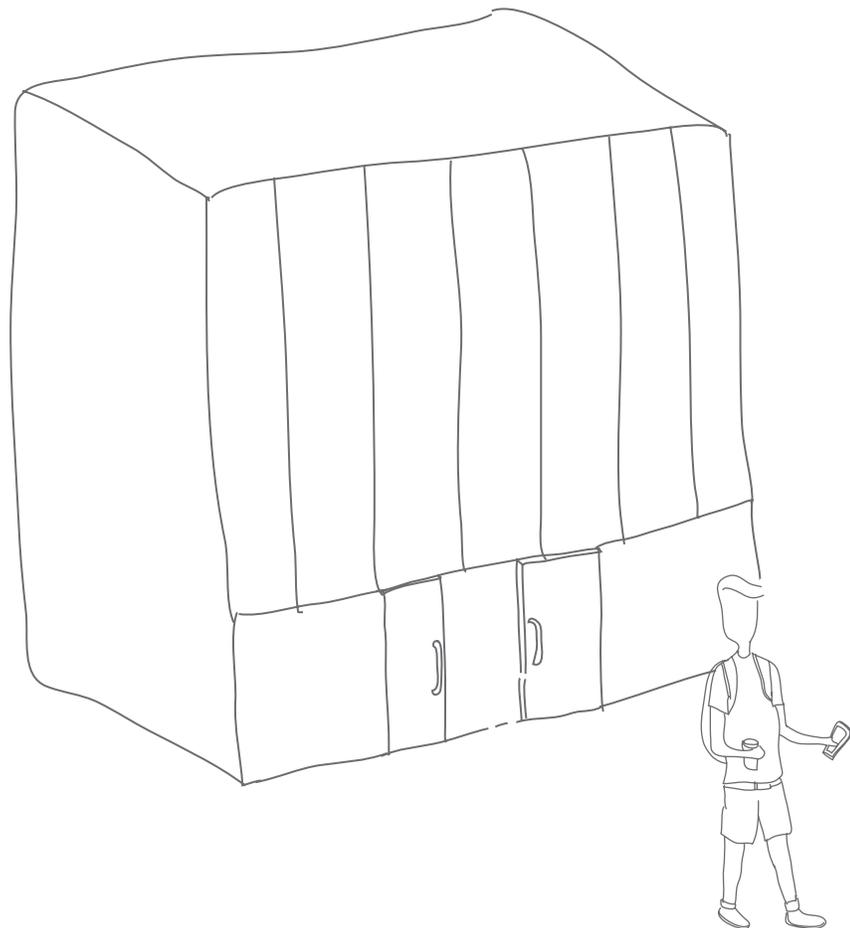
The cloud of attachment is the platform for sense of belonging. Individual need to community is the motivation for users to involve actively in and determine strength of belonging.



How to design and evaluate

As I have mentioned above, the task for design concept is to integrate individual needs with such platform. The desirability for the concept will be asked and discussed to see if it suits or evoke the need of individual needs and to what extent these needs can be fulfilled within the community.

First round of design concepts

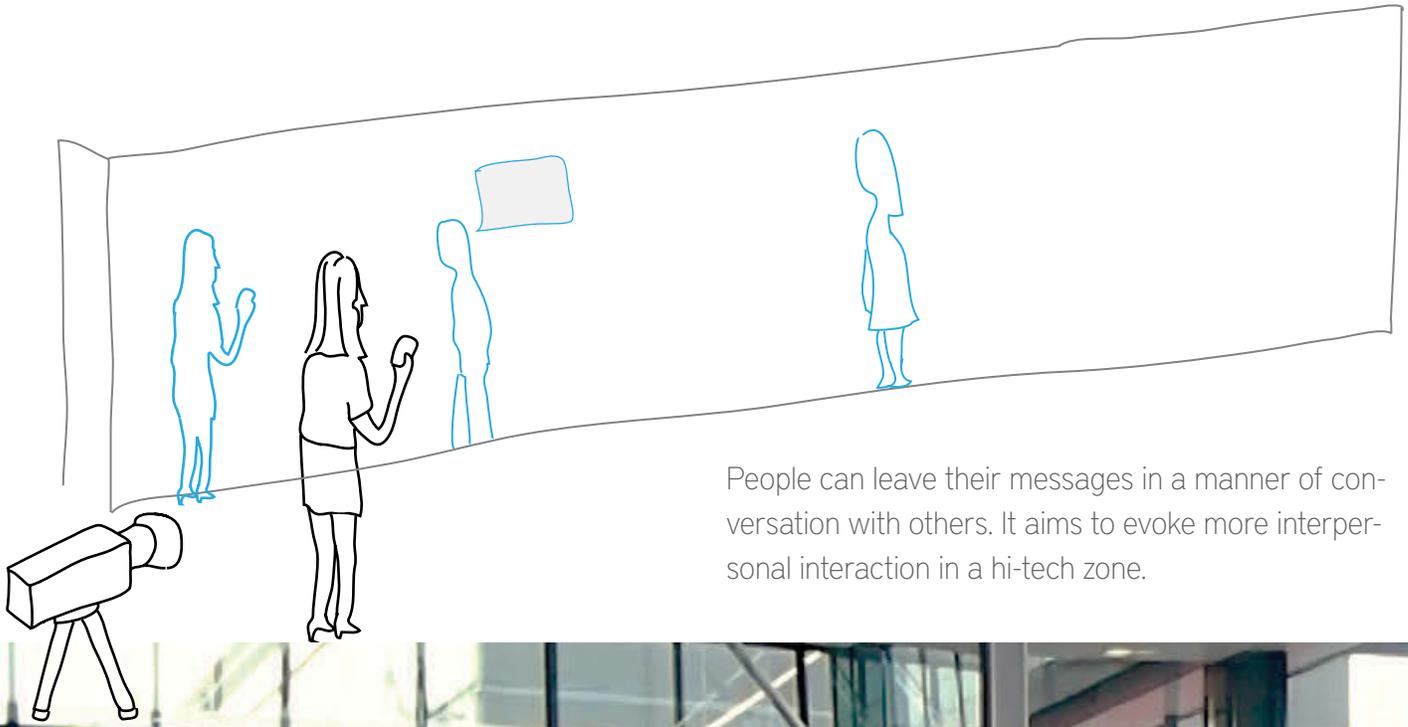


Working off in the afternoon along the wood in front of office building



messages sent among colleagues is visually connected in the mobile phone, users can add decorations and music by sharing the message to others.





People can leave their messages in a manner of conversation with others. It aims to evoke more interpersonal interaction in a hi-tech zone.

second-hand mark selling!

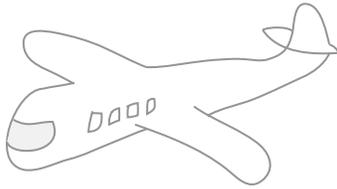
Evaluation

These two concepts are evaluated on the theme day. Main question is missing motivations behind for an employee to engage in such activities. Although it fits the motivation of attachment, people can use alternatives which they think it is more efficient and effective in social-networking. The characteristics to bond these specific people and in their very place is blurred.

I then started to look into the indoor office life, where the scenarios attaching my target users firmly.



Moving the Studio(contextualization)



Exploring the context

Motivated to contribute to the design opportunity, the next step is to experiment the concept in the context and to be inspired by real office environment and people working there. During the SDL week, I went to Taicang industrial zone. My design goal is clear, and yet the framework of belonging still need to be experienced and developed in concepts. Through desis Lab, I reached Taicang industrial zone and to find incentives with office culture which allows for a design intervention to create the sense of belonging.

Observation and discussions

From my personal experience, to understand culture needs to immerse myself in. In the working environment, I projected my concept in the context with office workers there. I managed to find a place in the office to work together with those office workers for one week.

As they commented on the previous concept, its influence on their working experience is limited, because most of the time office workers are working within the closure environment.



Time lapse vs patina

Belonging is something developing in a circular manner. It can be felt once people reflecting on time, work and people passing [3]. How can the interactive design serves the forwarding manner of people's feeling? As times goes by, emotion alters. How can the interactive system grow itself to keep its pace with?

The theme for the workshop responds to time variable as a self-growing reflection of previous interaction. It inspired me to confront the dynamic constituents of human emotion.

As I interpret, patina can be represented as traces. But what kind of traces can make people realize the meaning behind their previous interactions is the question I want to focus on.

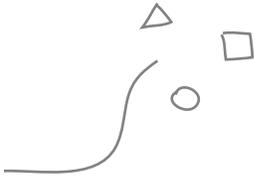
Ex-formation in the cultural context

Ex-formation is to use knowledge users informed about to explain new information and emotion for them to feel. The term is put forward as a design belief by Kenya Hara. In the cultural context of Chinese local office, I prefer to use oriental way of description. It is an indirect way of metaphor which introduces scenes and meaning already recognized accepted by users.

The design concept aroused emotion of defined scene, by implanting the meeting moment at train station into office working environment. Train station relates to long farewell and reunion especially in the very moment of approaching the platform in Chinese culture. The culture is sensitive to be alone and unfixed living settlements. The train windows are set in the corridors in the building. People walking in front of the windows can see others present outside the window on the platform. Once the user slow down their walking pace, the 'train' gradually approaches the station and halt.

The design use an implicit way of interaction between office workers as the relationships in the Chinese culture. The windows connect and pinch the indifference among people in the building naturally. Referring to the belonging framework, it invites people to be bonded and rootedness.

Engagement in space (analysis)



belonging to space [11].

When design for sense of belonging, I expect to establish attachment between members, but also to study the connection between people and their spaces. The qualities of locales and landscapes give rise to a feeling of belonging and rootedness and a sense of familiarity, giving rise to concern that provides ontological security[12]. Relationships in human behaviors to the space can show one's engagement and commitment to it. Aside from that, Bourdieusian is a term to describe how people experience a sense of belonging in spaces. It is a habitual spaces which people know instinctively what to do and how to behave just by step into them[13].

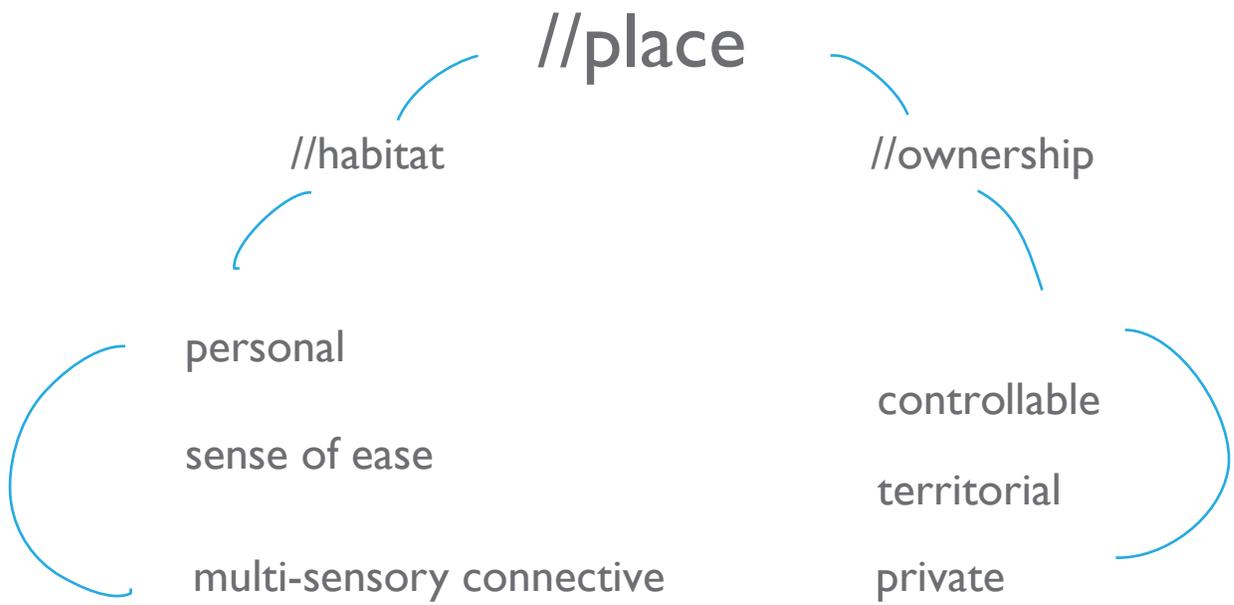
How we engage with space by moving through it and in doing so we make space 'our own'. In other words, we build a sense of belonging in the world based on the meanings we give our environment by moving through and engaging with it[14].

Ownership of a place

Spaces are sensory to people. How places are organized and displayed reflect and motivate people's engagement. By territoriality, the places are 'owned' into a habitual spaces to a specific group or person and promise the privacy from other members in the community or shared the space.

Habitat

In the place which people can feel the sense of belonging, there is sense of ease provided through engagement and familiarity to the place. The engagement with the place not only provide the familiarity but also the multiple sensory connecting the place. The range of possible engagements is expanded, people are also more likely to behave more (as personalization) to their own space with ease. Thus in such a habitat, it is used and created for multi-functions for people to react with multi-behaviors. The range of possible behavior promises people to feel ease to stay long in a place for both escaping and concentrate in the working environment.

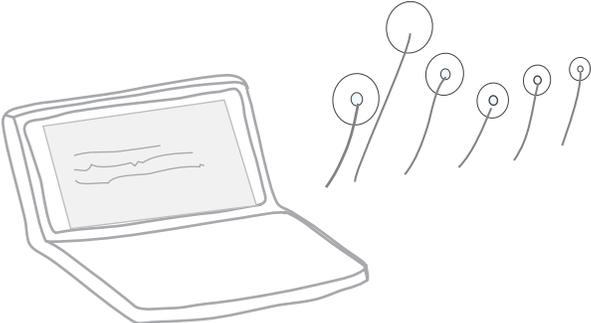


belonging at work //place
in terms of user feeling and motivation

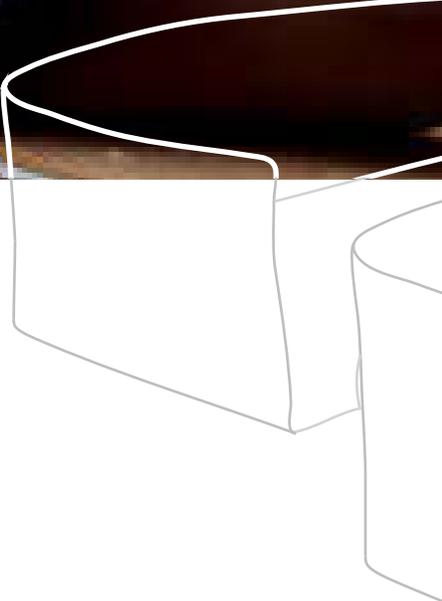


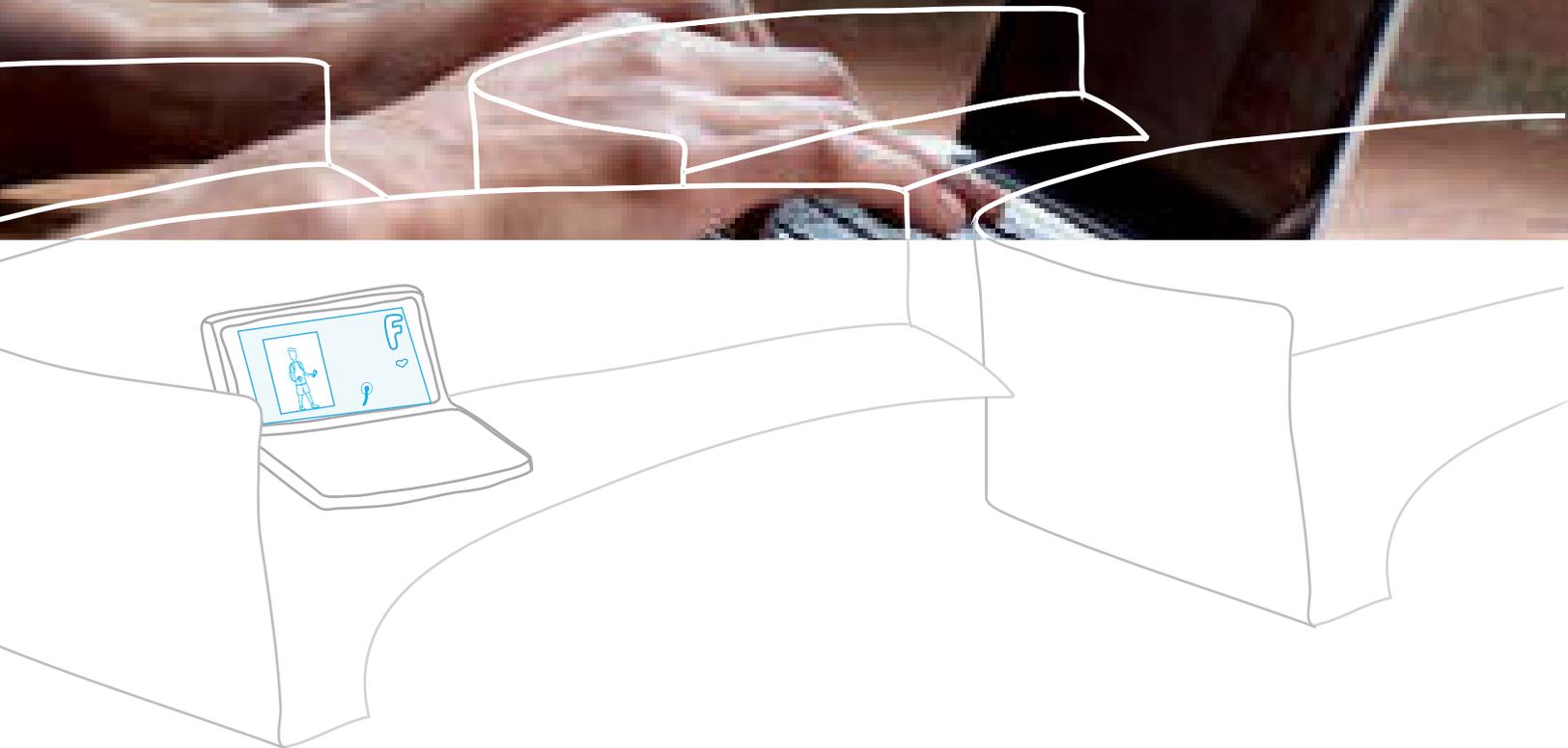
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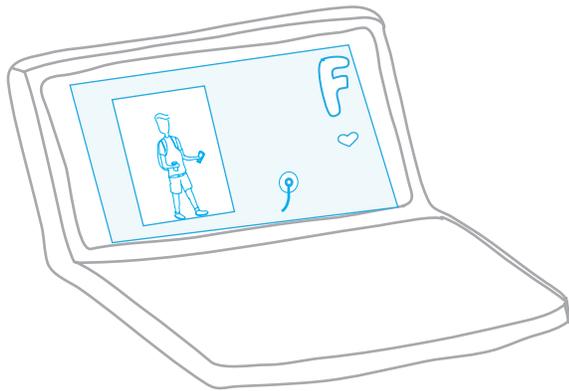
Inspired by the 'habitat' place engagement, connecting virtual and reality in a non-intrusive way.



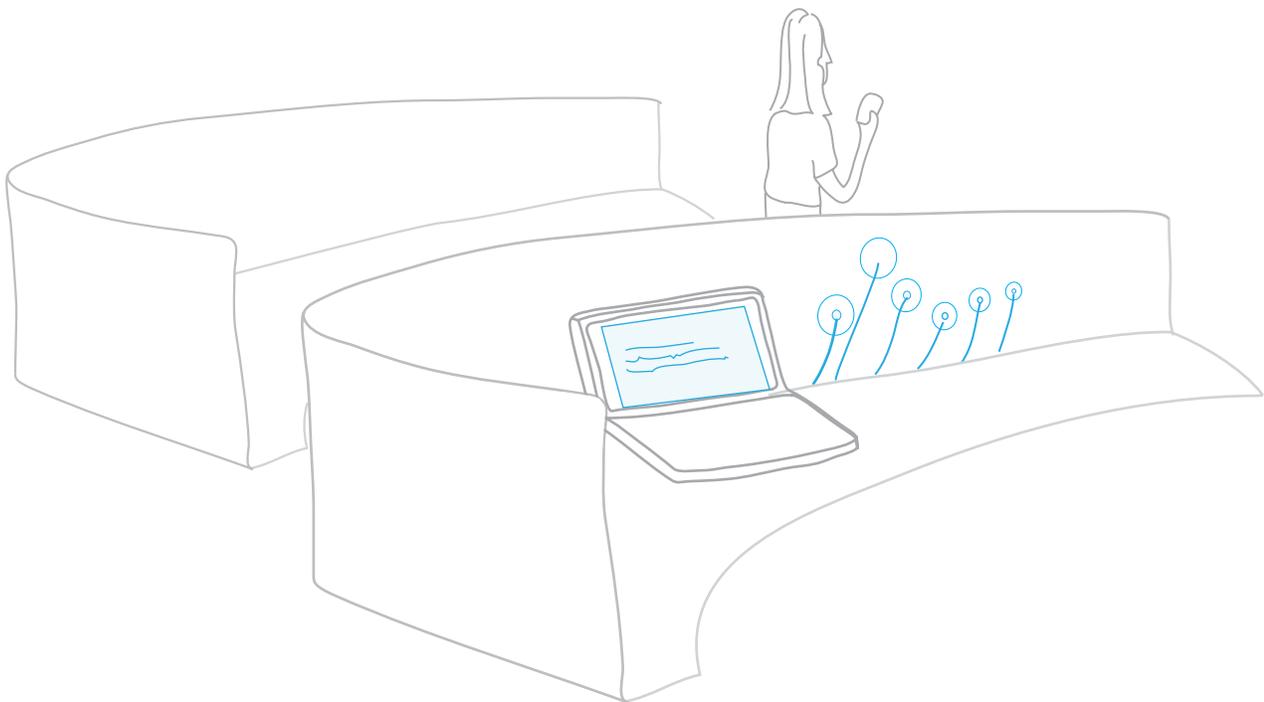
A new scheme for belonging(synthesis)



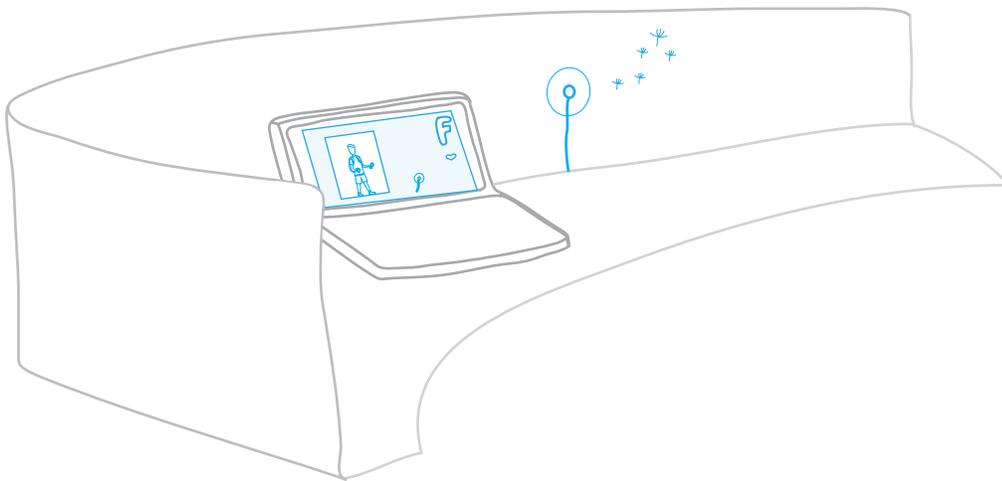




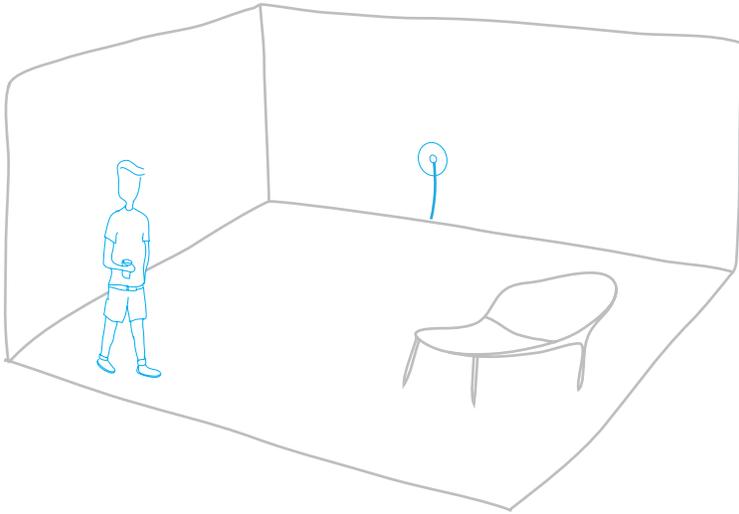
giving permission for the pictures on the face-book, twitter or those stored in one's own folder to oeco.



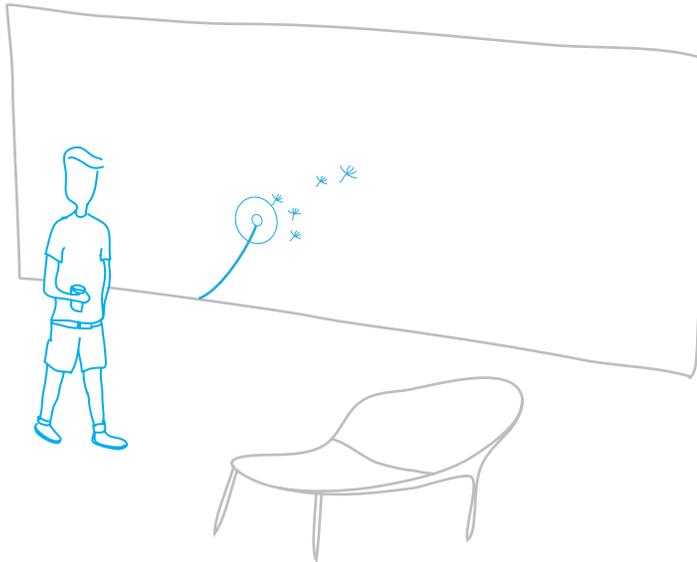
feeling the time spent and people passing by



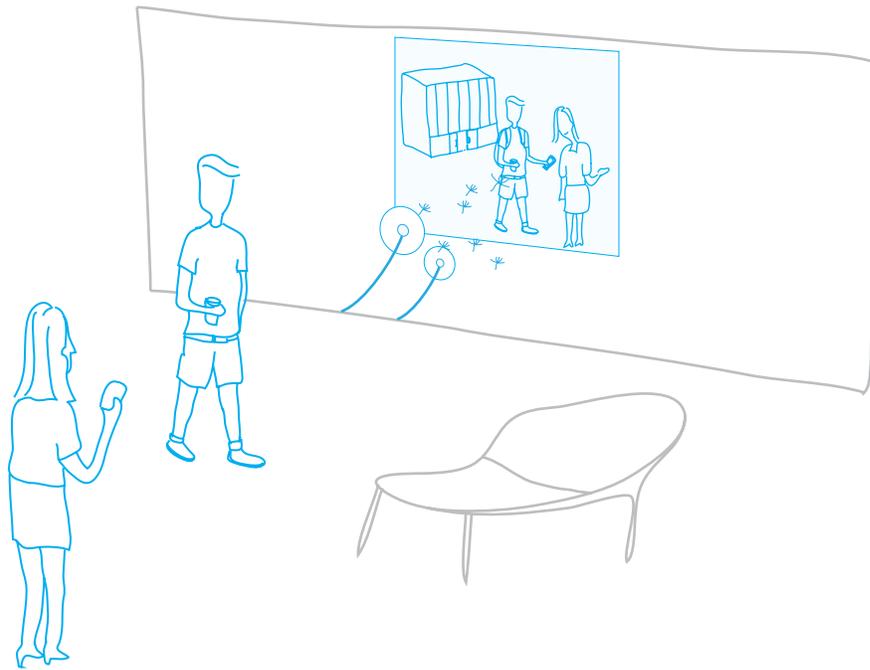
Once the employee get fully occupied in his work, other people can see the crawling dandelion from the outside of the working cell. They get the notion that this person is totally engaging in his working environment and better do not disturb. On the other hand, dandelions show as to a farther distance(look smaller) opening view to the employee, if the person is open for discussion and collaboration.



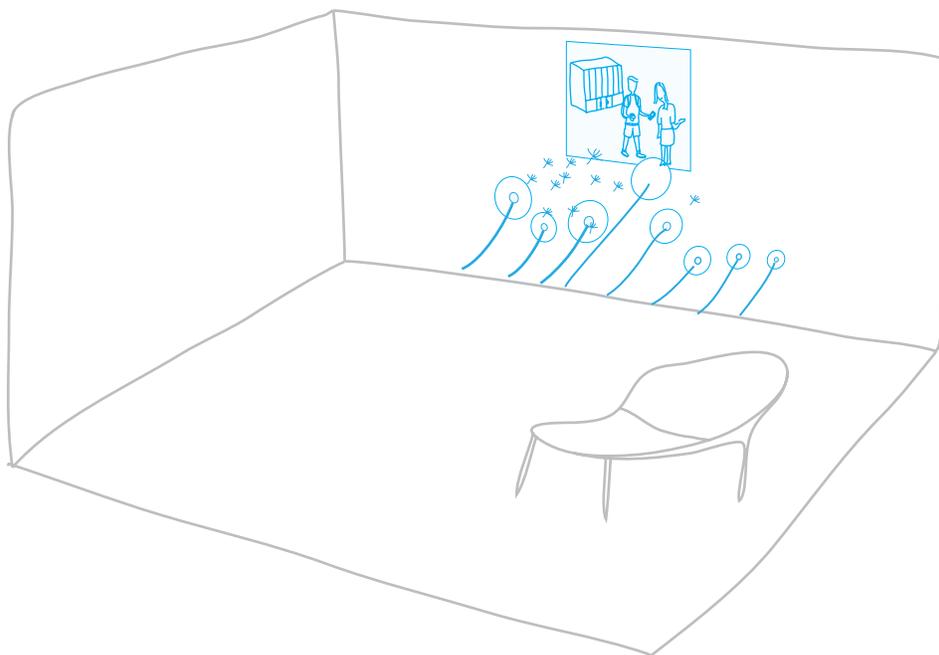
Walking into the common room, the florets which are brought from their own working cube is blown and the plant is continues to grow in the common room.



When one pays his attention to the dandelion, blowing up the seeds in the air.



People in the common can share their common shots or common interests together



Dandelions remains in the common room, as a sea of flower when the room get empty.

how oeco. works

Once one's pictures are allowed into the oeco system by simply clicking the dandelion icon, the pictures are authorized to be shared in the office-wise environment. The office workers make their own contribution to their surroundings. In the concept, other than photos, videos and music can also be admitted into the system.

Users are motivated to grow the system not only for the decoration, also for the personal space they can keep away from distractions, keep private and personal when doing the work.

As several people come together and be attentive to the dandelion by turning face to or walking closer by, dandelions are blown and the florets turn into pictures of common interests which have been collected in the oeco. system.

interpersonal platform

Oeco creates an interpersonal platform for office workers by providing a topic to interact based on the media. Pictures are personalized providing a self-disclosure topic for the users. By blowing their own plant to the common space, and showing the media automatically, people are invited to the place and the group as well. Dandelion as a symbol system is abstracted as the representation of the membership of office employees.

engagement with the place

In the office cube, a more personal space is created to provide the sense of ease for office-workers. Employees can control over their private working space to immerse themselves totally in the work. Escape in the open field of flower is inspired by creative workers like designers who are keen on personalized their own 'territory' by natural personalized and music listening while working. However, users can also leave the 'territory' away instead in a open mode for discussion. The function of working cube is within control.

Prototyping

The working prototype are made with two parts. Functions of the prototype can be divided into detecting (kinect) people's movement, display (beamers and screen), and users' input of photos.

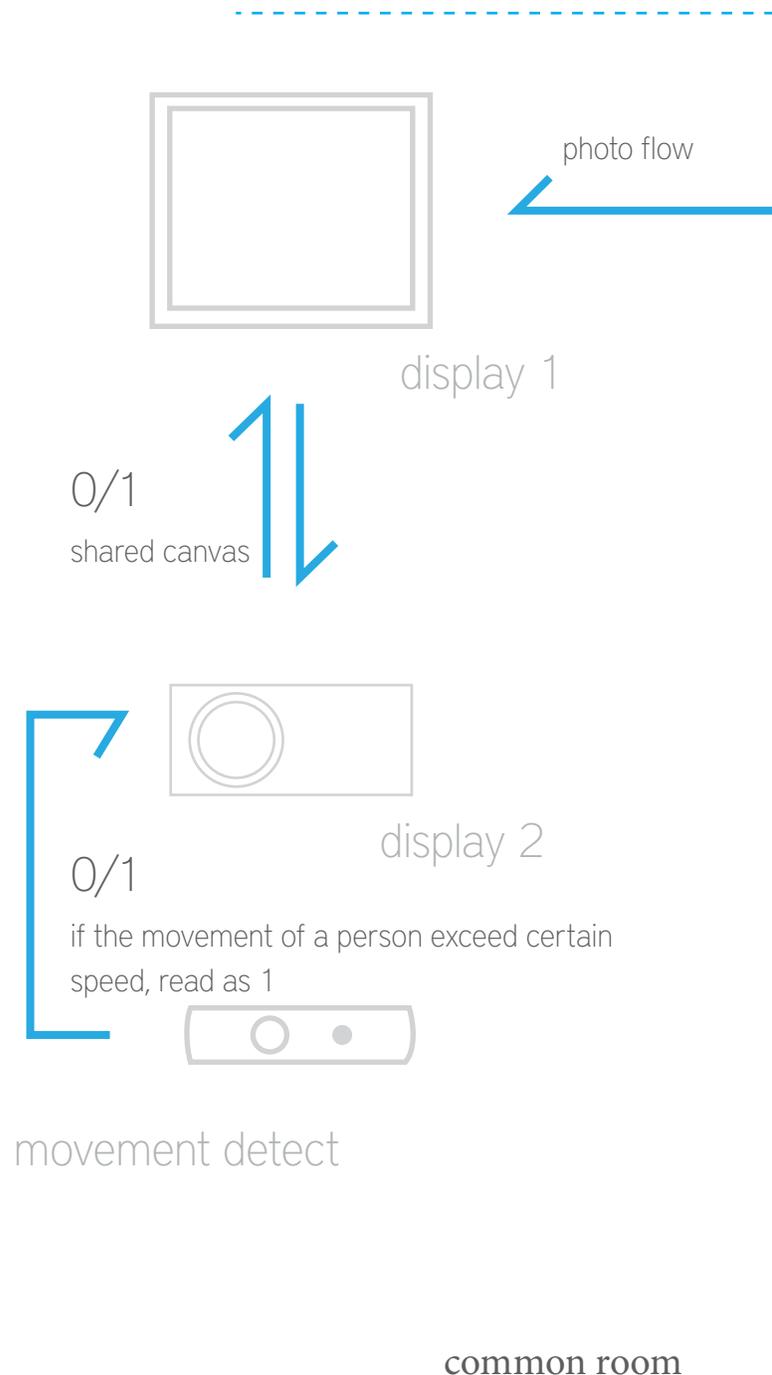
There are communication between screen and beamer in the common room part, which is accomplished with shared canvas.

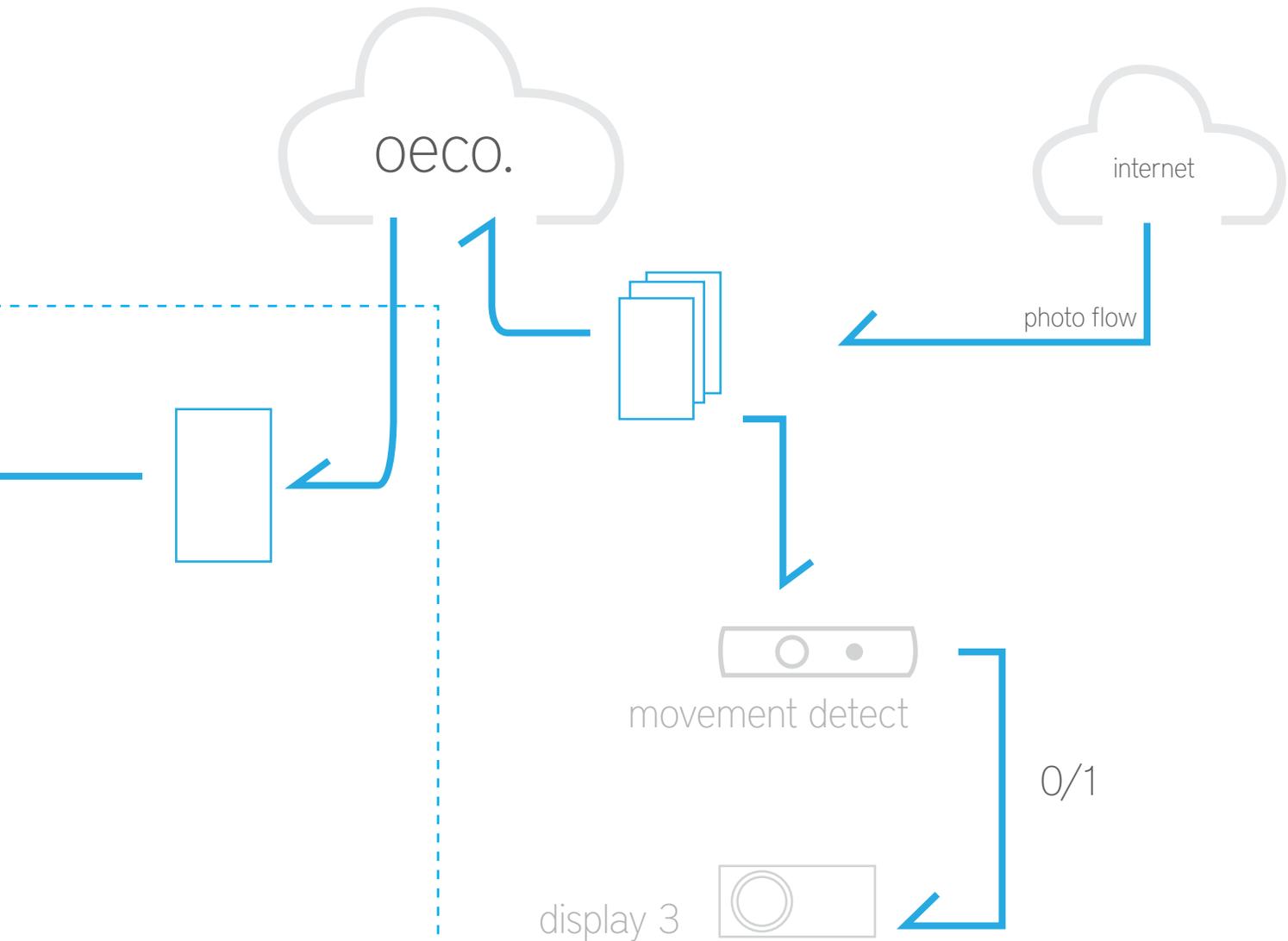
The dandelions are svg files I used to enable z dimension of the display from screen to the dandelions. Tables are used to preset the x,y location of the dandelion, its z location is adjusted according to the y axis.

Kinect out put its detection as 0/1, continuity of the dandelion movement is achieved by accumulation on itself.

Florets are alternatives from gravity particle class, they disappear as their amount of z axis rise.

Pictures are shown once there is people's moment and 2/3 of the florets reach 2/3 of the height of the screen.



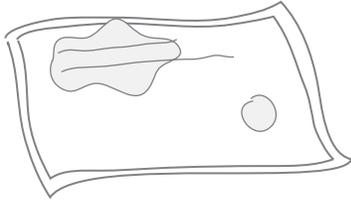


$$\text{distance}(x,y) = \text{last time distance}(x,y) + (-1)^{(0/1)} * \text{constant} * \sin/\cos(\text{wind direction})$$

$$\text{wind direction} = \text{last time wind direction} + \text{noise}$$

office cube

Reflection and perspective(reflection)



My design process is to define the elements of feeling or motivation for the sense of belonging, However, belonging is not among the priorities for employees to pursue. During my design practice, I want to find a balance between the framework and people's motivation to engage. Explorations are made about how such framework can create the sense of belonging for people in the working space driven by valuable motivation for employee themselves. Other than that, how to present user-friendly and attractive the prototype is also what I want to examine and reflect.

In general, there are two elements I want to evaluate: motivation and attractiveness. Besides, I also want to know people's suggestions on how to improve the concept.

1. Motivation - desirability test

Goal of desirability test

Desirability test is used in the conceptualization phase. It aims to find how the users feel about the concept and try to improve concepts based on the feedback. In my evaluation, I try to validate the motivation for people to use the concept. My goal is to reflect if users perceive the design in the way as I expected according to the framework.

Pool of adjective words for users to describe their perception of the concept

Motivation:

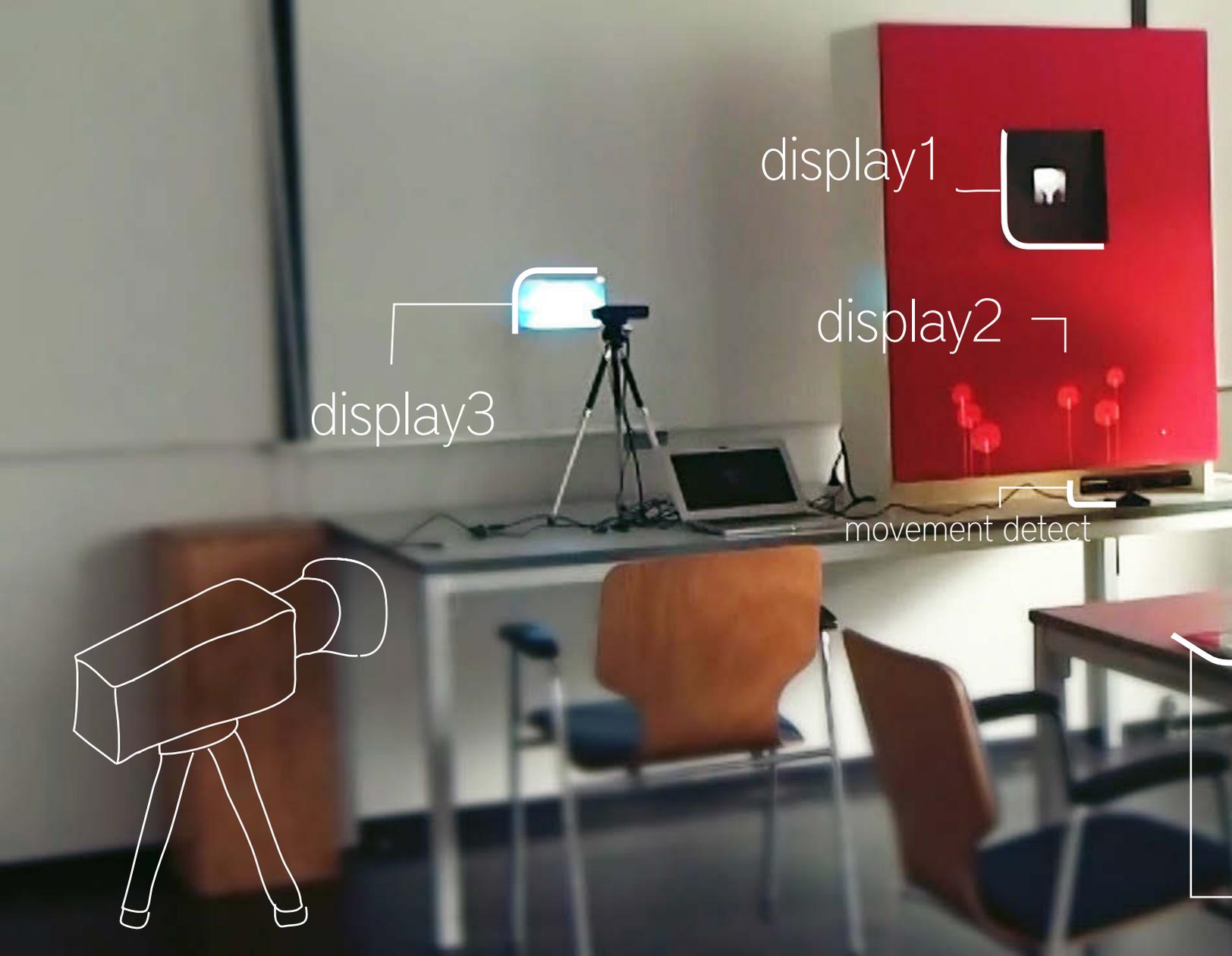
1.tied 2.disoriented 3. controllable 4.motivating 5.personalized
6.territorial 7.compelling 8. innovative 9.invited 10. engaging
11.creative12. connected 13. valuable 14.disoriented
15.customizable

Feeling:

1. estranged 2.escaping 3.symbolic 4comfortable 5.flexible
6.understandable 7.collaborative 8.non-intrusive 9 familiar to
place 10.contributive

2. Attractiveness of the interface

I used the method of Attraktiff to measure the attractiveness of interface of my concept. Users are invited to indicate their levels between opposite adjectives. There are four dimensions are evaluated: Pragmatic Quality, Hedonic Quality-Stimulation, Hedonic Quality-Identity, Attractiveness. To what extent the functions of the prototype enhance the possibilities of the user, stimulate him or communicate a particular identity (e.g. by creating a professional, cool, modern or any other impression)? How well a user identifies with the product? To what extent the prototype supports moving forward attitude by offering novel, interesting and stimulating functions, contents, interactions and styles of presentation?



Participants of 5,
4 of them are phd students, one is master student. All of them work regularly in an office.

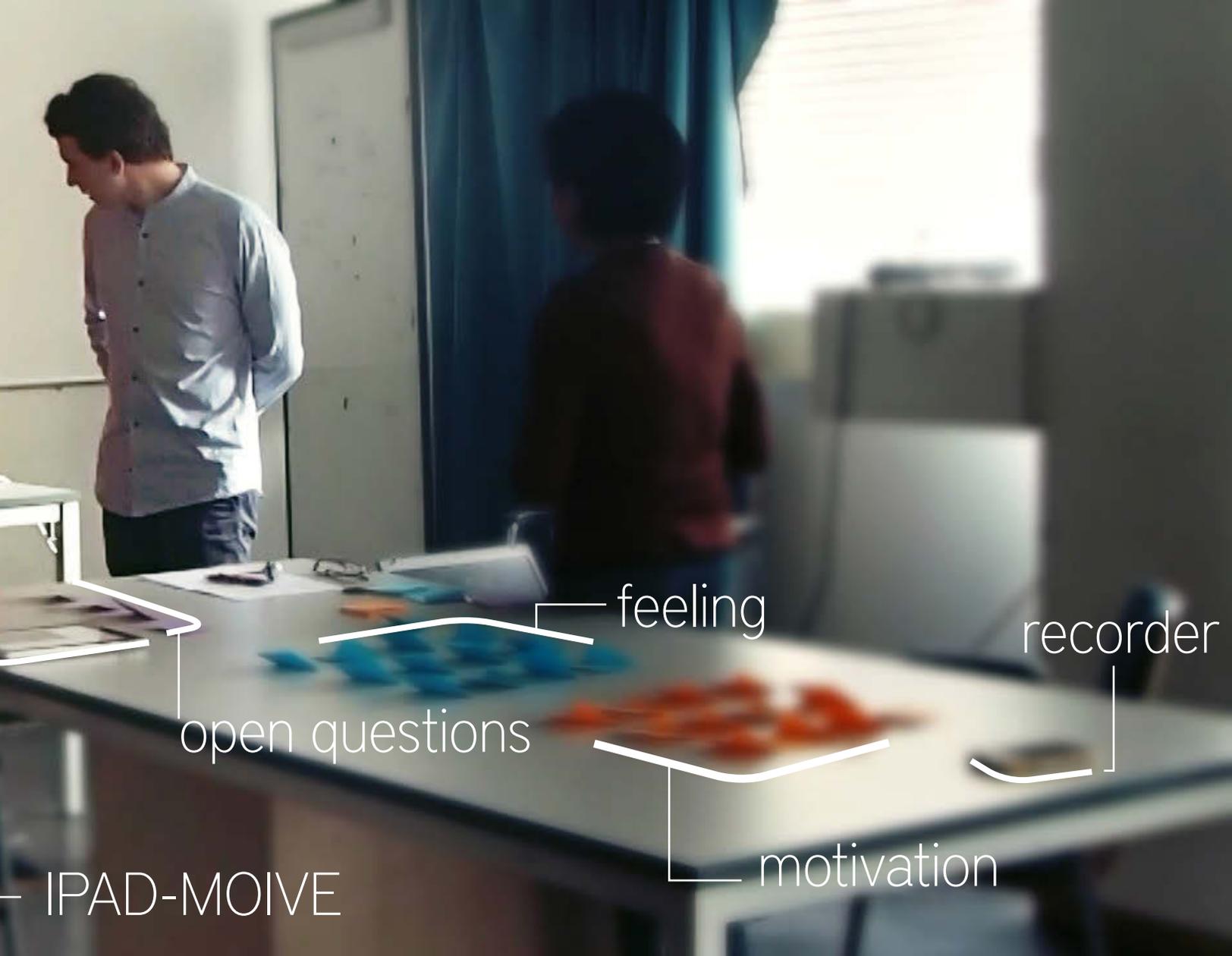
3. Suggestions

I want to users to give suggestions focusing on Social Attachment and Place Engagement. The following questions were asked:

How do you think the system will contribute to your social engagement in the office?

How the system will enhance your working experience?

Do you have any suggestions to the system?



Result:

The most named motivations are (above 3/5) :

tied/connected: ties to the group are made

personalized: users see the system as decorative and prefer to have more pragmatic part

invited: users are invited to participate in the group interaction

innovative/creative: never see such system in the office environment

(un) customizable: users all hope there can be some different choices for plants but as well as the color. customizable is also related to low feeling of territorial, as users explained, everyone has the same symbolic icon make territory less recognizable.

The most named feeling are (above 3/5):

symbolic: the dandelion is a adorable symbol and as a group the system is recognizable, however, dandelion is tender, there should be customizable for more personalization;

collaborative;

contributive;

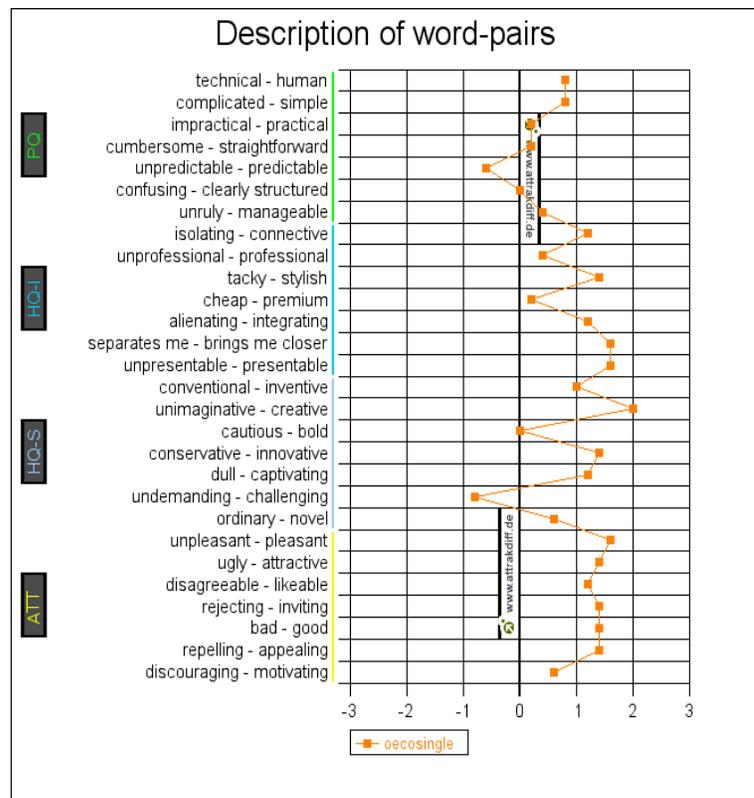
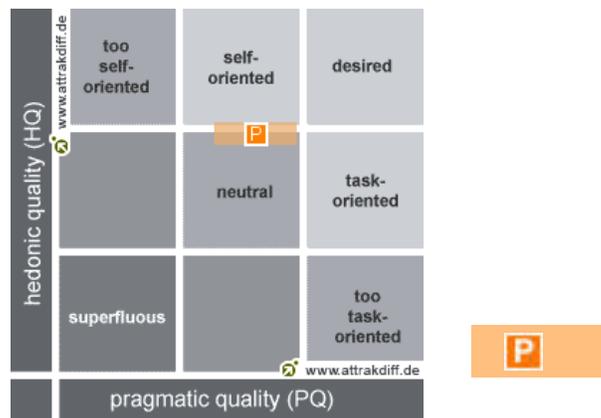
non-intrusive: whether it is non-intrusive or not depend on how the system use photos on network;

comfortable: movement of dandelion provide a calm feeling familiar to place

Attraltiff result:

Pragmatic quality is clearly the classification. The user is assisted by the product, however the value of pragmatic quality only reaches the average values, there is room for improvement in terms of usability.

User is stimulated by oeco, and yet there is still room for improvement exists in terms of hedonic quality.



reflections

sense of belonging is realized

Based on the user test on oeco, it realized the belonging essentials according to framework. Most of the adjectives concerning to elements in belonging is picked up by users. It ties people inviting them to join in the attachment serve human bonding. Symbolic system caters for the membership within the company. Place familiarity is achieved which can be reinforced with adjustable 'fences'. As I have interviewed, social and private in the office itself is tricky, people tend to switch to different modes to work in. Reclusive status is suitable for focusing. Higher 'fencing' helps employees to create private space from other members. On the other hand, lower 'fence' matches the work flow of opening for new thoughts. Instead of projecting directly on the wall, the plants can be projected on a transparent plank, as a communicating indicator between employees. Ambient experience in the working working cell improve itself by music, accompanying the scenes, for users to totally sink in.

sense of territory by customized symbol

Customized symbol creates more personal feeling and can be picked up at once. Territorial feeling is weak for the common symbolic expression. For visual part, connection between florets and pictures can be more detail and such transformation can be made with more advanced and seductive animation. This is the part some users do not understand, for they think there is something missing in their mindset.

Network among colleagues

Several users suggest more freedom in the office cube when interact with the system. Dandelions can be retrieved back to pictures and other multimedia at certain moment. They explained their need for inspiring pictures during creative thinking especially for designers. Automatic or network among colleagues can support more inspirations. This kind of presentation and sharing help to build the image of personal capability which is an attractiveness in boding as I have mentioned in framework.

Competency Development

Design

Design is to create value for stakeholders. In this project, the main challenge is to integrate sense of belonging (clients 'motivation) and other experience enhancement (users 'motivation). Client wants to hold talents in the new working area and employees chase better working experience. I managed to connect these two parts by reading psychological paper about belonging to understand its constituents and design at the same time to target these constituents with users 'motivations and feelings.

Technology

I have developed programming and managed to carry out a fully working prototype. I have learnt to programming basic graphics in processing and networking among segments. As I reflected, prototype can be realized partially but need rich interaction for visitor to fully engage in. Visual effect needs to be amplified. I have developed technology from scratch to realization. The goal in the future is how to interact with prototype with rich interaction.

User perspective

In my previous user test experience, I have set open questions for users to talk about their feeling to my design. However, it is hard to capture the implication behind the random words. My goal this time is to reflect if users perceive the design in the way as I expected by providing adjective words of motivation and feeling. Conversations of how the users feel and expect twirling around these adjectives structure themselves well to develop the framework. It is introduced as a method for Desirability Test. I have now better grasp of user test: users comment based on their personal experience . Designers need to have a framework or method benefit their own concept with users' experience.

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