

COM OOD

Product design for better communication and less stress in startups

TEAM MEMBER

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DURATION

Aug 2017 (1 month)

MY ROLE

User Research,
Prototype, User test,
Pitch



Project Background

Nowadays, China is facing a transition phase. In light of the success of the entrepreneurial pioneer, Alibaba, various startups are set up in different fields of the area. More and more people of young generation choose to work at startups or start their own enterprise. However, studies have shown that people working in startups are experiencing immense stress from both people around them (clients, employees, customers, and the friends and family) and themselves (self-expectation and pressure on success), much higher than those who work in other enterprises. Through this project, we attempted to dig deeper into the causes and the impacts of the pressure and provide strategies for people working in the startups to get a balanced life.

My Role

Product Designer

Interview, Affinity Diagram, Persona, Ideation,
Interface Design, User Testing

Design Process

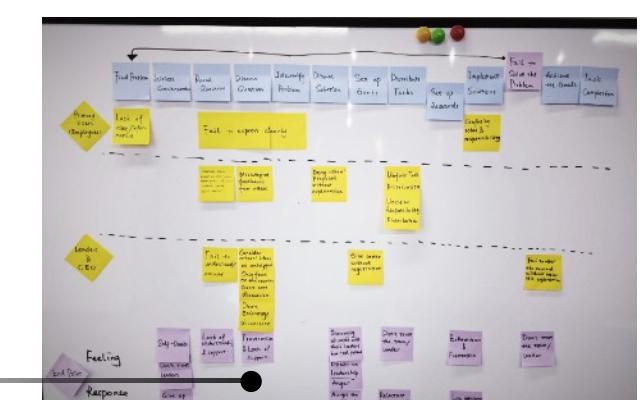
Research

Survey
Interview
Literature Review



Synthesis

Affinity Mapping
Persona
Journey Map
Ideation



Prototype & Design

Clustering & Voting
Sketching
Modeling & Arduino Development
Interface Design



Evaluation

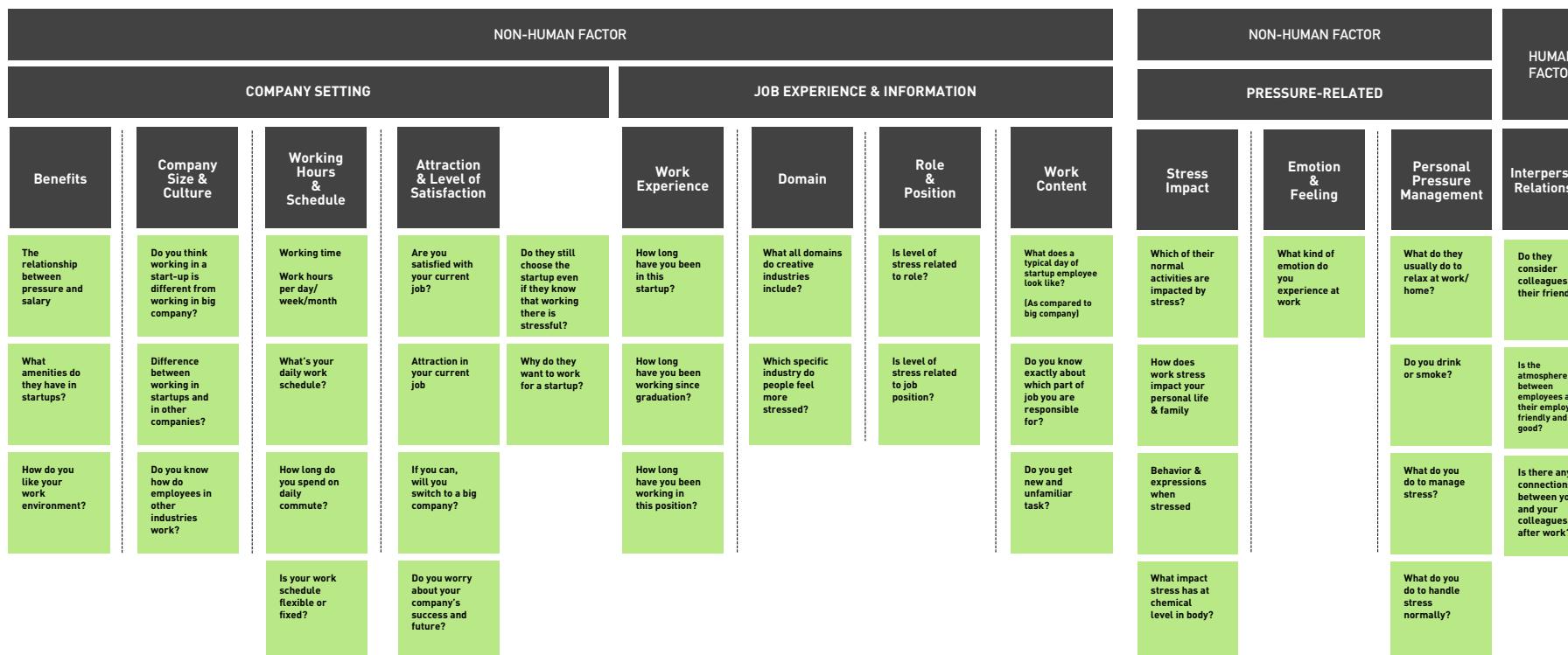
Interview



01/ User Research

01-1 Preliminary Research

To begin with, we tried to define all the potential pressure sources. Through the brainstorm and literature review, we came up with a bunch of ideas related to the work pressure from “off work” scenarios to “at work” scenarios. Our focus was more on the “at work” scenarios, which were further divided into human factors and non-human factors.



01-3 Interview

Besides these two who experienced pressure from their work, our research also included 5 other interviewees who were employees, CEO and group leaders from Bay West Accelerator or Stooches (an educational startup). We finally generalized two personas regarding CEO/ leader and employee respectively.

Through interviews, we got our personas and journey map which shed light on how interpersonal relationship/ communication cause harmful pressure.

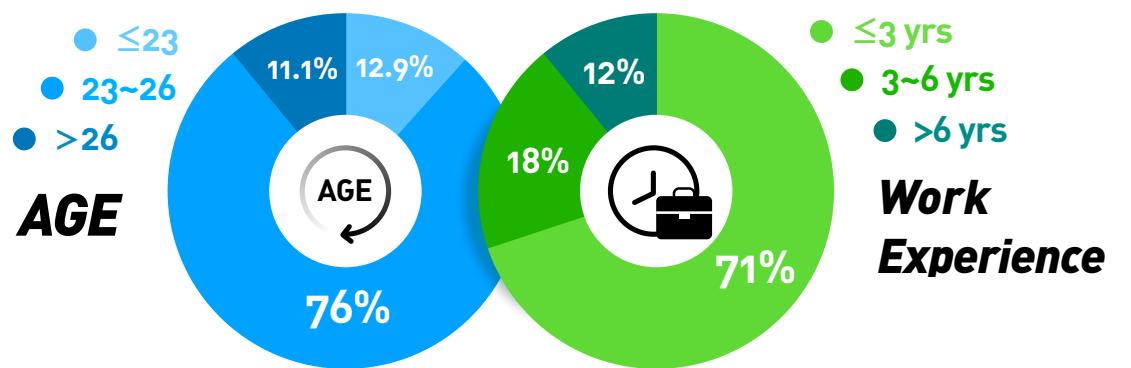
01-2 Survey

According to the possible pressure sources we postulated, we first conducted a survey* to study the stress level distribution among employees working in startups. The results are shown on the right —

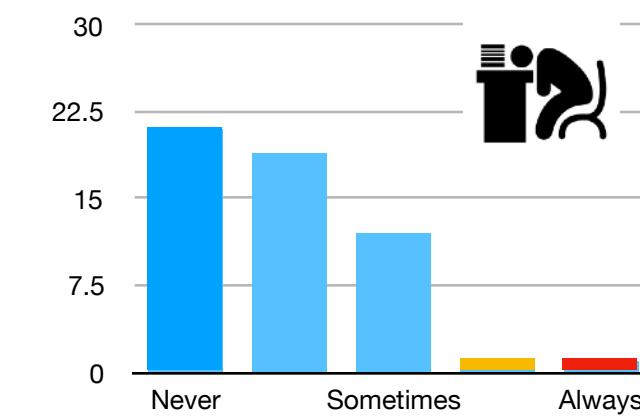
- Most of the respondents are people of age 23~26.
- Most of them just started their career within 3 years.
- Though they are young, most of them could deal with their work pretty well.
- Living far away from home /Being single, they seldom experience stress from family or off work scenarios.

However, the survey results still showed that about one-third of the respondents experienced sleep deprivation and other negative emotions due to their work. Based on all above, we narrowed our target down to the “at work” “human factors”. We also invited two respondents to our interview

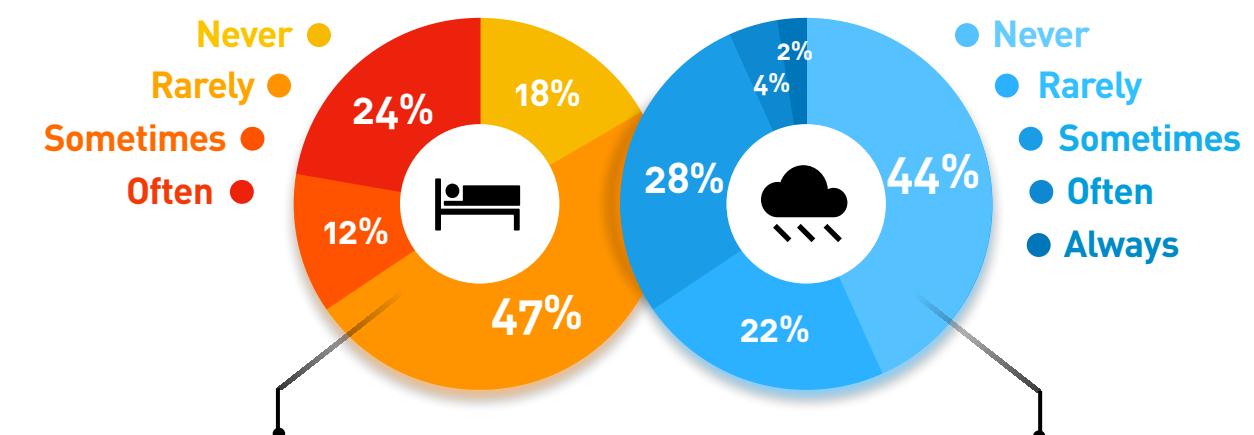
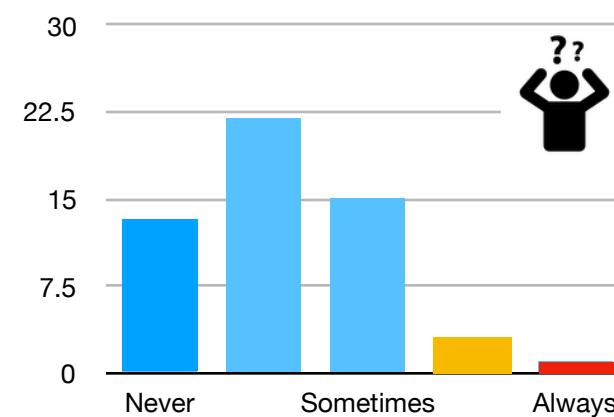
who reported that they were experiencing sleep deprivation and depression in the survey.



*Q: How often do you feel that there are **too many challenges in your work** which make you stressed out*

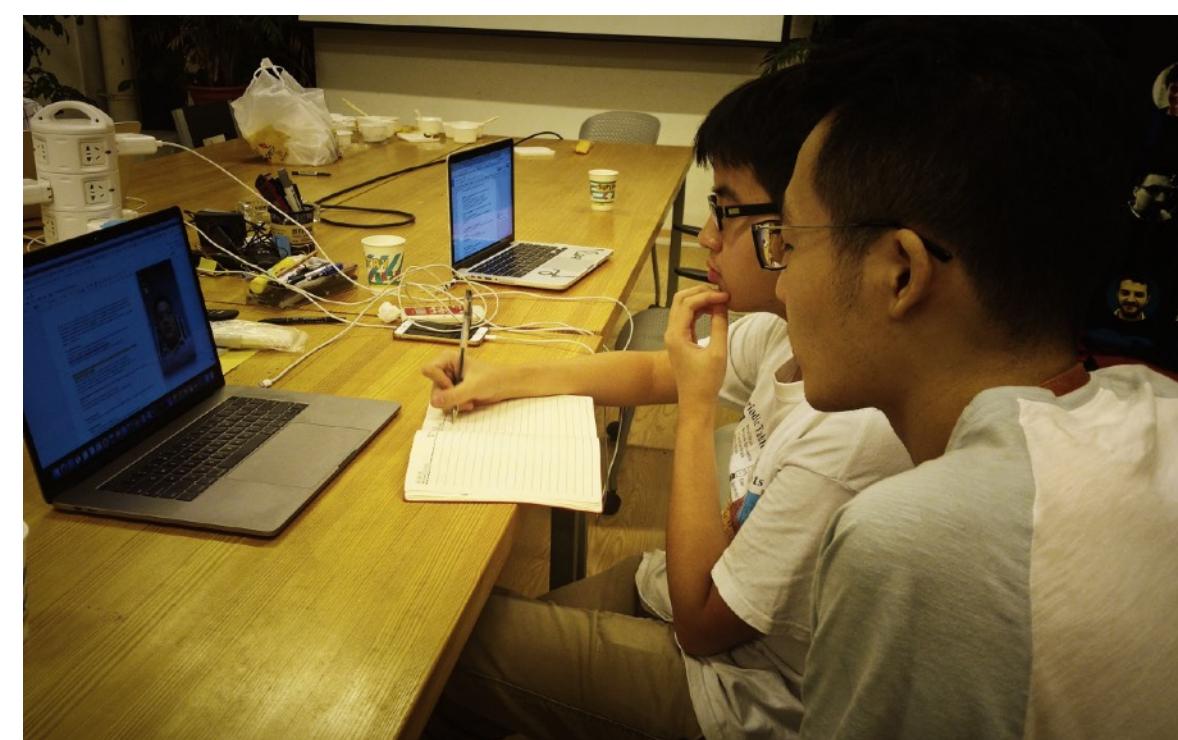
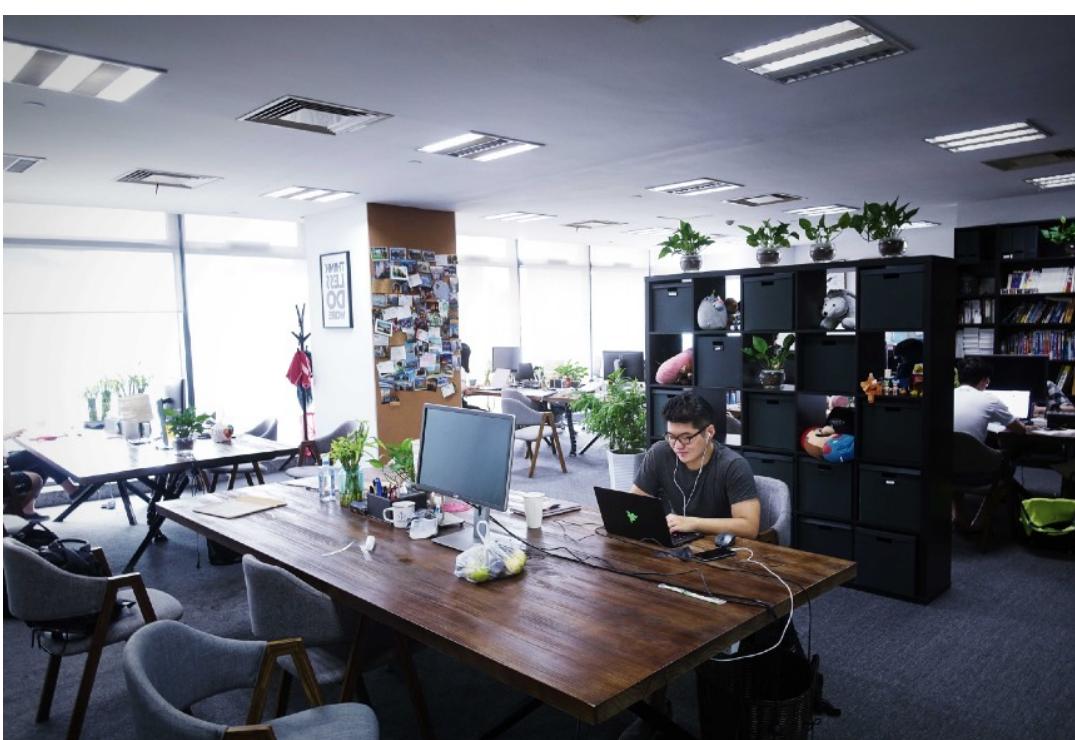


*Q: How often do you think you **cannot handle your work / lose the control of your work***

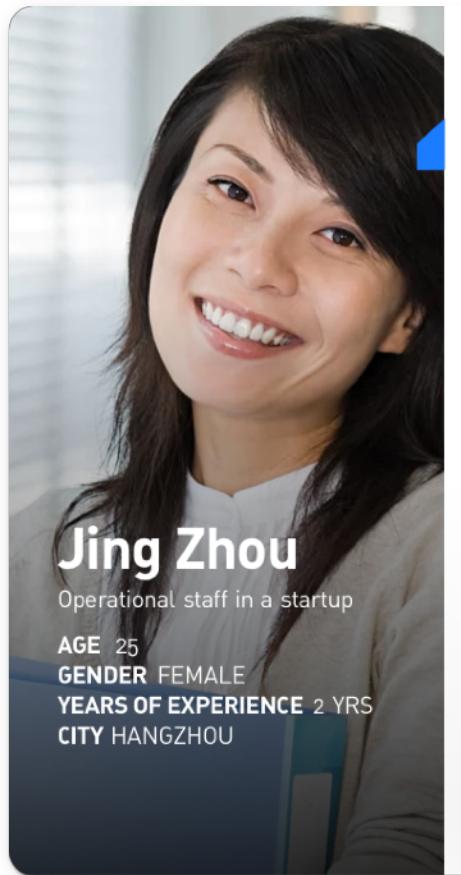


*Q: How often do you experience **sleep deprivation** due to your work*

*54 respondents from Stooches (an educational startup based in Hangzhou) and startups in Bay West Accelerator



02/ Synthesis Persona and Inspirations



Jing Zhou

Operational staff in a startup
AGE: 25
GENDER: FEMALE
YEARS OF EXPERIENCE: 2 YRS
CITY: HANGZHOU

I am quite confident in my company's future. But sometimes I get annoyed when my leader disagrees with my ideas without a proper reason.

PERSONALITY
Talkative
Extrovert
Responsible

WORK EXPERIENCE
Not quite experienced in the current field.

WORK TIME
8-10 hours. Work overtime at 60% of her work days.

RELATIONSHIP WITH COLLEGES/LEADERS
Gets along quite well with them at most of the time. Sometimes strongly disagrees with her leaders.

PERSONAL LIFE
Works in a city far from her hometown. Keeps a cat. Stays by herself during days off. But is usually interrupted by unexpected work emergencies.

Primary User

According to our research, we found that employees work perfectly without harmful pressure if there are supportive collaboration and friendly interpersonal relationship. Below shows some key components which helped us to identify the correlation between interpersonal relationship and harmful work pressure.



Xinhai Sun

CEO of a startup
AGE: 33
GENDER: MALE
YEARS OF EXPERIENCE: 6 YRS
CITY: HANGZHOU

Pressure is inevitable in startups. Sometimes it could be converted into motivation as well.

PERSONALITY
Energetic
Strong-minded
Eloquent

WORK EXPERIENCE
Used to work at big companies before started his own enterprise.

WORK TIME
Work cannot be separated from life. Has no apparent work schedule.

RELATIONSHIP WITH COLLEGES/LEADERS
Tries to create an open and friendly work environment. But the baseline is the accomplishment of works with efficiency and quality.

PERSONAL LIFE
Always positive and energetic during most of his work time, but feels down and spent when gets back home or at rest.

Secondary User

Compared to those who work in established companies, bosses/founders in startups are more likely to deal with overwhelming and various tasks which break up their attention for each employee. Meanwhile, a closer interpersonal distance with their employees makes the impacts of interpersonal relationship sharper and more direct.

What makes working in a startup **easy/attractive**

Reversed

What makes working in a startup **hard/stressful**

How **supportive and friendly relationships** among employees help in handle stress

Pursuit & Startups' Attraction

They pursue the open-minded lifestyle brought by the compact company size and flat management. Those make them access their leaders and other co-workers more frequently and directly, which help them gain rapid growth in career.

Rapid Growth in Career Path

They have the basic knowledge that working in startups might be exhausting. In fact, they choose to work in startups because multiple tasks and tough challenges would boost their growth in career.

Cooperation Offers Support

With cooperation and support from the team, basically they won't feel powerless dealing with daily work, even though sometimes it could be overwhelming.

Frustration

Sometimes their ideas are denied without explanation or when their works are misinterpreted. When this happens frequently, frustration will accumulate and finally lower their passion and efficiency in work which further makes them anxious or angry.

Lack of Cooperation Cause Negative Impacts

Lack of cooperation/support and shared understanding will induce lower efficiency and frustration. Without friendly and relaxing interpersonal interaction in the workplace, even a seemingly easy task would induce reluctance and aversion.

Small Talks Promote Relief

At times when they experience frustration due to their leaders. Talking to other employees would help a lot in relieving negative stress and retrieving high work efficiency. It works especially when they both are dissatisfied with someone.

Sharing Encourages Positive Communication

They share snacks with their co-workers. By doing this they can easily initiate some simple and easy small talks which let them know each other more and facilitate positive mood.

Long-lasting Stress Leads to Leaving

When frustration and lack of cooperation last for a long time, they turn into mistrust and long-term harmful stress. Those will finally force them to leave the startup.

Inspirations

More Direct Connection Between Founder/Boss and Employees

Because of the compact company size, they generally have more connection with their employees compared to those in a big company. Thus, once intense relationship occurs, it is more easily to be sensed.

Multiple Task & Fragmentary Attention

They have to take charge of various kinds of tasks. Generally, they pursue high efficiency and productivity. As a result, they sometimes cannot pay full attention to everything and each person. This reduces their chance to gain empathy towards employees, which increase the possibility of unsatisfactory communication.

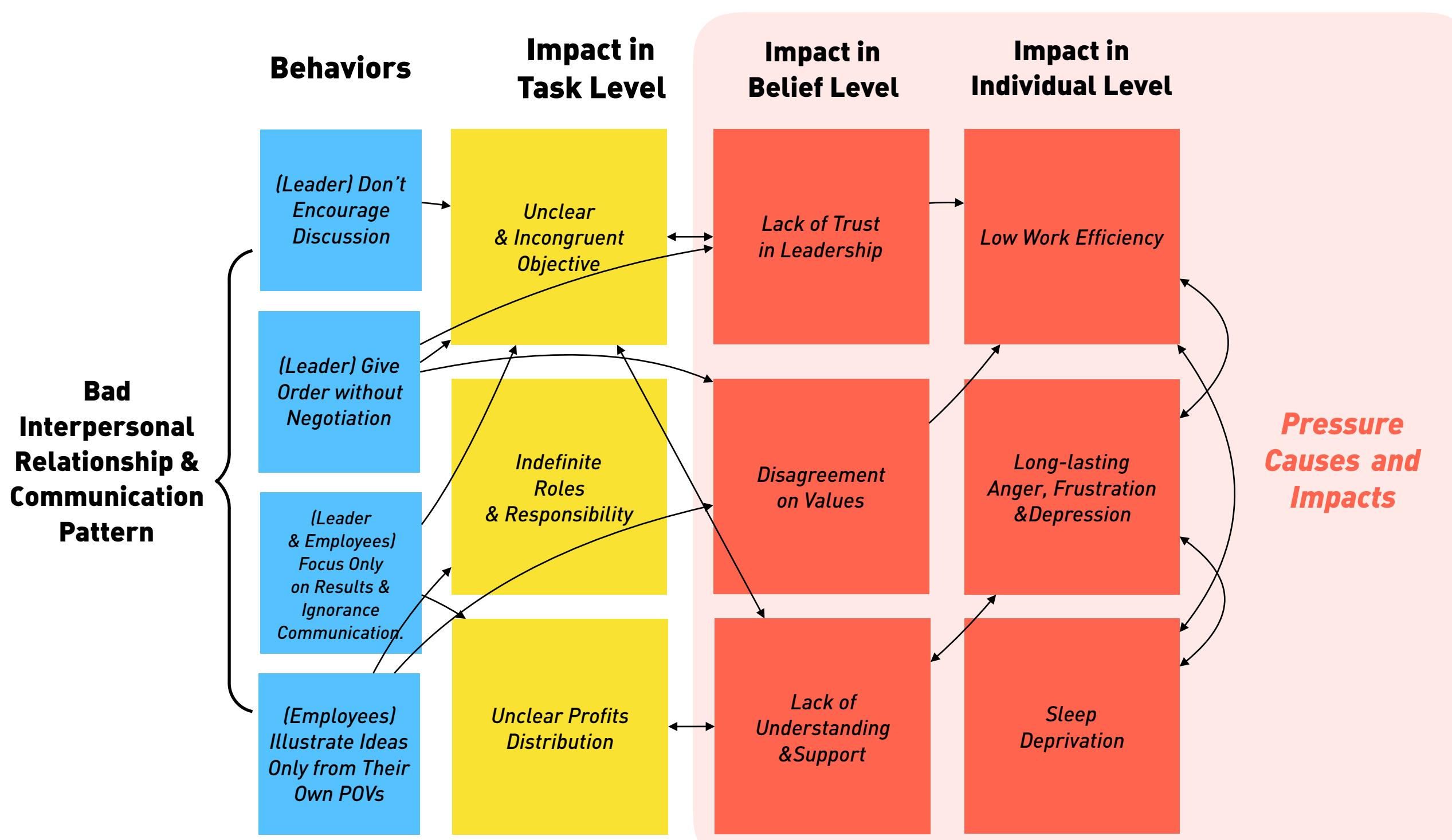
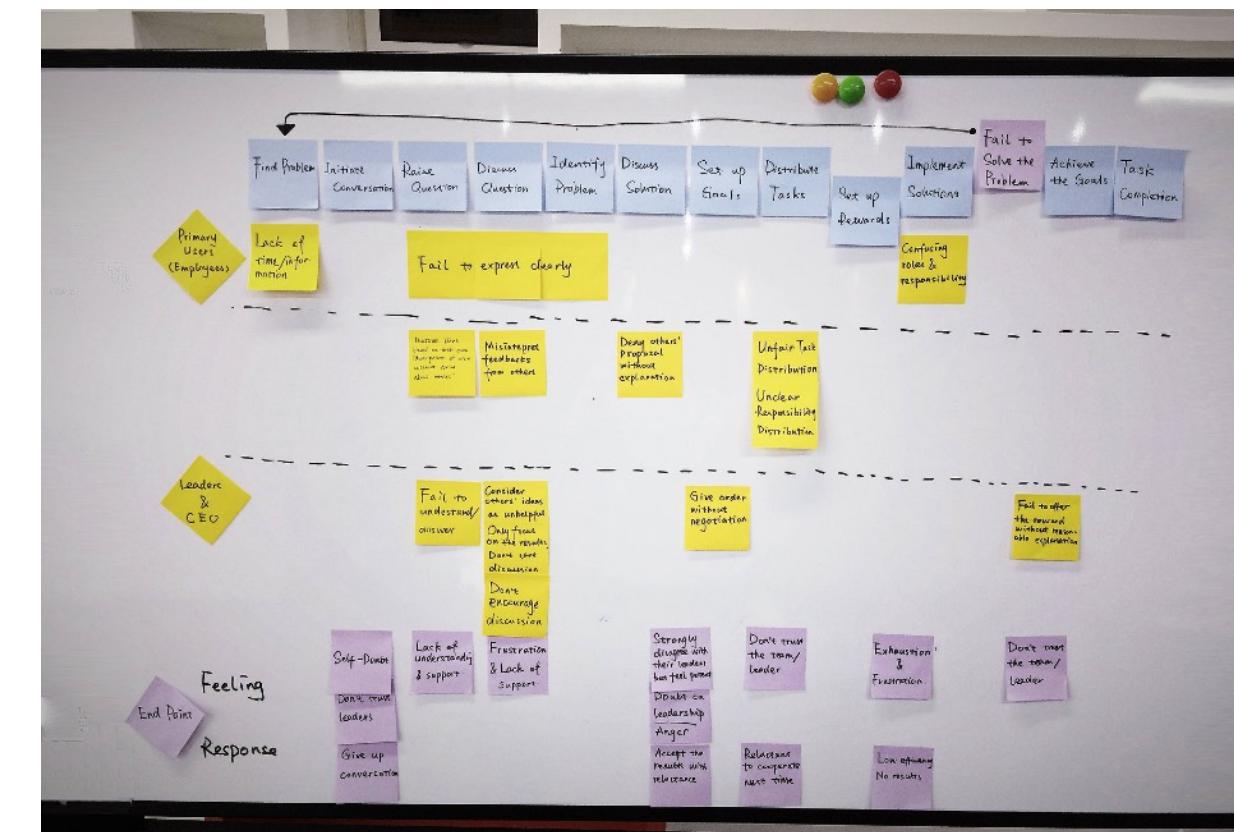
Concerns and Expectations

One of their biggest concerns is recruitment. Good human resource means rapid growth and fast success. Then have high requirements on employees' agreement on the company's value. This sometimes makes them perceived as less tolerant.

02/ Synthesis Journey Map

After we discovered that failures in interpersonal relationship and communication might be the pressure sources, we focused more on exploring the problems in all kinds of communication including small talk as well as meetings. By formulating the journey map we noticed how bad interpersonal relationship and communication would finally cause unsolvable and harmful pressure.

Through our journey map, we figured out how bad interpersonal relationship and communication patterns reflect on employees' behaviors and how those behaviors then impact their work and finally their mental health.



Pain Points (extracted from journey map)

Deny others' proposal without explanation

Leaders only focus on the results. They don't care about communication

Give order without negotiation

Lack of time/information

Consider others' ideas as unhelpful without careful listening

Limited by their position, cannot understand the significance of other's ideas and tasks

Frequent frustration block attempts in communication

Long-lasting negative emotions affect their work performance

Design Goals

We saw a few of the behaviors and impacts of bad interpersonal relationship patterns as the pain points. By mediating these behaviors and impacts, we wanted to facilitate communication at startup workplace to finally eliminate the potential pressure source. All those pain points indicated 3 main goals for our design tasks shown below. Finally, they converged on

"HOW MIGHT WE create an open and friendly working environment (physical & mental) to facilitate communication?"

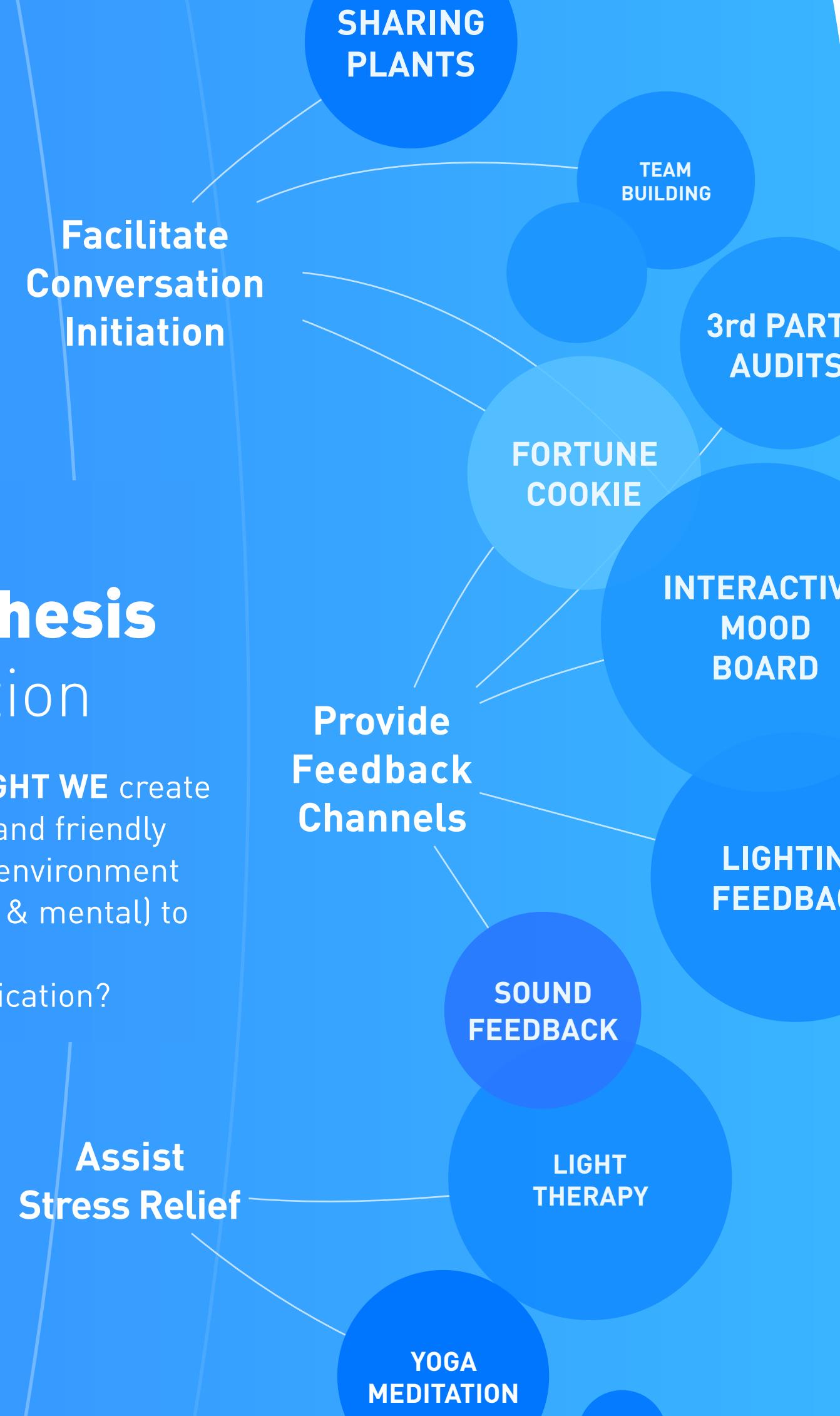


02/ Synthesis

Ideation

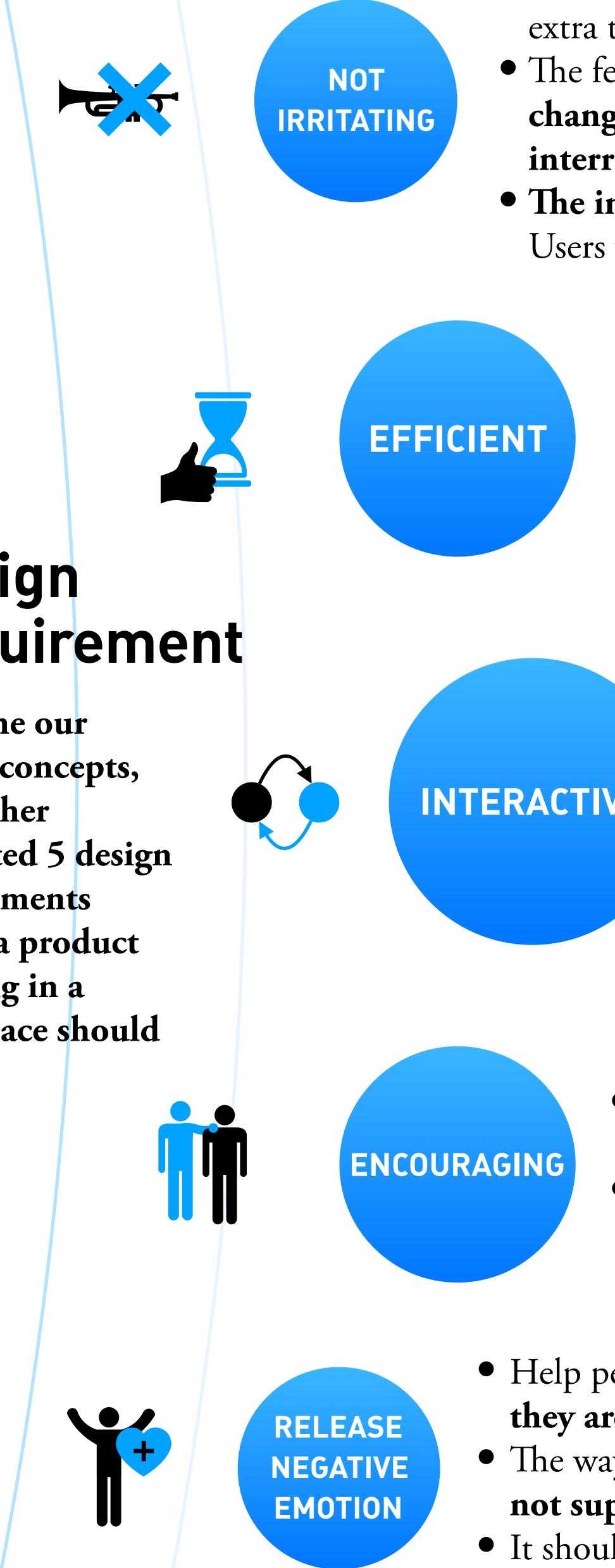
HOW MIGHT WE create an open and friendly working environment (physical & mental) to facilitate communication?

Assist Stress Relief



Design Requirement

To refine our design concepts, we further presented 5 design requirements which a product working in a workplace should meet.



- It should assist **lighten mood** without causing extra trouble.
- The feedbacks it offers should **not cause strong changes** in the workplace. They should **not interrupt the work**.
- **The interaction pattern should be natural.** Users won't have to learn how to operate.

Considering it is placed in the workplace —

- Generally, no extra maintenance is required.
- Each branch of the task flow should be short. The operation should **not be time-consuming**.

- Offer **more interaction among people** to facilitate small talks.
- Enrich interaction **between people and the environment** to make them feel cozy.
- the machine itself should be interactive, **rich of intriguing feedbacks**.

- Offer **extra motivations** for communication.
- Encourage people to do things that provide **more values other than business values**.

- Help people to **express their feelings, no matter they are positive or negative**.
- The way of expressing the feeling and emotion is **not supposed to bring a negative impact**.
- It should notify the negative impact of the lack of expression.

03/ Prototype & Design Modeling

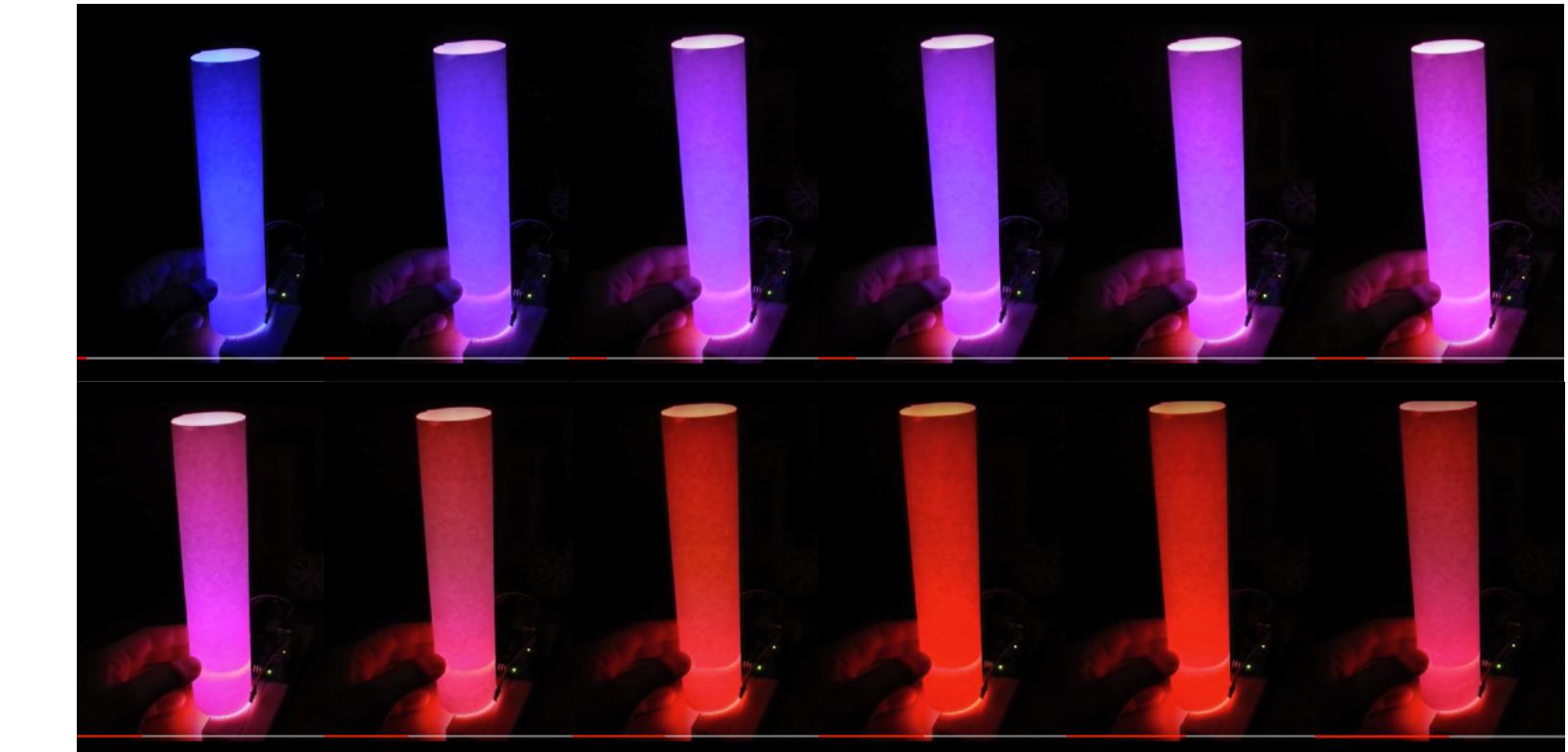
Based on our design requirement, we filtered those ideas which might not be qualified. For instance, sound feedback might be irritating thus is not suitable for the workplace.

We finally converged all the ideas into two main concepts — **interactive mood board and lighting therapy and feedback system**. By KT board modeling and Arduino development, we presented our first version rough model for our design. In our concept, mood board should be an intriguing interactive machine which you could use to record the change of your feelings at a workplace and the lighting system could provide extra feedback channel for the overall emotion and provide changing light therapy for each individual.

KT Board Modeling
Startup Open Office

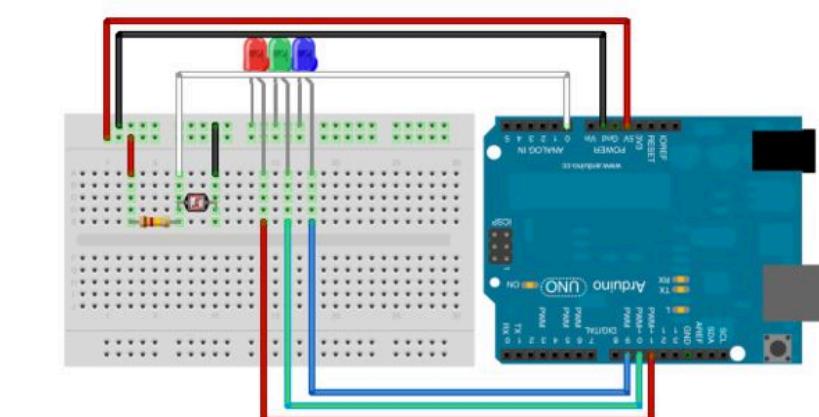
Interactive Mood Board

Lighting Therapy and Feedback System



By using the light dependent resistor, we developed an auto-tuning color-changing mood light. According to second-hand research*, we found blue light could enhance the work efficiency and support mental acuity, vitality and alertness while reducing fatigue and daytime sleepiness. While for warmer light, it generally creates a sense of comfort. This kind of lighting should be used in more intimate settings where you want workers to feel calm and relaxed. In this case, light could be used to help adjust people's mental state.

The materials we used to build the lighting system is shown below



Arduino Circuit for Mood Light

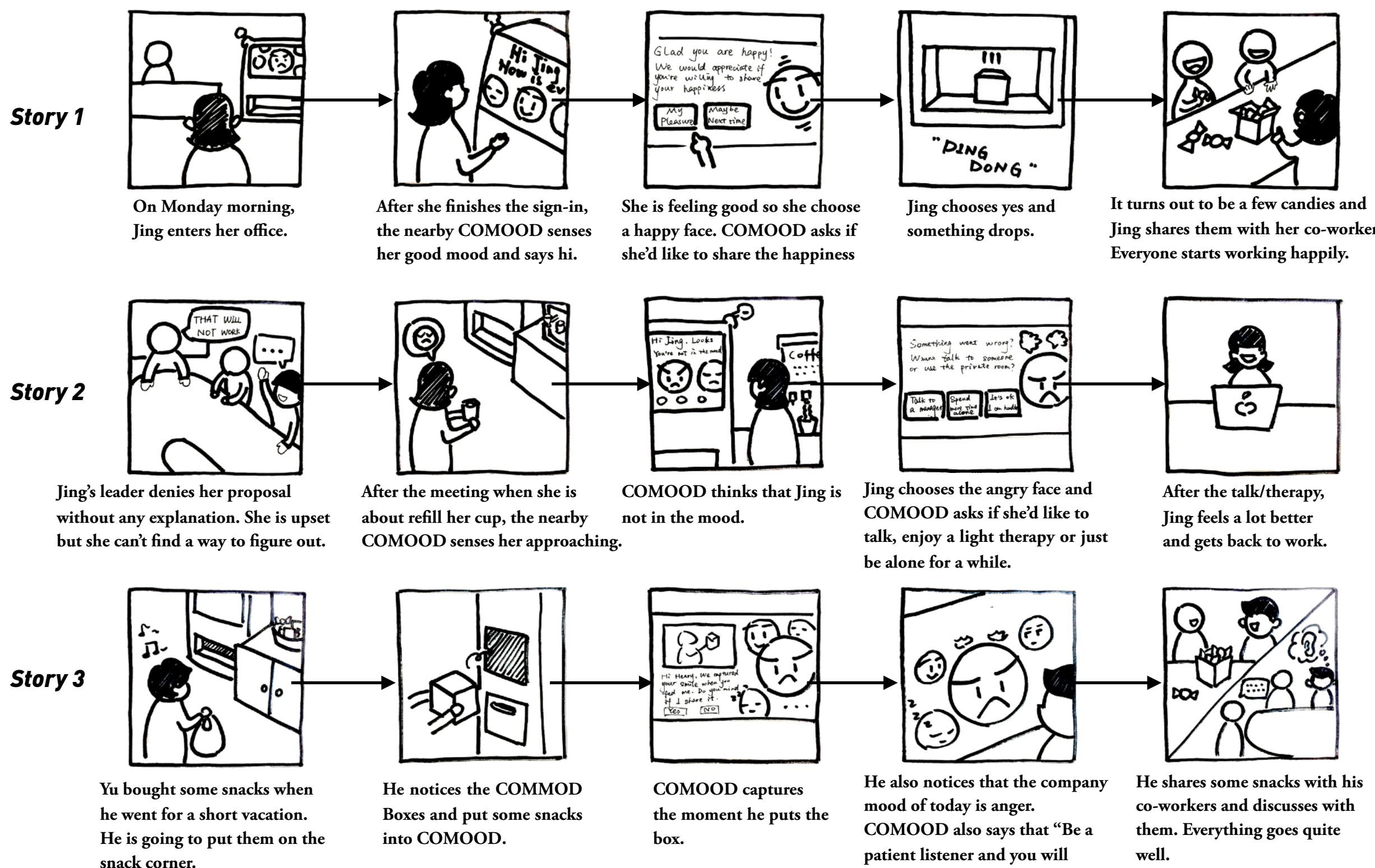
- Arduino
- Jumper wires
- 1 RGB LED or 1 red LED, 1 green LED and 1 blue LED
- LDR (Light Dependent Resistor)
- Bread board
- Sheet of paper

*<https://onlinemba.unc.edu/blog/how-lighting-affects-productivity/>

03/ Prototype & Design

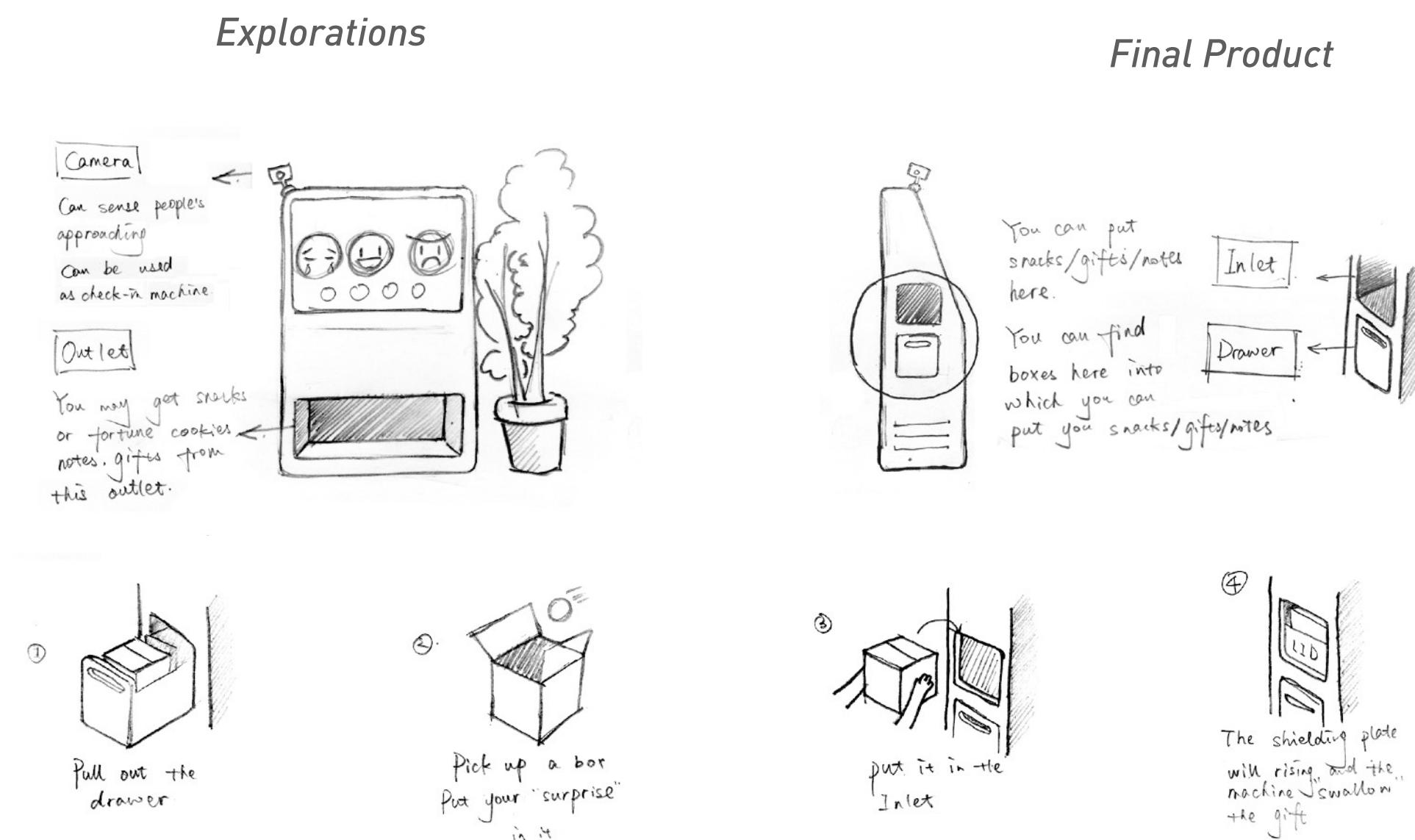
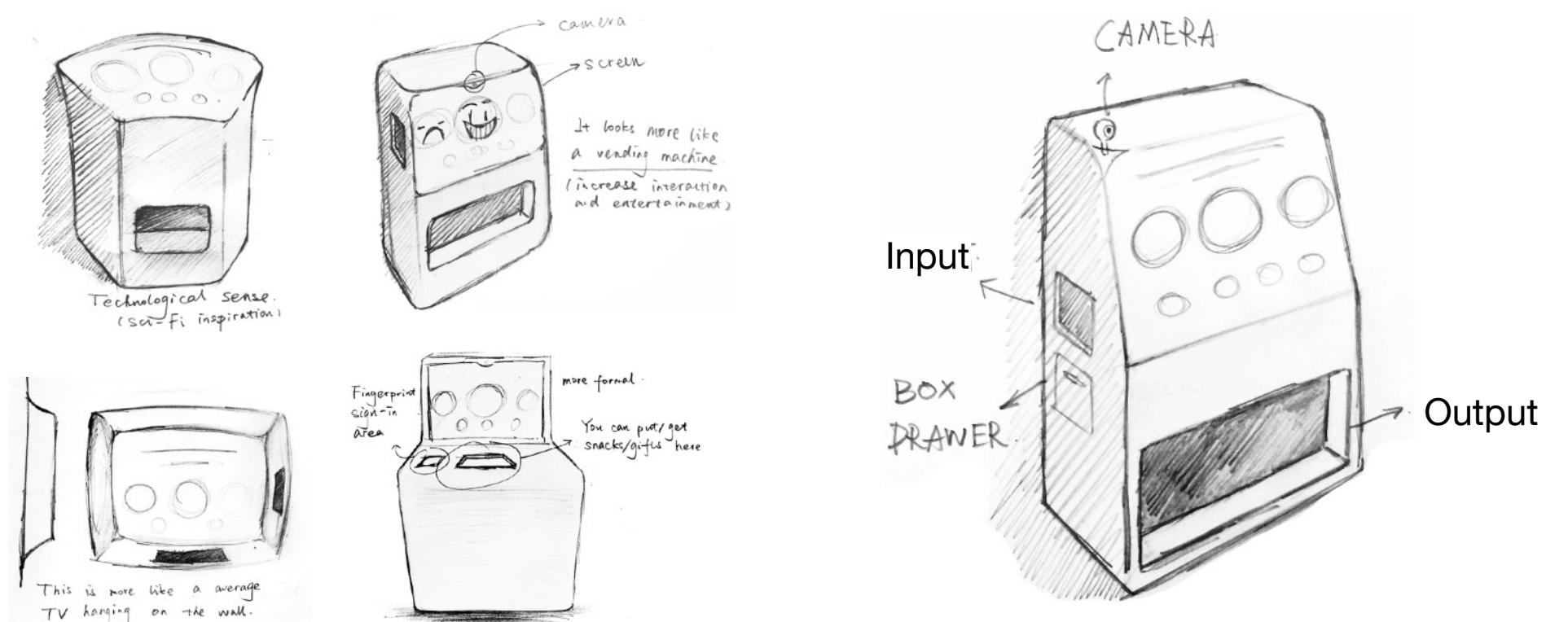
03-1 Storyboard

Through storyboarding, we went through the whole user task flow which further illuminates our interaction/interface design.



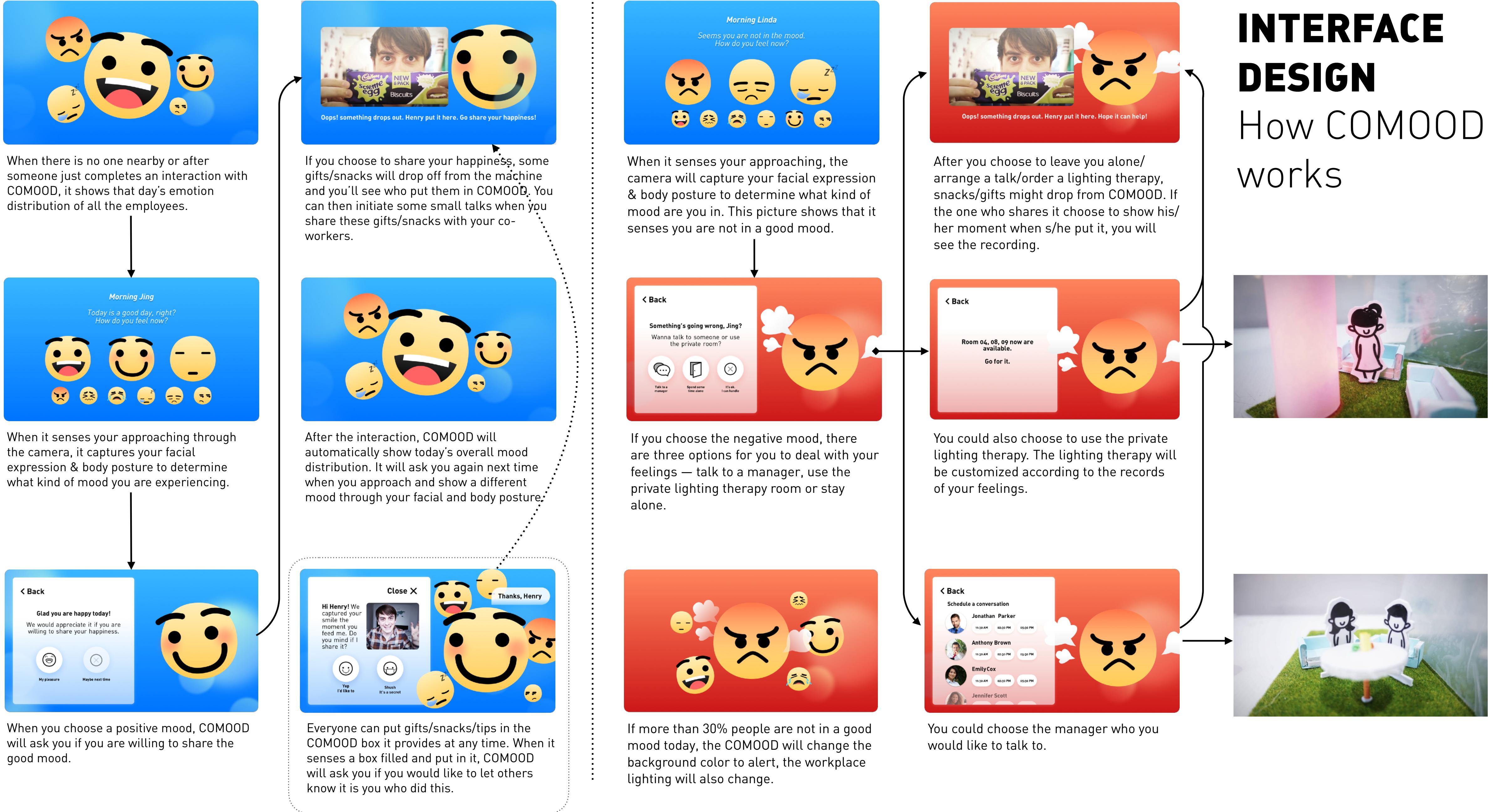
03-2/ Design Sketch

Through sketching, we explored several possible shapes of products. The sketches shown on the right shows the final form of our product. It looks like a vending machine. We wish this intriguing design would promote more motivation for interaction.



INTERFACE DESIGN

How COMOOD works

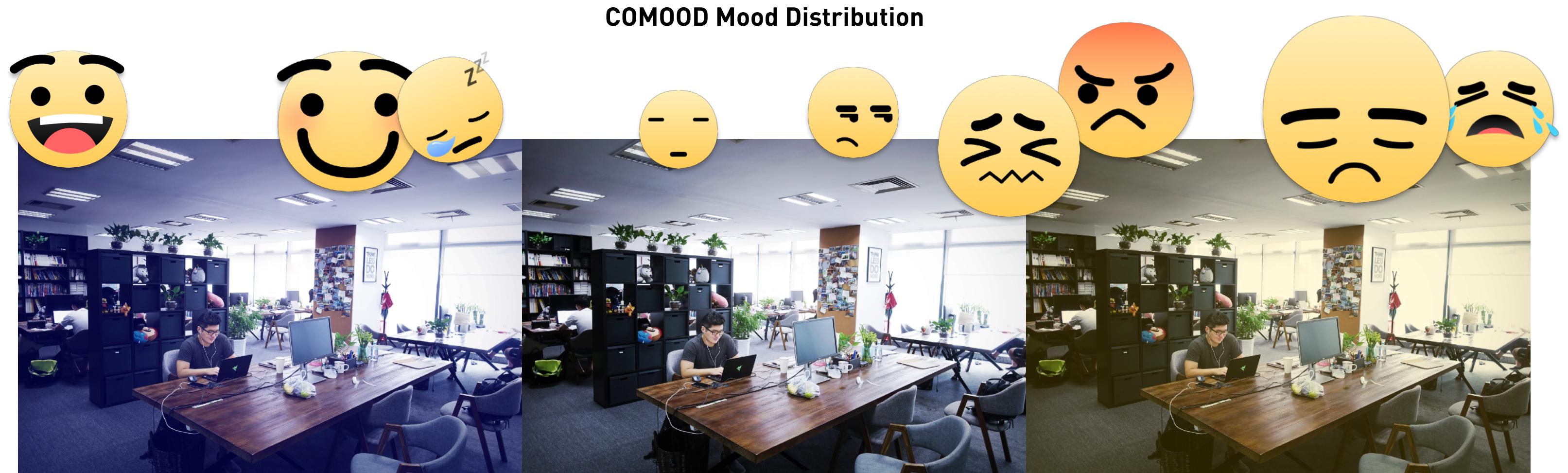
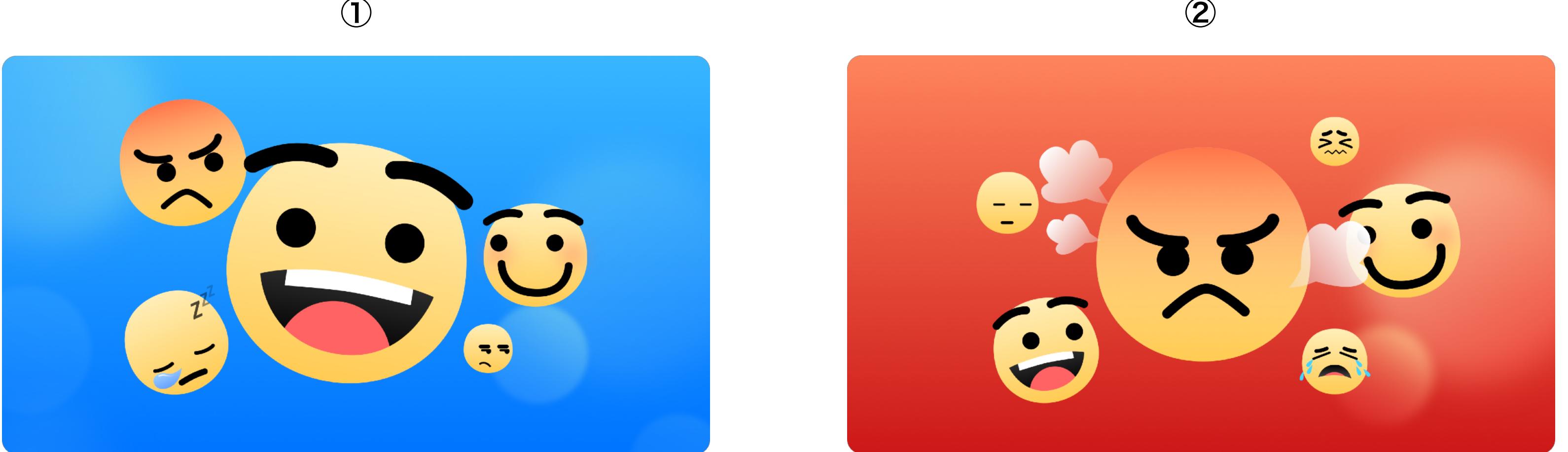


Lighting therapy & Feedback System

How COMOOD works

Other than individual therapy, the lighting system can also provide non-irritating feedback and automatic adjustment to the entire workplace.

Since COMOOD can collect and analyze employees the overall mood distribution. If most people choose the happy mood, the happy emoji will show on the COMOOD screen (as shown in pic ①) and there will be more blue light since it can enhance the work efficiency and support mental acuity, vitality and alertness while reducing fatigue and daytime sleepiness. While if most people are in an angry/anxious mood (as shown in pic ②), then the light will be warmer since warmer light create a sense of comfort. The correlation between mood distribution and lighting is shown below.



COMOOD Mood Distribution

Corresponding Lighting Adjustment