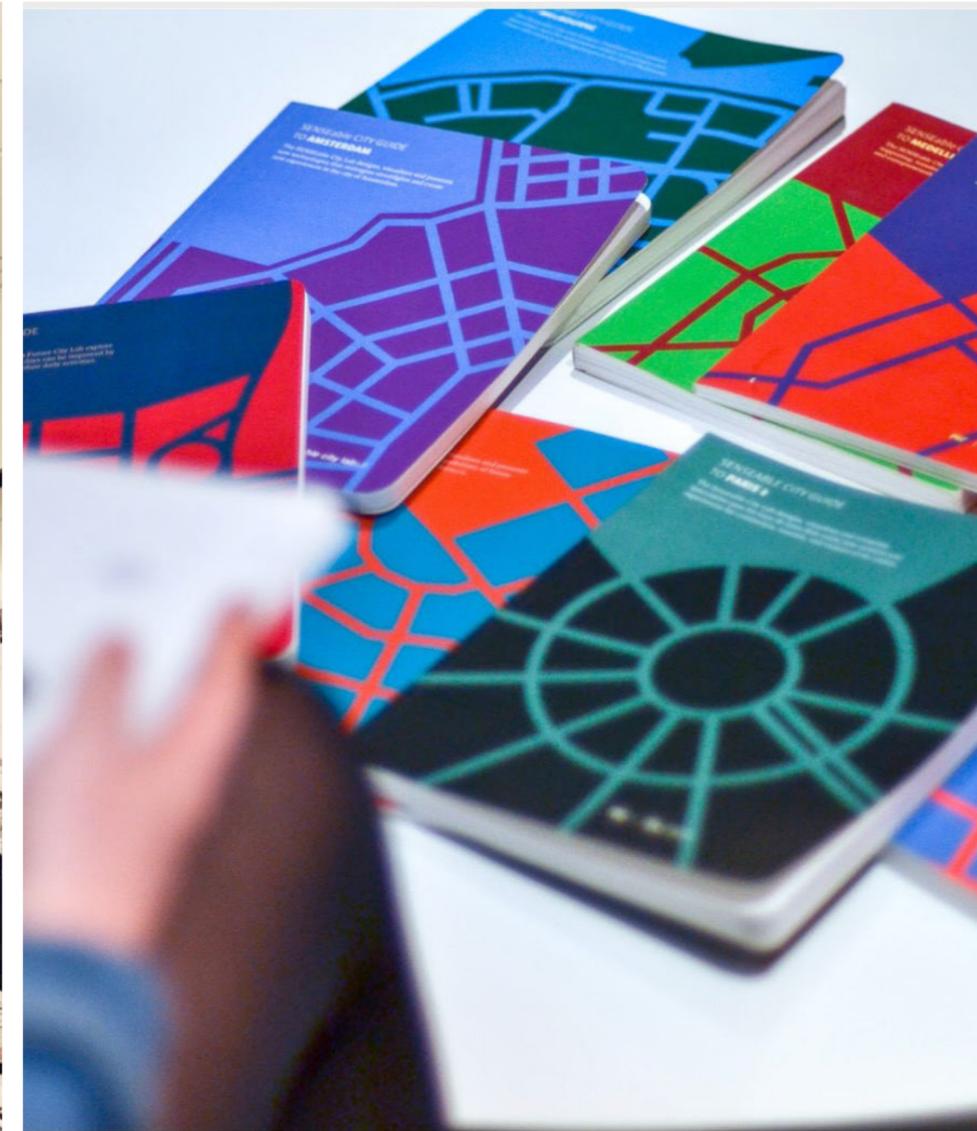
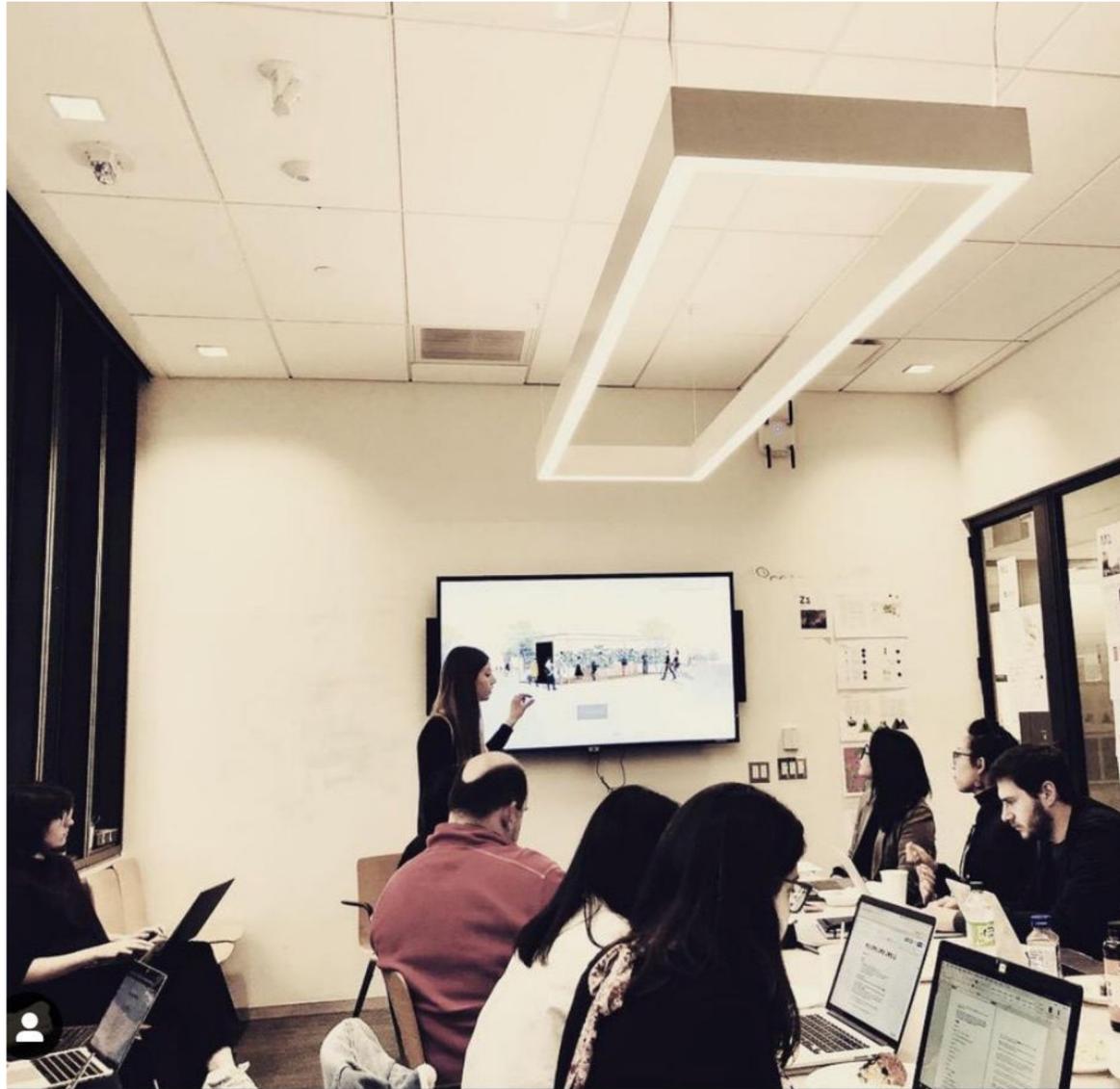


Innovating Munich

Leveraging the use of digital technologies to activate public areas and foster creativity among companies and users.

YEAR 1



YEAR 2



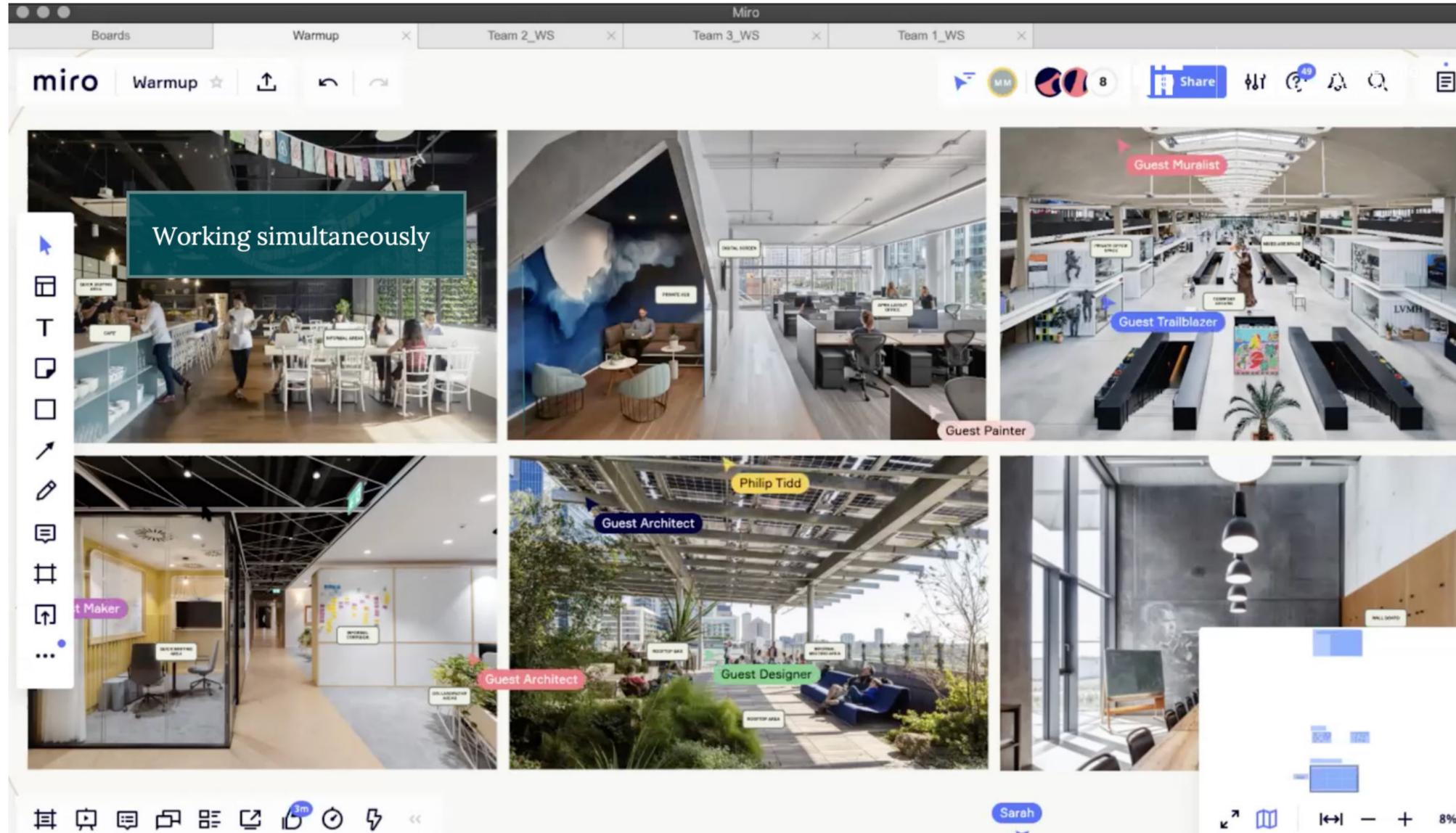
LabCampus

1,464 followers

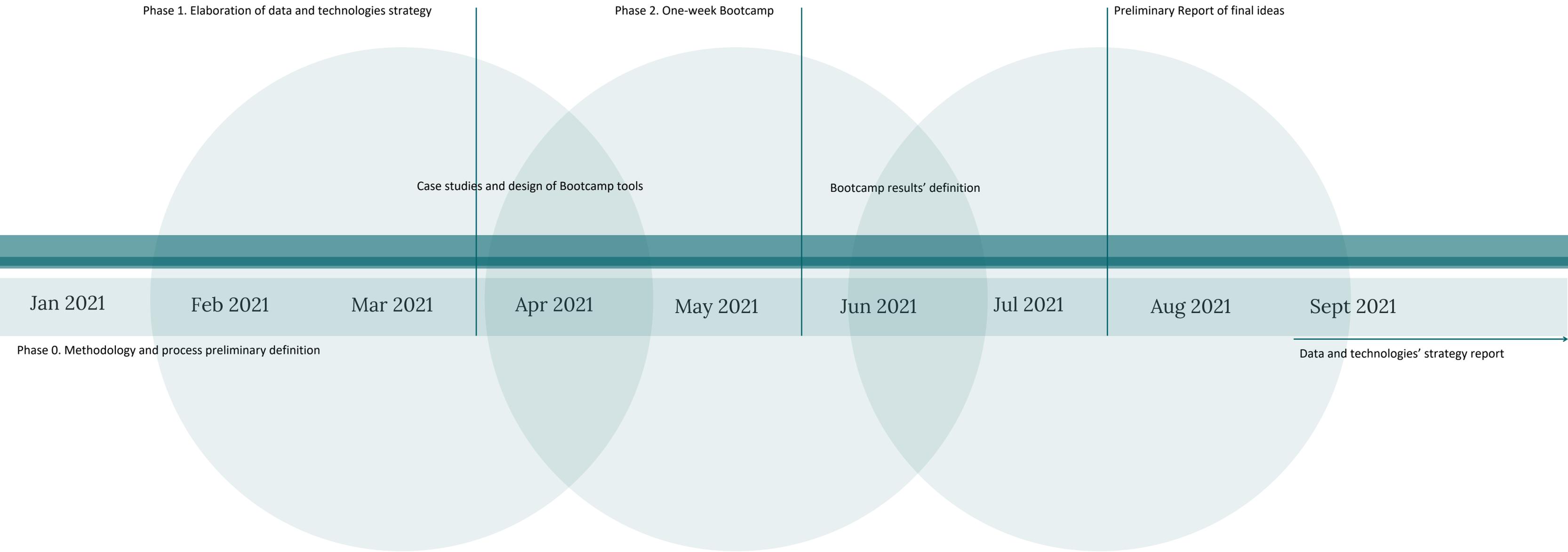
11mo •

+ Follow

This week, together with the [MIT Senseable City Lab](#), we carried out an external and an internal digital workshop, in which we discussed possible scenarios and room configurations for the future of [#LabCampus](#). Thanks to all par ...see more

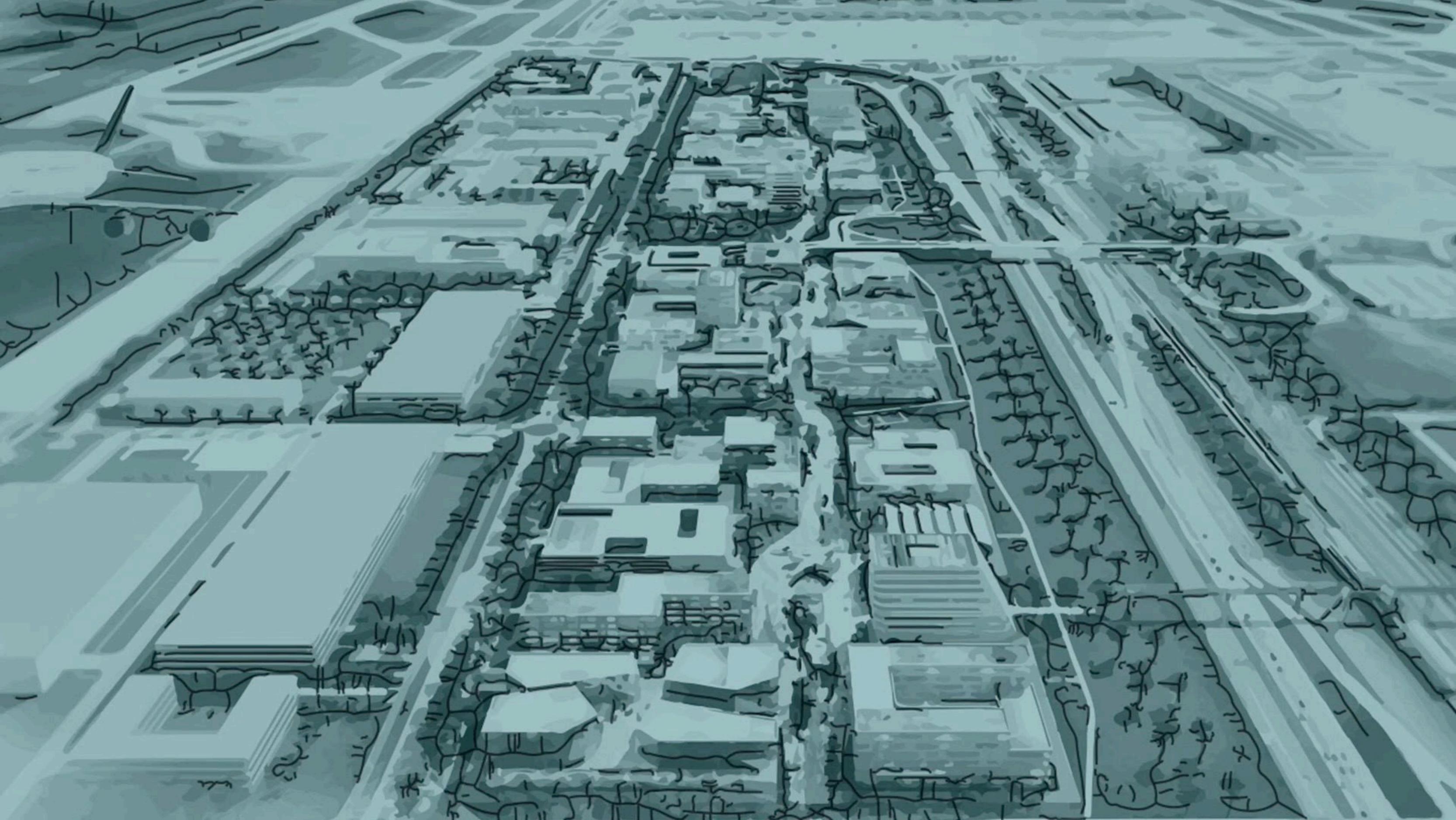


YEAR 3 - WHERE WE ARE



GOAL

How can we use digital technology
to enhance spatial experiences and creativity?



Annotated drawings

Always to keep in mind

GOAL

Cases/cool project to keep in mind

Get inspired by functions and activities

Lost in the digital environment? :)

Links

Contacts

Team 1 workspace

Team 2 workspace

Team 3 workspace

Day 01

Sharing of the results on Day 2

Day 01

GROUP #3 BR...

Group 1

6 ideas generated by three teams

Day 02

Sharing of the results on Day 3

Day 02

Choose at least 1 tool to represent you Persona Interaction

Day 03

Have a look on this catalogue

Day 03

Sharing of the results on Day 3 (end of the session)

TEAM 1



Tom Benson (SCL)



Martina Bon (Polimi)



Chiara Carovelli (Polimi)



Luca Vallini (Polimi)

IDEA 1

How might we help
LabCampus users to spot
quickly the best place in
the common areas?



Ruhe helps LabCampus' goals in:

- *monitoring in real time the noise level
- *flexibility of work and leisure in the building
- *serendipity encounters

RUHE

Finding the best place

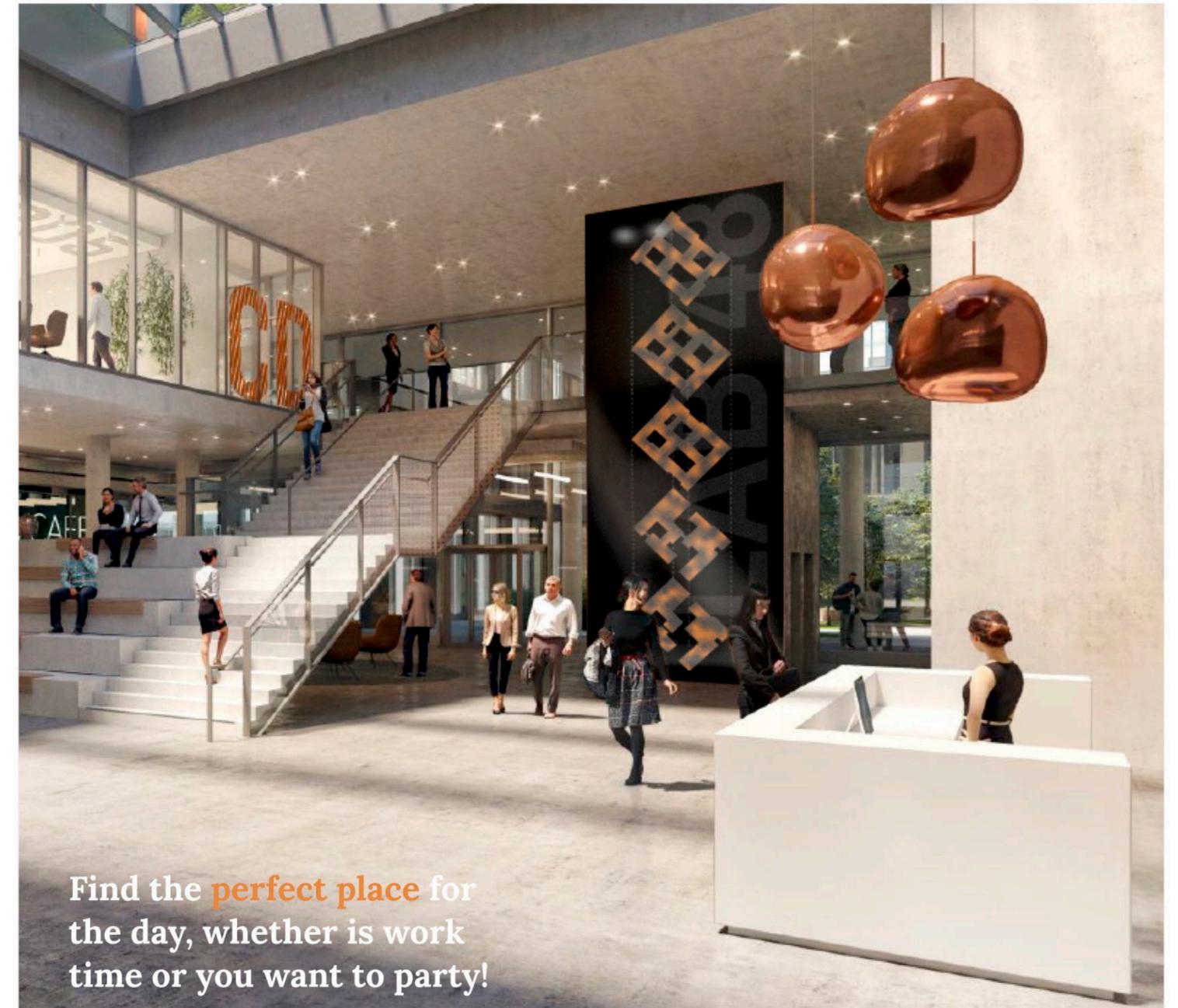
When it comes to getting things done, everyone looks for the best place to focus in. But the definition of "the best place" is highly subjective: some like having people around, others prefer being alone in a quiet room, others can focus even in the loudest place. Considering the shift of work habits towards a more fluid and dynamic routine, this diversity will increase, and people will rarely have the exact needs each day, probably changing them hour by hour. How to manage this diversity, ensuring people the ability to find the most comfortable place for them?

Locating noise

The common trait in seeking a place to work is checking its loudness. What if there was a way to spot it in advance and remotely? Our project aims at automatizing this process through a noise sensing system in the building and crowdsourced data collection through users' phones. Data on sound levels will be matched with spaces through a visualization tool, Ruhe, that will allow LAB48 users to spot the most suitable place for them quickly and at a glance. Ruhe comprises two touchpoints: a recognizable LED wall in the lobby and a more handy digital platform.

More than quietness

LAB48 isn't just about working and quiet spaces; neither Ruhe is. The system can also intentionally go in loud places, where people are probably having a break together. This system could be a perfect way to catch networking opportunities or get to know more people.

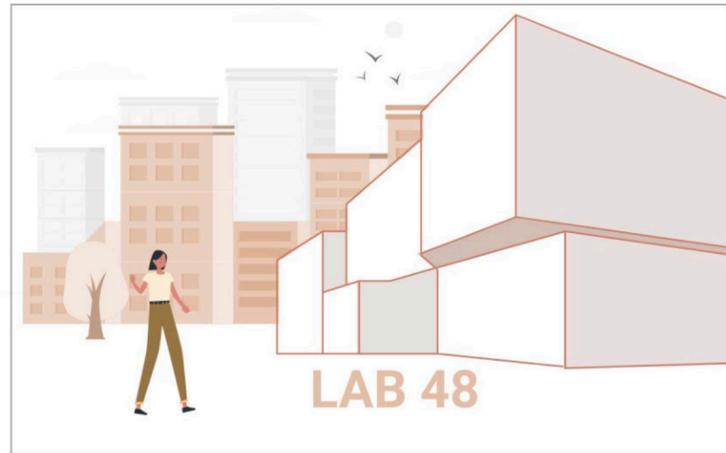


Ruhe

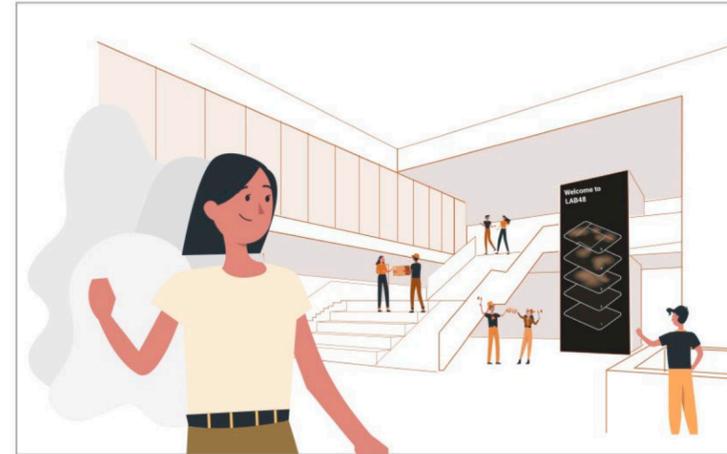
#perfectplace
#soundlevels
#realtime



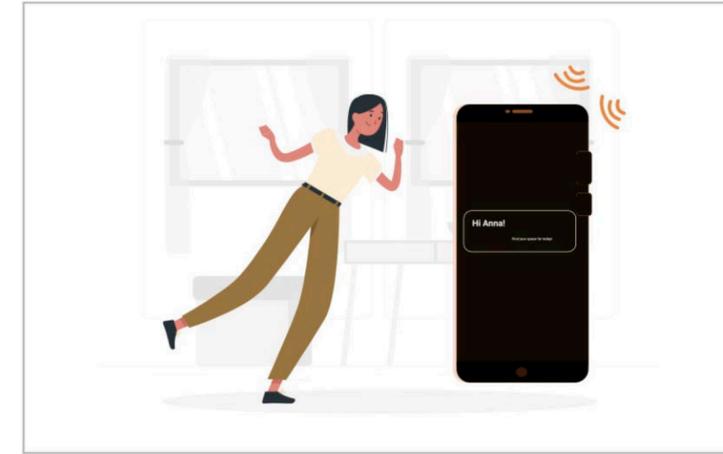
STORYBOARD



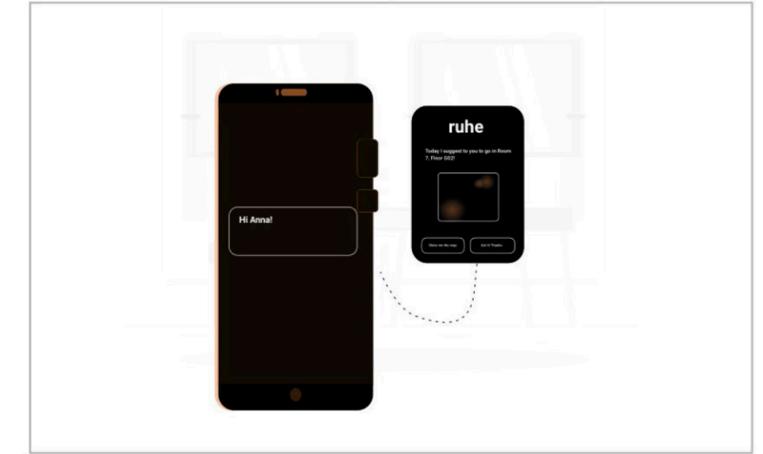
1. Anna arrives close to the building to have a normal working day at LAB48



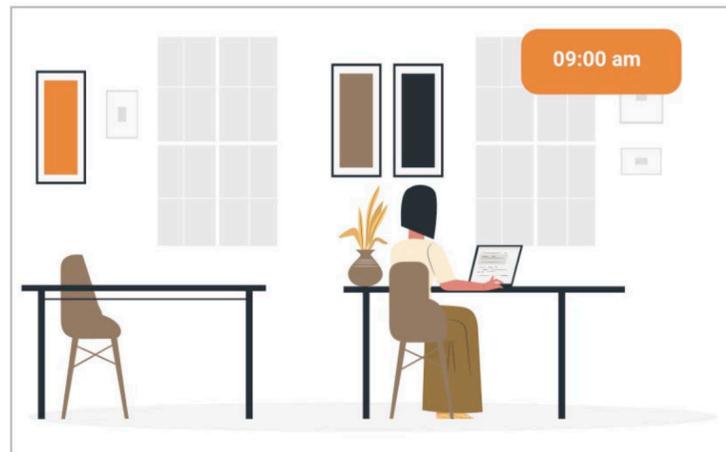
2. Entering the lounge she have a look at the big LED Wall that show the noise overview of the building



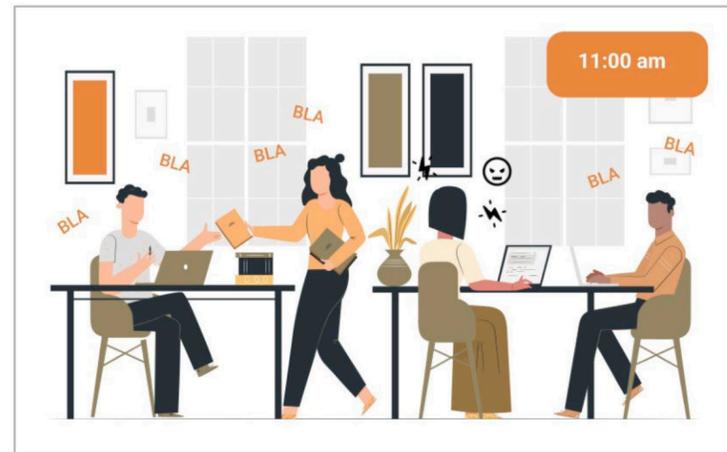
3. She then receive a notification from the beacon sensor connected to the LAB48 web platform



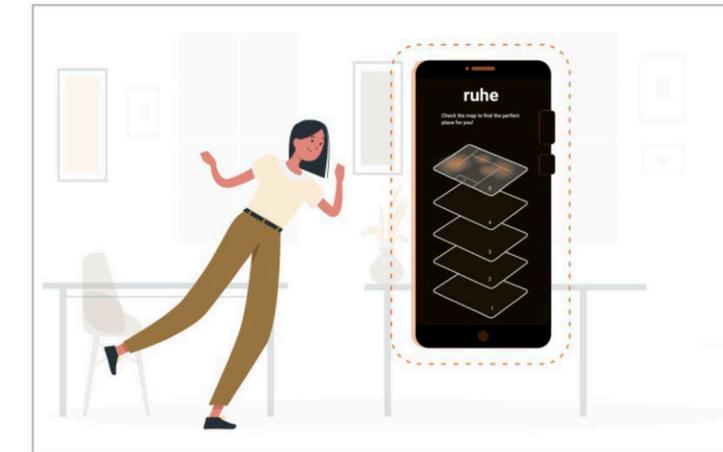
4. According to her preferences, the notification says "Hey Anna, today I suggest you go to Room 7, floor 02!"



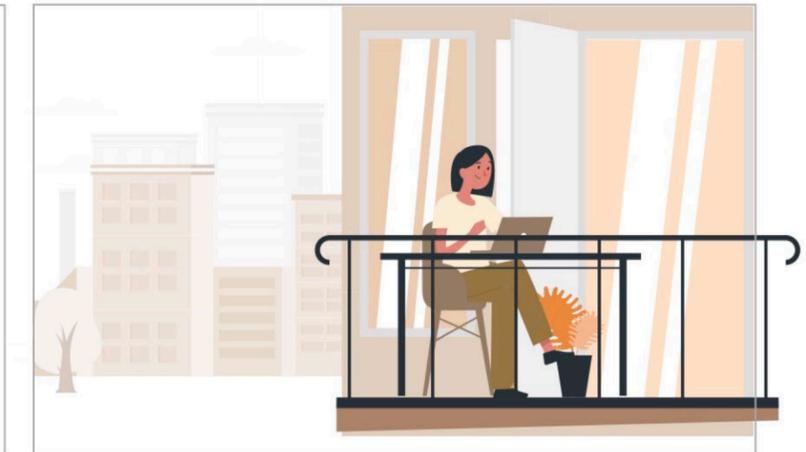
5. Anna goes to room 7 and starts working



6. After some time the room gets crowded and

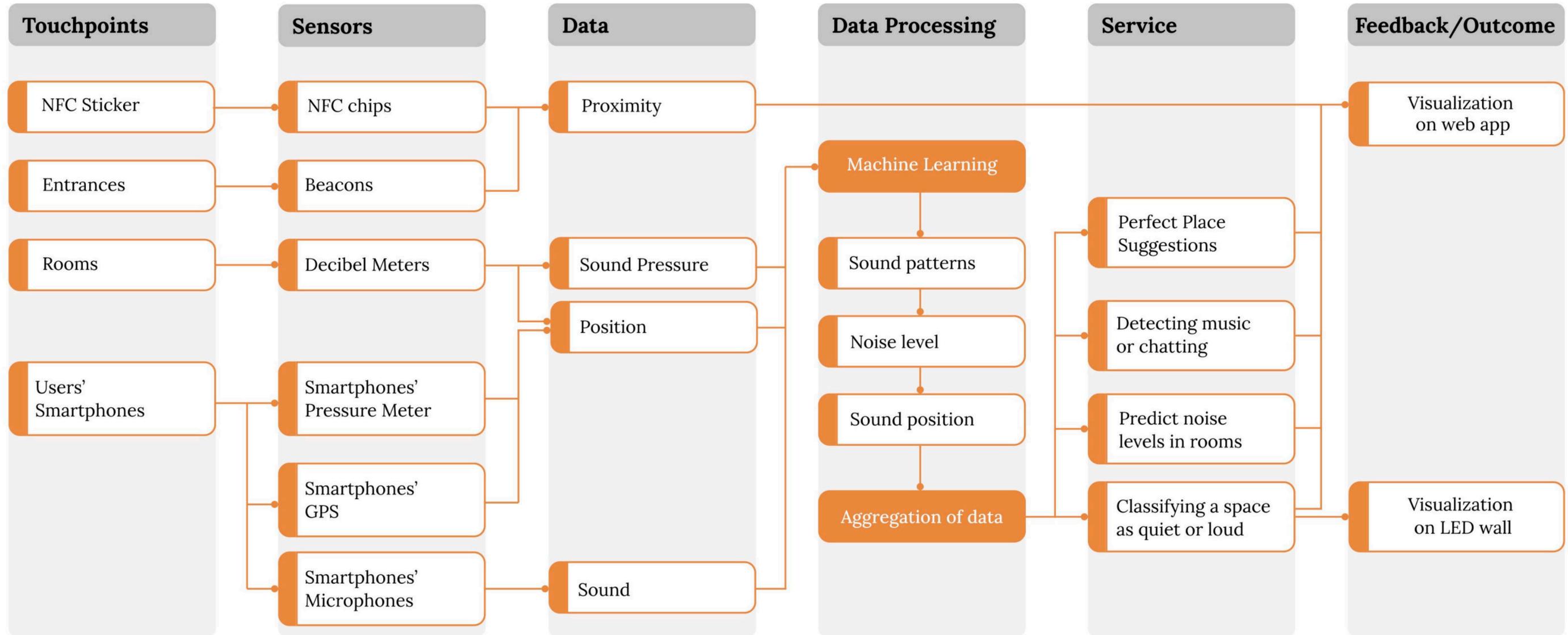


7. Anna checks the map on the phone to see how's the noise



8. She works on the terrace in the quiet

TECHNOLOGY



OUTPUT

Connecting people & buildings

To provide the service, it is necessary to install several decibel meters to detect the sound pressure in the whole building. All the data collected are visualized in Noise Level Maps that the user can check both in the platform and the LED wall in the lobby.

The system's precision is implemented by users' phones: the app will use their built-in microphones to provide the system with an additional layer of data. The resulting dataset won't include private conversations. It will anonymize them to avoid catching personal information.

Once the crowdsourced database grows, it will give back users another layer of information. Thanks to machine learning, the system will detect sound patterns and classify the kind of noise present in the room (the beat of the music, speaking, etc).



RUHE AND PERSONAS



Alex



Miriam



Pavel



Sonia

PERSONAS main pains

Unplanned disruptions in his routine and lack of entertainment (A.)

Lack of opportunities to experiment with new technologies (A.)

Lack of time for leisure activities (A.)

Difficulty in approaching people after work, lack of leisure spots (M.)

Lack of quiet places to retreat (P.)

Seamless IT experiences (P.)

Forced social events (P.)

Lack of inspirational conversation at eye-level (S.)

Access to new ideas skills and tools (S.)



Ruhe helps to find where noise places are, joining people having a break together.

Experimentation on how AI can work, use of a digital platform for noise detection.

A way to easily and quickly find where people are and join them in a minute.

Thanks to Ruhe leisure spots like corridors, terraces will be highlighted to know where people are talking in realtime.

With Ruhe is easy to quickly find quiet places around.

Ruhe is a simple tool, experienced it through an easy application platform.

This tool can help serendipity in the building without forcing any conversation.

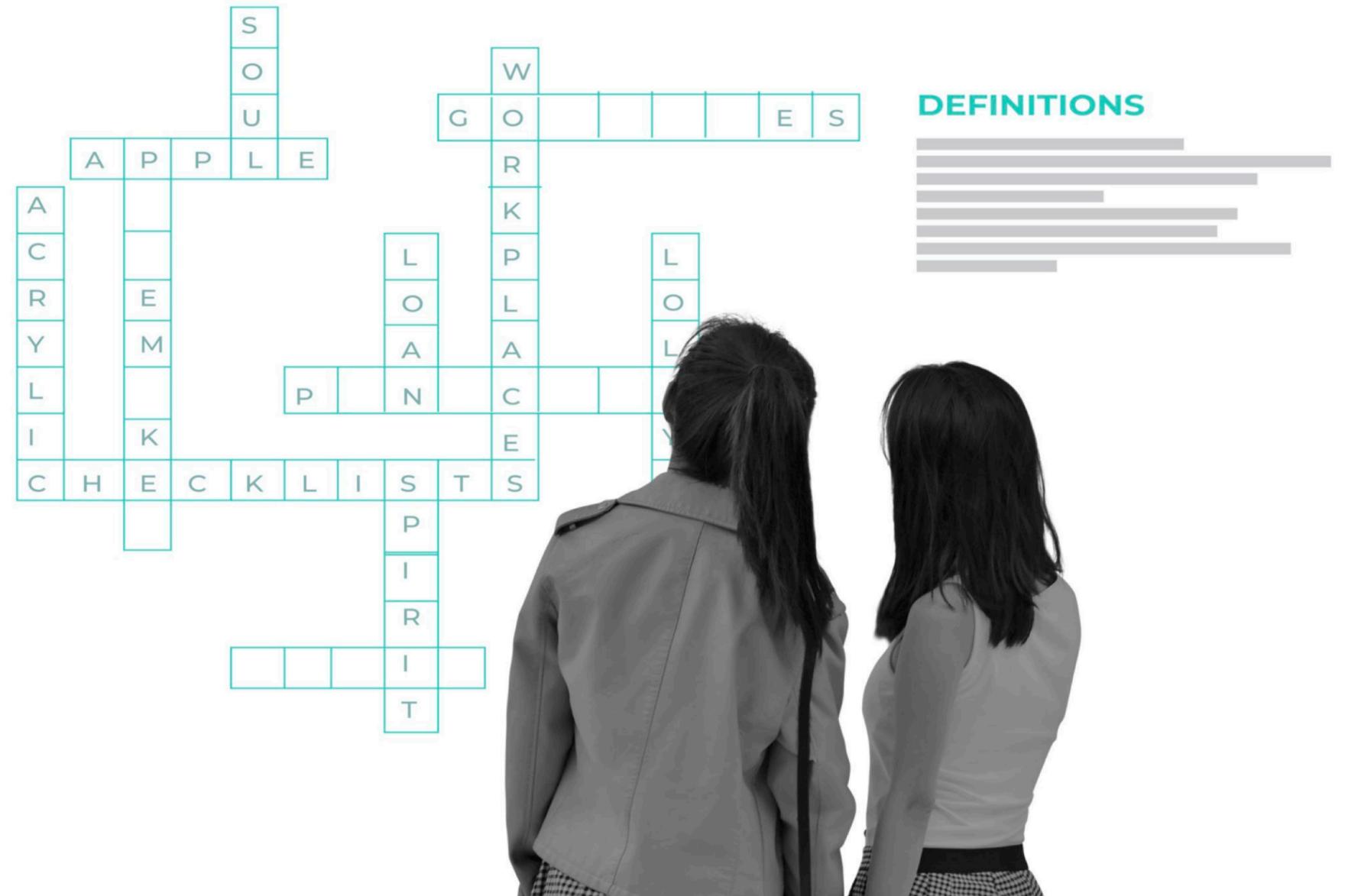
Check Ruhe, everyone will be happy to share some time with people.

Unplanned conversation in shared common spaces are fundamental tool to help people for having new ideas and tools.



IDEA 2

How might we improve
informal networking
fostering playfulness?



Waru helps LabCampus' goals in:

- *collaborative experiences
- *boost social life in the building
- *serendipity encounters

How do spontaneous connection happen?

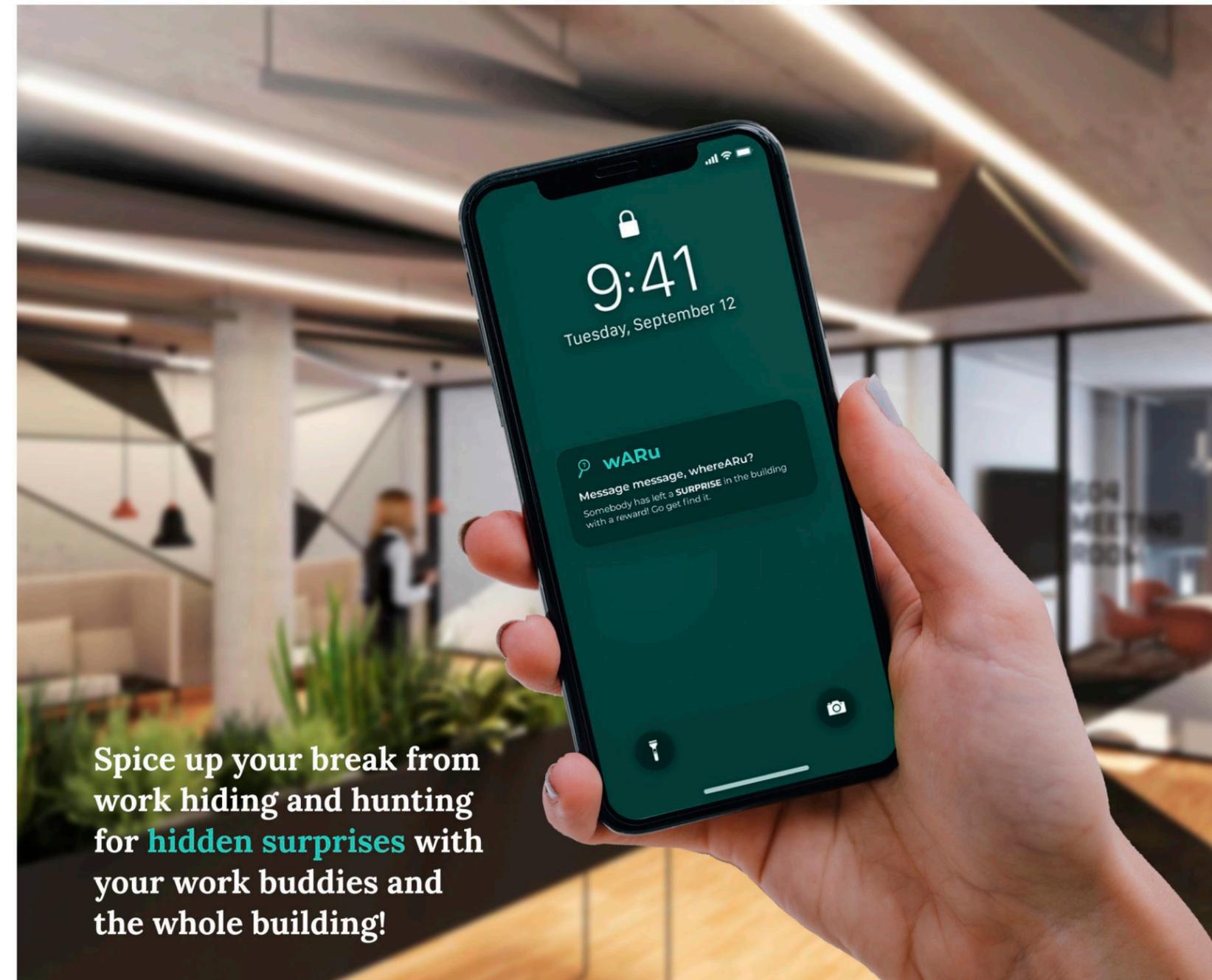
Meeting new friends as a kid is the easiest thing: children read space differently, and anything can become a stimulus to interact with others. When adults, finding spontaneous connections with others becomes more challenging. How do people usually do break the ice? Jokes. Everybody still has a playful side, but finding an appropriate way to express it in a working context can be so challenging that it's just easier to hide it. What if we could provide people with a playful way to interact through surprises? easier to hide it. What if we could provide people a playful way to interact through surprises?

Gamifying communication

People in a working environment exchange lots of messages during the day, mostly sitting at a desk. What if, instead of receiving messages, people have to find them? We envision an AR-based platform, wARu (=where are you), where surprises and messages can be geolocated all around the building for people to go and find. A message remains "mysterious" until the addressee finds it, transforming it into a surprise. User's phones will become their "magical lens", through which they can scan the secret side of LAB48 and a source of hints on how close/far what they are looking for (hot/cold metaphor expressed through vibration).

Creating community

wARu is more than a secret 1 to 1 messaging system: people can also broadcast in the space any kind of media (videos, drawings, sounds, etc) and adjust the privacy level of messages from 1 person to everyone in the building. This various range allows the use of the platform to create public surprises and games (public "treasure-hunt" for giving out discounts, "riddle of the day", etc) that become an excuse to meet and socialize.



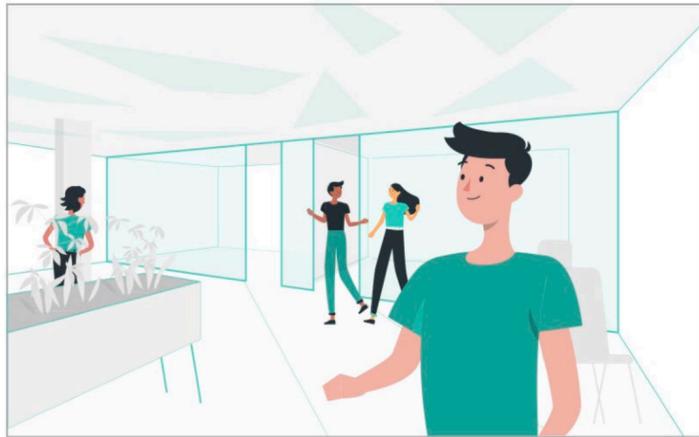
Spice up your break from work hiding and hunting for **hidden surprises** with your work buddies and the whole building!

wARu

#treasurehunt
#networking
#playfulness



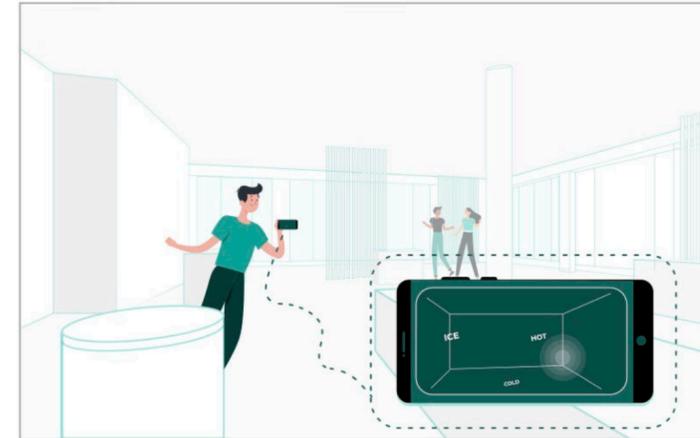
STORYBOARD



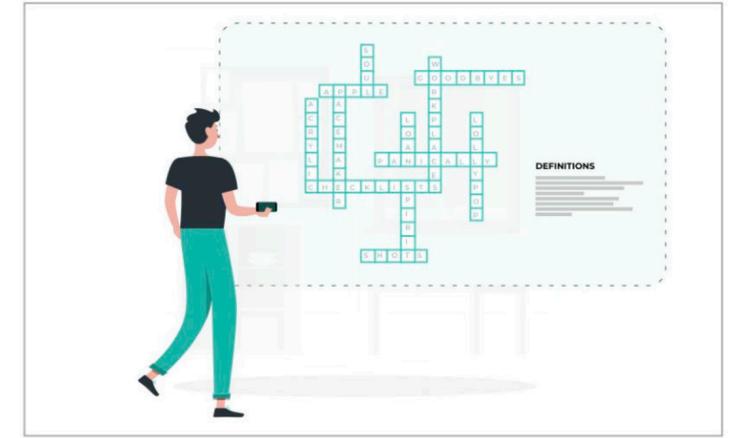
1. David is wandering around the LAB48 during his break



2. He then receives a notification from the app: somebody posted a PSAs with rewards! He has to find them



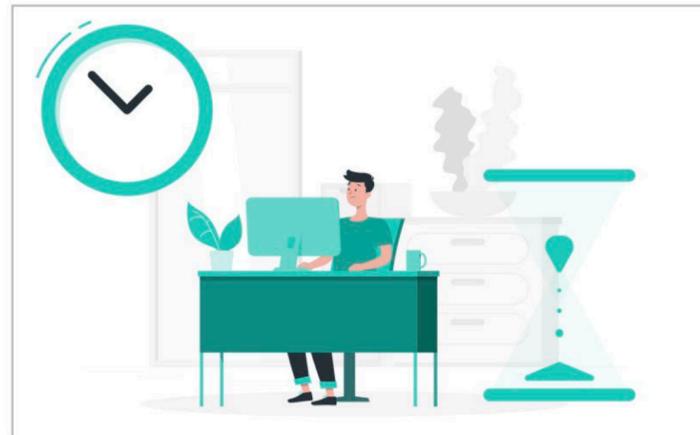
3. David turns on the whereARu app and starts searching for the items through the AR real time scanning system



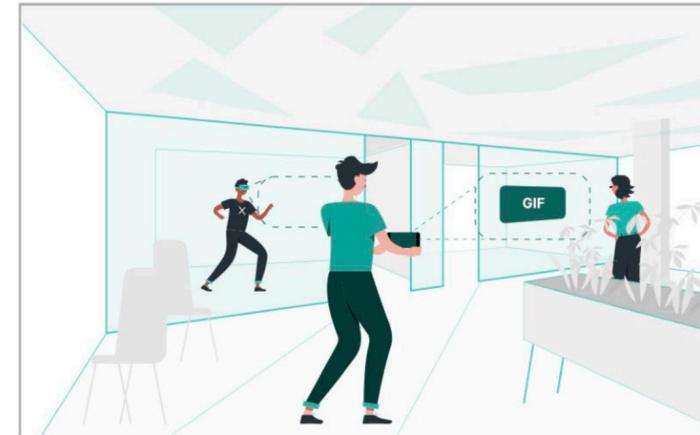
4. Suddenly he finds one of the PSA, it was a crossword. But somebody was faster than him and already fill it.



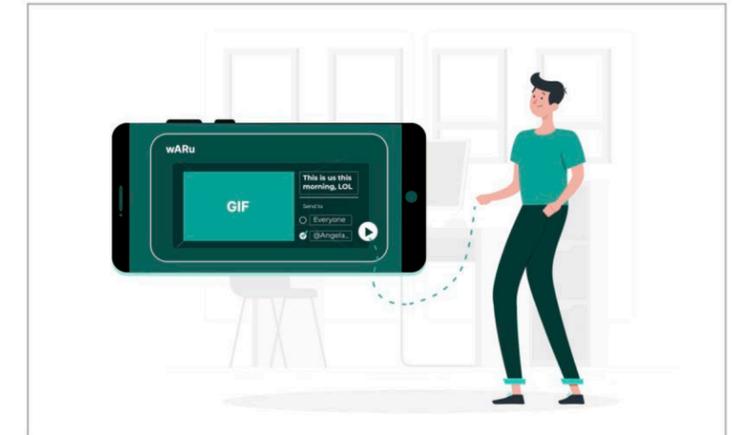
5. He then meet with another person that was searching the quest, Angela, who was also searching for the crossword.



6. After this pleasing meeting and a small chit chat, David come back to work, and time pass...

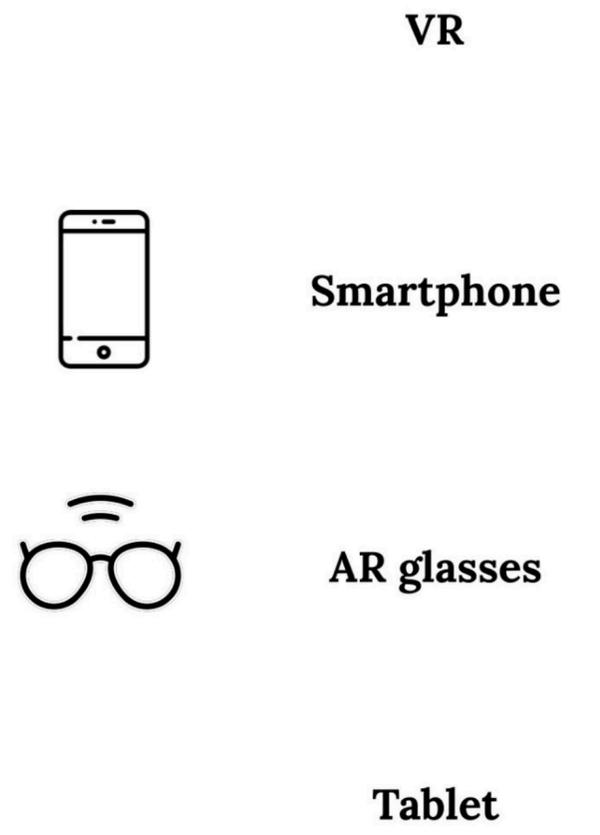
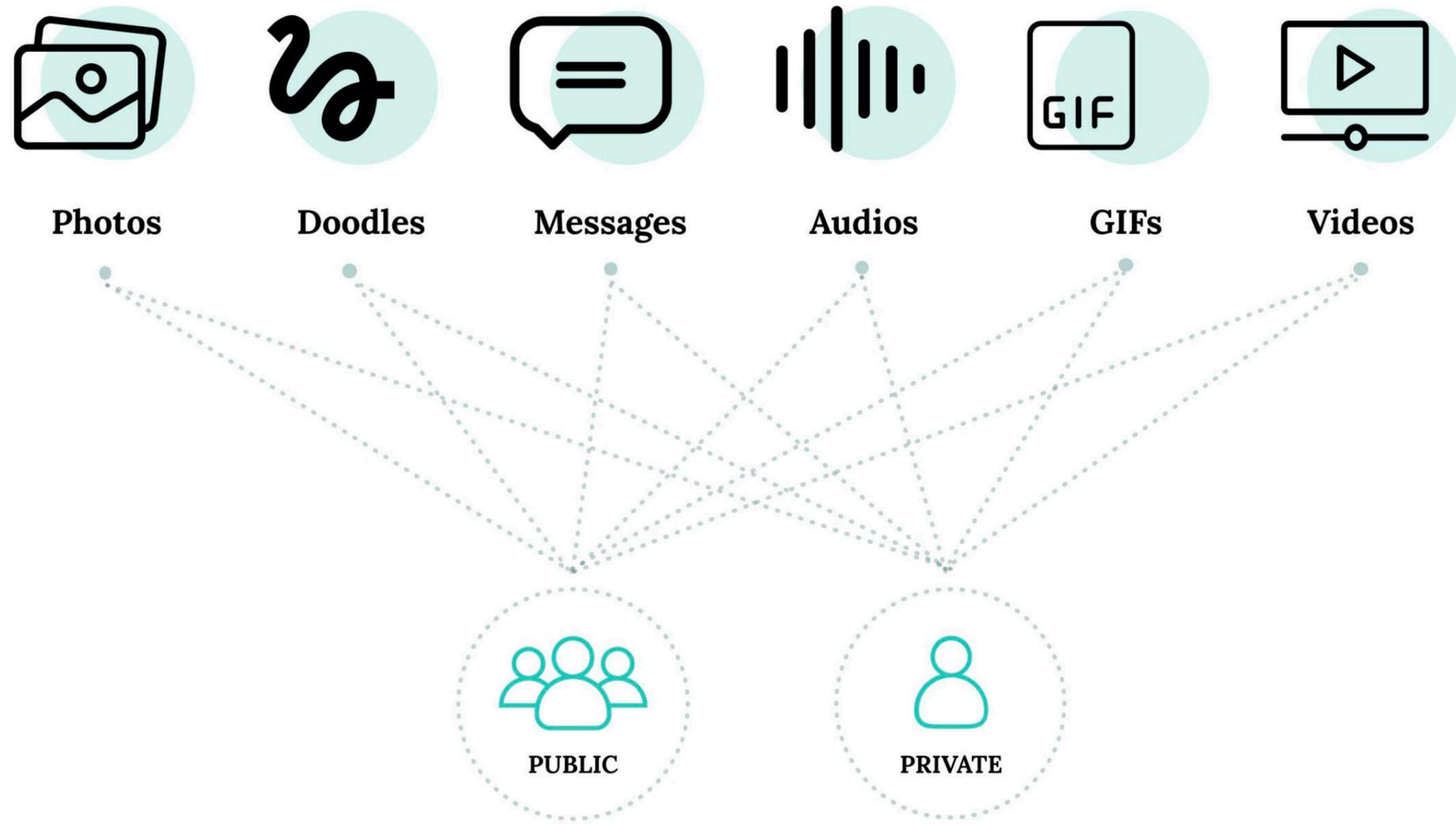


7. He decides to catch up again with Angela leaving her a hidden message just for her in a common space, while other people are finding for hidden surprise with other tech devices!

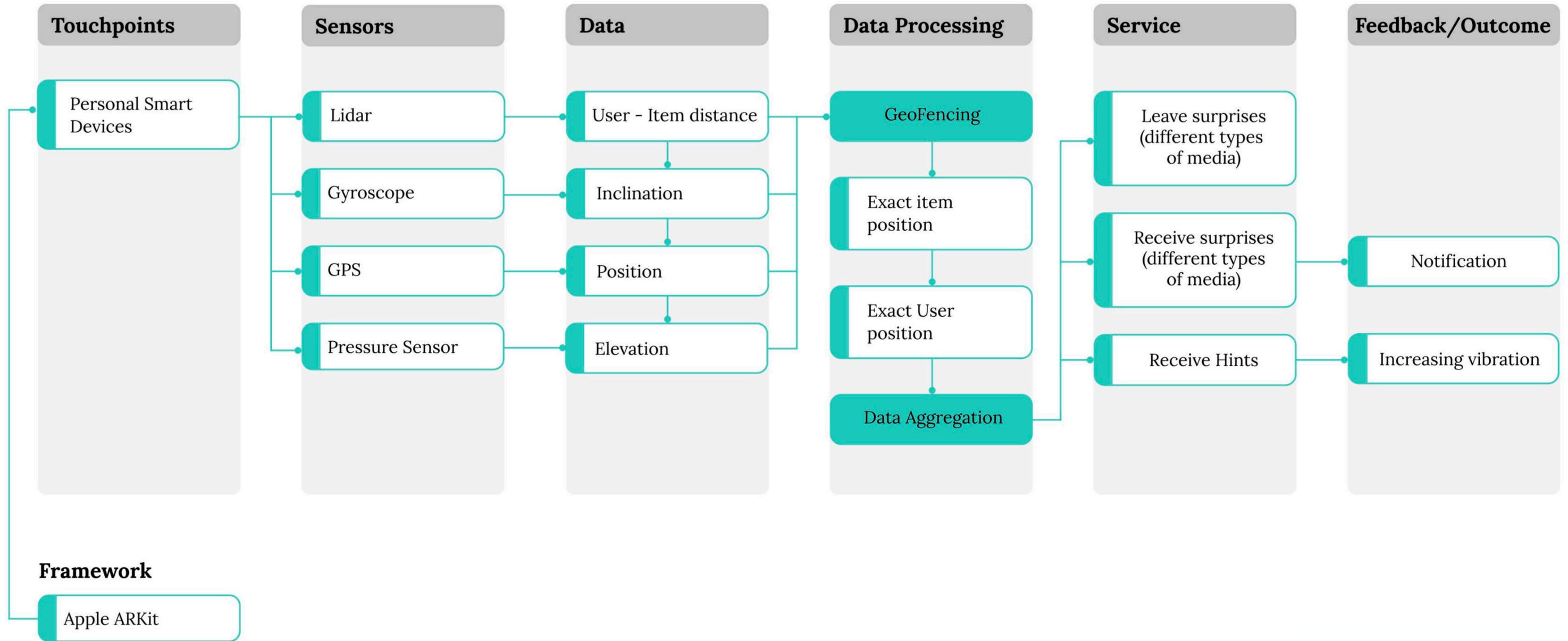


8. David place in the room for Angela a GIF on the theme of "being late" to have a laugh about what happened before, sending her the notification to start searching for the surprise

TECHNOLOGY – POSSIBILITIES AND DEVICES



TECHNOLOGY



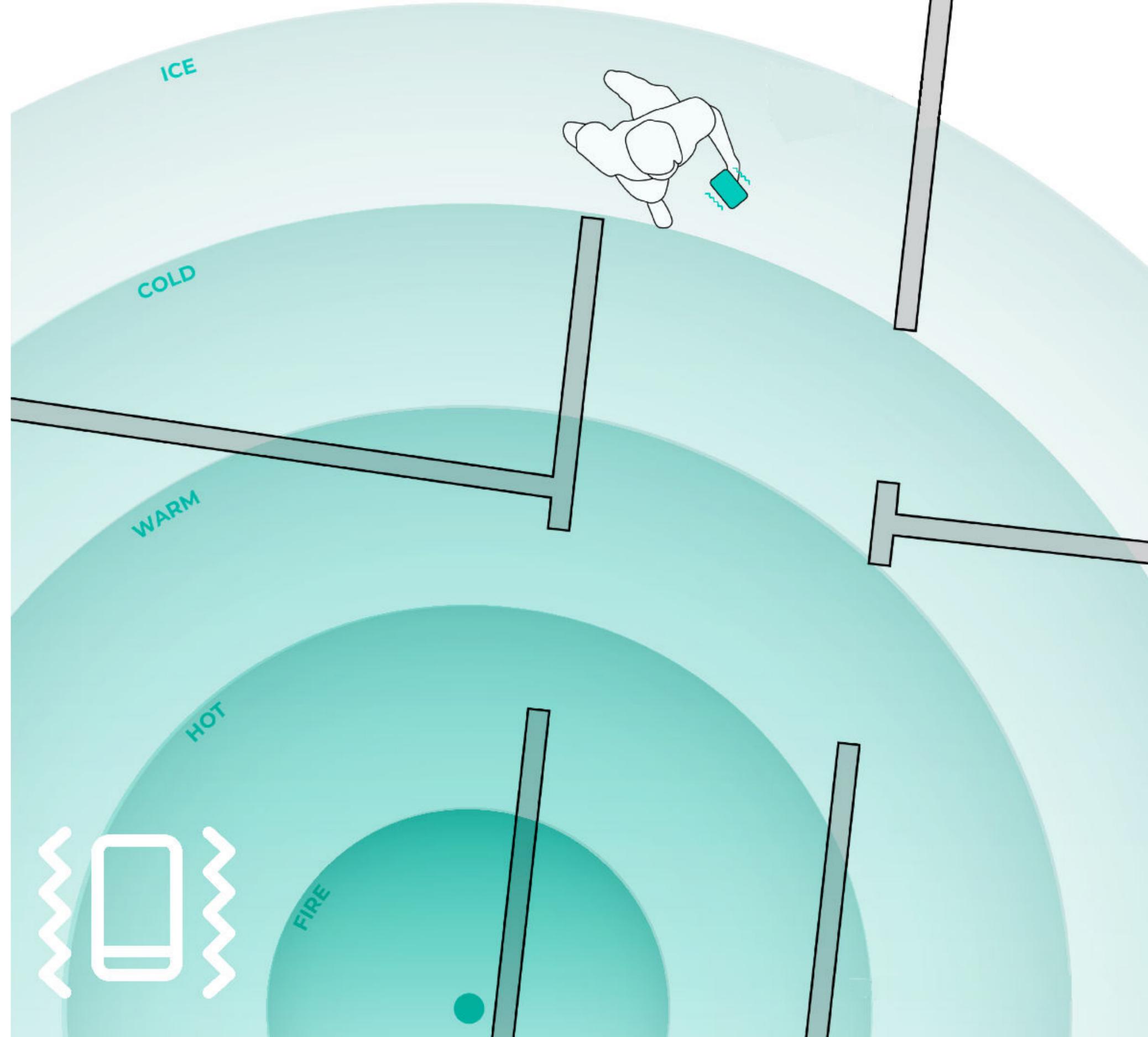
OUTPUT

Geolocate your hidden treasures!

The service behind wARu is grounded on the concept of geolocalization of the hidden items in the building's ambients. This is possible thanks to the technology behind the AR experiences for smartphones: the usage of lidar sensors, GPS, gyroscope and barometric pressure sensors placed inside our phones permit us to localize the elements in the tridimensional space.

To further improve the precision of the location, the GEOFENCING system is employed to precisely identify the position of the single item, creating a bubble/fence around it thanks to latitude and longitude coordinates. This system allows encoding the exact position of the item and makes the navigation in augmented reality the most precise possible for the user.

Moreover, to make the hunting more playful, the system notifies users about their proximity to the item by giving hints on the position through the "Hot&Cold" game. This is paired with a vibration that, simulating a metal detector, speeds up the vibration's pace when the user is closer to the item.



WARU AND PERSONAS



Alex



Miriam



Pavel



Sonia

PERSONAS main pains

Unplanned disruptions in his routine, Lack of entertainment (A.)

Lack of knowledge on innovative methods to spur his projects and personal development (A.)

Lack of opportunities to experiment with new technologies (A.)

Lack of information exchange with Labcampus Users (M.)

Difficulty in approaching people after work, lack of leisure spots (M.)

Forced social events (P.)

Lack of time for creative tasks and inspirational activities (S.)

Access to new ideas skills and tools (S.)



Waru with the system of hidden messages/surprises encourages interaction dynamics and pleasant breaks from work activity.

Waru is an activator for advice and feedback on users' projects, targeting specific people.

A way to experiment with seamlessness technology, fostering a new mode of interaction through unique technology.

Waru perfectly addresses this need through a playful mode that constantly stimulates people on campus.

Users can take advantage of Waru's messaging at the end of the day or creating a game for colleagues that encourages a time of sharing.

The dynamics of the game favours a spontaneous interaction that triggers new dynamics of relationships between users.

Waru provides possibilities to organize or share tasks and activities among users.

New messages and surprises are tools for users in having new ideas.

TEAM 2



Claire Gorman (SCL)



Stefano Petiti (Polimi)



Nicola Notarnicola (Polimi)



Kosta Dimitrijevic (Polimi)

IDEA 3

Employees' wellbeing
directly effects their
business performance
how to monitor and
improve it?



Smart elevator helps LabCampus' goals in:

- *Health monitoring
- *increase quality of daily life
- *serendipity encounters

SMART ELEVATOR

Monitor the wellbeing

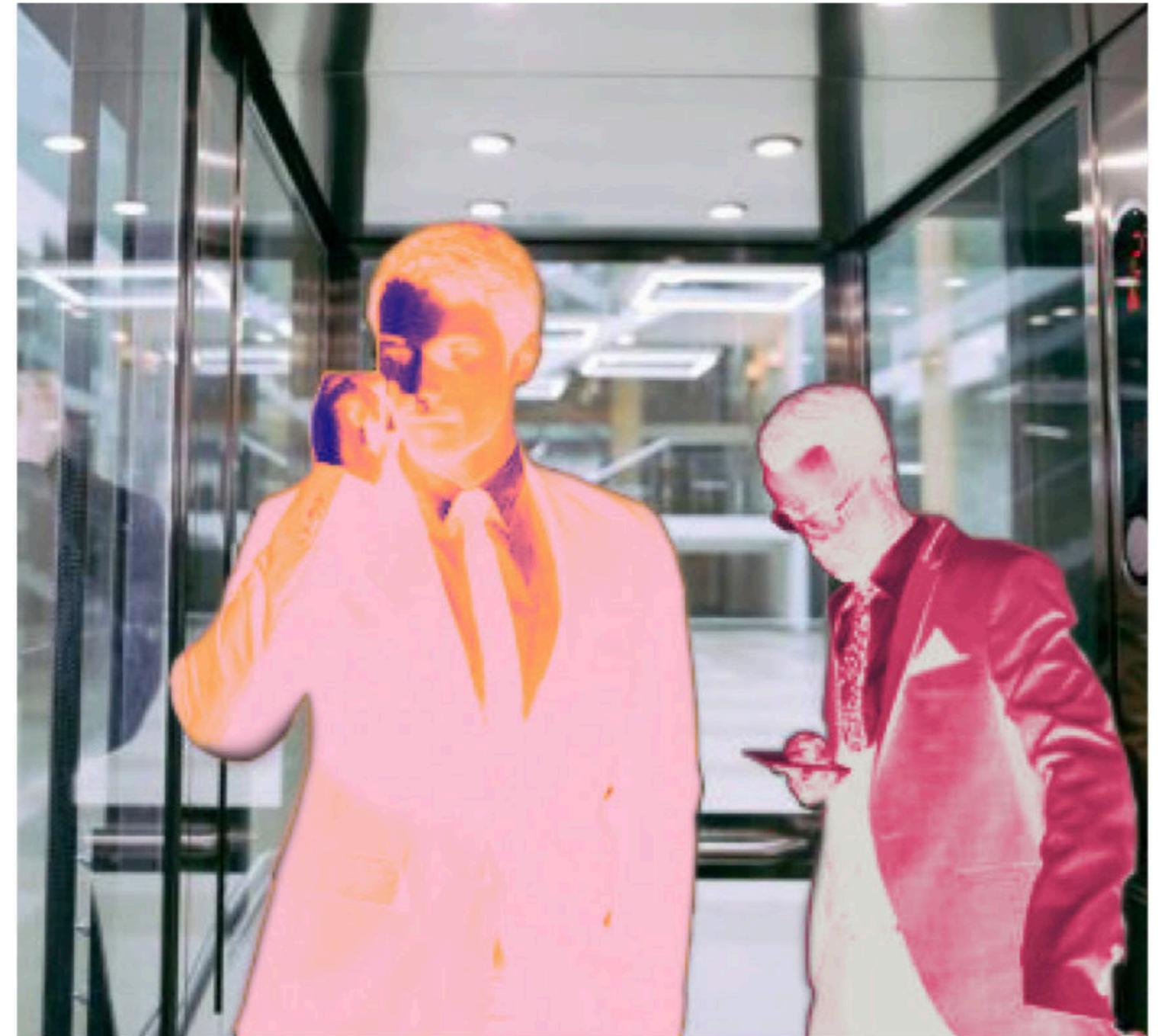
LabCampus, located close to Munich Airport, aims to become a working space distinct by its services and utilities that foster more productive, social and healthier working conditions. The wellbeing of an individual employee plays a significant role in one's performances that can later also have an impact on a team or a company. In order to address this issue, the proposal aims to monitor the wellbeing of the individuals and help them cope with stress.

Elevator as touchpoint

Based on the building's architecture, a hypothesis has been made that the majority of employees will use elevators for reaching their offices. Elevators being the hotspots that distribute people multiple times a day, from the ground floor to the offices, have a potential of collecting significant amounts of data related to stress levels of users. Employees, who accept to use this kind of service, would be recognized through their company card when entering the elevator. Various sensors are used to gather data indicating their stress levels, processing them and providing relevant feedback.

Service output

The output of the service comes in the form of an email with recommendation of the actions an employee should take in order to reduce the level of stress. The service is linked with the employee's business calendar, according to which the recommendations are being tailored. Other output of the service comes in the form of a chart that sums up the date of individuals in a team and delivers it to the team managers, who can then have an overview of the general condition of their employees.



KLAUS MÜLLER

LIWE SCHMIDT

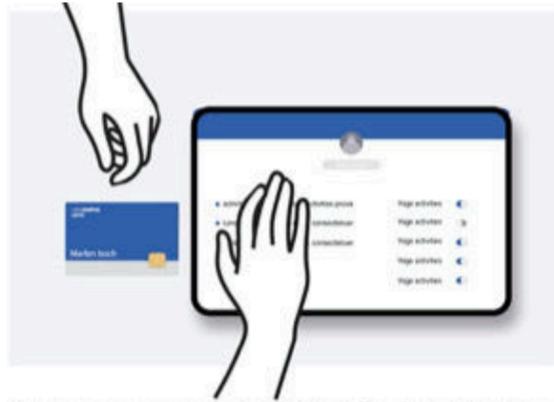
GRETE BECKER

KLARA SCHAFFER

Smart Elevator
taking care of
employees' stress



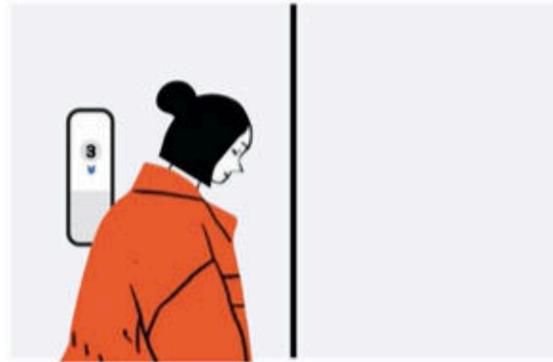
STORYBOARD



Clear is a new employee in building 48 and it's at the time of signing the contract when she is presented with the possibility of participating in the wellness programme.

If this is the case, Clear will be one of the employees whose health will be monitored in more detail so that they can be offered personalised health activities in addition to those already offered to all employees.

Clear thinks it's a great idea and agrees



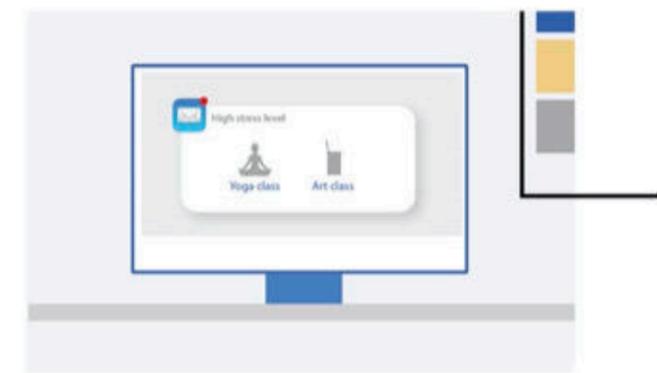
It's been 3 months since Clear's first day on the job and she's been working on a very important and complex project, she's been under a lot of pressure lately but she can't relax because the deadline is near.



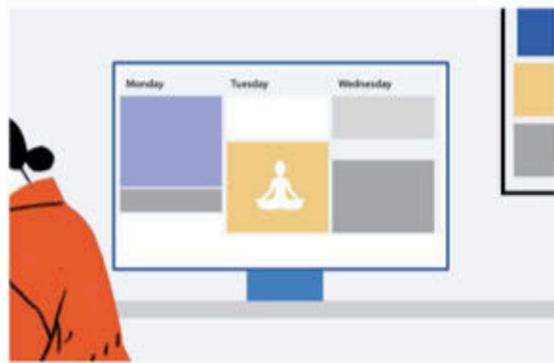
It's 9am and as usual Clear comes into the office, as she works on the 3rd floor she chooses to take the lift to save time. The lift, thanks to the NFC technology in the employee ID card, understands that Clear is on board and starts to scan her.



Thanks to biometric sensors in the handrail and pushbuttons, as well as the camera system and floor, the lift is able to collect a range of Clear's biometric data to understand their emotional and health status.



The data collected by the lift is then processed, aggregated and the system understands that Clear is under a lot of stress at the moment, so it responds by suggesting her some activity to alleviate her anxiety.



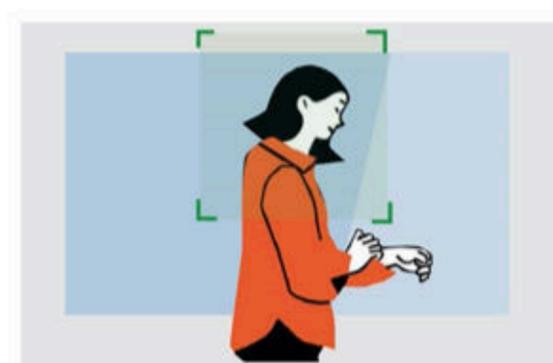
At the same time, Clear's data is aggregated with that of other employees and passed on to the building's HR department so they can monitor the wellbeing of their employees and devise a long-term strategy to improve their conditions, as well as using the same data to validate the effectiveness of the wellbeing programme already in place.



The wellness programme knows Clear knows her work schedule and knows that she also practices yoga and gymnastics. So, cross-referencing her schedule with her office activities, it offers her an invitation to a yoga class the next day, just before lunch.



The programme's advice doesn't stop there, cross-referencing what it knows about Clear with information from other product designers enrolled in the programme like her. The system is therefore also able to propose activities and courses for leisure time, in Clear's case painting.

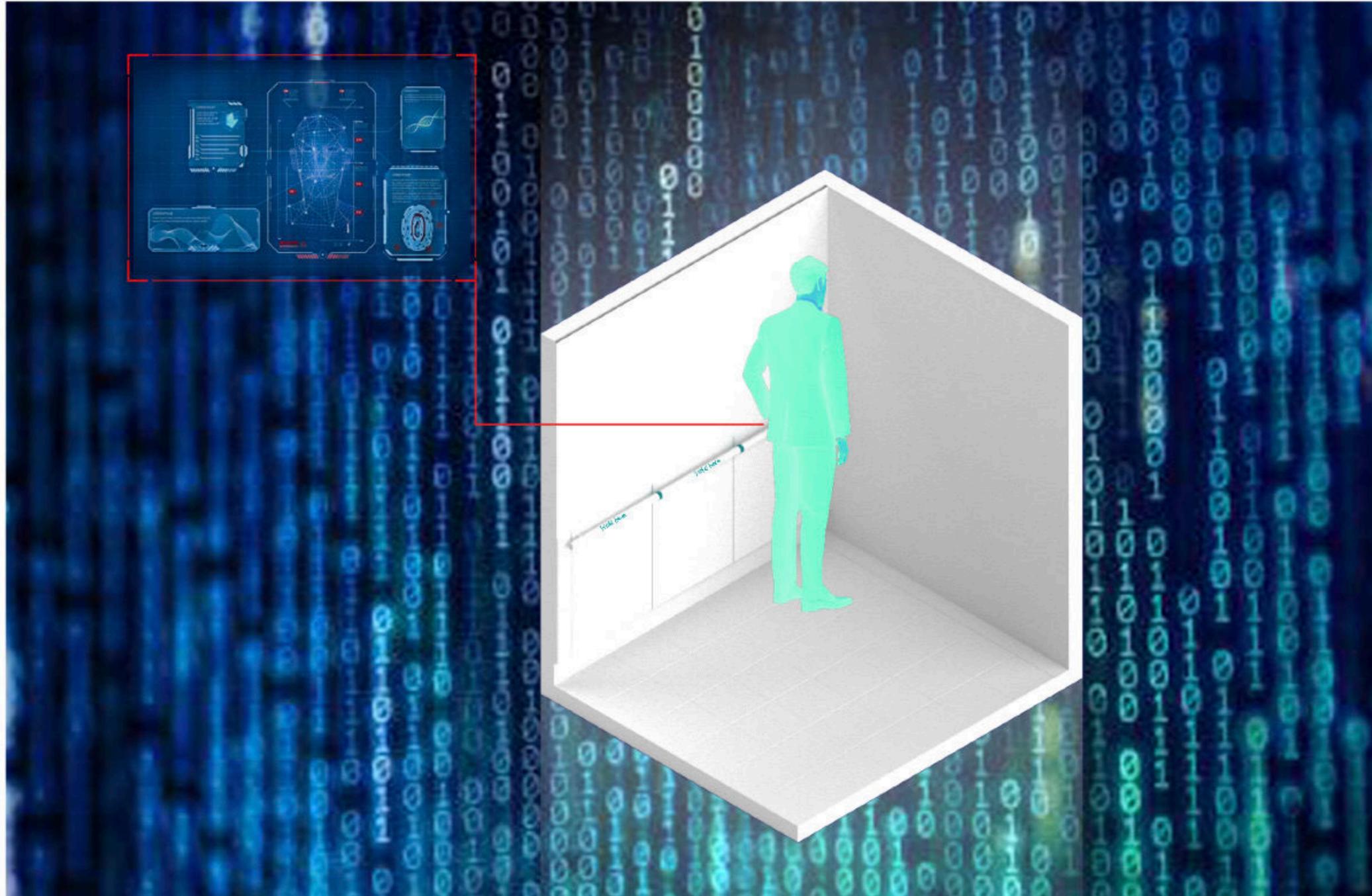


A few days passed, Clear handed in his project and started following the customised wellness proposals in building 48. She now feels much better, is less stressed and more productive.



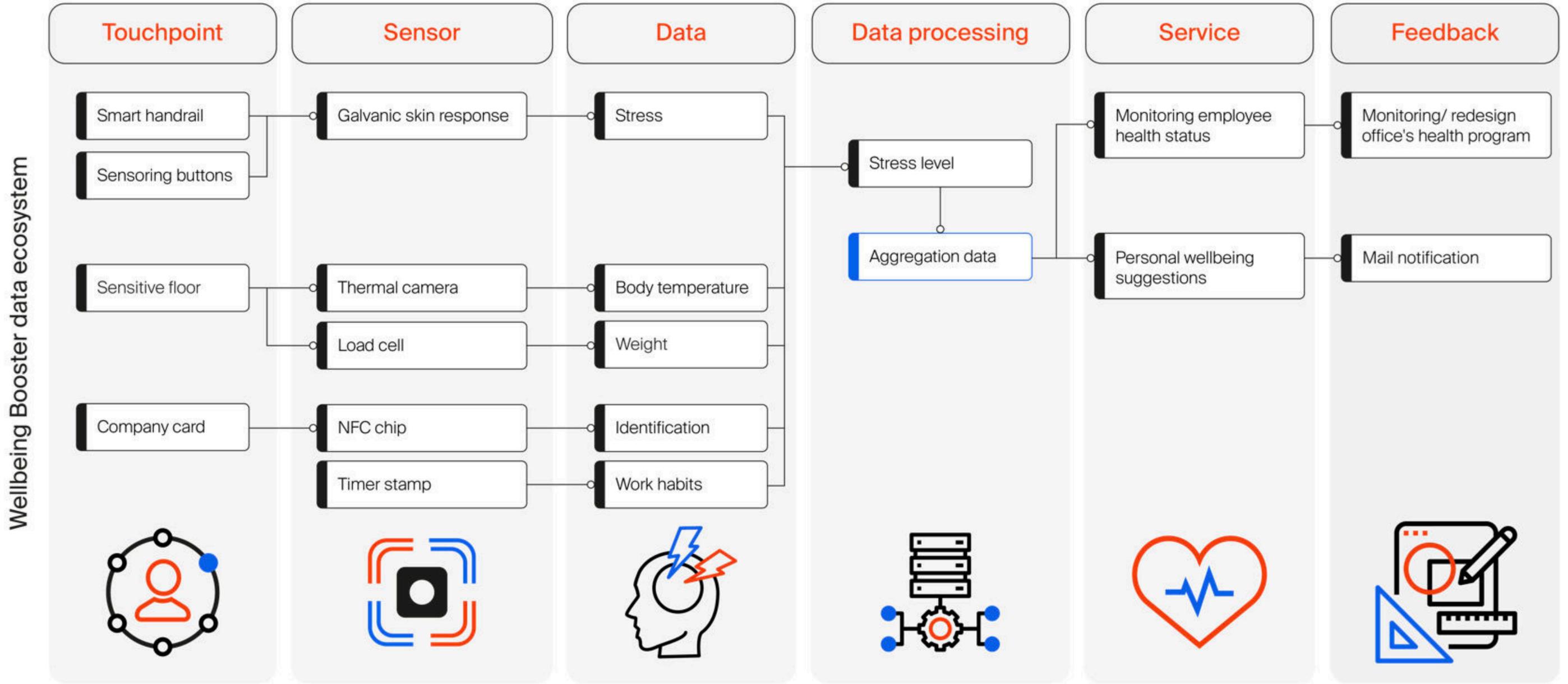
In the meantime, the building's HR continues to monitor the data and has found that the new yoga and meditation courses offered seem to be even more effective than expected. Obviously not everything is perfect yet, the workers on the second floor seem to respond less well than the others, so more research will be needed.

TECHNOLOGY



Handrails in elevator are equipped with Galvanic Skin Responses that measure stress levels of the employees.

TECHNOLOGY



OUTPUT



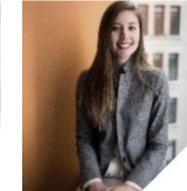
In elevator collective stress monitored in order to provide insight of collective wellbeing of the employees.

Identities of employees who subscribed to the service remain unknown to the sensors.

SMART ELEVATOR AND PERSONAS



Alex



Miriam



Pavel



Sonia

PERSONAS main pains

Unplanned disruptions in his routine,
Lack of entertainment (A.)

Lack of information exchange with Labcampus
Users (M.)

Difficulty in approaching people after work, lack
of leisure spots (M.)

Conversation too formal and focused on work (M.) and
Lack of inspirational conversation at eye-level (S.)

Forced social events (P.)

Minimal time for rejuvenation and relaxation (S.)



Smart elevator suggests activities to solve high levels of stress, which can be shared with other users creating new relational dynamics.

The activities and shared calendar become opportunities for teambuilding activities and new opportunities to share time together.

Leisure activities related to smart elevator become opportunities for exchange and relationship, and new collaborations.

The elevator itself is a waiting space that encourages short conversations even between unknown users. Smart elevator becomes an ice-breaker.

Users can decide to participate in calendar activities spontaneously, based on suggestions that emerge from their stress level.

Organizing activities allow users to increase chances of rejuvenation and relaxation.

IDEA 4

How might we transform
a lobby into a social
space for interaction?



Agora 2.0 helps LabCampus' goals in:

- * community engagement
- * sharing knowledge and get feedbacks
- *serendipity encounters

AGORA' 2.0

Fostering serendipity

LabCampus, being an office space that hosts different companies, has a potential for networking among employees with diverse backgrounds and fields of expertise. Before reaching the offices, people working in LabCampus have to pass through the lobby. In this common area, both employees and visitors circulate, making it a social place where serendipity is promised per se. Having such a potential of the space in mind, the project recognizes the possibility of lobby playing the same role that agora did in Greek polis. The constant flow of the people creates a dynamic atmosphere that, with the proper management, can trigger socializing, sharing of ideas and knowledge.

Collective interest

With the above potential of space in mind, the question is being used to start the discussion on collective interest. Following the form of multiple-choice questions, different teams working in the building can file a request for asking a question in the lobby. Through this type of survey, they will be given insights into employees' collective moods and opinions. The survey results could later help develop different programs relevant for team-building activities and managing the wellbeing of employees.

Collaborative space

In terms of physical intervention, the part of the lobby floor is marked by the LED tiles. Depending on the number of possible answers to the question, the smart tiles will change colour, one for each number, forming a pattern on the ground. By standing on one of the answers, motion cameras will detect the vote and closeness of people and visibility of their opinions will be used to start the discussion. When there is no question proposed on the LED tiles, the same flooring can project the flight routes above Munich's sky.

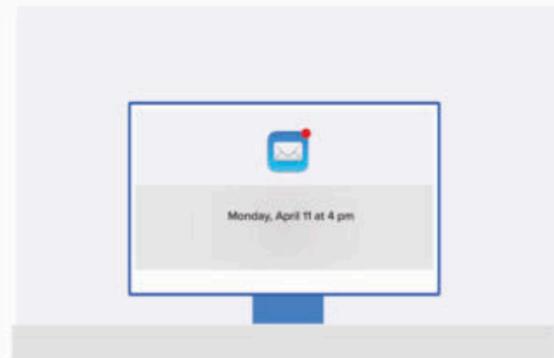




Agorà 2.0
Lobby as a social place

LAB 48

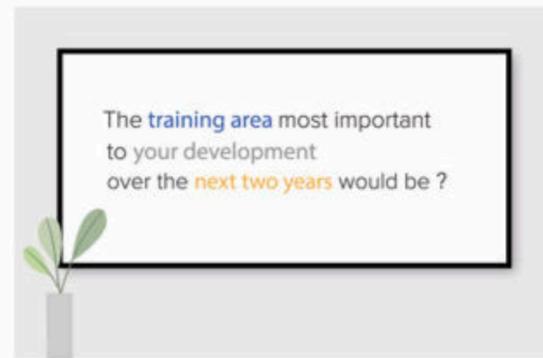
STORYBOARD



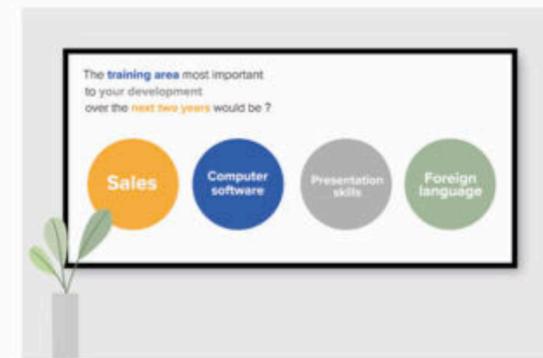
It's Monday 14 April and the employees in building 48 are invited to take part in a survey to find out which skills they think are most important to implement for their future jobs. It doesn't seem to be the usual boring survey but something more interactive, as the invitation is for Tuesday in the building lobby.



It's Tuesday and everyone is in the lobby waiting for the survey to start.



It is now time, and the survey question appears on the lobby screen.



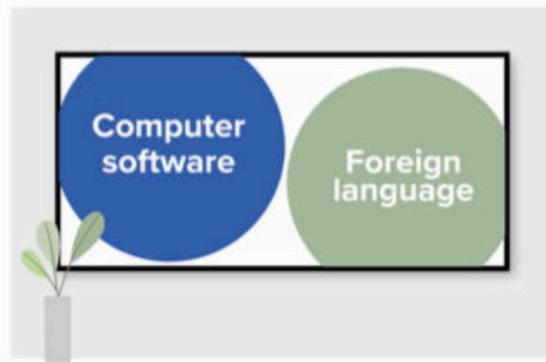
In addition to the question, the screen shows options and explains how the voting system will work.



At this point, before voting, employees are given time to think and discuss among themselves how to respond.



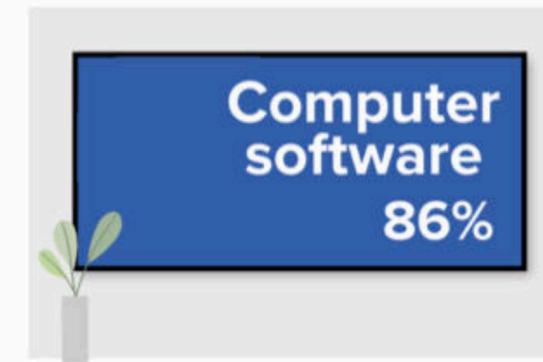
The voting finally starts and the voters are asked to vote by placing themselves on the floor according to their preferred answer.



The first phase of voting ends, the results are shown on the screen and the employees prepare for the ballot.



Once again there is a time for discussion and debate before voting again.

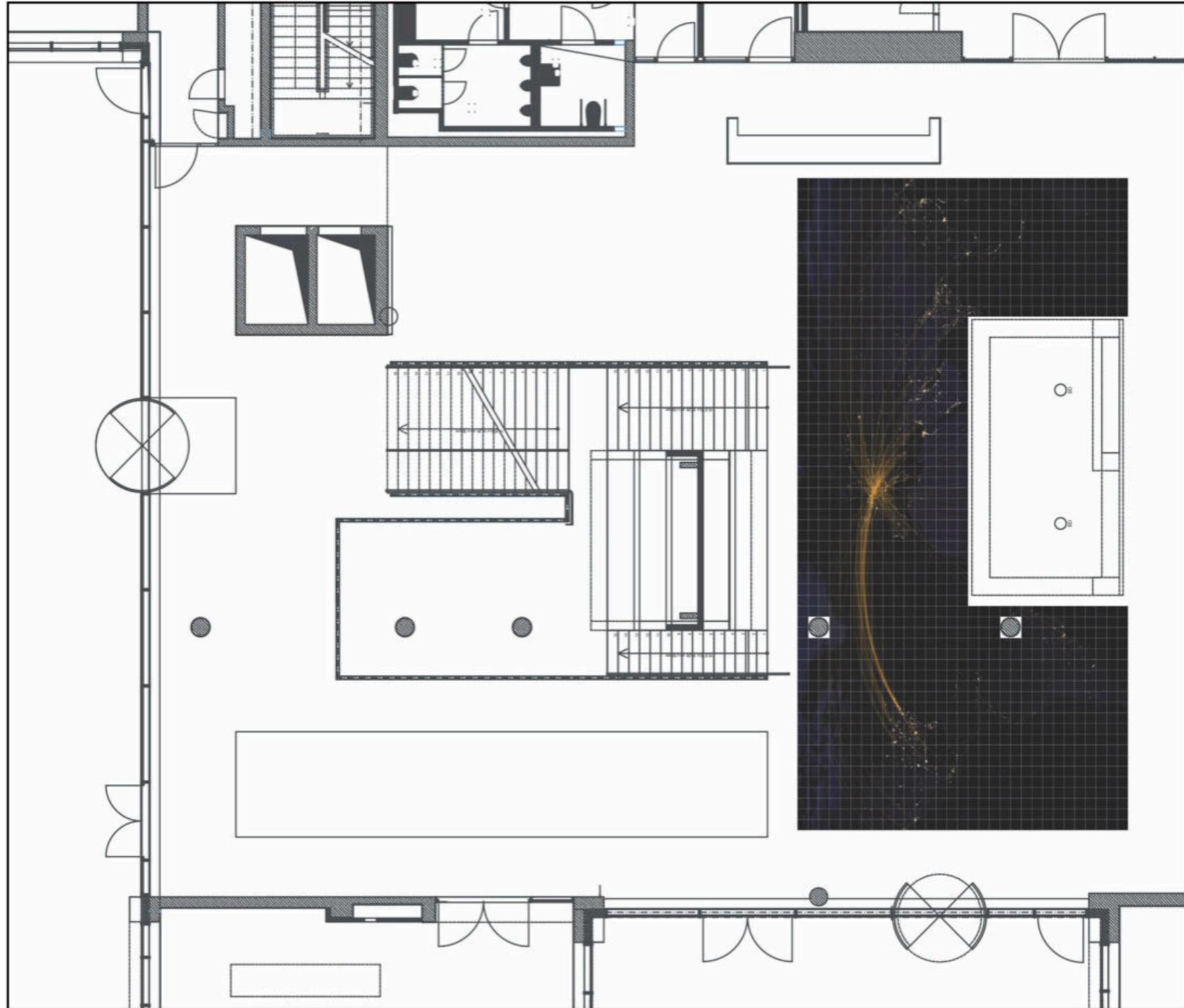


The decision is made, the winner is "Computer software", programming seems to be the most popular skill.



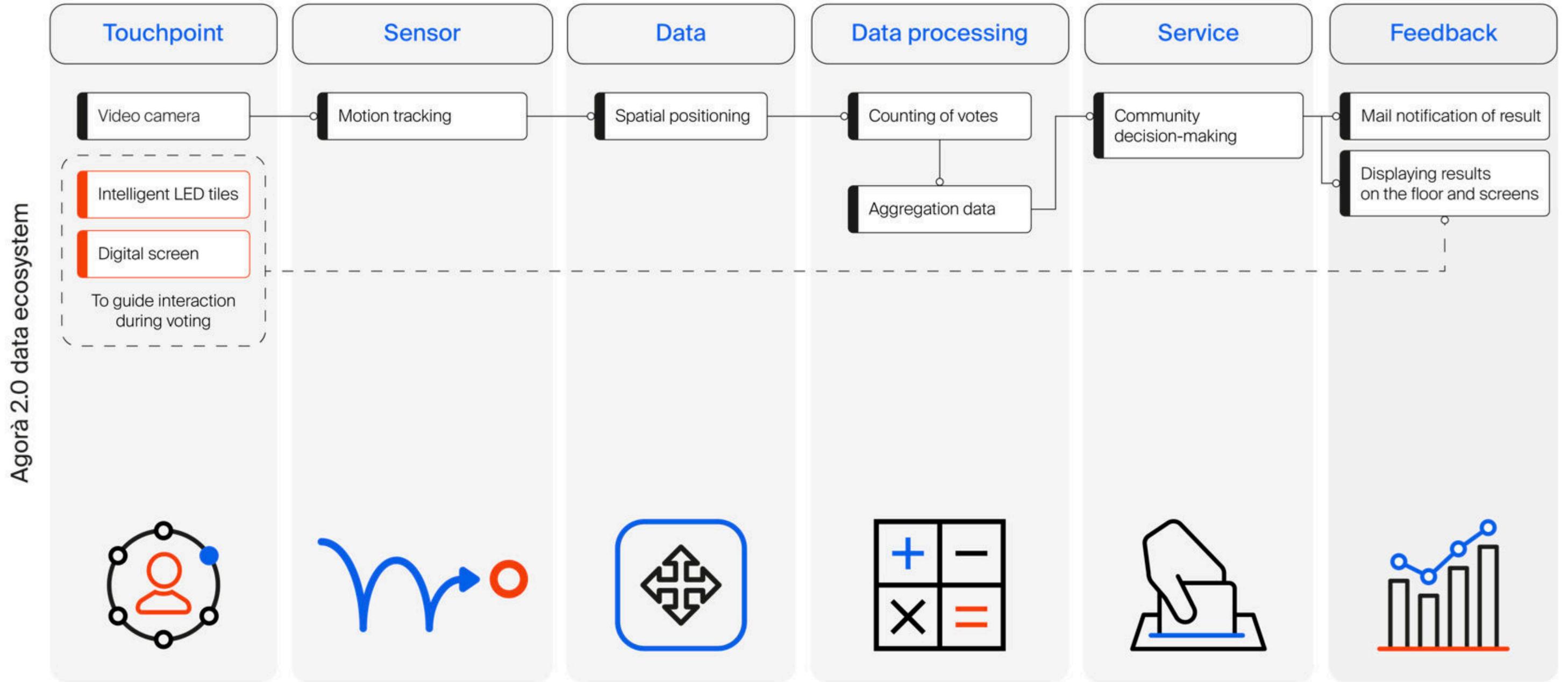
At this point the HR team knows what decision to take and plans a series of activities to improve the skills of its employees.

TECHNOLOGY



Interactive LED tiles are used to show data and propose different configurations of the lobby for the voting sessions.

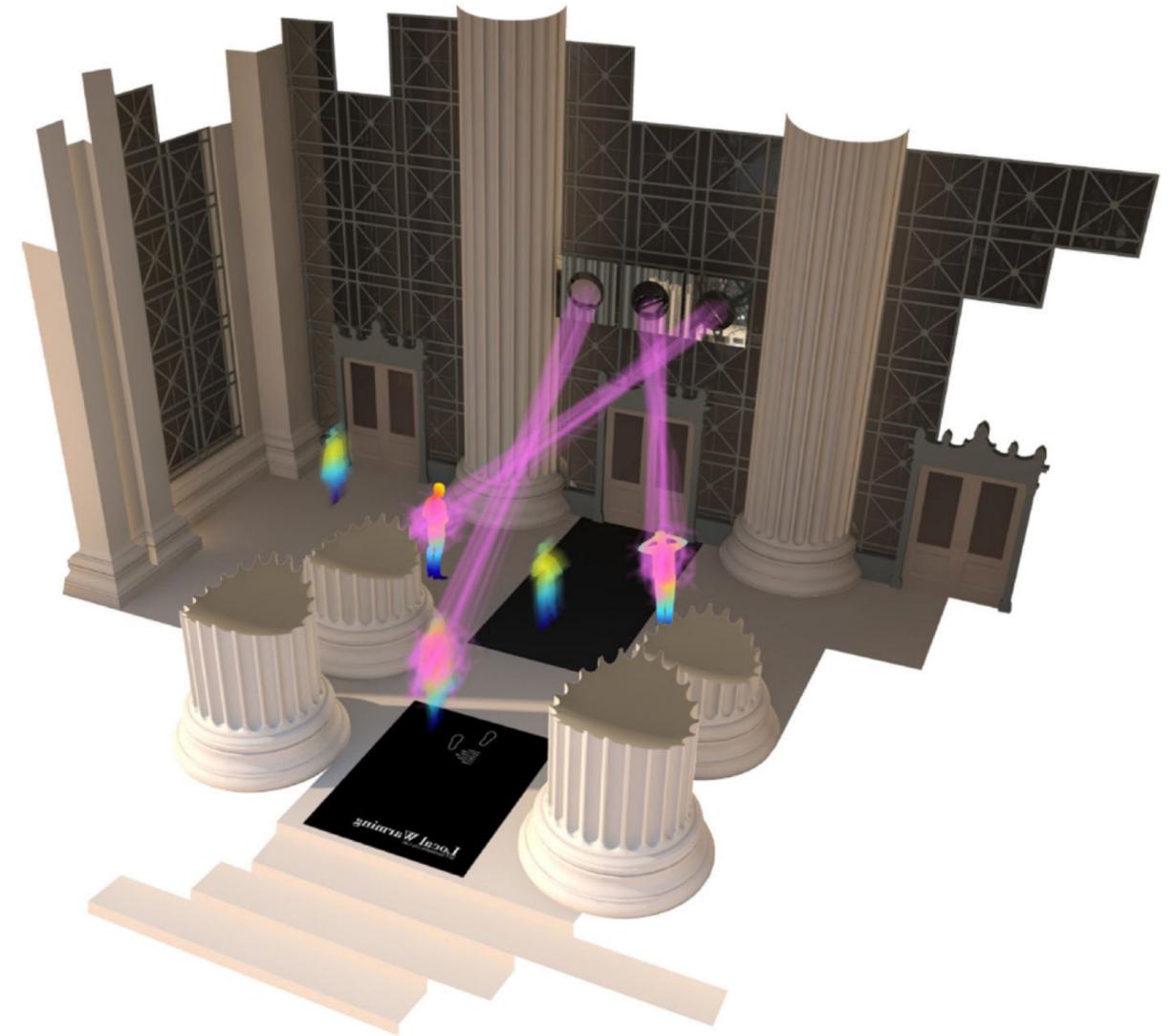
TECHNOLOGY



TECHNOLOGY'S VARIABLE



INTERACTIVE SCREEN, LESS INNOVATIVE AND ENGAGING



THERMAL CAMERA TO DETECT USERS' LOCATION

OUTPUT



Motion cameras counting the number of participants and their votes.

AGORA 2.0 AND PERSONAS



Alex



Miriam



Pavel



Sonia

PERSONAS main pains

Unplanned disruptions in his routine,
Lack of entertainment (A.)

Lack of knowledge on innovative methods to spur his
projects and personal development (A)

Lack of information exchange with Labcampus users
(M.) and unrelaxed conversation during lunchtime (M)

Fear of not contributing a lot in the projects

Difficulty in approaching people after work, lack
of leisure spots (M.)

Conversation too formal and focused on work (M.) and
Lack of inspirational conversation at eye-level (S.)

Forced social events, exchange new skills (P.)



Go into the building and find active voting sessions to disrupt the routine. Users can also plan new surveys to be joined during the working day.

Creating sessions to vote or request feedback is always uninvolved and boring, Agora 2.0 wants to provide a new method to encourage projects and personal development.

Agora 2.0 wants to address this lack by creating opportunities to share and engage colleagues with innovative questions.

Giving feedback is not always immediate and effortless, Agora 2.0 facilitates this.

The lobby becomes a gathering space even by not participating in the vote itself, observing the flights routes projected on the floor.

Surveys can also become opportunities to share not-work related topics and become an ice-breaker for a conversation among colleagues.

The result is a space that incents serendipity and new interactions that can become an opportunity for new collaborations.

TEAM 2



Ziyuan Zhu (SCL)



Chiara Alberti (Polimi)



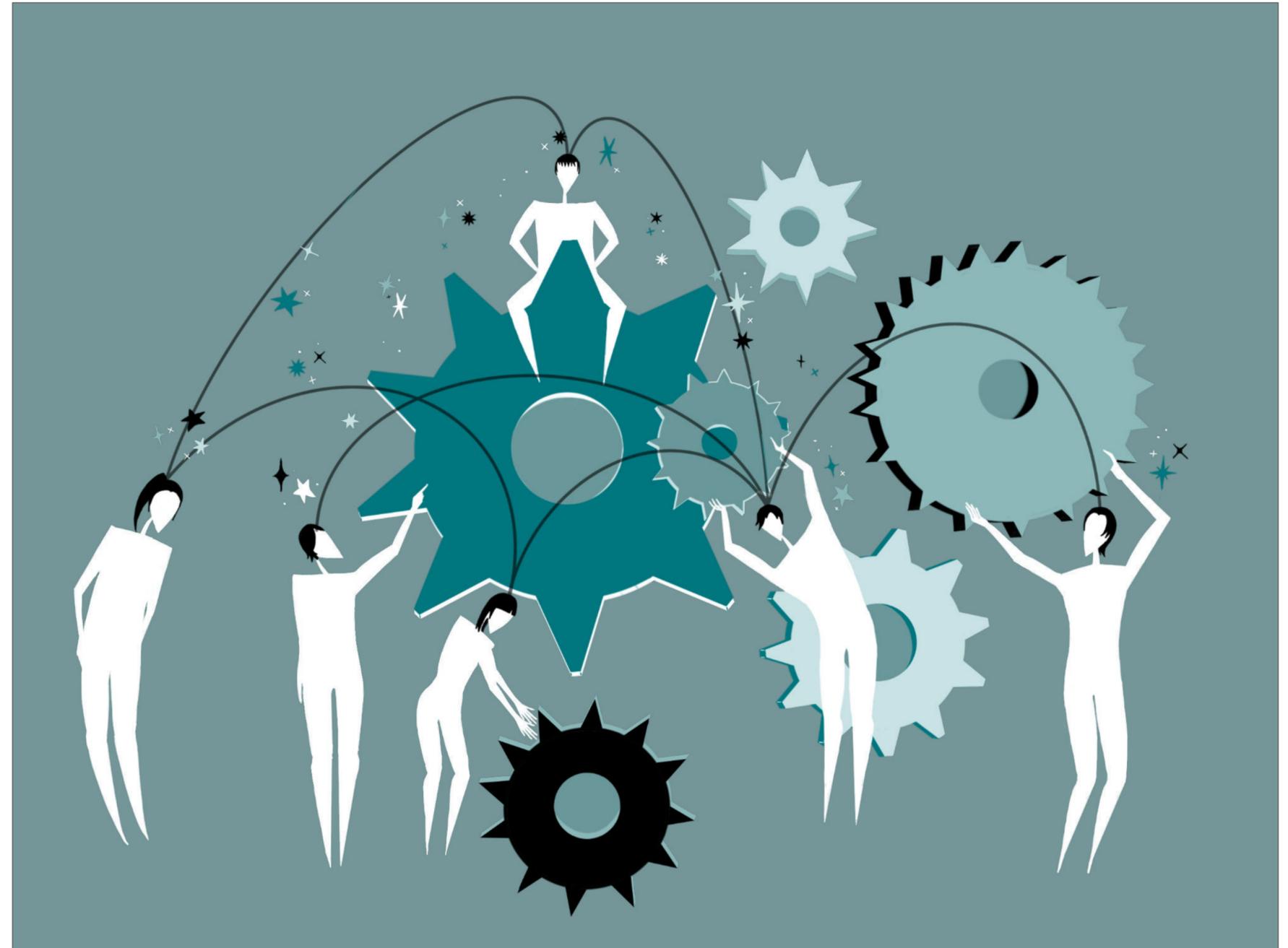
Lucrezia Marsili (Polimi)



Laura Scateni (Polimi)

IDEA 5

How can we facilitate the exchange of knowledge and sharing projects to receive feedback from LabCampus community?



Collaborative corridors helps LabCampus' goals in:

*sharing knowledge

*collaborative experiences

*serendipity encounters

COLLABORATIVE CORRIDORS

Ask for help

Collaborative Corridors is a concept designed to help teams that are stuck in the middle of a project by submitting their doubts and difficulties to the scrutiny of others. The projects are located inside the corridors of the first floor of LabCampus 48. It is an area dedicated to work-related use because it hosts both meeting rooms and offices.

Collaborative walls

The objective is to exploit the high transit of people along the Corridor to foster a collaborative environment where external people can contribute and possibly solve some of the team's problems. Whenever a team has some unanswered questions or issues, they can share part of their digital boards or notes outside of their working room. Collaborative Walls will sense where a greater concentration of people is present in the Corridor. Thanks to a series of strategically placed projectors, it displays the team's shared notes in the most crowded area.

Immersive experience

Any person occupying working rooms in the building is provided with a marker through which they can write comments and notes in a 3D space in response to what the team put out. This way of interacting allows for a more unique, immersive experience. The owner team will then see the updated notes, which might facilitate moving on in their work. "Collaborative Walls" aims at fostering cooperation inside the workplace and exploits the potential of sharing competencies.





Collaborative Corridors

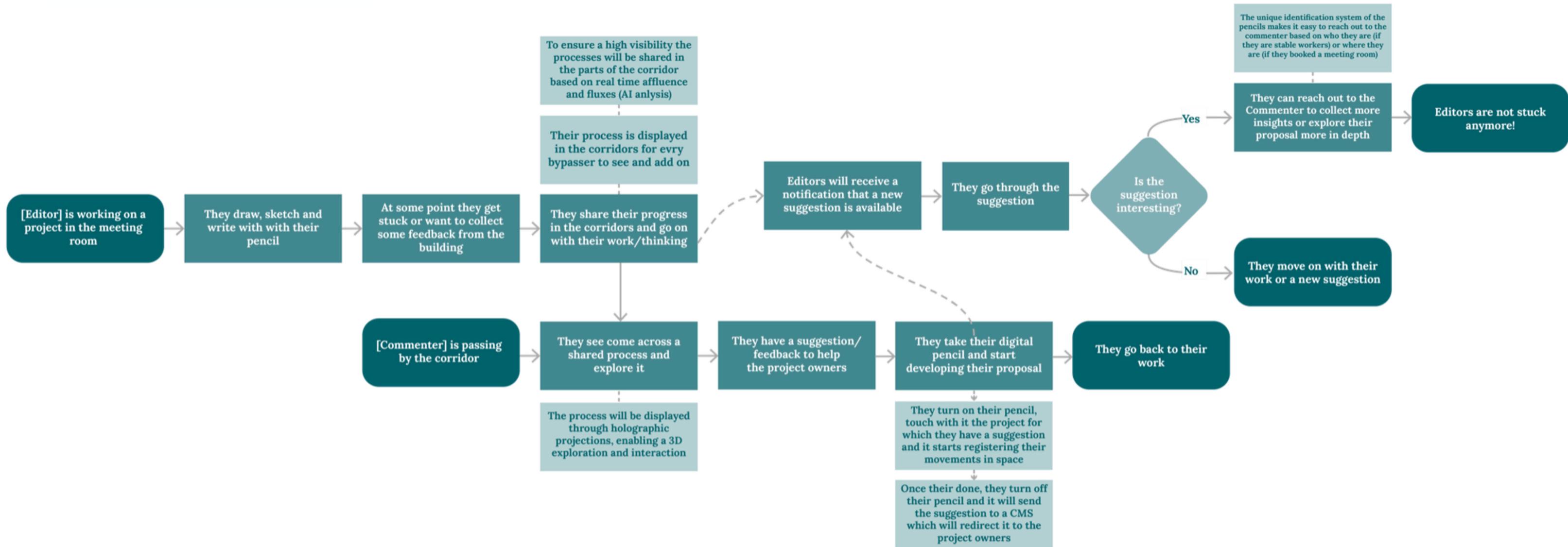
Create together

STORYBOARD

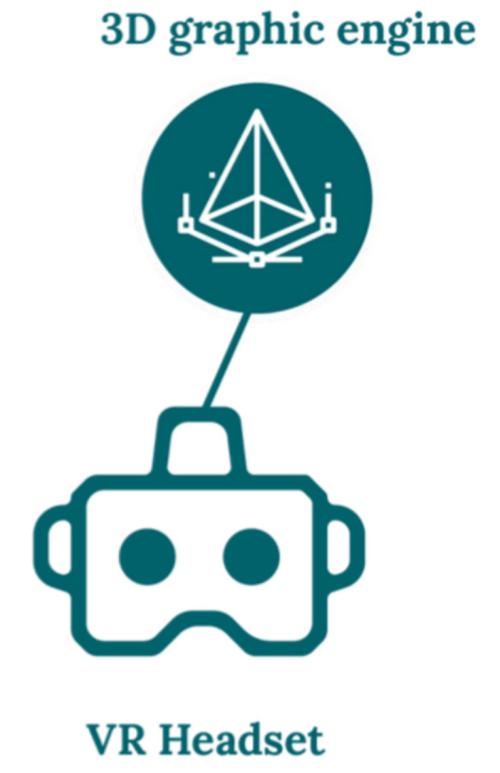
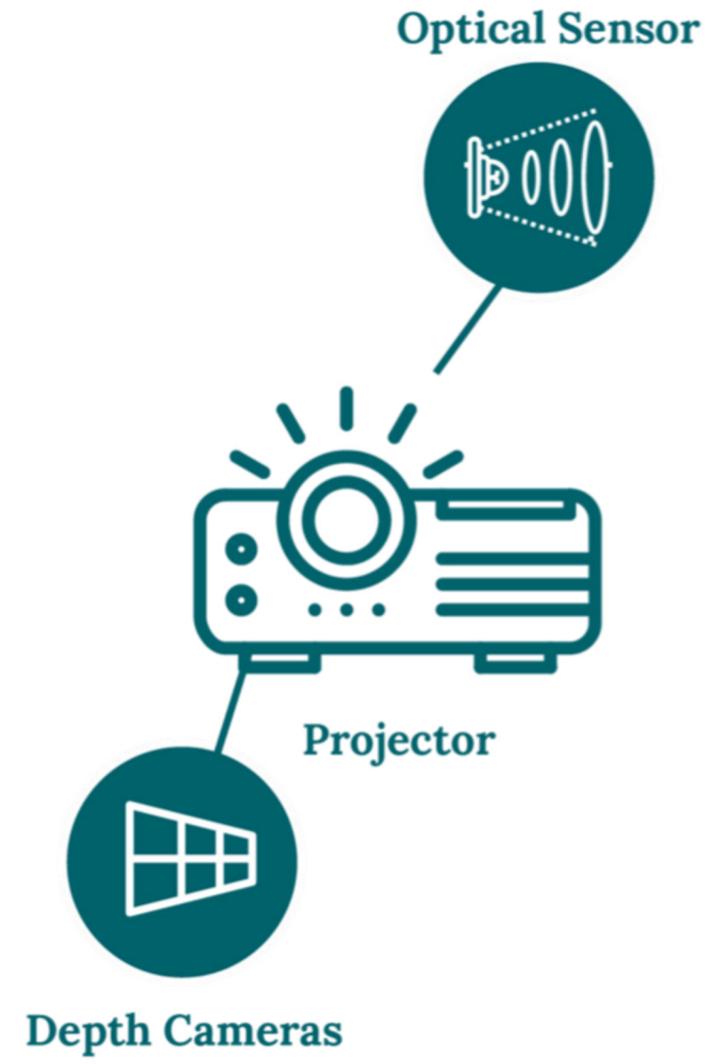
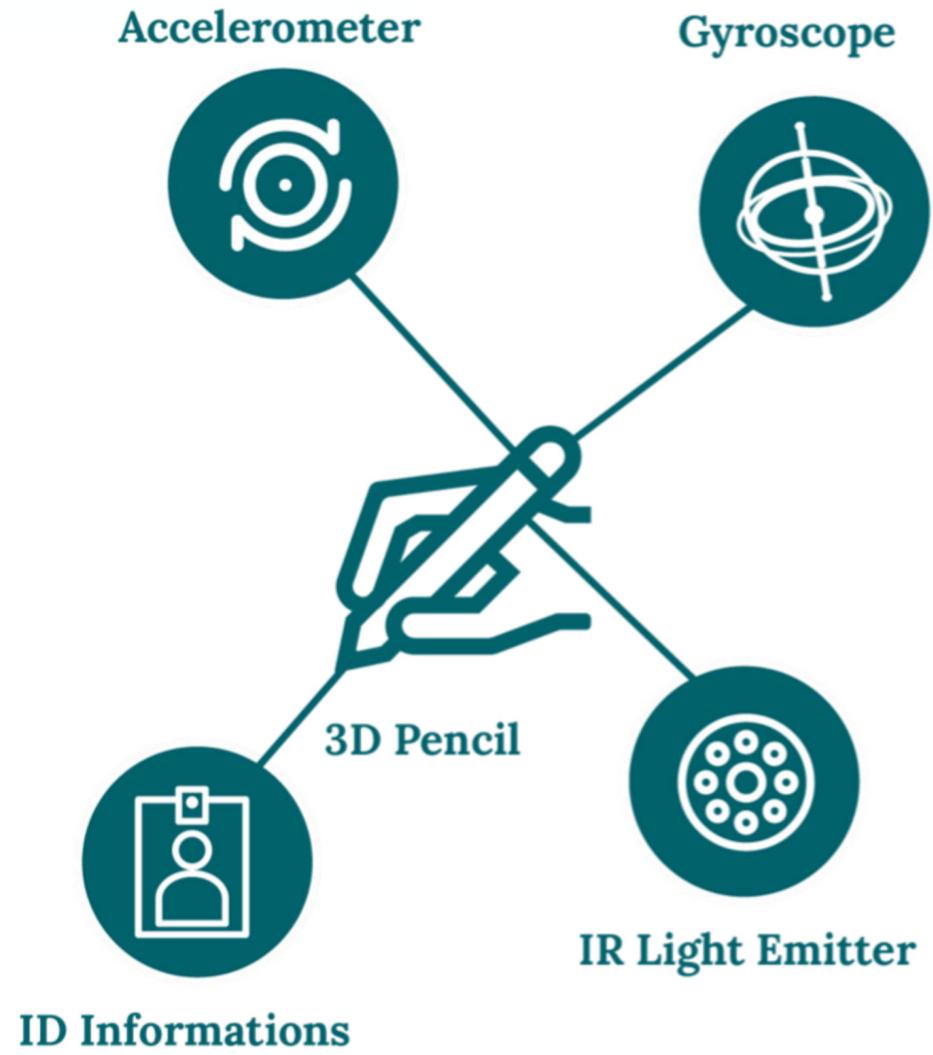


- The team is **stuck on a project**. They have an issue from which they can't move on.
- They need the help of someone and decide to **share the issue** through *Collaborative Walls*.
- An officer **walking in the corridor** reads the notes. He has a solution for that!
- He uses his personal marker and the VR headset to **leave a suggestion** for the team.
- The team is finally able to work their problem out.

STORYBOARD

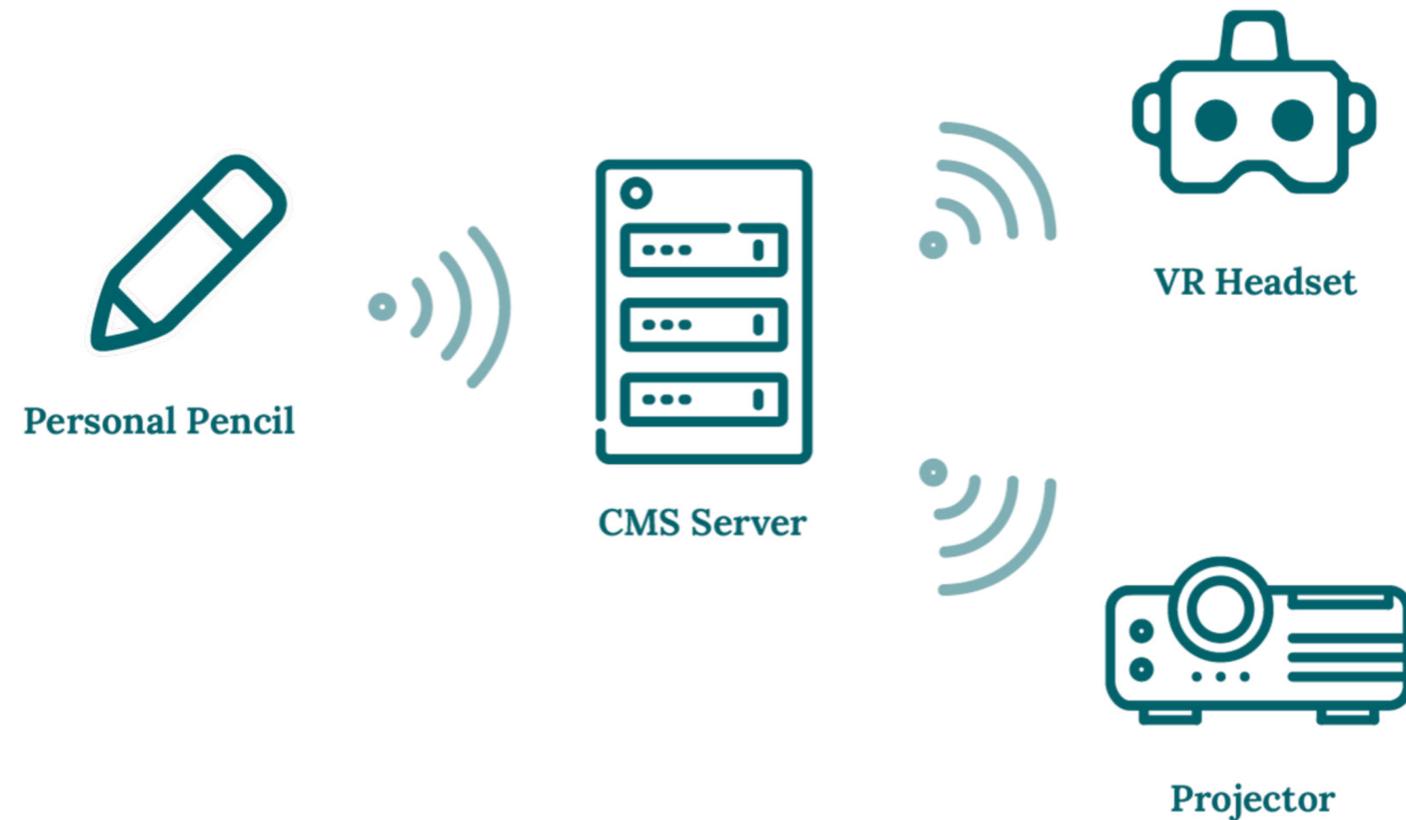


TECHNOLOGY



TECHNOLOGY AND OUTPUT

With **IMU Motion Sensors** and **an Optical detection system based on infrared inputs**, pen movement and hand gestures of users will be detected and displayed as strokes through **projections** (in case of 2D writing) **or a VR visor** (in case of 3D drawing). The data will be stored in a **CMS (Content Management System)** and exchanged between users inside the meeting room and corridors. Meanwhile, the **gesture data and flows of people** in the corridor will be collected via camera and analyzed via Machine Learning to provide better adjustment of the interface, e.g. displaying the drawings and contents in relatively empty spaces to make it more visible.



COLLABORATIVE CORRIDORS AND PERSONAS



Alex



Miriam



Pavel



Sonia

PERSONAS main pains

Lack of knowledge on innovative methods to spur his projects and personal development (A)

Lack of opportunities to experiment with new Technologies (A)

Lack of information exchange with LabCampus users (M)

Fear of not contributing a lot in the projects (M)

Seamless IT experiences (P)

Attend design workshop (P)

Exchange new skills (P), Access to new ideas skills and tools (S)

Exhausting discussions with higher management

With a simple technology Collaborative corridors is encouraging the sharing of knowledge to find unexpected solutions to the problem.

Using a wall to share ideas and receive feedback allows users to experience unexpected technology, which fosters and increases curiosity about these new digital experiences.

Collaborative walls responds perfectly to this need, it was born as a system to facilitate seamless sharing of ideas and information.

Giving feedback is not always immediate and effortless, Collaborative Walls facilitates it.

Office walls become places to share.

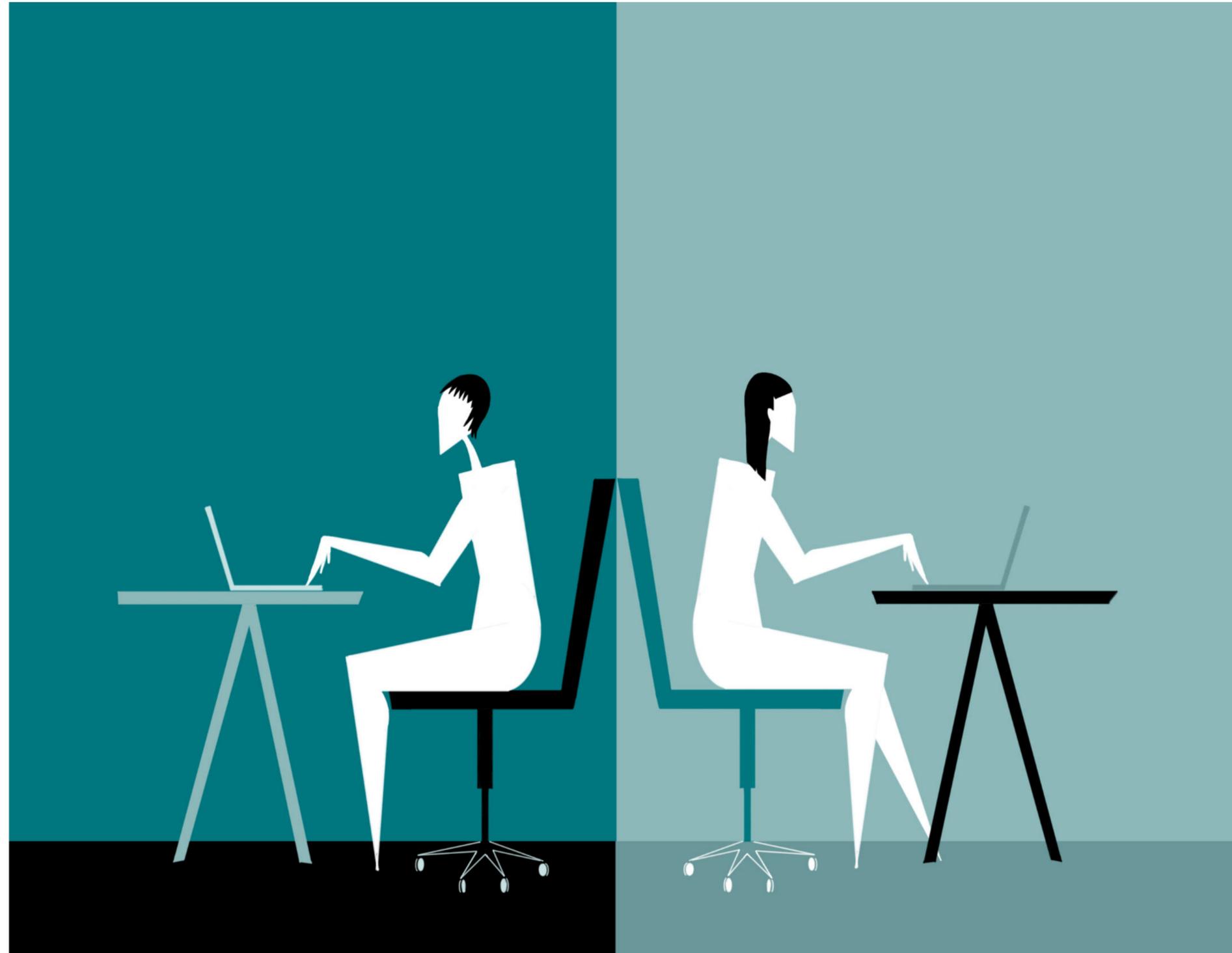
Collaborative walls offers the ability to hold quick design workshops in informal spaces.

You can also share tips and ideas or tools.

Through this new dynamic of sharing, it can facilitate this issue.

IDEA 6

How can we reduce
missed interactions and
help officers build
relationships?



Social Bubble helps LabCampus' goals in:

- *sharing knowledge
- *boost social life in the building
- *serendipity encounters

SOCIAL BUBBLE

Join a campfire

Social bubble is a concept designed to help officers of LabCampus create a network inside the working environment based on shared interests. The inspiration is that of campfires, where people gather together around a central element and tell each other stories that bring sharing and reciprocal enrichment.

Icebreaker in the social network

Social bubble is a system composed of a platform unit spread in the inner courtyard of LabCampus 48 and a smartphone application. If opted in, when people sit and switch on the platform and have a conversation together, an AI embedded in the table detects the subject matter of the discussion and codifies it with a colour, which lights up the bottom part of the platform. In the meantime, a Bluetooth device senses the phones of the people present around the platform and records their presence. When an officer walks inside the courtyard, they can use the app to discover the topic of each platform through AR. They can therefore join the conversation they are most interested in, and detect languages spoken. In the app, they can find a summary of the conversation (by keywords) containing time spent talking, the topic, and the people who were there.

AI to track behaviors

The app allows the user to add people and reach out to them individually through chat. This way, they can nurture their relationships built inside the workplace on an internal social network platform. The aggregated data collected by the AI can be made available to LabCampus to organize events and initiate programs for the officers based on their interests.





Social Bubble

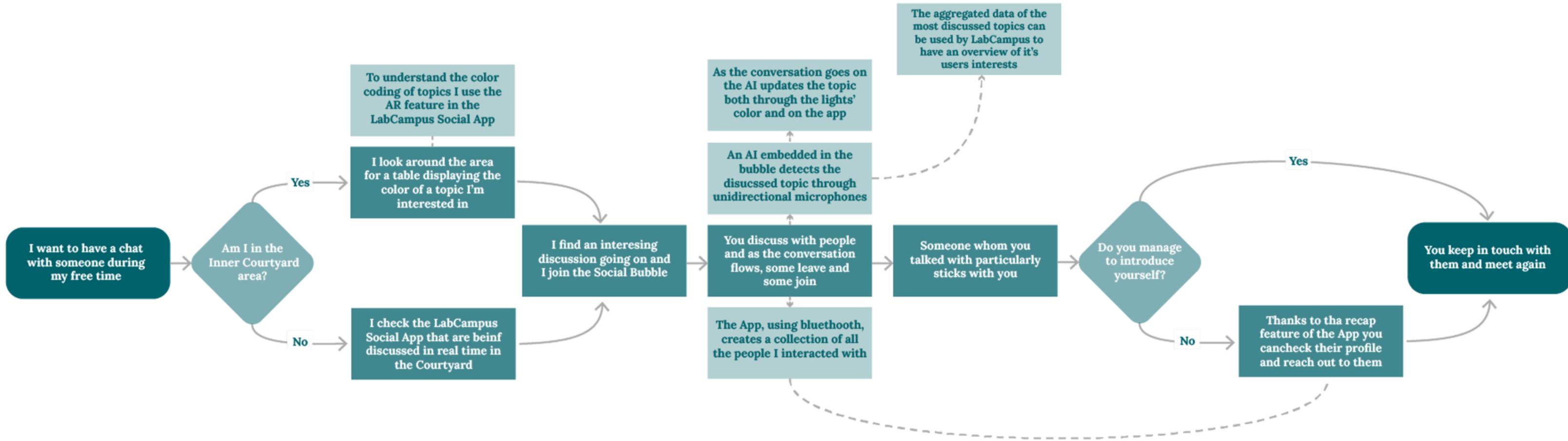
Let the office talk

STORYBOARD

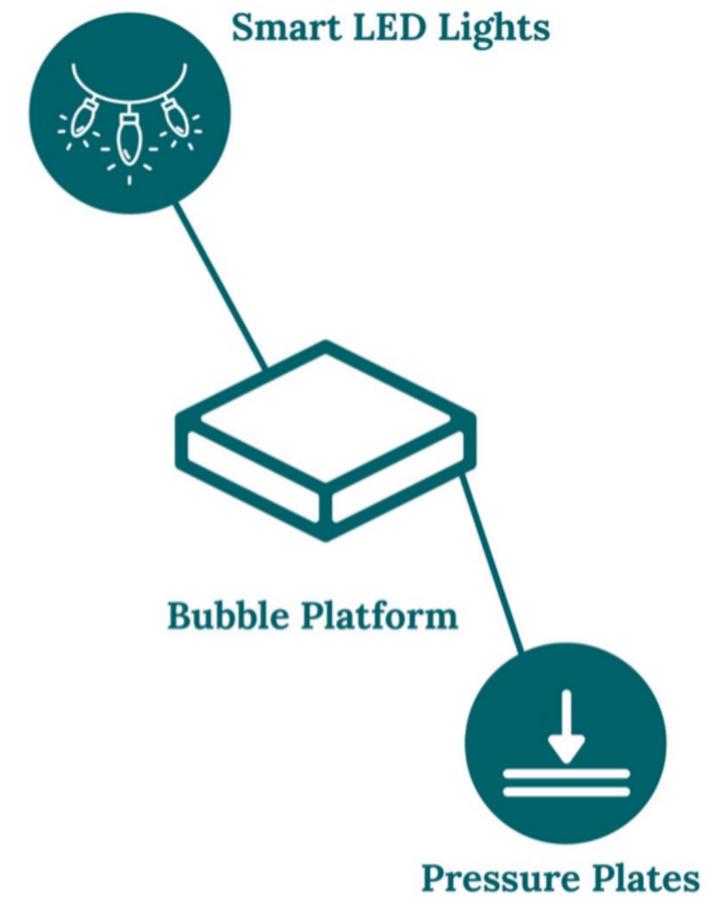
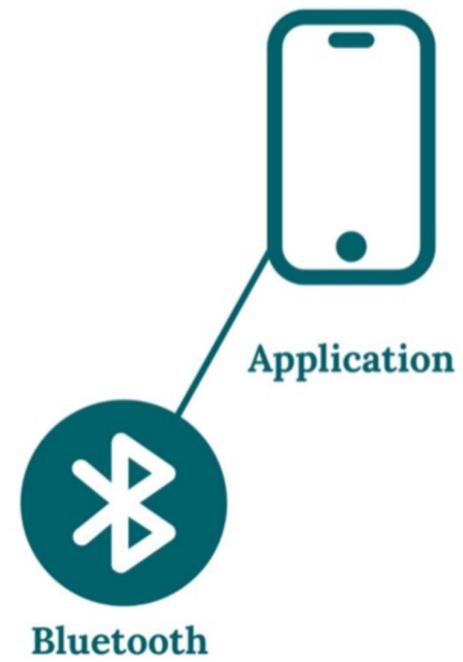
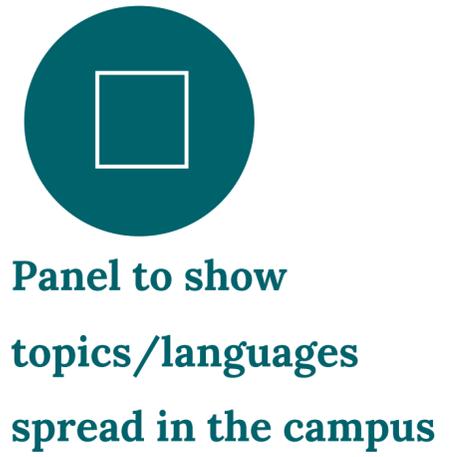
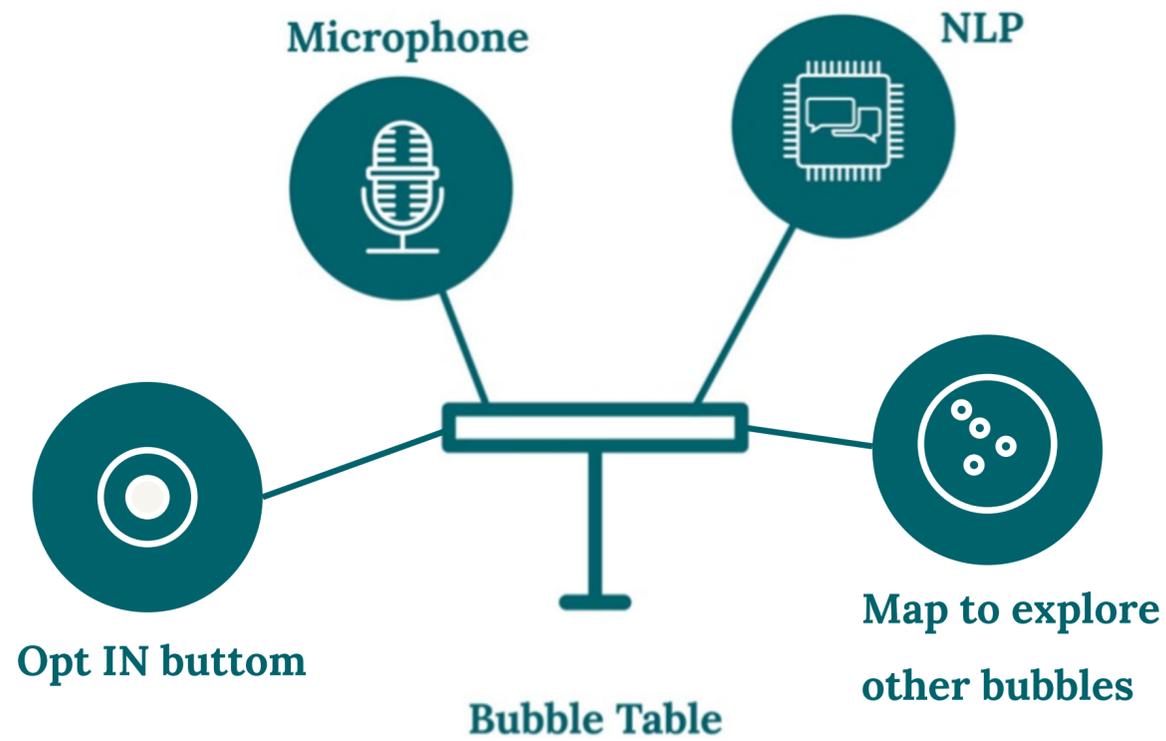


- The officer is walking through the courtyard. He is **in the mood for a talk** today!
- He pulls out his smartphone and **opens the Social Bubble app**.
- Through **AR**, he finds a platform where a topic of his interest is being discussed.
- He **joins the conversation** and starts talking to other people that already activated the platform (opted in).
- Once back home, the user finds the people who were at the platform and check their most talked topics on the Social Bubble app.
- The user **reaches out** to one of them through the chat.
- The two **meet again** for new exciting talks!

STORYBOARD



TECHNOLOGY



TECHNOLOGY AND OUTPUT

Opt in system

You can see the conversation's topic and share it in the Campus system, detecting the topic only if all the participants at the table are opted in.

Realtime maps

In each platform, seats, benches around LabCampus, green areas, a real-time map is showing who is talking, about what and where (only opted in participants).

How to find Social Bubbles

*Lights to show the encrypted topic of conversation, just look and find them around building 48 and LabCampus.

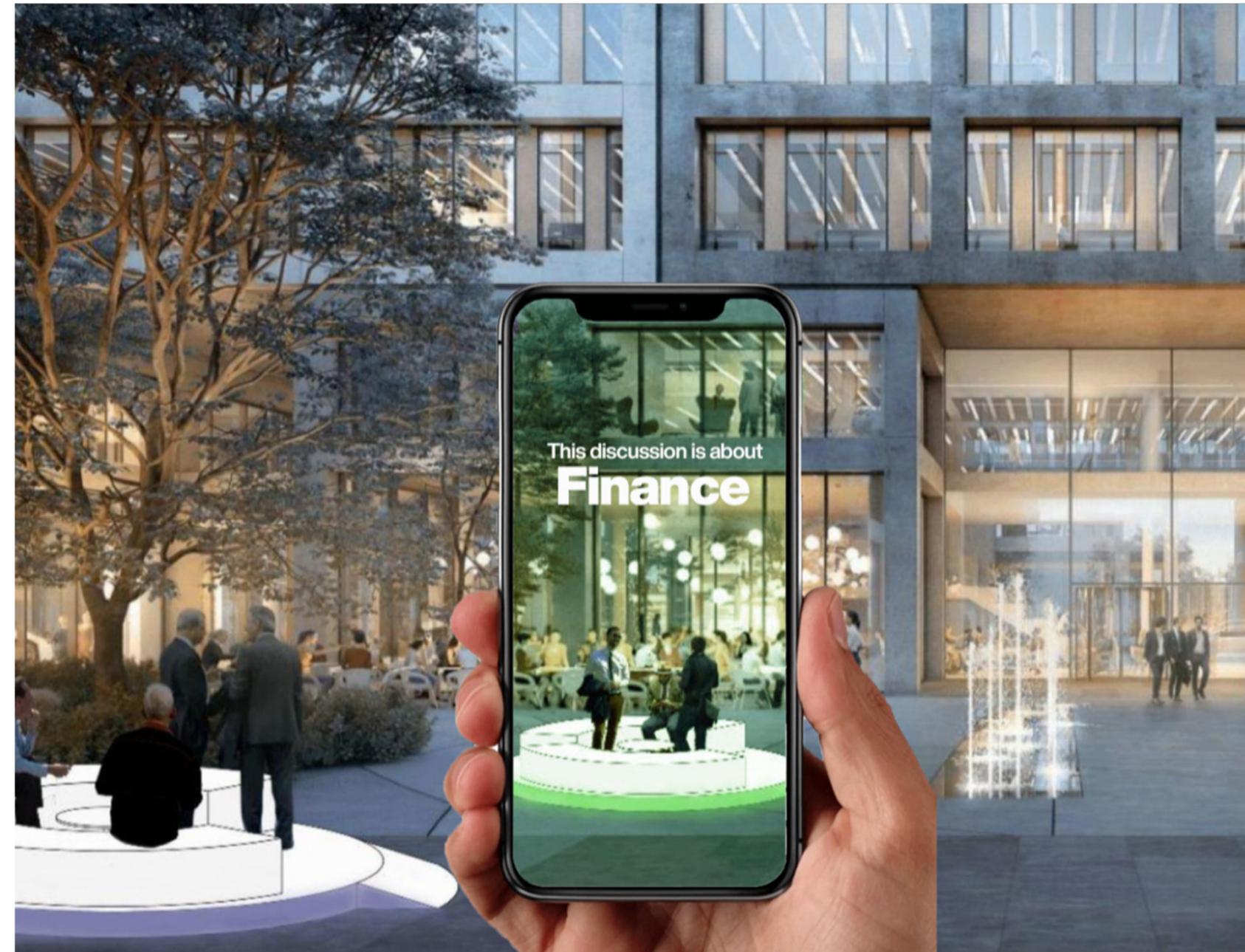
*Active benches in labcampus and Munich, just go there and switch them on.

*Panel in the main lobby and LabCampus main accesses: show detected words/topic and language spoken.

Detecting the voice of discussion and filtering the private content, **only if you are OPTED IN** *Social bubble* is able to capture the keyword of the conversation and which language is spoken via **NLP (Natural Language Processing)**. When people enter the bubble and start discussion, **the voice detection** will be trigger to start collecting the voice content.

The system will automatically filter the content without meaning or private content and **cluster the high-frequency words** as topic keywords.

Based on the words clusters, themes will be generated and **colors** will be set up in every social bubbles to indicate the topic in the bubble. Main lobby and all LabCampus accesses have a map showing where to find topics and languages detected in the Campus or nearby area.



SOCIAL BUBBLE AND PERSONAS



Alex



Miriam



Pavel



Sonia

PERSONAS main pains

Unplanned disruptions in his routine,
Lack of entertainment (A.)

Lack of knowledge on innovative methods to spur his
projects and personal development (A)

Lack of time for leisure activities (A) and Lack of
information exchange with Labcampus users (M)

Conversation too formal and focused on work (M)

Lack of quiet places to retreat (P)

Lack of inspirational conversation at eye-level, Forced
social events, exchange new skills (P.)



Social Bubble allows users to quickly check out active spots to meet new people and share discussion topics.

Social bubble becomes an opportunity to create sociality and share skills useful for projects and not only.

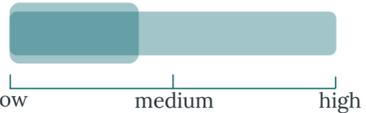
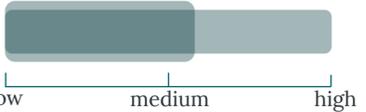
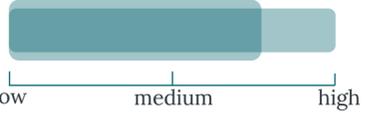
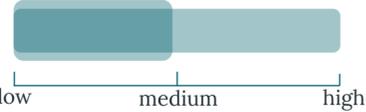
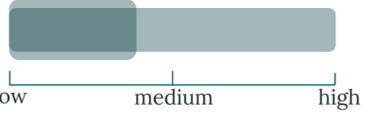
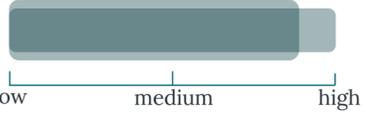
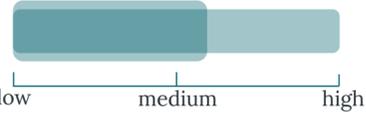
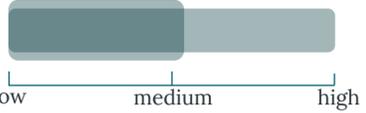
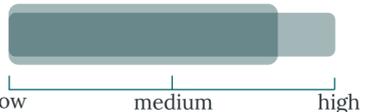
Having little time during the working day, an easy-to-navigate digital platform saves time and facilitates interaction with other users.

Social Bubble allows users to intercept discussion topics that occur in real time.

Social Bubble also becomes a place of quiet when the system is not active, where you can work or find concentration.

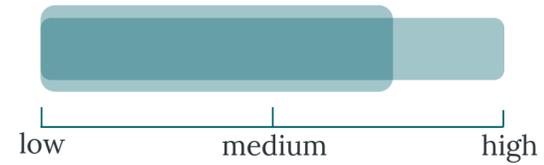
By creating curiosity in seeking out the various locations available on campus, each location becomes a different opportunity to share conversations with users on campus. The result is a space that incents serendipity and new interactions that can become an opportunity for new collaborations.

SUMMARIZING IDEAS

Project	Main goals	Implementation effort	Costs effort	Decrease cost opt
Ruhe	Customization, serendipity			No lobby wall
Waru	Collaboration, serendipity			Only personal devices, no VR glasses
Smart elevator	Health monitoring, serendipity			-
Agora 2.0	Engagement, sharing, serendipity			Screen, thermal cameras
Collaborative Walls	collaboration, sharing, serendipity			-
Social Bubble	Social life, sharing, serendipity			No tables (technology applied on existing furniture), no walls

METRICS

Implementation effort

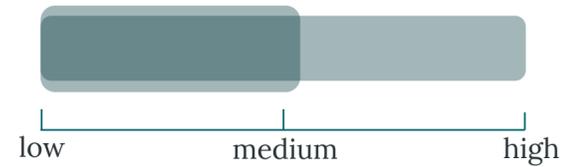


Low: only sensors/technology

Medium: few physical elements/devices

High: technology and physical elements/devices and spatial implementation

Costs effort



This graphic bar is based on SCL's previous experiences.

Actual figures for costs / efforts can only be quantified properly in the design and engineering phase, which is not part of the research project developed by SCL.

Innovating Munich

Leveraging the use of digital technologies to activate public areas and foster creativity among companies and users.