

SURVEILLANCE AND HAPPINESS IN THE WORKPLACE

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INTRODUCTION

OVERVIEW

During this ten week project each group was assigned a “magical” device based on up-and-coming technology and guided through a design research process to eventually produce a research inspired solution. All groups were assigned a device that dealt with surveillance and were asked to choose an audience, gather participants, and perform interviews centered around that topic. We performed analysis on all of our collected research to organize data into themes and form insights that would direct our final design approach. Finally, we used this information to generate several concepts that would then be shaped into our final design solution.

PROMPT

A **wearable sensor** that can determine when a person is feeling content or **happy**

Our prompt deals with happiness, and more importantly, monitoring happiness. The sensor recognizes happiness as a binary input and can therefore only recognize its presence or absence. In no way can the sensor recognize different levels of happiness nor determine its cause.



RESEARCH

SECONDARY RESEARCH

Before pinning down our problem space, we began by performing secondary research to better understand our subject matter and find areas of opportunity in which this device could serve a solid, meaningful purpose. Our research included a wide array of information regarding happiness including understanding personal wellness, shared and communal happiness, how happiness differs from other emotions, and the deep rooted psychology of happiness.

Is There an App for Monitoring Your Happiness?

In the article "Is There an App for Monitoring Your Happiness", Dr. John Grohol goes through the feasibility of a number of methods that a smart phone could use in order to track its user's happiness. The first method relies on the monitoring of speech and how frequently users talk to relate back to happiness. He notes that a while a decline in a person's talkativeness can be one sign of depression, the variation of speech levels between people and situations makes this a fairly unreliable method for a computer to monitor happiness.

The second method would be sleep and wake patterns. Grohol almost immediately dismisses this method because of the phone's inability to tell if its user is asleep or awake and the inconstancy of human schedules that may cause a lack of sleep. Even if a

technology was created that could seamlessly track a person's sleep, it would not be the best tracking of happiness. The last method relies on monitoring physical activity. Many people who exhibit high levels of physical activity show increased levels of happiness. Although this is common, Dr. Grohol again debunks the theory because even the most active people in the world can still fall into ruts of depression and still be plenty active.

For our purposes we are supposed to assume that the technology exists that can accurately track happiness, but this article does help us to understand the form this device may have to take. We may want to assume this is a wearable device that is linked to some sort of application on either a computer or a smart phone.

Detecting Emotions With Wireless Signals

This article focuses on a recently developed piece of technology called the "EQ-Radio" which can wirelessly detect a person's emotions. This device tracks the subtle changes in the target's body, such as heart rate and breathing rhythm. According to the MIT researchers who developed it, the device is 87% accurate at detecting whatever the target's emotion is. Existing emotion trackers rely on either audiovisual cues or skin-contact biometric sensors.

A point the article makes is that even though on-body sensors are reliable sometimes, "[devices such as] chest bands and ECG monitors are inconvenient to wear and become inaccurate if they change position over time." The EQ-radio device is changing the game with the new innovation of sending wireless signals

that "reflect off of a person's body and back to the device." Because it sends a wireless signal, the device does not require use of a LOS camera or a wearable. The system must be trained with a person's individual emotions over time before it can make valid guesses about emotional phases.

The usage cases surrounding this type of product were primarily for the entertainment, consumer behavior, and healthcare industries as the MIT professor leading the project, Dina Katabi, states that the device could be used to test viewer's reactions in real time. As we look into existing methods of recording happiness, this technology provides an alternate solution to conventional wearable devices.

Brain Scanner Can Tell What Emotions You Are Feeling when Your Mind Wanders

Researchers at Duke University have recently been able to identify different emotional states through use of an fMRI scanner.

While at rest, a patient's emotional states flicker across the brain in specific regions - emotions which include contentment, amusement, surprise, fear, anger, sadness, or neutrality. Each of these emotions appear in a specific part of the brain. To track these emotions, the patients were showed specific film clips and samples of music to elicit specific emotions. This allowed the researchers to create an emotion map of the brain, which helps to track emotions when "people just let their mind wander." Whilst letting their minds wander, the scanner collected data every two seconds which were then compared to the emotion maps,

where the team of researchers were able to predict the mood of the users.

This scanning technology provides researchers with an objective means of detecting patients' emotions. Heavy subjects like depression could be scientifically tracked and treated, instead of solely relying on unreliable self-reported information. Drugs created to treat anxiety and depression can be tracked so researchers can see "whether [they] actually change a person's brain-state when they're resting. You can see, for instance, whether a high level of fear activation goes down when they're using a certain drug— and you could do this using a quick 10 minute fMRI scan." This has potential for far-reaching applications in both medical and social settings.

Feeling Glum, Happy, Aroused? New Technology Can Detect Your Mood

This article highlights some of the emerging technologies that are capable of monitoring mood and explores the possibility of emotional connection to machines.

Some common methods of mood analysis consist of voice recognition, skin stimulation, facial recognition, and EEG brainwaves. The article explains how mood analysis can be used to improve safety on the road or simply offer unique ways of self expression through fashion. The article also makes a call to introduce bio and mood sensors into medicine in order to identify

thought disorders. Unfortunately, the technology still has a ways to go, as it is only currently capable of differentiating between basic emotions. Some applications of this technology include the advertising agency and even mapping individual emotions to external events.

This is very interesting when considering what emotions you allow to be shared and what benefits you can gain from others' knowledge of your emotional state.

Dynamic Spread of Happiness in a Large Social Network

This research paper goes into detail regarding the spread of happiness between people. The research team found that happiness transfers from person up to three degrees of separation from the initial person. They found that a person who associates with more happy people are more likely to become happy. The three degrees of separation was even applicable here, where being well connected indirectly to happy people saw a positive influence on future happiness. Interestingly, it was not found that happy people become the center of these networks. The researchers hypothesize that happiness spreads via mimicry of "emotionally relevant bodily actions."

Another interesting finding was that the spread of happiness was heavily influenced by the characterization of the relationship between friends. Mutual friends had a much stronger effect on each other's happiness than that of a pair where one sees the other as a friend but that sentiment is not reciprocated. Perhaps the most important finding was that physical proximity was extremely powerful in determining how contagious happiness was and that frequent contact was shown to have a greater impact than strong social connections. As we look into both the physiological and sociological aspects of happiness, crowd-based emotions provide a wealth of challenges and opportunities to address. Clearly, biometric data can only provide so much so researching communal situations could inform some unique design solutions.

The Contagion of Happiness

This article states that happiness can be observed in three different ways: "A way of thinking... a way of feeling... or simply a way of being." Another point compares happiness with joy stating that happiness is simply the fleeting state of mind when meeting your needs and seems to be closely tied to the feeling of instant gratification.

Conversely, joy is about feeling connected with other people and is experienced more than the brain from what The acknowledges it. This is believed to be a result of our evolution whereby we adopted social structures to better survive.

A very interesting fact that this article brings up is that happiness is in part related to the genetics of the person who experiences it, meaning that our general level of happiness is just as affected by who we are just as much as by our surroundings. The article also states that money and material possessions only affect happiness up to a specific point where the lack thereof no longer induces stress.

While we consider the communal effects of happiness it is important that we also remember the factors that play into individual happiness. It is also important to realize that sometimes emotion is below conscious awareness and yet may still play an important role in shaping behaviors.

Stumbling on Happiness

Dan Gilbert is a Harvard psychologist who specializes in studying how humans react to their environments. In his book "Stumbling on Happiness" as well as his TED talk, Gilbert talks at length about several experiments and experiences he has observed that have to do with how choice affects happiness.

Gilbert has split happiness into two different categories: synthetic happiness and situational happiness.

Situational happiness is what people would feel in certain joyful situations (eg. being given a gift or hearing a funny joke). Synthetic happiness, on the other hand, is what our minds artificially create in response to difficult or non-ideal situations.

In brief summary, he states that people who are given the choice among several or even just two options will most likely feel a sensation of regret or second guess themselves. However, people who are forced to accept one outcome will most likely adapt and accept their situation, and in turn, feel happier about their lives.

From this insight we can gather that happiness is relative to and dependent on the situations and choices that lead to it. This artificial effort to compensate for tough choices opens up many possible directions for design research and ideation.

Want to be Happier? Stay in the Moment

Matt Killingsworth is a researcher who studies human happiness. In his TED talk, Killingsworth runs through his process for gathering data about happiness by using Track Your Happiness. This is a mobile application that sends random notifications throughout the day to its users, asking questions about their happiness levels and the daily activities associated with them. He has compiled this data and come to a conclusion that largely has to do with what Killingsworth calls "Mind Wandering." During mind wandering, humans tend to drift off and think about things other than what they are currently doing, much like day dreaming.

Although most people would assume that during mind wandering people would show an increase in happiness, it actually creates the opposite. All the data alludes to the fact that we are much happier when we are focused on the task in front of us or "living in the moment". As a group, we can use this information to better ask our participants what kind of tasks they enjoy doing and how they try to cope with tasks and environments that make them unhappy.

ZENTA: Your Personalized Coach for Body & Mind

Whereas most wearable devices with on-board biometric scanners are geared around fitness tracking, ZENTA instead takes the role of a life coach through monitoring emotion levels. ZENTA is a wrist-wearable product currently in development with a significant crowd-sourced backing. Its goal is to allow users to discover how their habits and recurring actions influence anxiety, happiness, and overall productivity. The wearable device pairs with a hefty mobile app to track a number of factors that result in a holistic mood profile. Machine learning algorithms track data like sleep schedules, mood changes, physical activity, and emotional states over time. With this information, ZENTA provides individually tailored advice on how to adopt positive behavioral changes to promote higher satisfaction in life.

ZENTA is one example of using measured happiness to promote better well-being in its users. This is a bold step forward from simple fitness trackers, as it can encourage deeply personal lifestyle changes. As we research possible design solutions centered around happiness trackers, we must also gain a thorough understanding of the subconscious, personal aspects of people's lives that contribute to happiness.

The Three Types of Happiness

This article suggests that there are three types of happiness, each resulting from different activities and experiences. The first two, anticipatory and afterglow happiness, stem from experiences in which look forward to events and remember them fondly after they conclude. Momentary happiness, the third type of happiness, can be achieved from purchases and with the appreciation of physical goods.

Momentary happiness with physical goods can last longer than with experiences because physical objects can be used repeatedly, unlike an experience which

occurs for an allotted period of time. While experience-based happiness was stronger in the moment, object-based happiness had a prolonged effect.

Weighing these different types of happiness against each other correctly presents some challenges for us to overcome. In order to better understand these multifaceted aspects of happiness, we'll have to do some of our own research to distinctly measure each type.

A Wandering Mind is an Unhappy Mind

This article focused on what types of situations contributed to happiness. In order to find this answer, the researcher developed an application that asks people to track their in-the-moment happiness at various, random times of the day. According to the article, "the database currently contains nearly a quarter of a million samples from about 5000 people from 83 different countries who range in age from 18 to 88 and who collectively represent every one of 86 major occupational categories." This wide range of people with large sample size exceeds what we will be able to do in our study but can supplement our research.

The study found that basically no matter the activity its subjects are engaging in, people are considerably less happy when daydreaming, even when they are thinking about pleasant or neutral subjects. Interestingly, the study found peoples' minds were wandering in 49.6% of the samples, and at least 30% of the samples in each activity—except making love. This data suggests that what people are thinking about is a better indicator of their happiness than what they are doing.

People are happiest when focusing on the present. But if people can actively recognize that daydreaming makes them less happy, would they be willing to change behavior in order to 'be happier?' How can we effectively help people to "stay present?"

Actually, Some Material Goods Can Make You Happy

According to this article, physical goods that allow us to have experiences make us happy, just like the experiences themselves. Learning a skill—like riding a bike, or playing tennis, or painting on a canvas—require physical objects. These types of experiences lead us to feel accomplished, or a rush of energy from working out. Furthermore, "it's not the fact of having an experience per se but that experiences can satisfy the psychological needs of autonomy, competence, and relatedness." Talking to friends, mastering a skill, expressing oneself through art or writing—all of these provide a measure of fulfillment that merely owning a thing cannot."

This article is great in comparison with the idea of happiness and mind-wandering. This article suggests that people's happiness is almost unrelated to the activity they are doing, and indeed more correlated with how much we stay in the moment. As we continue research, we should continue looking into how these pairings of intangible experiences and physical objects create happiness.

Are You Too Stressed to Be Productive? Or Not Stressed Enough?

A Harvard Business Review article published earlier this year was focused on the relationship between stress and happiness, refuting the idea that stress is inversely related to happiness. As it turns out, optimal work performance is dependent on a moderate amount of stress.

The writer, Francesca Gino, bases her argument around the Yerkes-Dodson law, a graphed relationship between anxiety and performance. It shows that performance levels increase with mental stress up to a point, before decreasing due to disproportionately high levels of anxiety. Optimal performance is reliant on a level of stress high enough to stimulate focus and attentiveness. This optimal level of stress is highly dependent on the difficulty of a task, but the bell curve shape remains consistent.

As we think of possible applications for active happiness sensors, we must be careful to consider situations where a lack of happiness or relaxation is actually desirable.

A system relying on a linear correlation between happiness and satisfaction runs the risk of trivializing the wide range of human emotions. In cases where efficient performance levels correspond with satisfaction, stress cannot be evaluated as purely negative. A moderate level of anxiety promotes effective work, which can result in happiness in various user settings.

Technology and Happiness

James Surowiecki's article focuses on the correlation between an increasingly technological world and general happiness. His main point is that while an abundance of gadgets has exponentially increased our opportunities and connectivity, its tendency to overwhelm us with choices and decisions has kept technology from directly increasing happiness. Surveys show that collective happiness in many major countries has actually slightly decreased over the last 70 years, despite a wealth of technological products becoming available. Reports of major depression in wealthy individuals have increased tenfold since the 1950s, a symptom directly tied to increased stress and anxiety.

Amish communities, on the other hand, have consistently topped the charts in terms of happiness and satisfaction levels, despite being nearly isolated

from new technology. While the author admits that there are undoubtedly other factors contributing to these results, it does raise the question of how much of an effect technological advancements really have on happiness.

Surowiecki chalks this up to the idea of hedonic adaptation – that regardless of how dramatic a new innovation is, we are so quick to take it for granted that it soon loses its effect on a person's overall happiness.

Surrounding ourselves with new technology may streamline and enhance our lives, but its lasting effect on our satisfaction seems to be negligible. We should keep the ironic nature of this fact in mind. How can we utilize a user's happiness without interfering with it?

SECONDARY RESEARCH INSIGHTS

Happiness is hard to define, and hard to tie to specific events, activities or experiences

Each person experiences happiness in a different way and in order to understand those individual experiences we must tie the emotion to specific events and activities.

Technology and systems are already in place for collecting real-time happiness

There are already many systems in place to track happiness, however many of these systems require massive amounts of user input and attention.

Happiness is communal

Happiness is something we share with others around us and is contagious. People who associate with happy people themselves become happy and feel a greater level of satisfaction in life. We wanted to find a problem area that could use this device to elevate the happiness within a community and then lead to a greater and more productive lifestyle.

PROBLEM AREA: OFFICE WORKSPACES

Prevalence of surface-level relationships in close proximity

The office environment regularly brings individuals together, however meaningful relationships rarely develop.

Job performance is positively correlated to job satisfaction

This not only benefits employees, but provides supervisors a real incentive to implement the use of this technology in their offices. Happy people are consistently shown to be more productive.

Communication is an essential part of working in an office

Due to the communal nature of happiness, we felt that a space where regular communication occurs would be ideal. Offices require plenty of communication and this provides a perfect space in which to insert our device.

SUBJECT MATTER EXPERT

Clint Rule: Privacy in the Connected Workplace

Early in our research process we learned of Clint Rule who, in his final year at Savannah College of Art and Design, wrote his thesis on privacy and surveillance within the workplace. We had the opportunity to meet with him and discuss our problem space. Ultimately, his expert knowledge on how employee's perceive and deal with surveillance gave us a greater understanding on what concerns need to be addressed in our solution. He informed us that coworkers respond better to surveillance when they directly benefit from participating and have a more democratic say in what information is collected and how it is used.



Associate Creative
Director, TEAGUE

RESEARCH QUESTION

What implications arise when employees in office settings communicate their job satisfaction or happiness to their supervisors?

STUDY OBJECTIVES

Our secondary research gave us great insight into happiness as a concept, but moving forward, we knew that we would need to direct our primary research more towards understanding the nature of social interactions throughout the office with an emphasis on privacy.

Identify existing
methods of office
communication

Understand
privacy concerns

Investigate
social barriers

USERS AND CONTEXT

20–50 Year olds

Medium-to-large office settings

We chose to focus on medium-to-large office spaces due to the presence of more coworkers who aren't uniformly familiar with one another. Small office settings were ignored due to the increased chance that coworkers would already be well acquainted. Extremely large offices also introduced the problem of employees being unable to even interact with one another. Medium office spaces with an abundance of surface level relationships afforded us the best opportunity to increase trust between coworkers.



INTERVIEW STRUCTURE

30–45 Minute interviews

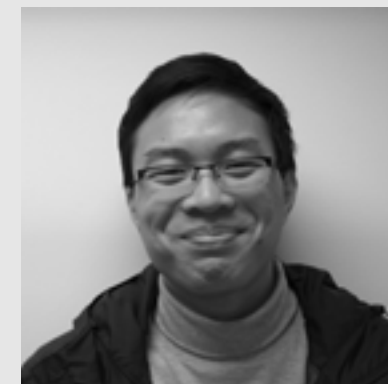
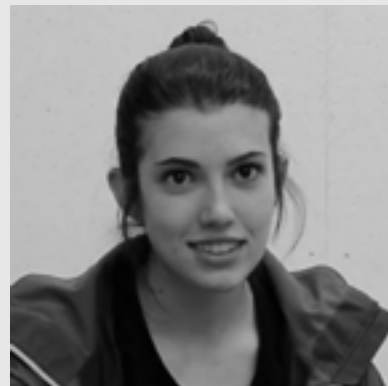
15 Minute Circle of Trust activity

We performed semi-structured interviews asking a variety of questions regarding participants' roles in the office, how communication takes place, and how conflict is resolved. Many interviews strayed from our script allowing us to explore more genuine and unforeseen issues we had no previous knowledge of. The diverse background of each participant offered us a different perspective of office environments. Additionally, we had participants engage in a Circle of Trust exercise that examined trust between differing roles within the office space.



PARTICIPANTS

We interviewed ten individuals from a variety of work backgrounds. Eight participants held employee roles while the other two acted as supervisors.



INTERVIEW SCRIPT: EMPLOYEE

Section 1

Tell me about what you do at your company.

Who do you report to, and who reports to you?

Who do you spend most time working with?

If a conflict arises in the workplace how do you deal with that situation?

Do you spend time with any of your peers outside of the office?

Tell me about a recent conversation you've had with a superior.

Section 2

Tell me about a time at work when you felt you accomplished good work.

How much of your personal life does your supervisor know about you?

What kind of personal information are you comfortable with sharing with your supervisor?

What personal things do you think are important for you supervisor to know about you?

What do you think you contribute to the workplace?

What motivates you to do a good job at work?

INTERVIEW SCRIPT: SUPERVISOR

Section 1

Tell me about what you do at your company.

Who do you report to, and who reports to you?

Who do you spend most time working with?

What is your current system for addressing to any conflicts that arise within the workplace?

Do you spend time with any of your peers outside of the office?

Tell me about a recent conversation you've had with an employee.

Section 2

How much personal information do you share with your employees?

How do you motivate your employees?

Is there anything missing from your relationship with your employees?

Tell me about a time when an employee was less than content, and what steps you took to address that situation.

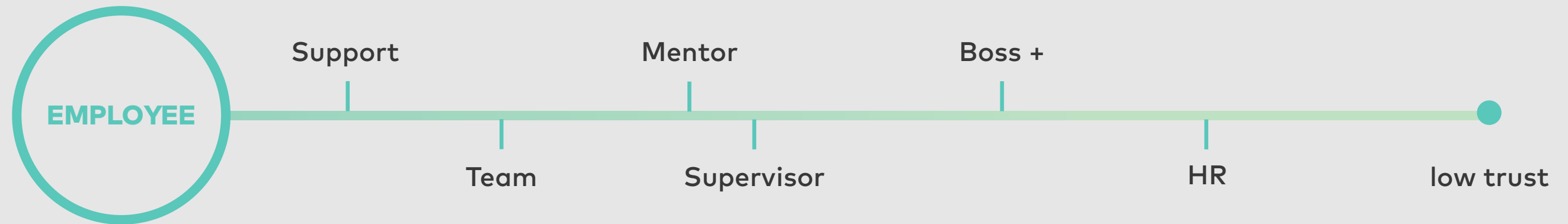
In what way would you change the current structure within your office to better handle employee satisfaction?

CIRCLE OF TRUST

We used the Circle of Trust as our data collection device. It was intended to break the structure of a formal interview and get participants divulge facts they may have not been brought up otherwise. In this exercise our participants placed different members of their workplace on a spectrum of trust from highest (closer to them on the spectrum) to lowest (farther from them on the spectrum). This trust dealt with their comfort sharing personal information as opposed to their trust in their coworkers' ability to fulfill their role in the office. With this exercise we came across some very interesting information that helped us formulate key insights later on.



CIRCLE OF TRUST RESULTS



This graph represents the average of all the employee responses. Employees tended to rate Support, Team, and Mentor roles on higher levels of trust. These were the groups of people that they not only spent the most time with, but that they worked in closest proximity to. Conversely, employees rated the Boss + and HR on lower levels of trust.

Support – IT/admin individuals that maintain office

Team – Coworkers that share similar projects

Mentor – Individual that coach participants through the company

Supervisor – Participant's direct boss

Boss + – One level above supervisor

HR – Human Resources

Reports – Individuals that work and report to the participant

CIRCLE OF TRUST RESULTS



This graph represents the average of all the supervisor responses. Supervisors regularly rated HR and Boss + and other management positions on the highest levels of trust. On average, they rated their reports as well as support roles much lower. This was in direct opposition to the employee responses.

Support – IT/admin individuals that maintain office

Team – Coworkers that share similar projects

Mentor – Individual that coach participants through the company

Supervisor – Participant's direct boss

Boss + – One level above supervisor

HR – Human Resources

Reports – Individuals that work and report to the participant



ANALYSIS

ANALYSIS METHODS

Coding data

Recording quotes and other brief statements from notes and videos onto individual sticky notes

Separating Themes

Grouping specific observations and organizing coded data around observed themes

Producing Insights

Linking multiple themes together to generate intuition into the problem space



INSIGHT #1

The trust between coworkers is dependent on the time they spend with one another as well as their proximity

We came to this insight based on employee responses that dealt with person-to-person interaction. They directly correlated time spent together (proximity) with a higher level of trust. Many participants explicitly stated that even time spent outside of the office was extremely valuable, especially when dealing with activities not related to work. Many employees who spent leisure activities with one another had a higher rate of in-office friendship and trust. This informed us that building trust would be dependent on interpersonal relationships.

"I'm close to my manager—we talk twice a day."

"I don't really trust the new CEO because I don't know him."

INSIGHT #2

Motivation stems from ownership and personal importance

Many participants described that they felt most accomplished when given the opportunity to take on a project, invest heavily in it, and make it their own. They even described that their ideal position was one where they had more control of the projects they were working on as well as more face time with their clients. Any potential solution would need to rely on giving users power over their work and information.

"When I close a sale from start to finish, I make it my baby."

"My best day: when I was thrown in, talked to the right people, and took initiative."

INSIGHT #3

Concern about maintaining a professional image is a barrier for openness

Every participant had some response regarding professional image in the workplace. Many participants explained how they needed to cultivate a personal image within their company. Many also stated that they would abstain from certain activities and mannerisms in order to protect that image. These individuals would not bring up even vaguely personal topics in conversation unless prompted and would mirror their coworkers behavior outside of the office. Any solution we would generate would need to prioritize maintaining a professional image.

"If they would think less of me, I won't say it."

"There's an atmosphere of appearing unbreakable."

INSIGHT #4

In-person
communication has
more impact than
digital

Participants that had large amount of digital communication with their coworkers listed many frustrations such as absence, lack of interest with their work, and miscommunication. Universally, in-person interaction was preferred due to its straight forward nature and lack of ambiguity. In one instance, a participant transitioned to a more digital model of communication and found that they and their coworkers were less involved and more distant.

"When there's a conflict, I'd rather talk to a coworker directly."

"I only talk to my talent fulfillment specialist on the phone...She's not available."

INSIGHT #5

The more integrated
into the company you
are, the more you trust
management

This insight was driven heavily from our experience with the Circle of Trust exercise. Employees as a whole ranked HR and the executives above them as very low trust. Conversely, the supervisors that we interviewed placed HR and their higher-ups much closer. When asked to elaborate, they explained that they felt much more integral within the company and at that point HR works for them as opposed to against them. Moving forward, we would need to understand that different users will possess different perspectives and levels of trust towards their coworkers.

"I don't trust HR because I don't know them."

-Employee

"I trust HR with everything."

-Supervisor

INSIGHT #6

Environments that promote open communication lead to happier employees

Spaces that allowed and encouraged interaction were always accompanied by positive work relationships. Additionally, working environments that break down the hierarchy separating employees and supervisors allow for more communication and lead to positive relationships. Our solution should encourage a more open and communicative workspace to allow for more interpersonal interactions.

"Our open kitchen facilitates much more interaction."

"I talk to my manager about things like stress management. We have hierarchy but it doesn't feel like it."

DESIGN PRINCIPLES

We used our insights to generate three core design principles which would direct the ideation phase of our project. Any idea that did not comply with any principle would need to be reworked or abandoned.

PRINCIPLE #1: Protect Individuals' Professionalism

Related Insights

#3 Concern about maintaining a professional image is a barrier for openness

#5 The more integrated into the company you are, the more you trust management

Because every individual stressed a need to maintain a professional image, no solution that put this image in jeopardy could not be considered. A solution would need to make every employee feel integrated without compromising personal information.

PRINCIPLE #2: Build Trust Between Coworkers

Related Insights

#1 The trust between coworkers is dependent on the time they spend with one another as well as their proximity

#5 The more integrated into the company you are, the more you trust management

Trust is essential for open communication in the workplace regarding personal issues. In order to facilitate open conversation about satisfaction and happiness, we need to promote a model that is grounded in trust-building interactions. Our insights showed that trust cannot be manufactured — it is built on face-to-face interactions and time spent together. We also saw that people more integrated into a company were more trustworthy of its inner workings. Building trust in the workplace can both increase job satisfaction, as well as laying the foundation for open sharing of happiness with coworkers.

PRINCIPLE #3: Supplement, Don't Replace In-Person Interaction

Related Insights

#4 In-person communication has more impact than digital

#6 Environments that promote open communication lead to happier employees

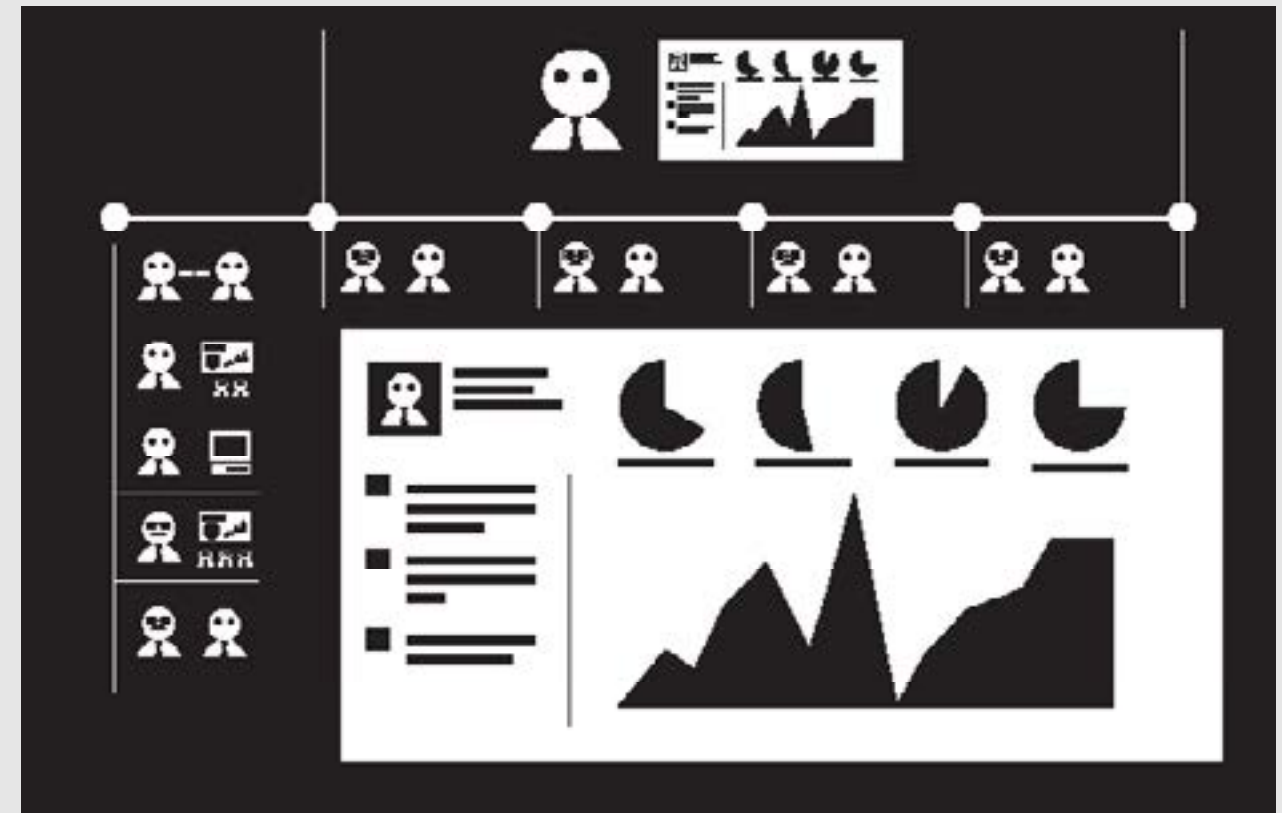
In order to build trust and genuine relationships, face-to-face interactions must take place. Digital interaction breeds miscommunication due to the lack of nonverbal communication and this creates more conflict than it resolves. Our design must not emphasize digital interaction and instead encourage in-person communication.

A black and white photograph showing a person's hands sketching on a piece of paper. The person is wearing a dark long-sleeved shirt and a light-colored, textured scarf. Their right hand is holding a black pen and is in the process of drawing a sketch of a person's head and shoulders. Their left hand is resting on the paper, with fingers spread. The paper has several other sketches on it, including a diagram of a person's head and shoulders, a diagram of a person's head and shoulders, and a diagram of a person's head and shoulders. The word "IDEATION" is written in large, bold, black capital letters in the bottom left corner of the image.

IDEATION

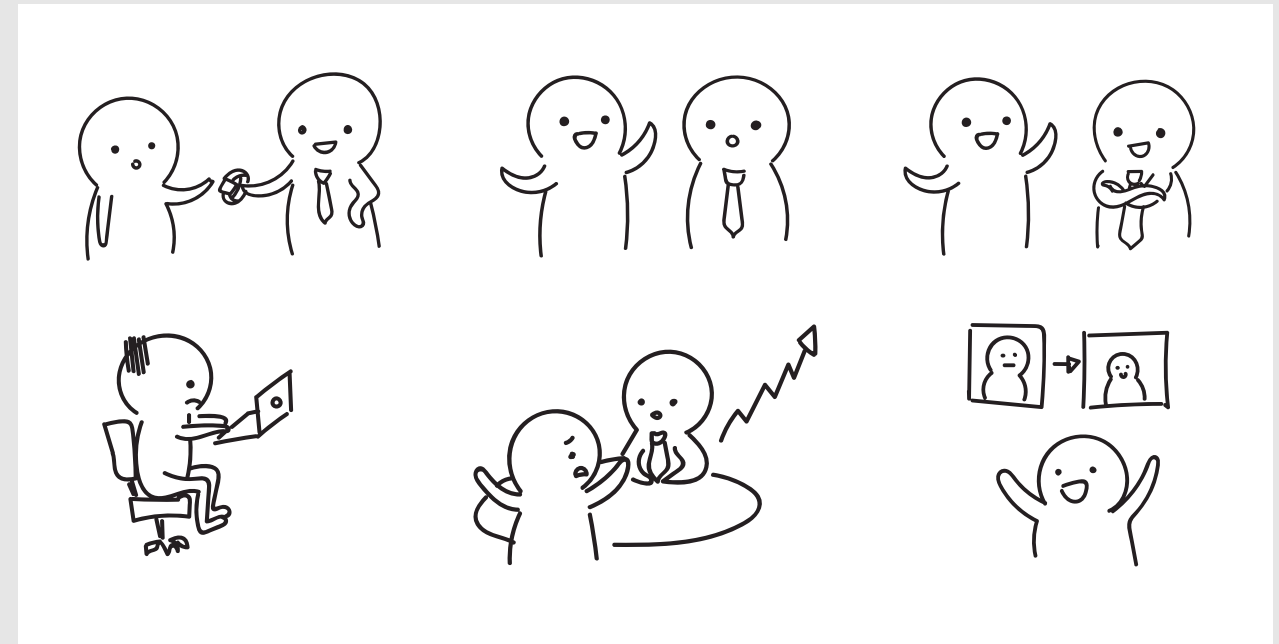
IDEA #1: Satisfaction Journey Map

An initial team project that newly hired employees take on in order to discover their role within the company and establish a personal connection with their supervisor and peers. This project is then followed up by a series of check-up meetings with one's manager that goes over goals, satisfaction with their role, and projects worked on. If the employee is satisfied/content with their position they continue on. If unpleased, employee and supervisor work out a new set of goals and a potential new role in the company that better fits the employee's aspirations.



IDEA #2: Check-Mate

This device relies on both the employee and the supervisor's participation. Once the employee is first on boarded, the supervisor will sign them to wear a wearable, most likely a smart watch that will track the user's happiness level, real time. The watch also acts as an encouragement piece that reminds the employee of goals in mind. This data is then available for both the supervisor and employee to review at home and monitor their data. If there is anything that arises, then it is both the boss and employee's option to take initiative and contact each other for a meeting to review and discuss the current situation.



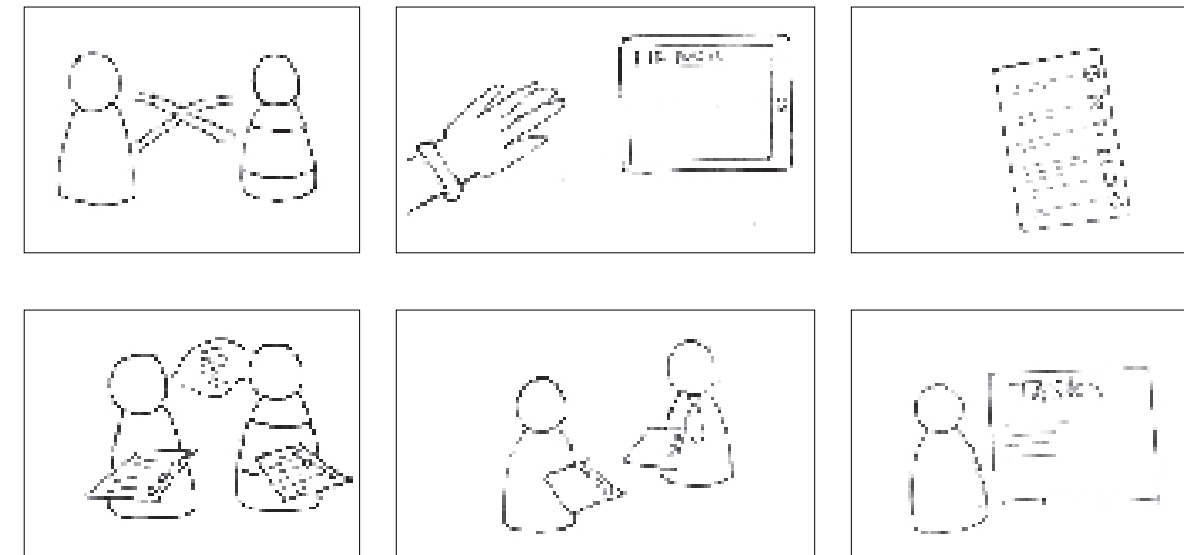
IDEA #3: Career Planning Happiness Tracker

Career planning is centered around job satisfaction. In this solution, a wearable device tracks users' happiness levels and correlates it with a self-made career plan timeline. The program suggests people in your company to meet with based on similar interests and experiences. This encourages more empowering communication in the workplace, and gives each individual a tangible means of assessing their career direction.



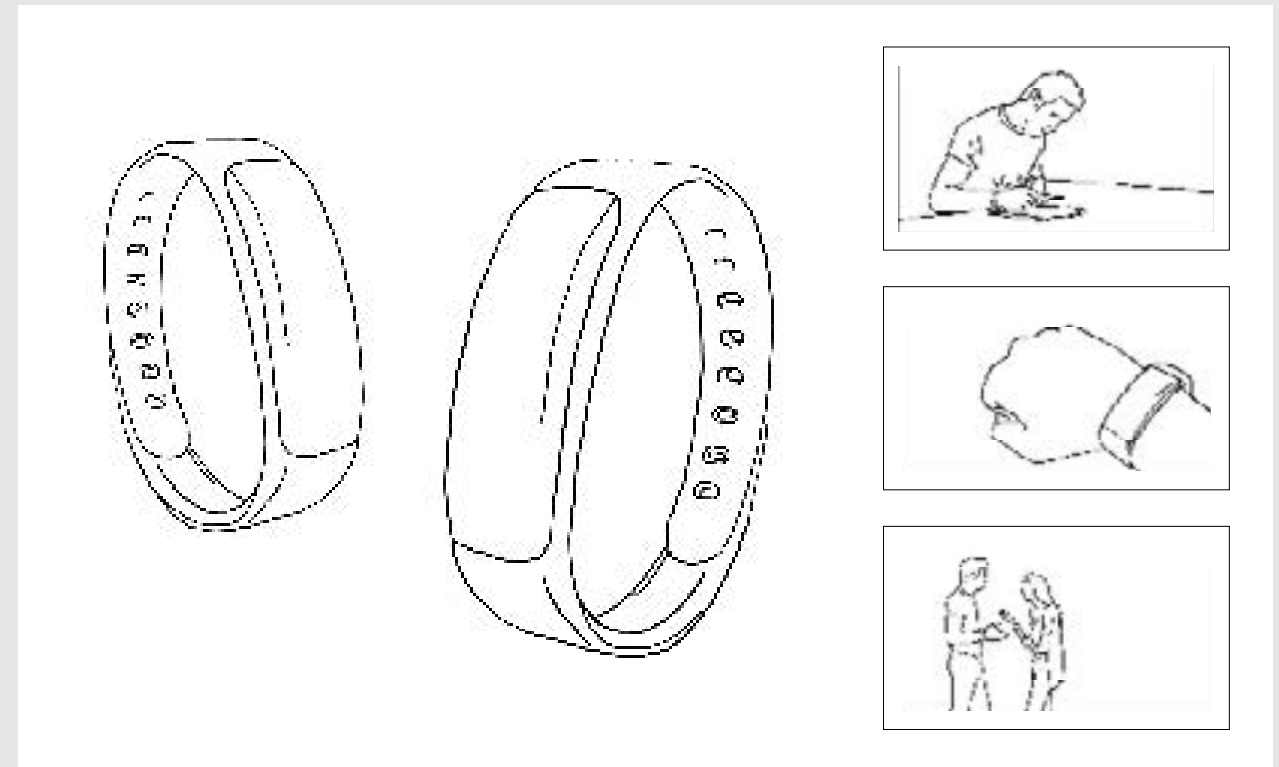
IDEA #4: Accountability Partners

This concept builds close peer-to-peer relationships through a mutual mentoring program. The partners match up in-person based on similar interests and personality. Once matched, they meet and write out their professional goals and the goals for their partnership. The happiness tracker alerts the partners of spikes in happiness, prompting them to meet up. Over time, they are able to help each other reach their professional goals, by talking through their favorite activities in the office. If the partners consistently meet up, they can deeply understand the other's strengths and weaknesses. This information, coupled with the happiness meter, can be used in individual meetings with supervisors to back up discussions of raises, promotions, and relocations. All of these elements together could be used to improve the work and happiness of these individuals.



IDEA #5: Community Mood Monitor

A wristband that monitors the overall happiness within a workplace and can suggest activities throughout the day to keep employees engaged and help them better get to know one another. When the average happiness of an office drops below a specified level, bracelets begin to activate, prompting their wearers to get up and engage with one another. This break allows employees to get to know one another and form relationships within their office.



INITIAL CONCEPT AREAS

Each of our initial concepts fit into one or two of these types of interactions. Based on critique we found significant flaws in each area but also room for improvement.



Personal
Tracker



Employee to
Supervisor



Person
to Person

PERSONAL TRACKERS

Unresolvable Issues

Based on the technology we were provided, happiness trackers would be fundamentally cumbersome, meaningless, and potentially damaging to one's well-being. People know when they're happy. Being alerted of your current happiness would be invasive and redundant, and could possibly ruin the genuine, subconscious nature of the emotion.

The only useful application for a product in this space could be uncovering deeper reasons and context for happiness. Our secondary research told us just how many factors influence one's happiness. Without the technology in place to track these causes of happiness, our product would be reliant on

constant and intrusive user input. The benefits this product could provide to a user certainly would not validate the sheer amount of input it would require for gathering accurate and insightful data.

The inability to distinguish causes of happiness would prevent us from tailoring this product to a workplace-centered use case. Gathering insight specific to job satisfaction would be impossible without technology in place to situationally categorize causes for happiness.

EMPLOYEE TO BOSS

Unresolvable Issues

Solutions specifically revolving around employee-boss interactions raise serious concerns about workplace privacy and interpersonal trust. These concepts inherently contradicted the need for personal ownership and maintaining professional image.

Top-down surveillance at its core destroys trust in any community—especially the workplace. Surrendering one's most personal emotional state to their supervisor breaches the meticulously crafted professional images employees strive to preserve.

The inability to contextually analyze this emotional data opens the door for serious misuse and corruption between supervisors and employees. A simple binary representation of one's happiness could be easily misinterpreted by a third party observer, which could lead to undeserved repercussions in the workplace. Users would be incentivized to fake happiness to protect their professional image, which would only further impede genuine workplace interactions.

Democracy, transparency, and personal ownership is necessary for any form of workplace surveillance. Any method of making happiness available to one's supervisor in such a form would irreparably harm workplace interactions.

PERSON TO PERSON

Requires Resolution

Our person-to-person solutions showed promise, but nonetheless had issues in need of resolving. Our solutions attempted to streamline relationship building by pairing people together to discuss personal topics. While this technically allows for communal sharing of happiness, it removes genuine formation of trust from the equation. Our insights show how dependent trust is on proximity and meaningful time spent with each other. Trust can't be manufactured. Formulaically putting people together to discuss personal issues bypasses this critical period of building a genuine rapport with coworkers.

We realized that without an organic incentive to share personal information, these employee interactions would remain at a surface level. While this concept space maintained our design principles, it did not adequately address our goal of effectively communicating happiness and job satisfaction in the workplace.

Person-to-person interactions showed the most promise for building connections without compromising professionalism. Removing office hierarchy from the equation created a form of surveillance that would least compromise employees' professional reputations. But in order to create long term impact and genuine connections between coworkers, we needed to further refine our ideas.

CONFLICT WITH THE PROMPT

Inherently Contradicted Design Principles

Through our primary research and ideation we came to the realization that the biometric tracker was at odds with our core design principles. Reducing happiness down to a single data point opens the door for misuse and corruption, as well as strips it of meaningful information. This view of happiness as a metric could easily cause anxiety and competition within the workplace. Our research informed us how important maintaining a professional image is within the office environment. Any method of revealing this information could irreparably damage people's workplace reputations and relationships.

Required Preexisting Trust

We also found that sharing personal information such as satisfaction was dependent on a strong preexisting level of trust in the workplace. Our participants informed us that the majority of workplace relationships lacked the trust required to comfortably share this information. In order for these conversations to happen naturally, we needed to focus on building a foundation of trust between coworkers.

FINAL CONCEPT

A solution that sets the foundation for
meaningful in-office **relationships** through
pre-existing **mutual interests**



Encourages conversations
between coworkers about their
mutual interests

Links are based on interests
manually entered on iPhone

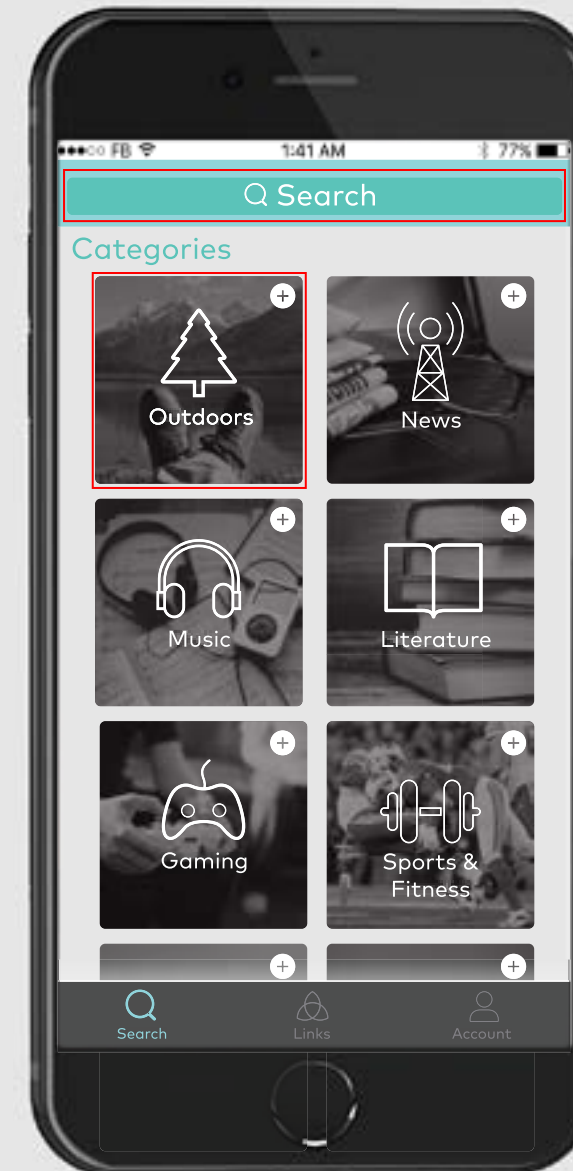
Links appear to each coworker
simultaneously on smartwatch



INPUTTING INTERESTS

The user begins by inputting interests via their phone in one of two ways. They can either search for their desired interest directly or browse through a list of categories in order to find activities and interests that do not immediately come to mind.

These interests and activities are stored within the app and remain private. Once the system matches them with a coworker, the mutual interest is visible to both parties.



LINKING WITH A COWORKER

When the system recognizes that multiple employees share an interest or activity, it selects a random business day to simultaneously notify both users of the match.

Once notified and with new knowledge regarding their coworker, users have the option to engage in face-to-face conversation about their shared interest.

The app encourages but does not explicitly force employees to pursue any interaction with one another. This allows for more genuine interaction between matched pairs that sets the foundation for a more meaningful work relationship.



WATCH FLOW

After receiving a notification of a link with a coworker, the user may then select the smartwatch app.

Once launched, a page with the user's most recent notifications are then shown, highlighted at the top.

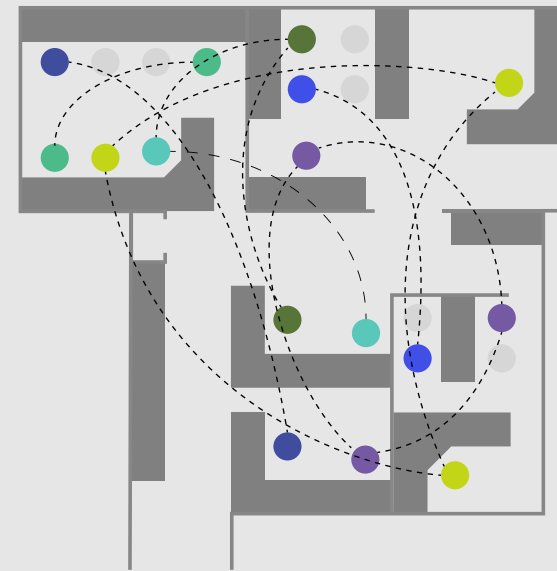
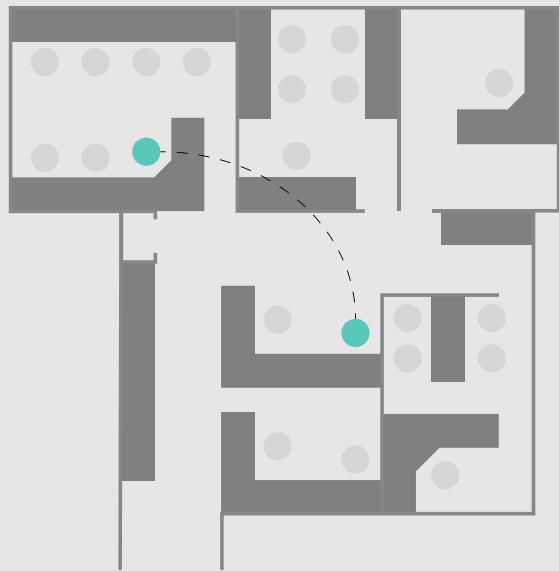
The user then selects their most recent notification of a connection made with a coworker, which navigates to a screen that is specific to that connection.

Within that connection screen, the user is then able to view previous connections made with that same coworker to remind them of other mutual interests.



ESTABLISHING AN OPEN ENVIRONMENT

Similarly to the individual pairing, the app works to eventually pair people all over the office to create a more friendly and open office community. This environment facilitates more candid conversation between coworkers that can, in turn, set the foundation for more open conversation regarding more personal topics including workplace happiness.



MOVING FORWARD

Were we to continue with this project, a logical next step would be to perform user testing to ascertain the viability of our solution. It would also further inform us of how better to structure the application flow and any microinteractions. We would also consider performing another round of primary research to build upon the insights that we had already gained. With our current knowledge of our problem space, further interviews would be better crafted to understand how surveillance affects the workplace. Finally, more research could be targeted towards supervisors, and help us integrate a greater amount of their perspective into our design.

This project has been incredibly beneficial in teaching us the value of good design research. Not only should research inform you of your design space, but it should support your decision making and heavily influence your solution. With this knowledge, we are better prepared to approach future design problems and back up our reasoning.