BauHow5

Report & Evaluation / Multiplier Event
Community Design Lab
'Have we met?'
Designing Social Hubs for Urban Nomads

20 – 22 March 2019

A joint initiative of BauHow5:

CHALMERS
UNIVERSITY OF TECHNOLOGY

ETH zürich

TU Delft

The Bartlett
UCL Faculty of the Built Environment
UCL

Technical
University
of Munich **TUM**

In cooperation with:

unternehmer**tum**
Center for Innovation and Business Creation at TUM

MINI LIVING

DETAIL

ARI
ARCHITECTURE
RESEARCH
INCUBATOR

Contents

Executive Summary

A design workshop of tomorrow's urban community where analogue life merges with the digital.

Digitally networked, locally at home. What role does community play in times when borders blur, when we communicate via networks and platforms, when we live and work on a project basis? A pop-up model between open house and open source, non-binding and binding – depending on the stage of life? A further development of the sharing economy and creative commons? In the fourth activity of design workshops, set up as multiplier event, the topic of future urban communities was emphasised.

Context of the Community Design Lab

Together with experts from practice, insight talks and experienced facilitators the participants developed in a 2.5-day-workshop on spatial, technological and social innovations to transform a temporary community into a community of change agents, visionaries and entrepreneurs. The ideas of a new co-living model in Munich for urban spaces was supported by the BauHow5 alliance, the start-up and entrepreneurial incubator UnternehmerTUM, the company MINI Living and the international architecture magazine Detail.

Process of the Community Design Lab

The process followed a less structured agenda than the design thinking lab or the design sprint and considered learnings from the previous workshops. The 24 participants were assigned to prior defined teams.

47% female / 53% male
100 % master degree
80 % TUM student / 20% incomings

The teams were facilitated throughout the 2.5 days by a researcher of the BauHow5 Alliance or a representative of UnternehmerTUM and Detail magazine:

Day 1 // Context & Challenge
Day 2 // Ideation & Concept
Day 3 // Prototype & Pitch

After the final pitches, the teams were given additional time to iterate their work, integrate comments and submit their results as documentation. 1 team dropped out on the second day of the workshop, 4 out of 5 remaining teams finalised their work: 2 teams only as individuals, two teams by two participants. In total only 6 of the 24 participants handed in documentation.

Teams & Results

The teams developed mostly digital solutions for creating communities in the future.

Team Bubble Me – Physical art interfaces as contact points within the building and distributed across the city of Munich

Team Giver's Space – A digital platform to offer contributions to the community

Team Domino - Reconnecting the digital and the analogue world with a play to discover community and the city

Team Play Local - Document the local area using a gamification tool to discover the city, collect points and reach levels

Team Anonymous – An application to individualize generic spaces combined with a sharing concept

Evaluating the Community Design Lab

As the workshop was intended to engage with a broader audience, the participants came partially from practice and other institutions. The response rate of the evaluation was 15 out of 24. It showed a high satisfaction rate with 15 cumulated replies of "agreement" and "strong agreement" (number of participants n=24):

Concept, consciousness & challenges for
future urban communities increased: **83%**

Workload, process & future implementation were feasible: **85%**

Collaboration, interdisciplinarity & integration increased: **91%**

Results & willingness to pursue idea further were satisfying: **78%**

Benefits to apply skills and use new insights occurred: **80%**

The community design lab showed the highest rates of satisfaction of all conducted workshop, but at the same time, the lowest rate of documentation and further development. For future development, a better balance of satisfaction and results shall be considered.

UnternehmerTUM and Detail documented the workshop in digital and print media and created a short video of the 2.5 days

See the Event

See the Documentations

Watch the Video

Chapter 01

Community Design Lab
Process & Methodology

Hello,

We are very happy, that you are taking part in the Community Design Lab!

In these 2.5 days we will blend the perspectives from architecture, sociology, engineering and management to 'Design Social Hubs for Urban Nomads.'

We will get insights from advanced researchers, practitioners and digital design leaders. We will work in teams of 4, facilitated by experts towards the unexpected.

Your participant's map will give you a bit of a guidance, but the most important thing you need to bring with you is:

Your motivation.

A creative workshop on designing social hubs for urban nomads.

Design your idea of tomorrow's urban community where the analogue life merges with the digital.

Digitally networked, locally at home! What role does community play in a time when borders are blurred, we communicate via networks and platforms, and we live and work on a project-basis? A pop-up model between open house and open aource, non-binding and binding – depending on the stage of life? A festival stage with changing activities? A service offer as a lifestyle trend? A further development of the sharing economy and creative commons? What can be digitised is now digitised. But should it be? How can a virtual social media community enliven or even enrich a physical space?

In an interdisciplinary workshop, spatial, technological and social innovations will be developed for transforming a temporary community into a community of change agents, visionaries and entrepreneurs. A new co-living model in Munich for the urban spaces of our world. Seed your idea!

Over 2.5 days, up to 6 interdisciplinary teams of 4 from the fields of architecture, design, business administration, sociology, engineering, computer science, politics and science will develop spatial, technological and social innovations using new design thinking methods. Get to know new creative design processes, expand your potential in an interdisciplinary team, and profit from the expertise of renowned experts. Be part of an international research project to activate a new design and development method.

The Community Design Lab is funded within the framework of the Erasmus+ programme of the European Union. BauHow5 – implemented in co-operation with UnternehmerTUM, MINI LIVING and DETAIL at the TU Munich.

Intro

Hello,

Intro
Agenda
Location
Tools & Focus
Partners
3 ECTS

Dr. Kerstin Sailer
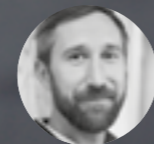UCL
Associate Professor
Social & Spatial Networks

Leyla Keramat
Spark Reply
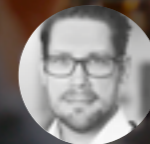Executive Creative Director

Philip Tidd
Gensler
Director & Principal Germany

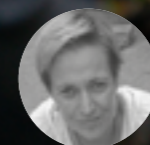## Partners, Facilitators

Mark Stabel
Munich Urban Colab
UnternehmerTUM

Harald Jenull
UnternehmerTUM

Oke Hauser
Mini Living

Sandra Hoffmeister
Detail

Heide Wessely
Detail

Christos Chantzaras
TUM Architecture
Research Incubator

Agenda

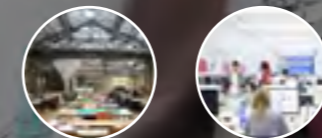@TUM Weisser Saal

20.03. // Evening 1 – Context

18:00 Get-together @ TUM Weisser Saal

18:30 Welcome Munich Urban CoLab
Mark Stabel UnternehmerTUM
Welcome MINI Living
Oke Hauser
Intro Why – Who – How / TUM
Christos Chantzaras / TUM

18:45 Context Sessions

Opening Insight 1: On Community / The Social
Dr. Kerstin Sailer, UCL

Opening Insight 2: On Digital / The Virtual
Layla Keramat, Frog Design

Opening Insight 3: On Space / The Physical
Philip Tidd, Gensler

19:30 Panel & Open Discussion

20:00 Drinks & Get Familiar

22:00 End of Intro

Location

For documentation purposes and dissemination, we will take pictures and make recordings of the three days. If anyone prefers not to be seen or visible, please inform us at the start of Day 1.
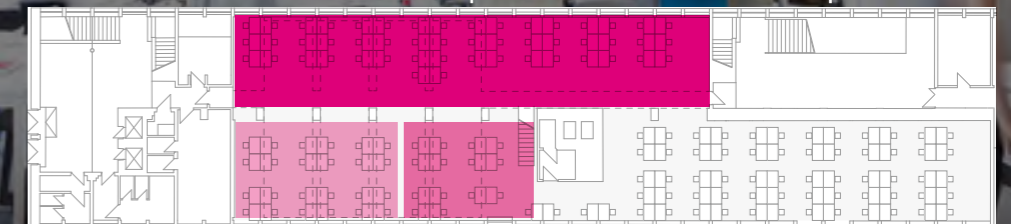
Prototype
DDL/TZ only with Safety Briefing

DDL/TZ   Computer Room

TUM / Weißer Saal

Arcisstraße 21
5th floor, central stairs
or
elevator to the 4th floor and central stairs to the 5th

Create

Break   Plenum

Agenda

@TUM Weisser Saal

@ Vorhoelzer Forum for Pitches

21.03. // Day 2 – Re-frame & Ideation

08:30 Get-together / Morning Coffee
08:45 Teams Assembling (Teams of 4)
09:00 Getting Familiar with Process and Facilitator
Prepare Interviews with the Speaker
10:00 Recap of Opening Positions
Interview Rounds with the Speakrs
11:00 Coffee Break
11:15 Collecting The Dots
12:00 Iteration I - Play Back
13:00 Light Lunch / Buffet
13:30 Frame and Re-frame the Problem
15:00 Food for thought / Coffee Break
15:30 State the Problem / The Question to Answer
17:00 Iteration II - Exploration
18:00 End of Day 1

22.03 // Day 3 – Prototype & Pitch

08:30 Get-together / Morning Coffee
08:50 Intro Recap – Agenda for the Day
09:00 Recap your Problem Statement
09:30 Ideate
10:30 Iteration III – Focus on one Idea
11:00 Coffee Break
11:30 Concept
13:00 Light Lunch
13:30 Storyboard your Concept & Prototype or Pitch
15:00 Take a Breath / Break
15:15 Develop Pitch Presentation
16:30 Check for Synthesis / Trial Run
17:00 Clean-Up "Weisser Saal"
17:30 Moving to Vorhoelzer Forum
18:00 Pitch Presentation
18:45 Jury Session
19:00 Winner & Drinks at Vorhoelzer Forum
21:00 Outro / End

Focus

Face-to-face wins.
Empathise with your team, and the facilitators

Focused work, focused breaks.
Keep the flow while working.

No phone calls / no texting in the team during sessions.
If you have to, please do in the phone area.

Come-together in the plenum.
Input lectures will take place there.

Work Visually

Share your thoughts and ideas, your comments and critiques by making them visual. Whatever you note or record, make it visible for all. On chart, on post-its, on boards.

Use thick markers, and write in capital letters.
Use pictures and pictos, instead of words.
For inspiration: thenounproject.com

Reflect-In-Action

Sketch, pin, map continuously.
Thoughts need to be visually there to be processed.
A hand is sometimes faster than the brain.
Produce as much as you can.

Tools

Train Your Writing & Sketching

Try to write the characters in capitals, big enough for to read from a distance. Avoid chart junk, keep sketches clean and pure, use colours on purpose.

Bring Your Own Device
Whatever you may need, bring it with you.
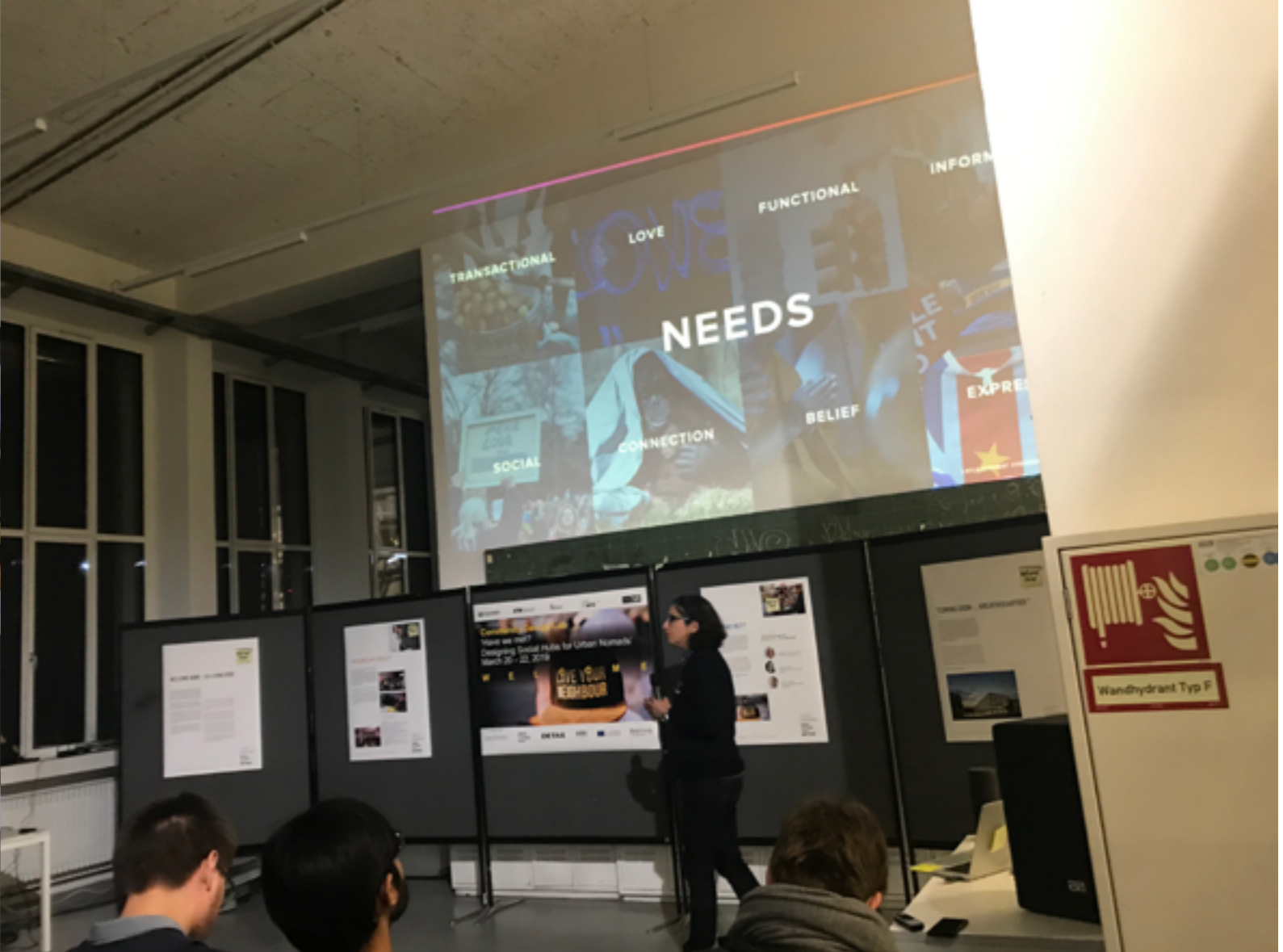
And one more thing.

Trust
Your
Intuition.

Community Design Lab
Challenge & Inputs

LOVE YOUR NEIGHBOUR

Chapter 03

Teams & Results

Teams

Team Bubble Me – Physical art interfaces as contact points within the building and distributed across the city of Munich

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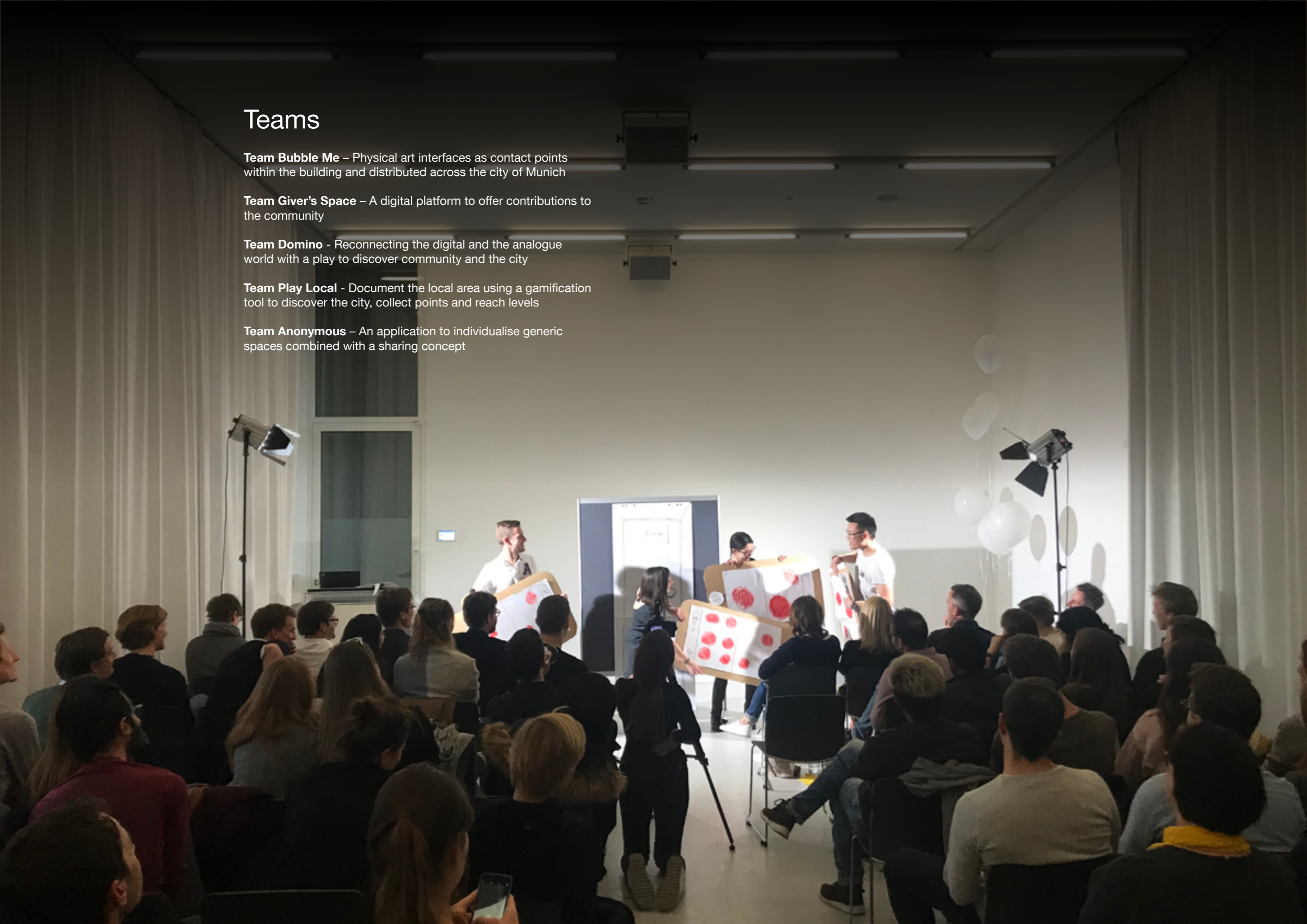
Report about the „Have we met?" workshop

Written by Antonia Selma Beck

Team Anonymous

Escape anonymity – come home!

About the Content…

About the product…

Product Description

The team "Anonymous" created an **app to fight anonymity in co-living spaces** by creating a feeling of belonging to the place and the community. The app provides two major components: the first one is the **individual furnishing**, the second is the **sharing and connective part**.

Target group

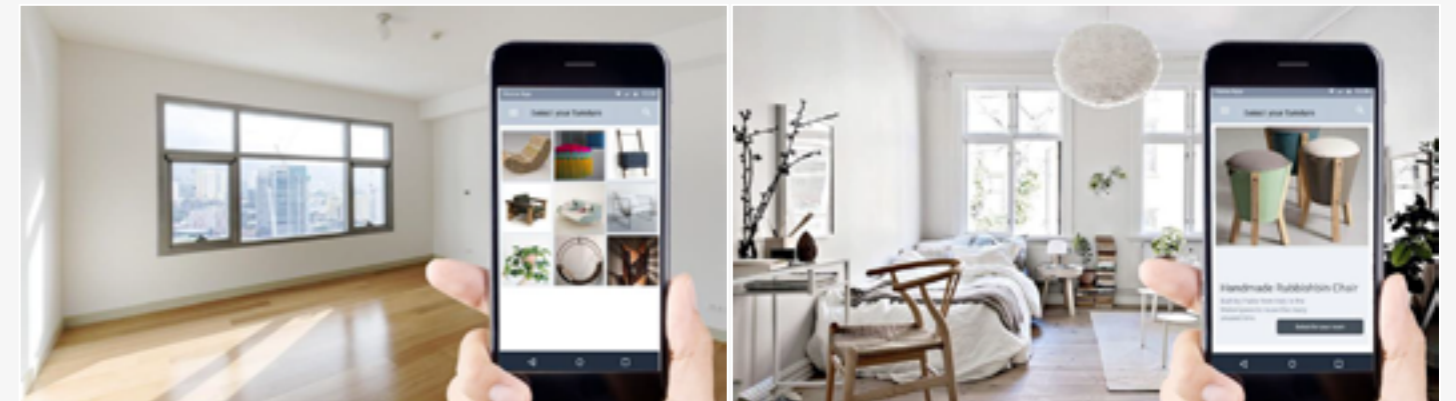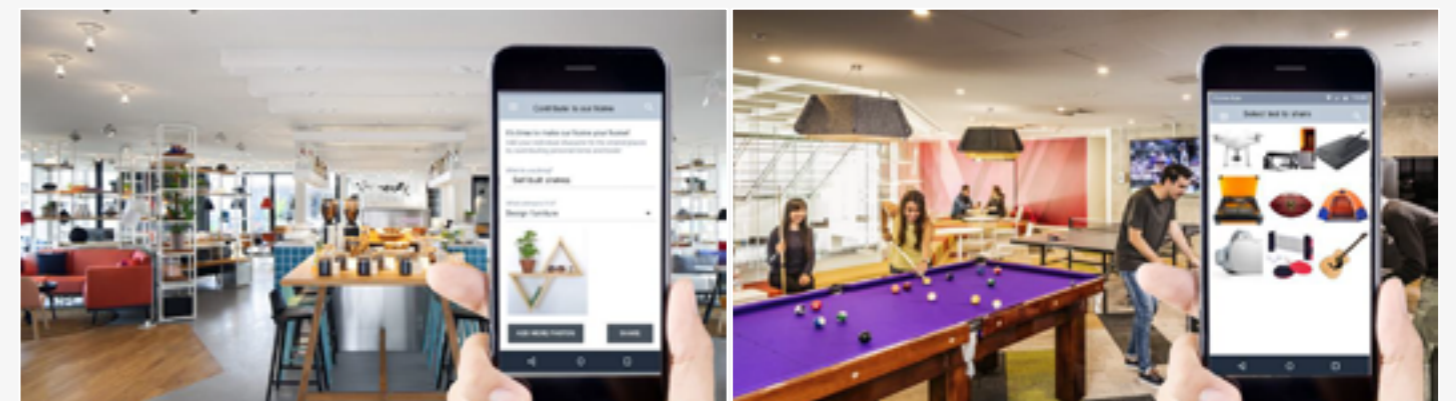The product addresses two different target groups: one are the buyers and implementers, in our case real estate owners or managers. The second group would be the actual user, digital nomads that move to a new town for three to twelve months.

Competition

Good news: the **concept** of the app is **unique**. Therefore the comparison is done with competitors that have some degree of similarity with the anonymous app. Those companies either rent furniture or have a good student co-living estate as their main goal. However, none of them is specialized in co-living for professionals nor do they work with an app to facilitate their product.

Risk/Opportunity

For the first component of the app, the furnishing part, no threat or risk is foreseeable at this point in time. The second part with the tool pool could bring up the risk that the available items are not of interest for the other members and therefore, no connection and sharing happens within the co-living. But as all residents are only there for a limited amount of time, the risk that everyone carries everything that they could possibly need is comparatively low.

The opportunities for this app are remarkable as the app is easy

to transfer to other real estates. Adding to that, the trend towards a sharing economy gets more popular, especially in the younger user group (Beutin, 2015). That makes the concept very attractive to this particular user group.

Conclusion

The created app is unique in its appearance and holds **a high potential to be installed in the globally** rising numbers of co-living spaces. To establish this app in the designated user circle, a pilot version of a co-living space would be the first step.

About the idea and the concept …

Moving to a new city can become a very unpleasant process where the **newcomer has to face** lots of **moments of anonymity**. This feeling of not belonging to the new place should in the opinion of the team "Anonymous" be purged by the co-living community. But looking at the co-living concepts that are currently state of the art, this feeling of being alien already starts with the first sight of the standardized apartments that all look the same and contain **standardized furniture** that the new inhabitant probably **does not even need**. This goes along with limited contact to others at the beginning and having a hard time to get into a conversation. Fighting this feeling of anonymity and **replacing it by a feeling of comfort and belonging** is therefore the **main goal of the app** that the team "Anonymous" has created.

According to the team's opinion, **the first step** to feel comfortable in a new environment is to **make yourself comfortable** in your home. Once someone has achieved coziness in his own flat, he becomes **ready to open himself up** to the community. This process is also supported by the Maslow's hierarchy of needs where stage two specifies the security needs one has; these include shelter and the preference of the known over the unknown. According to Maslow, a human seeks to accomplish the needs of each stage before striving to attain the next stage. The security needs are followed by the needs of love and belonging (Maslow, 2013).

These two steps also build the guideline for the design of the app the team developed. The idea is that once you sign the leasing contract, you get access to the app and you can **choose the furniture you want** in your future flat. This way, we ensure that every resident has **an individual room** that **fulfills all his needs**. It is planned that the furniture pool is filled with a combination of new but also vintage or self-made single-piece furniture that tell a little story in their description (see Figure 1).
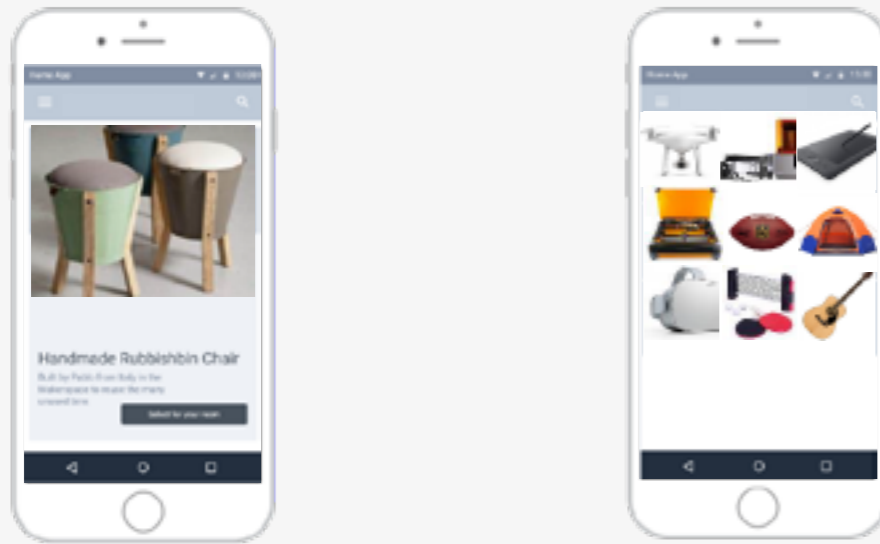
Figure 1 The furniture choice (left) and the app based tool pool (right) illustrated in the app

After furnishing the flat, the new resident will be requested to **contribute something to the shared pool of tools** of the apartment complex. In general, these items should represent something that this person brings to the co-living area that others might not carry with them; a waffle iron, a tent, a guitar or a drone are just few out of many possible examples.

By adding the tool to the virtual pool, the person **gets access to the tool pool of all residents**. Through the app, he can search for items (see Figure 1) and will find a short description of the item and the contact details of the owner. The **big advantage** of all of those items is that they are **not more than a few doors or floors away** from your home and available at **no cost**.

Besides the item itself you also get into **contact with the other residents** of the building. A conversation is easy to start once you meet to hand over the item as it is very likely that the other person has similar interests. Thus, this way of sharing is in our opinion a second step to fight anonymity and also a great way to c**reate a unique and valuable experience in the new destination**.
Once you move out of the complex, you can decide by yourself if you want to leave the items with the building and transfer the ownership to somebody else or if you want to take them with you.

About the markets and users …

Before conducting the competitor analysis, the target market and the respective customers have to be defined.
For the anonymous app, the **markets are global co-living spaces** that are **used by urban nomads** with close ties to the startup scene. The intended user group is characterized as purpose driven, creative and open-minded and, their main goal is to foster their business idea. The users may come as a single entrepreneur, a freelancer or even a startup team.
In the case of the anonymous app, it is important to **distinguish the users from the buyers**. This distinction will be described extensively in the chapter "About the marketing …".

About the competitors…

To find suitable competitors, the team anonymous has analyzed companies that are connected to real estate and furnishing combined with digital technology or shared experience. The major competitors that could be detected are the following startups:

- *CasaOne:* „ A modern furniture collection on customizable rental plans with white glove delivery and assembly" (La Casa Ventures Inc., 2019) For the casaone startup, the central goal is to make furnishing easy, quickly changeable and without upfront cost. The head quarter is located in San Francisco, USA.

- *Envizzo:* „We built our marketplace to help design and furnish rental properties" (Envizzo Inc., 2019) The concept of this startup focuses more on the furnishing process of a rental property. Envizzo is based in New York City, USA.

- *Stanza living:* The stanza living startup aims to re-invent student living with fully-furnished rooms, regular meals and a high support of digital technology to "minimise human-interaction in the most tedious tasks like complaints, feedbacks, and monthly payments" (DTwelve Spaces Pvt. Ltd, 2019). Adding to that, stanza living also offers a membership program that contains experiences and network options. Those membership programs are called "stanza springboard" and "stanza social". The startup is based in the New Delhi, India.
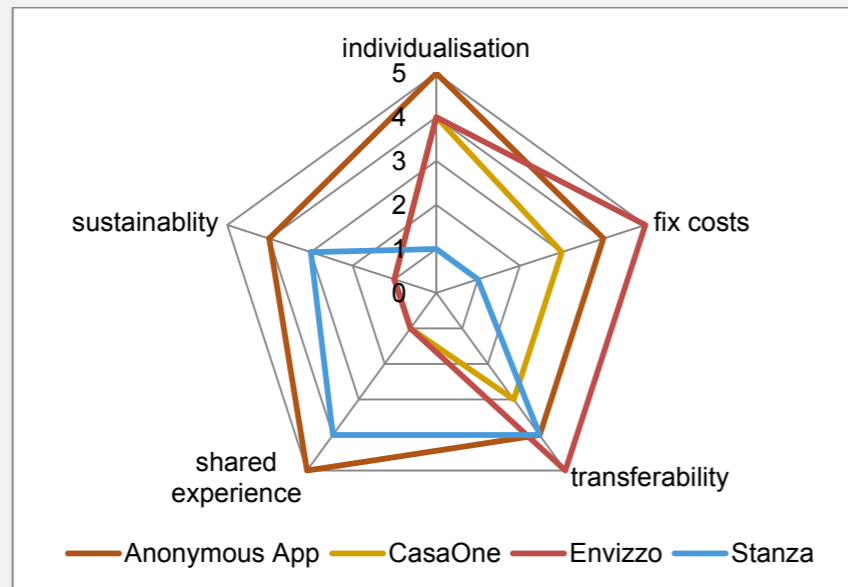
Figure 1: Competitor analysis with the three main opponents

To compare those startups with the Anonymous app, the following set of criteria was chosen: individualization, sustainability, shared experience, transferability and fixed costs of the startup.

To ensure a high profitability of the industry, the threat of substitutes needs to be low. Therefore, an industry has to distinguish itself through product performance. (Porter, 2008) Consequently, the main goal of the competitor analysis was to find out unique selling points.

Looking at the diagram in Figure 3, it can be observed that the **shared experience**, the high degree of **individualization** and the **sustainability** are the top and **unique selling points** of the anonymous app. The app should therefore not be in danger of substitutes as soon as the marketing strategy focuses on these points.

About the marketing …

Before looking deeper into a specific marketing concept, it has to be pointed out that for the created app, the target customers and the target users are two different groups.

The **customers are owners of a co-living real estate** that are looking for a way to make their property as unique and as attractive as possible to new tenants. On top of that they are interested in an efficient solution.

The **target users** in comparison are the **new residents** in a city that were already described in the chapter "About the markets and users …"

As the overall **marketing concept** also has to **address those two groups**, the team "Anonymous" proposed that the concept will also be split into two concept lines.

Concept number one targets real estate owners. Here, the **focus should be on the practicability** of the app and the **power of attraction** that the app has to digital nomads. Possible promotions could be done through real estate fairs but also through congresses or events where universities connect with private enterprises. Also, a price reduced test phase could be very useful to demonstrate that the app really has an impact on the quality of life for the lessees and therewith also the attractiveness of the real estate.

The second concept has its focus on the digital nomads. Here, a **more social media oriented concept** could be useful. Cooperation with influencers that already use the app could awake the interest of this digital oriented user group. Adding to that, promotion videos could be uploaded to frequently used platforms of the digital nomads. A more detailed analysis on those platforms would be necessary to enable targeted action.

About the implementation…

To get a real impression of the app, it is important to see it in use. To ensure that, the implementation should start with a co-living estate in or around Munich. The team anonymous is optimistic that the optimal surrounding can be found here with Munich being one of the six startup hotspots in Germany. Moreover Munich is the city with the highest percentage of foreign startup teams in Germany. (Bundesverband Deutscher Startups e.V., 2017). Additionally, a **Munich based test area** would ensure efficient and best possible support due to short distances between the team and the pilot project. Particularly interesting would be **a cooperation** with the co-living house in Munich planned by the **UNTERNEHMERTUM GmbH**.

About the two days – a report and my personal experience…

Not being an architecture student, the first impression I got from the workshop was the **inspiring surrounding** during the first evening: simply the view over the entire city and the talks with students from all different kinds of study fields already made the first hour of the workshop to a non-ordinary lecture for me. The

following presentations of the experts were very informative and made the topic accessible for me.

On the second day the **unique characteristics of the lecture** became even more obvious when all participants started with a joint breakfast: it was really helpful to get in closer contact as from now on only the students that really participated in the class have been present.

After a motivating speech of the organizers from the architecture chair and the UNTERNEHMERTUM GmbH we all started to work in the groups: at the very beginning it was challenging to get together and discuss **without** really **knowing the people** in your group and **without an elaborated vision**. But looking back, the lack of those two factors actually made the discussion even more vivid and intense. Also the **limited amount of time** that was given for the first steps was challenging and did put a certain amount of pressure on the group.

The group work on **day one focused the actual problems** that we see in the co-living spaces of the future. As my group did gather mainly solution-oriented members, it was challenging to establish the necessary mode of thoughts for a pure problem description. However, with the help provided by our mentor and the discussion with the experts during the evening presentations, we have been successful in **defining a clear scope** and a feasible solution for our project.

On day two I was really impressed by **how much work can be done by four people once clear targets** and an appropriate approach **are committed**. It was great to see how **the different strengths of everyone** almost automatically appeared during the creation of the pitch.

Concluding I would say, that this approach including a limited time schedule and intense discussions to agree on a problem as well as a solution was a **new mode of operation** for me and definitely **worth the experience**.

Bibliography

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Appendix

Team Domino

"Community Design Lab: Designing social hubs for urban nomads. Create new concepts, business ideas, products, apps or innovative space constellations for an urban community in an interdisciplinary design workshop"

Final Report

Maximilian Backenstos
Thai Son Pham

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2 Context and concept

The concerned project is organized by the Community Design Lab, a project group, which is run by the international center Erasmus and the program of European union BauHow5 both at the Technical University Munich. Cooperation partners and sponsors were UnternehmerTUM, the entrepreneurship center of the TUM, MINI LIVING, a design and architecture project by the car brand MINI focusing on co-living concepts, and DETAIL, an international magazine for architecture.

The project consists of initially six interdisciplinary teams of master's degree students able to apply from the subject architecture, design, business administration, sociology, engineering, computer science and politics. They worked together in a workshop setup for two days and were developing with Design Thinking methods innovation in living-space design, technology and social matters (Co-Living, 2019). To each team an expert from the partner companies were assigned as a facilitator, who actively engaged in the development process.

The whole project started with a public kick-off event the evening before by three 15 min keynotes from speakers with expertise in concerning topics. Dr Kerstin Sailer, from The Bartlett School of Architecture – UCL, gave inspiration about the social part by explaining what a community is and how such is created. Layla Keramat, Executive Creative Director of frogdesign, gave insights of how technology changes our way of communication and what possibilities can be used to connect people instead of separating them. Philip Tidd, Principal / Head of Consulting Europe, Gensler, is an experienced architect, who inspires the audience with building interior design, which underlines the active influence of design on human behaviour and how architecture can be used to lead community driven actions of habitants. Host and main organizer of this project was Christos Chantzaras, lecturer at the TUM in the department for architectural information technology.

2.1   Competition set-up with a workshop structure

As the set-up of the workshop all participants were divided into teams according to their background and experiences with the goal to have the most diversity in each group. All in all, 6 groups were formed with 4-5 people each. Our team consisted of Carol, an architect student from Canada, Ekaterina, an architect student from St. Petersburg, Maximilian, a management and technology student from Munich and Thai Son "Tyson", a management student from Munich. Marion, a consultant for strategy and conception at DETAIL with architect and business administration background, was acting as a facilitator.

On the first day, the goal was to get an understanding of the problem, to frame a use case and define a specific problem, on which the team will work on.

The second day was about to validate the defined problem in theoretical way and develop a concept to solve this problem. All teams were working on a presentation for the final event in the evening in front of a public audience of about 50 people, eight judges from the sponsor and partner companies, the kick-off speakers and the other teams. All participants are offered to join the UnternehmerTUM for continuing the ideas created in this project, which will be funded as well.

2.2   Getting a common understanding of the topic

The organizers of the event left the definition of the problem open for further interpretation: The challenge was to come up with a concept for creating and designing co-living space for international entrepreneurial nomads coming to a certain place to live and work with each other. As an example, for such a place, they introduced as in the kick-off event a new building of UnternehmerTUM in the middle of Munich, which will be a location for developing international start-up teams and sharing knowledge. Start-up teams, coaches, and other entrepreneurs will be living there under one roof between three and twelve months while working on their projects in the UnternehmerTUM. This space will be created mostly for living and community building.

With several different backgrounds and experiences in our group we had different imaginations and understandings of such a co-living space. We also had different interpretations about the goal of the concept we should develop. In several short brainstorming sprints in combination with Design Thinking methods we gathered our interpretation of the topic into a visual pin board. Starting the process, we created questions to the speakers of the kick-off event, who were available for a Q&A session. By writing down these questions we could derive the most important aspects for ourselves before keeping on working with each other. We came up with the first questions:

- What makes a successful model of community living and working?
- How to connect people with different interests and backgrounds?
- What does community live look like? What is shared and what remains private?
- How can be the community be sustainable in terms of expenses and income (meaning financial sustainability), people and concept (meaning conceptual sustainability)?

The speakers Kerstin, Layla and Philip gave us inspiring insights on the topics community creation, community enhancing architecture and technology. We gathered their answers with keywords and ideas:

Layla	Kerstin	Philip
• Communities can be measured by KPI's (Key Performance Index) • Creating value by increasing touchpoints of serendipity • Rituals as initiator of personal contacts • What is the soul of the community?	• Instead of fixed rules, a negotiable framework should be set up • How are communities run? – bottom up or top-down • Size of community determines the way of running it • Which type of community do we want to aspire? • Transitory V.S. long-lasting	• Tendencies to programmatic solutions rather than rely purely on architecture • Food gets people together • Layering of space: private, semi-public, inter-community, city • Balance of privacy and public, because of different individual value for work-life-balance • How to converge digital and physical?

Table 1 Speakers' insights to the topic

After structuring the results of the feedback session, we added our own ideas and questions, which we want to solve. We merged our understanding and interpretation of the current challenge and came up with one common overarching problem definition for our group as a milestone for further works. We defined the core problem as the following question: "How to enhance the experience while living in the co-living in this specific space in Munich?"

2.3 Defining terms and framing the problem

With the goal to develop a concept in the end to drive a life in community we broke down this core problem by asking the following two questions relating to the insights gained from the speakers:
1. How do we define a community? What matters in a community?
2. Who are the members of this community?
3. Which problem exactly do we want to solve for these users?

We answered the first question by writing down our own experience and knowledge about the definition of a community. We tried to get inspired what matters in a community and which mechanics to run a community are relevant to set a knowledge basis for the ideation session for the product we want to develop. Table 2 consists of our inputs after a brainstorm sprint. We focused on our imagination and feeling based on our prior experience to describe a community.

Feeling, requirements	Physical appearance
• Belongingness • Feeling to be part of sth • Common experience • Lively, inclusive • Sustainable • Decentral • Room to express feelings	• Activities • Name • Free-time together • Specific space not necessary • Sharing culture • Defined members • Rituals

Table 2 Jointly collected experience about community

We divided the life of a community member for this specific case of the start-up house of UnternehmerTUM into four steps:
1. Entering the existing community. We assumed we don't create a community by ourselves but creating a concept for an existing one.
2. The time inside the community interacting with other members and living in this house. Sharing experiences to maintain and develop the community ecosystem.
3. The out-phasing step, where members prepare to leave the community physically, because their stay will be limited due to their projects. This step requires considerations about how to connect a member emotionally to the community to keep the contact even after their stay.
4. The future of any member becoming an alumnus of the community. We thought of creating an international network for this community and preparing to set up other start-up houses in other locations.

After several design sprints for the second question, we defined the young entrepreneur as a possible persona of tenants of this co-living space. This person is between 20-35, part of a start-up team or start-up coach/consultant, dedicating most of his time on his/her business project, from any possible ethnicity and nationality, open minded and willing to interact with other people in the co-living space. They will stay a limited time in the co-living space – between three and six months

For the third question, we made assumptions on their challenges by describing their daily routines. This persona seems to have few hours per week in the evenings to interact with other tenants. They don't have much time to engage in a community. They are likely willing to share experiences and seek conversations. We think also, that they would like to do group activities, but don't want to spend much time with organizing them. Food and beverages should play a major role in such a community. We included the idea about key performance indexes for living together in a social hub, so we tried to define quantitated characteristics of this community.
- Number of members joining in a period.
- Numbers of members overall.
- Amount of possible differences between tenants.
- Amount of similarities.
- Duration of stay.
- Number of possible touchpoints inside the house.
- Number of shared objects in the house, e.g. rooms, furniture.

To answer the third question, we referred to the four steps of a member's life in the community and focused personally on the first two steps.

Entering a new community can be hard for people due to social and individual obstacles. Especially, people coming from all over the world have initially a language barrier, which is followed by a different culture, infrastructure, habits and social environments than in their home countries when coming to Germany. Some may suffer from anxieties of being foreign and homesick.

The life inside a community requires actions and space for development and maintenance of the culture of a community. Our goal is to nourish an environment for comfortability and creativity for any member, as well as creating connectivity between members and a cultivate a mind-set of sharing. This goal can be disrupted by distractions from outside. The city of Munich provides a lot of options to spend the small amount of free-time, which raises the need to integrate the co-living community also in the already existing cultural ecosystem in the city. Furthermore, the lack of time for any member due to work can lead to passive behavior with less integration to the community.

Considering all these environment conditions and different challenges we summed up our project as problem question:

"How to create a feeling about the community that is so attractive, and making the joining process so easy, that you commit yourself within two weeks to join the community?"

3 Prototype concept

3.1 Possible solution approaches

Our approach offers a solution that deals with the challenges above and answers our question in the problem definition. Initially, we came up with several ideas on how to design a process which helps new, international tenants to smoothly integrate into their new home. We divided our first ideas into a digital and an analog solution (*Table 3*).

Digital	Analog
• Online Messenger groups • Blog/Website with information about activities • Digital platform for exchanging knowledge and interact with each other • Extra device	• Welcome party • Welcome packages • Daily lunch • Group activities • Shared objects • Black board / screen in the

Table 3 Possible solutions approaches for the problem

While all these events are suitable to generate a social event, the overarching framework is still missing. Therefore, we were happy to get feedback from the UnternehmerTUM on this stage of the workshop.

3.2 Feedback and creation of solution

By presenting our approaches to one stakeholder from the UnternehmerTUM we got the feedback to further focus on the real needs of our customer group. Therefore, we came up with five key interesting elements for our customers: Sport, Culture, Nature, Design Labs and Food & Beverages. Our customers represent digital nomads, which normally balance their leisure and work and just in a few cases childrearing (Thompson, 2018). We figured out, that start-up owners are interested in those fields and it would be easier to connect with the existing community while attending events on those fields. We believe in the power of social events in these areas to connect people. Now the next questions which arises is how to use such events to really connect people and how to organize such events.

We further believe in the combination of digital technology in form of an app and the big power of analog tools to overcome those obstacles. As an analog tool we´ve chosen the game Dominoes. The game consists out of several rectangular tiles with each tile having two numbers between 0 and 6 on it. The aim is to find the fitting two tiles and connect the tile with those two (Demaine, Ma, & Waingarten, 2014). Therefore, its crucial to find the other two fitting tiles to be successful in the game. We used this analogy to create a software approach, where the customers are offered several vouchers for events or gifts out of the five defined key elements. One side condition is, that they always at least one other person with the same voucher to get the item.

While Dominoes is an analog game, we aimed to reflect the game in a software solution. This goes hand in hand with the digital lifestyle of digital nomads, which are quite open to digital solutions. Furthermore, it combines all different requirements we see on such a solution. By combining the well-known game and enriching it with social activities we created a digital platform. These platform enables interactions with the external environment of the start-up community and further unites the community by one leading application. The aim of the activities is to make the usage of such an app so attractive, that the social hurdle to ask someone which tile he or she has gets minimized.

3.3 Creation of possible customer journey

After defining the overall approach, we need to take a deeper look onto the customer journey of our potential users while using the application. This increases the understanding of the user pain points and the specific value proposition we can provide.

We separated the customer journey in different consecutive steps: Arriving, entering personal information, starting the game, matchmaking, enjoying and reloading. During the first phase the user is forced to download the Dominoes-App on his mobile smartphone to unlock his room in the co-living space. Once the room is opened, he needs to answer several questions about his leisure preferences and special needs related to his work. Based on this questionnaire the application selects the fitting events for the user. During the game phase the application shows one tile with two numbers. The user now needs to find other users with one fitting number to unlock the achievement. By communicating with other users over their number, social contacts are formed and community is created during the matching phase. Once one fitting other user is found, the achievement is unlocked and the enjoying phase entered. After one week the users are entering the reloading phase and new achievements are available.

By offering the possibility for external companies to sponsor such achievements also an economical perspective is matched to our solution. For instance we thought about the possibility for restaurants to sponsor one advertisement like one free beer. This helps the companies to adress those special customer group and helps the user to know the local city even better.

By integrating the analog game Dominoes into an digital solution we created the fitting part to help people join the community. By using the offered achievements as a motivation to enter the society we have gamified the community joining proces. While simplyfing the joining process is our value proposition to the user, we great added-value to several companies and the co-living operator improves the overall customer expierence in his facilities.

4 Application and implementation strategy

Before suggesting a possible strategy to execute the described concept, a SWOT analysis (strengths, weaknesses, opportunities, threats) will be done below to show an understanding of the possibilities of this concept.

Strengths

First, this concept, which is based on a smartphone app, is highly adaptable to any other facility or group of people. Using a platform method, this can be transferred to any other setting with the goal to connect people. Regardless of nation, location, number of users (the more the merrier). The only requirements are a smartphone and internet access.

Second, this app has a simple basic functionality, which just have one function: displaying a Domino stone, which can be easily implemented. This simplicity sets a solid ground to add many different features and has the potential to become a trend. A minimum viable product can be created without much costs and validated very soon.

Weaknesses

For this concept to become a ritual it needs a lot of initial effort and content management. The app must run properly, the use's interface must be attractive and validated, the content must be created for the matching part, partnerships with sponsors and vouchers must be created, the whole customer journey must be thought through very carefully and tested on the field to get feedback for further development.

Opportunities

The whole concept has the potential to serve several demands at the same time: implementing a community ritual, helps new community members to interact with others soon, project management tool for group activities, marketing platform for companies, communication tool. Because the simple mechanics of the Domino game is used, many other features can be built upon the main function.

Threats

A smartphone app can result to be a weak tool for building a community. People in the field of startups or are involved in entrepreneurial work usually use smartphones with several apps. So, there can be community members, who do not welcome a new app easily, especially apps with another separated function.

Furthermore, the Domino app can become obsolete after people are already included in the community. It might happen that they organize the private time without the app, if the app doesn't provide any extraordinary value anymore.

4.1 Different fields of implementation and benefits

White label concept

In general, our approach can be introduced to any group of people, who forms a community, which is either still in development or have an organized stream of new members. Examples are sport clubs, associations, companies, neighborhoods etc. People can use the app to onboard new members and actively connect existing members with each other in a playful way. By developing a white label concept, the Domino app can be treated as a technology product.

Marketing extension

The offers and vouchers in the app can be provided by partners of the community. So, the app serves as a marketing platform or even as a market, where companies can offer special products for the activities of the community using the app. This is beneficial to companies by extending their market range and build new groups of customers with common interests.

Inter-connectivity with other communities

People in the community can even reach out to people from the outside and integrate them in activities. For instance, members organize a public festival, where special activities and offers are provided through the app. Some communities have interesting contents and programs, which are worth sharing to other people. By doing so, a community can do marketing for attracting new members.

Vice versa, people who wants to get in touch with the community can approach it via app and get information about it.

Market research tool

By tracking activities and products offered in the app, communities can do market research on their members. The goal of this feature is to get to know their members better and adapt their programs for more satisfaction within the group.

4.2 The Lean Startup (Ries, 2011) approach as next possible steps

To validate the need and usability of this concept, we suggest the executing team find an existing community and ask to test the concept as a minimum viable product (MVP) under real-life conditions. The chosen community ideally should represent the tenants, who will move in that startup co-living house of UnternehmerTUM. Fraternities (in German: Studentenverbindungen), university project groups, the Entrepreneurship Center of the TUM in Garching or regular startup meetups, e.g. Silicon Drinkabout, are possible target groups with aspects of diversity, identity and specific purpose.

First, interviews or surveys should be done with these people to ask about their challenges in running a community. Questions can be:

- Do you have fixed routines which are included the community culture? What would change, if these routines were dismissed?
- How are new members welcomed in the community? Are there certain processes of either cultural or administrative matter?
- How are people get in touch with each other? Are there specific tools recommended?
- How often do people inside the community see each other?
- What are the requirements to get into the community?

The next step suggests building an MVP of the Domino app for field testing the specific concept of Domino. This first draft of an app needs few basic functions such as

- Randomly create Domino stones
- Each half of the stones accessible per click and revealing a voucher or activity below
- An application programming interface (API) for manually including vouchers and activity options

- A possibility to symbolically connect people with the same half of a Domino stone, e.g. a QR-Code for scanning and accepting the match.

In the same time, the executive team must write a business plan to describe the process on how to integrate other features in combination with a full stakeholder analysis. So far, we identified the following stakeholders, who directly influence our current concept:
- Central organization of the co-living space
- Tenants, e.g. start-up founder, coaches etc.
- Project partners of the start-up teams
- Sponsors and partner companies
- The city as an institution
- People of the city

Any further development of this concept must be adjusted to the results of the feedback from the MVP testing and directed by the executive team.

5 Documentation of workshop

All content we created during the workshop were the results of brainstorming sprints, inspirations from the speakers, facilitators and organizers, and own inputs from prior knowledge. We were provided with pin-walls, post-it stickers of different sizes, flip-chart paper and felt pens in different colors. Every idea, question or comments on the project we wrote down on post-it stickers and pinned them on the pin wall, so we could structure our ideas in a flexible and visual way. Sometimes we even drew our ideas as pictures or sketches.

We respected every single opinion of every team member. When presenting our ideas within the group, everyone had the chance to contribute their thoughts. Our facilitator, Marion, mainly supported us with structuring our ideas and kept the time during ideation sprints. She asked questions to give us hints whether our ideas are feasible or applicable.

The time table was clearly communicated by the organizers, which includes team presentations in the plenum. This element was helpful to get a comparison between our understanding and the content of the other groups. Additionally, this setting gave us the feeling of competition, so that we were motivated to become the group with the most extraordinary idea.

5.1 Results of the workshop

In the beginning, we started with writing down own questions about the topic, which helps us to understand the topic by answering them (Figure 1). These questions were also presented to the speakers for the Q&A session as described above. The results are structured in Table 1.
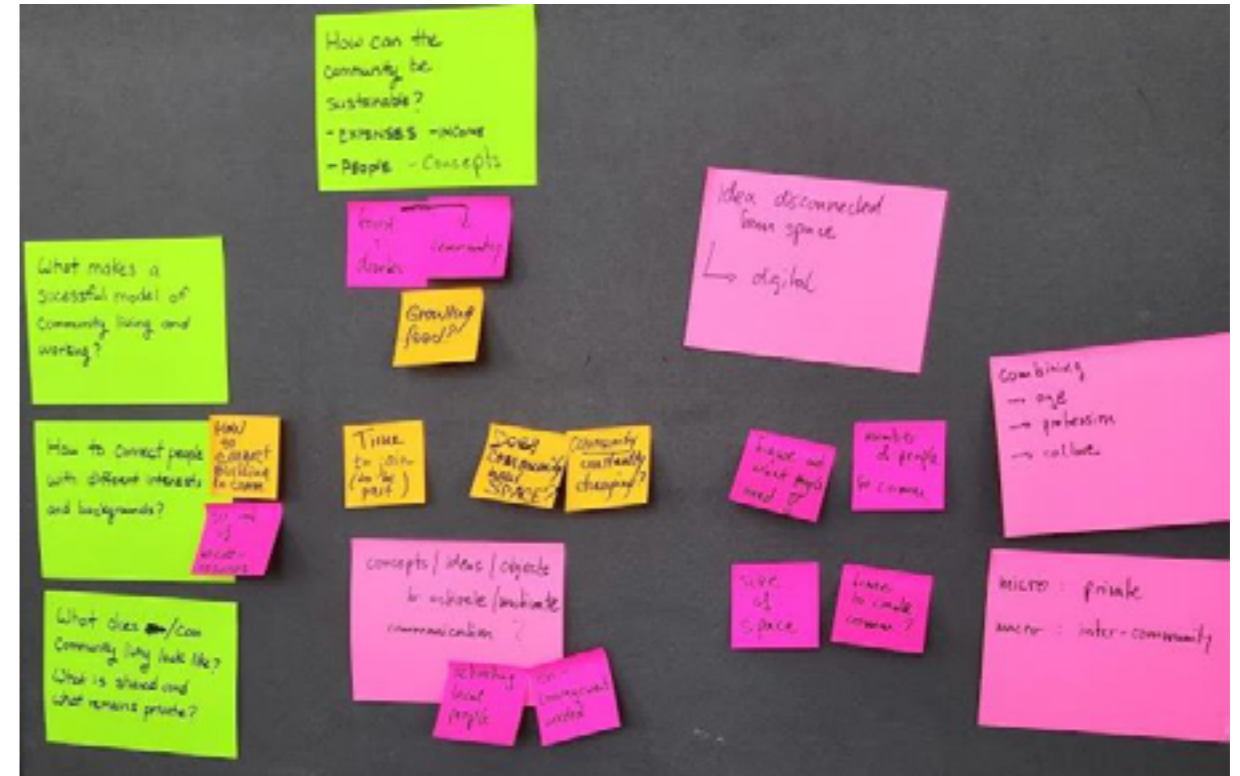
Figure 1 Questions to the speakers

After collecting and creating a lot of statements about the term community, we built a framework to integrate our findings (Figure 2). There, we included the timeline of a

Figure 2 Framework for inserting our findings

tenant's stay in the co-living space, a space for possible problems of a tenant during

the stay, the challenge we face, questions and ideas. A milestone was the work on the question how to establish interactivity between an individual and the community. In the next step, we collected characteristics of a community to get a better understanding of the term (Figure 3).

Figure 3 Personal definition of community

We continued by deciding to focus on the first step of a tenant's housing timeline: the entering process into a community. Based on this decision, we developed the persona of a possible tenant moving into the co-living space (Figure 4). The imagination of a young minded entrepreneur emerged from several different group of people, which each of us created to get an understanding, to what extent we should consider our prototype to fulfill the needs of the community members. We even considered couples, family with kids and experienced entrepreneurs above 40 years of age.

Figure 4 Persona of a possible tenant

Bringing everything together from the first day of the workshop, we finally defined our problem statement as a question, which we will answer on the next day with a community concept (Figure 5).

Starting with the problem statement, we did a brainstorm sprint to create ideas for solving the problem (Figure 6) (Figure 7). These ideas include many different approaches including activities, technologies, framework concepts, events and all sorts of products.

In a second brainstorm sprint, we narrowed down our ideas and repeated the challenges we were facing and which community KPIs we wanted to support. So, we got new ideas of more practical concepts, which we could even draw on paper (Figure 8) (Figure 9).

In the final step of the prototyping, we combined all concepts into the idea of the Domino game to create something that connects people and let them be part of a greater picture. This connection will be enhanced by activities initiated in the app (Figure 10).

After finalizing the structure of our prototype, we worked on the storyboard for the final presentation (Figure 11). We scripted it as a mixture of TV advertisement and theatre performance to explain a possible customer journey and show our concept in action.

Figure 11 Scrpting the storyboard of the final presentation

5.2 Comment about final presentations

During the final pitch we had a timeframe of three minutes to pitch our idea to the audience. To demonstrate our astonishing idea, we built a mock up out of paper and played the whole customer journey from arriving to entering the community. The combination of a little bit of humor and demonstrating an analog mock-up out of paper helps people understanding and remembering your idea. After just a few trainings we delivered a humorful and interesting pitch to the audience.

6 Personal statement on the interdisciplinary work and its applicability to foster creativity and innovation

It was my first time to work together with architects and I was quite impressed on the different way of approaching problem settings. By using one more visual way that I normally do other solution approaches can be found and results achieved in another way. I was quite impressed by the workshop and really liked the format to work in such an interdisciplinary team. It really fostered my way of thinking an approaching challenge. (Maximilian Backenstos)

I am astonished what a group of people not knowing each other can create in this short amount of time. Especially, the fact we could combine all different points of views, including our facilitator's, to work in a hands-on project with a specific result we all like, impresses me the most. Furthermore, the interdisciplinary setting shows me a possible method to work on future problems, regardless of the topic. The work in this project was very valuable and joyful to me. Some elements I probably will include in my own professional work. (Thai Son Pham)

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Community Design Lab

'Have we met? Designing Social Hubs for Urban Nomads'

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Content

Executive summary

In the present report, a full description of the Bubble Me concept and implementation plan will be detailed. A description of the different development stages of the workshop can also be found, and our final thoughts from our personal experience. Within the context of the Community Design Lab 'Have we met? Designing Social Hubs for Urban Nomads', we learned and discussed about the components, relevance and relation of the social, physical and digital spaces. Bubble Me "popped-out" in our faces as a potential solution to the problems that come along with Urban Nomads. The main concern with this ephemeral, but still sizable and valuable groups, is the lack of integration in their temporal communities. Therefore, Bubble Me offers a set of products and services to fulfill the need of this specific target group. Bubble+, Bubble Hubs and a Software/App are our main products. A combination of hardware and software blend to offer a unique experience to the user "An extension of the virtual world to the reality". Via the Bubbles, a matching based on personal interests will be done in order to offer a set of recreational activities in the local community.

For the implementation strategy, consolidating collaborations is one of the main tasks, establishing partnerships as a well as a robust brand promotion, together with a solid product/service to gain consumers. The strong Customer Relationship Management task force will be crucial for understanding our clients, follow-up the trends, and to ensure the best service to the user.

In this report, we also describe the development process that we experienced during the workshop. From the iteration processes, to the solution ideation, passing through exploration, problem formulation and feedback sessions, we learned a lot, we enjoyed a lot, and we were satisfied with our project.

We truly believe, that one day, Bubble Me, can be a solution that will offers a set of services relevant for the current society. Bubble Me will catch your sight and it will connect you with your local environment, giving you a unique interaction, user experience, and sense of belonging.

The problem - status quo

Urban Nomads. A nomad is a member of a people who move from place to place to find pasture; a person who leads a roaming or wandering life. From Latin nomades (plural) nomas (singular), from Greek nomad, nomas roaming around, especially for pasture, from base of nemein to pasture. The origin of the word 'nomad' refers to three components – a mobile lifestyle, a certain territory or pasture, and pastoralism. Regarding the origin of the word, the term 'nomad' differs from terms such as vagabonds or migrants because a nomad operates in a fixed area or pasture and works as a pastoralist. A nomad is thus defined as a mobile. Anja Fischer, Research and Nomads in the Age of Globalization (Fischer, 2010).

The status quo. About 420 thousand people in Munich come from other countries, from this, a certain unknown percentage of people are moving to live in Munich for one year or less (Statistisches Amt München, 2017). We are trying to connect and associate them to the indigenous liveliness. For that reason, we are endeavoring to link them to the city through social and physical bubbles. However, we still assume many of constraints, In terms of language barriers, cultural differences and integration and other factors.

Prototype concept and description

Bubble +

With Bubble+ we aim to connect people, matching them with social/virtual bubbles through their hobbies, interests and preferences, also promoting diversification by suggesting activities out of your comfort zone. It is an extension of the virtual world to the reality through a set of somatic bubbles (Fig. 1). The Bubbles will consist of a digital and physical part. Digital bubbles will be achieved through our on-site software (in the Bubbles) or via the App, and will be available to people who form part of the service. Physical Bubbles are a concept still open for Engineering, Design and creativity, but it certainly has to integrate some characteristics like appealing & Ergonomic Design, Interactive interface (e.g. touch screen), user recognition (e.g. Facial recognition, proximity sensor, NFC), Artificial Intelligence, Connectivity, among others.

The set of offers that the service will provide to the users vary from personalized activities like sports, arts, concerts, cultural events, and social events in general. Other offerings will be guided tours, information disposal, local activities, search and localization tools, renting platforms, sponsored events, etc.

Bubble Hubs

Clusters of bubbles in strategic (crowded) public spaces over the city. The features that these bubbles offer are different from the ones Bubble +, limited options, but the idea is similar. A network of bubble Hubs will be created over the city of Munich, connecting each Bubble Hub as a reference point of interest. Serving as attraction while still offering the service (Fig. 2).

Figure 1. Bubble+ concept.

Figure 2. Bubble Hubs concept in Munich.

Customer Base

Our potential customers are both, local people and visitors. Such business ideas, of course, need to be supported by local business and other entities. The focus, within the context of the workshop, are the Co-living spaces. Other potential targets are Co-working spaces and also, we can cooperate with companies in the domain of tourism and cultural centers to boost development in a collaborative way. Bubble + would also be able to sell other services and products through its platform service, with its embedded Up-to-date System. The customer could add features that bring good

value proposition, key activities and competitive strategy to cope with other players in the arena. To make Bubble + viable and applicable, we have to make an alluring offer to get people to use the service, as well as to gain social acceptance. However, one could ask what are these Bubbles and what do they provide?

Bubbles are a set of diverse activities which can offer significant choices and alternatives to the community and visitors in terms of daily life and social integration. Hence our primary purpose is connecting minds.

These are some initial offers and activities which have to be installed inside each Bubble and will be customized to targeted groups according to their preferences and interests. Collaborations are significant in our business in order to have varied, valued and magnificent services to our customers and users. Sustainable development for the subscribers, easy transactions, and authentic and local experiences are essential in our vision to deliver high valued services with daily and continuously updates. A website, App for smartphones, referral program, word of mouth, ads and events are a key to reach our potential customers and users. Furthermore, closing central agreements with local partners, creating the right practices for the subscribers.

Financial Model

The financial model will be based on the next given assumptions: subscriptions per user, commissions from bookings and other businesses such as local professional providers and partners, commissions from trade transactions made through our platform, advertisement. As we mentioned, we plan to start probationary cooperation with a local established business in Munich. As for the physical Bubbles, the service will be based on a leasing license to the interested parties. These agreements with local Business Owners will help us generate additional revenue to finance our transactions and customer's needs.

- Activities and Services: i.e. Increase awareness about local activities through a variety of services and offers.

- Entertainment and Leisure: Sponsored events, tours.

- Art and Culture: i.e. Museums and Cultural Events. Exhibitions and Theatre.

- Exploration and Orientation: i.e. Events and Parties, An increase of Information towards local activities and easy access and use.

- Stories and Experiences: Weekly program.

- Sport and Physical liveliness: i.e. Meditation and Yoga, Sports Clubs & Gym.

- Information and Workshops: i.e. Know-How meetings and consulting, unfair trade, scams and Inconvenient. Closing central agreements with local partners, creating the right practices for the subscribers.

Application and Implementation Strategy

Bubble Me was born with the idea of expanding and connecting minds, linking them with local trends, activities and other social events. For that, we need to come up with a feasible business idea which should be rational and adaptable by the social, environmental circle. Not only but also competent and trustworthy for the targeted group, to ensure that people are interacting and communicating in a safe spot. We need to implement a strategy which can overcome all fallacies and misconduct we need to collect data and set an algorithm survey to be able to deliver unique value to our community. Therefore, to make this community healthful and happy we have to observe sustainable development plans, for that reason, we will support our customers and users with offline and online services in terms of offline we are planning to employ a team of counsellors and assisting managers. For the online services and offers, we will have a bundle of content to offer and propose to our potential customers' perceived values and attention. Hence, consulting, suggestions and deliberation segments should be observed. Besides we are aiming to launch a platform with four service packages including basic free, standard and premium. That will provide an economic value added (EVA) and will create a substantial new cash flow to cover our variable and fixed costs. Our main objective is to offer a mixture of services and products to our customers and users through significant networks. Therefore, our endeavor to create Unique Value Propositions (UVP) and sustainable outcome for all of our subscribers. We do believe, and these are our desired endeavors which we always pursue to gain our customers' loyalty and satisfaction. Furthermore, our customers and users intercommunication are essential critical factors for us. While Service offering provides marketing, customer relationship & comfort; customer experience administrators, as well as local information managers, should act on four key transformation drivers:

- Revenue growth

- Reduction in operating costs of customer service

- Enhanced customer satisfaction

- Service update

These drivers will allow us to discover more about how our customer interacts with the service and offer them substantial actions to improve their experience, awareness and consciousness. We also need to access and execute market research in terms of the market entry strategy, investigating competitors in the arena by using SWOT analysis, for example, their advantages and disadvantages. These driven elements will help us to implement superior-oriented marketing. As well to focus on our primary targeted customer to better understand their needs and preferences. We are also planning to set algorithm inquiries to segment and cluster people regarding their preferences and precise needs. Also, collecting customers' constructive feedback, find incomplete gaps and productively tackle them. Sustainable and business development strategies will be implemented to cope with fluctuations. Some ways in how we can achieve our goal is:

- A qualitative and quantitative assessment of our customer service maturity level via a sectoral data benchmark based on the customer interactions of more than 300 individuals.

- An innovative and user-friendly interface to explore data and better understand our customers' expectations and satisfaction.

- Recommendations with predicted benefits to personalizing our strategic plan in terms of.

Overall, the implementation strategy can be summarized as:

1. Initiation: Understanding, classification, structuring and processing.

2. Formulation: External & Internal analysis, strategy selections, evaluation, strategy as project.

3. Implementation: Developing structure and system, deriving costs of operations, strategy administration.

Documentation of the Workshop

From day 1, we were immersed into a whole new world of community design. Philip Tidd, talked about the importance of the physical space, from spatial distribution to the use of nature, the contribution of each element to the environment. Leyla Keramat talked about the importance of digital platforms and the already existing "solutions" to bring people together in the local communities. Dr. Kerstin Sailer explained the social roles of the Urban Nomads, remarking the tendency of the non-integration of these individuals in their temporal communities. Overall, we got an initial idea of the relevance of the problem, and the content of it.

On the second day, we went hands-on, we started getting to know our team and our facilitator, starting to formulate questions to get more insights from the experts (Fig. 3). Without noticing, all our questions, as open as we tried to formulate them, were already pointing to a certain direction, narrowing down some ideas, and showing us new possibilities.

After processing the information and settling down our thoughts, we had iteration processes, which later, brought us to the problem finding. We were intended to find proper problems and real needs, without thinking about the solution yet. The re-framing process started so that we could see what other possibilities we were missing.

The exploration started together with the "final" framing. Especially this step was very useful for us because it helped us to deepen into topics like values, behaviors, journeys, vision and more user-centered topics that allowed us to be more empathic with our project.

For the final problem framing process (Fig. 4), we made some assumptions and stated a more realistic situation: "*Constant fluctuations of residents of the CoCo (Urban Co-Living space) creates social bubbles. These bubbles lead to CoCo not being unique, not feeling like home, and not being linked to Munich*." And so, the first day finished.

Figure 3. Questions for the experts and problem framing number 1.

During the second day, we made a recap of the problem statement, then we started the ideation process for the solution, and finally, we prepared the developed concept for a presentation. We first gathered the different potential ideas and features for the solution, we clustered the concepts, and ultimately, we voted for the most relevant and striking ideas (Fig. 5). The next step was to integrate the ideas and features together in a "single" solution. We did a better description of the characteristics of the idea, and thus, and abstract thinking began, the same that led to the conceptualization of "the bubbles". This conceptualization, was our anchor point to develop our product and service, working in our values, operations, technical characteristics, visual concept and potential reach (Fig. 5).

Finally, the preparation for the presentation started, we had to conclude some thoughts, started the media content, and of course, we needed an eye-catcher, the visual factor was present in our pitch: a basic representation of "The Bubbles".

Figure 4. Problem framing iteration process 2.

Figure 5. Ideation process, voting and definition of characteristics of the Bubbles.

Personal statements

Erick Pano

As scientist and manager on process, I have had multiple experiences with Design Thinking processes and with interdisciplinary group-work, but never something with such a fast pace while aiming an actual outcome. Also, it is my first experience in the field of Architecture/Housing, which also gives it a whole new level of reinvention, since the designers and architects have a different approach to problem-solving. Combined with all the other backgrounds and expertise present in the workshop, novel and unique approaches were born. I find it as the best way to have a potentially sustainable impact.

Faisal Mohammed

The Community Design Lab was an outstanding experience for me. In these days I did not only learn but as well gained friends from diverse backgrounds. Plus, cooperating and involving with an interdisciplinary staff from various specializations from TUM and other organizations was a challenge because of the divergence of views. Still, as soon as you get to know your instructor and your team also understand their perspectives, everything will be feasible. Therefore, working and interacting with such an innovative and energetic environment is an extraordinary practice especially when you achieve your endeavors. Moreover, I learned how to handle, bargain and compromise with people you just met them the day before. That was per se an excellent benefit to me.

References

1. The Tuareg Society within a Globalized World: Saharan Life in Transition; Chapter 2, **Kohl** , Ines; Fischer, Anja; I. B. Tauris, 2010.

2. Die ausländische Bevölkerung nach der Staatsangehörigkeit 2017; Rathaus München.
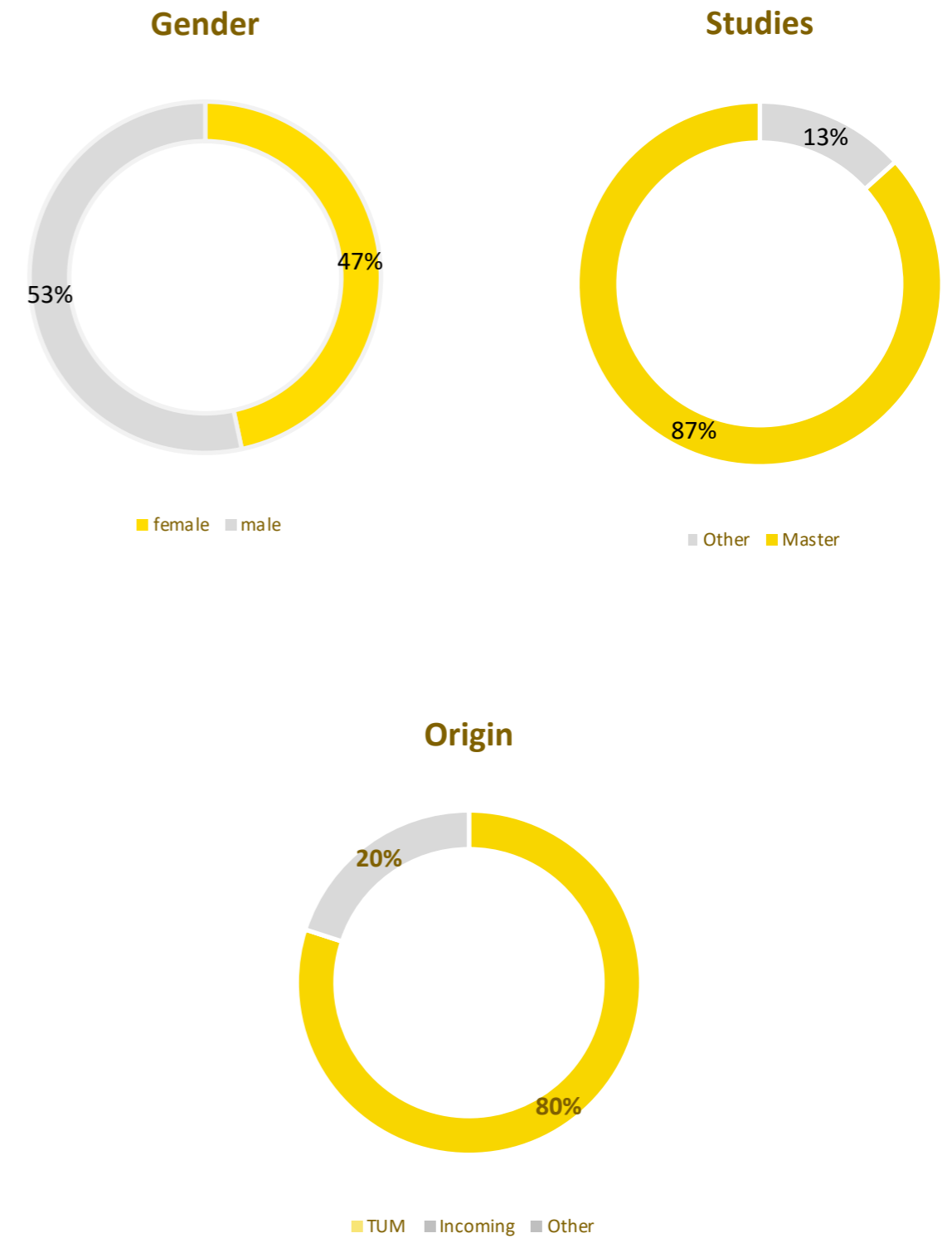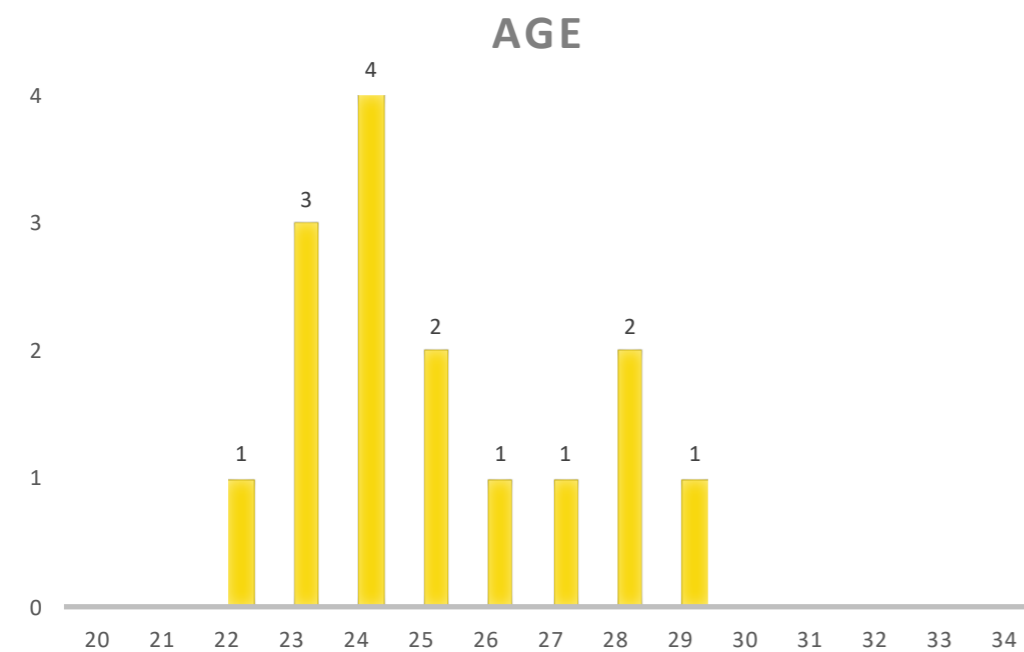
Chapter 04
Community Design Lab Evaluation

Summary of Evaluation

The response rate of the evaluation was 15 out of 24. It showed a high satisfaction rate with 15 cumulated replies of "agreement" and "strong agreement" (number of participants n=24):
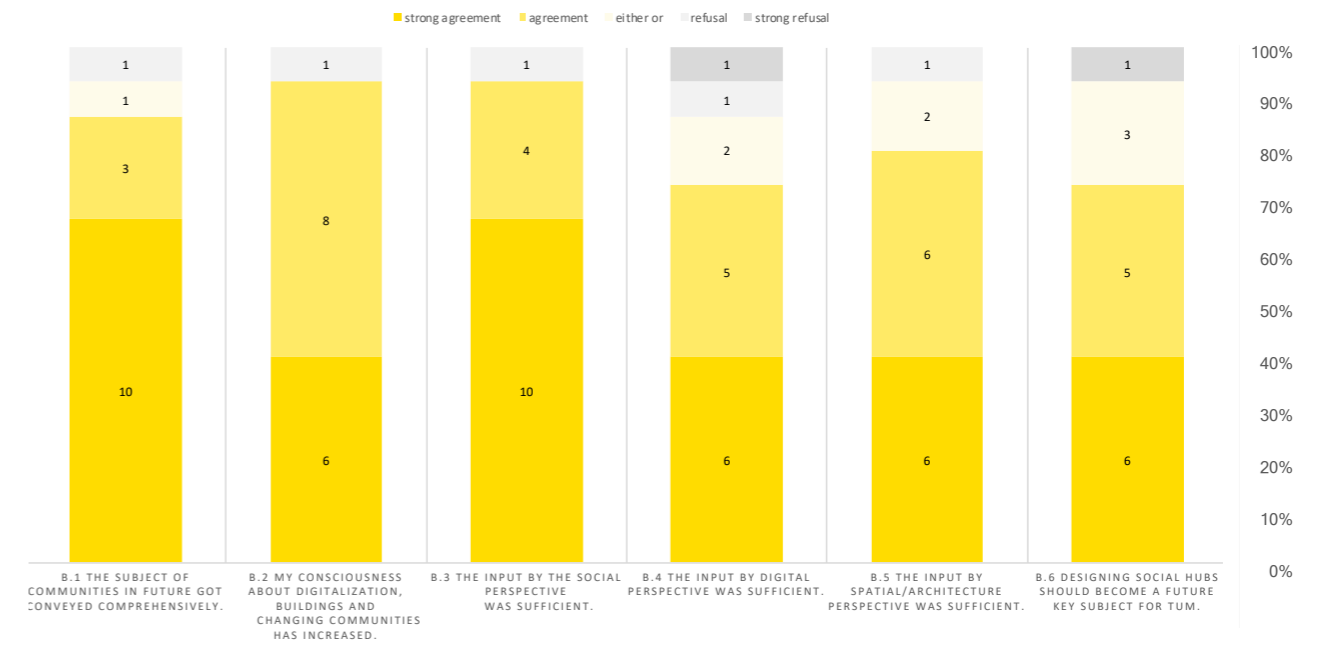
Concept & challenges for future urban communities increased: **83%**

Workload, process and future implementation were feasible: **85%**

Collaboration, interdisciplinarity and integration increased: **91%**

Results and willingness to pursue idea further were satisfying: **78%**

Benefits to apply skills and use new insights occurred: **80%**

The community design lab showed the highest rates of satisfaction of all conducted workshop, but at the same time, the lowest rate of developed concepts, of documentation and further development. For a future development a better balance shall be considered.
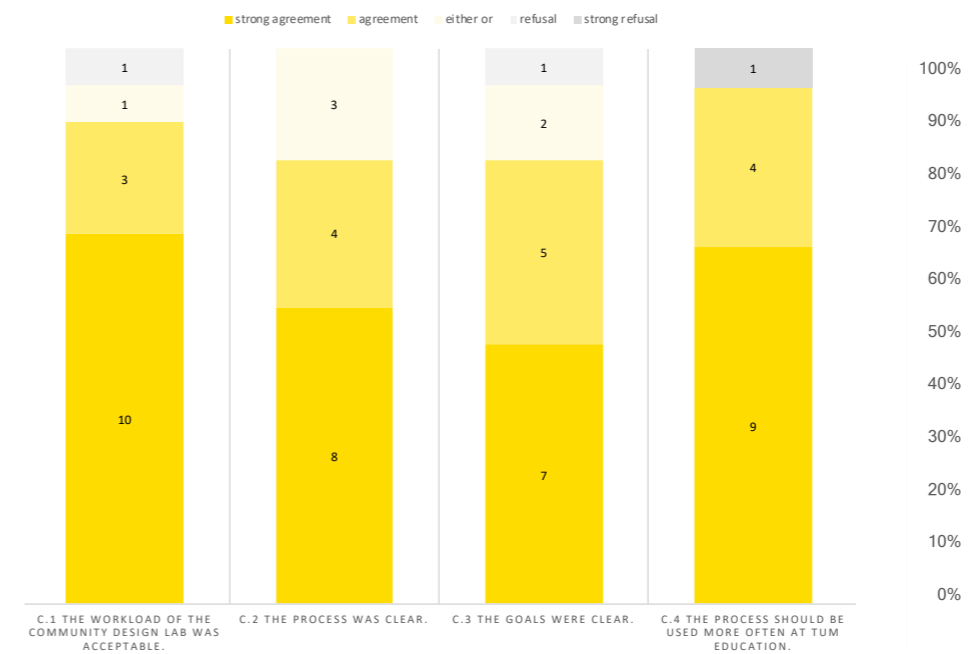
Gender

47%

53%

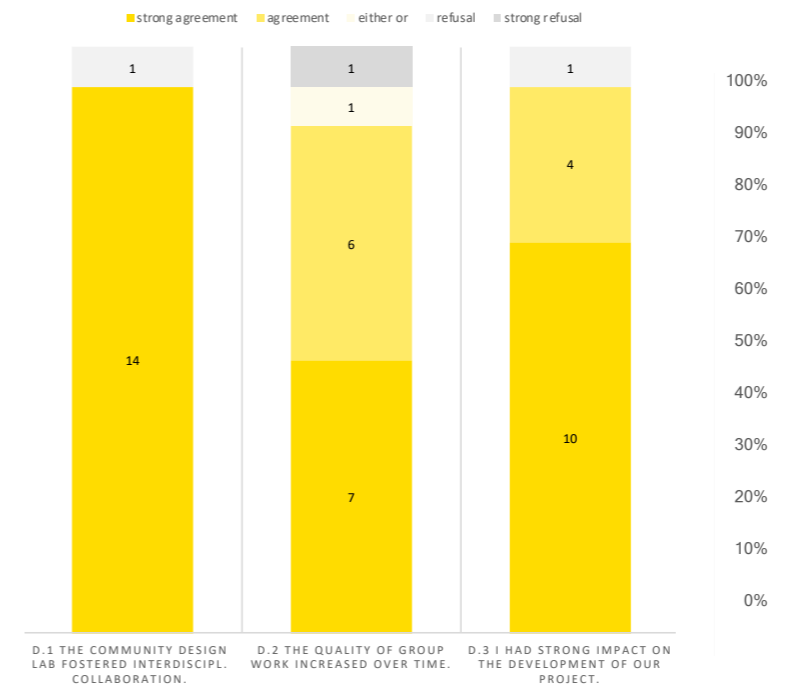■ female ■ male

Studies

13%

87%

■ Other ■ Master

Origin

20%

80%

■ TUM ■ Incoming ■ Other

AGE

Age	Count
22	1
23	3
24	4
25	2
26	1
27	1
28	2
29	1

On Challenges

Legend: strong agreement, agreement, either or, refusal, strong refusal

Value	B.1 THE SUBJECT OF COMMUNITIES IN FUTURE GOT CONVEYED COMPREHENSIVELY.	B.2 MY CONSCIOUSNESS ABOUT DIGITALIZATION, BUILDINGS AND CHANGING COMMUNITIES HAS INCREASED.	B.3 THE INPUT BY THE SOCIAL PERSPECTIVE WAS SUFFICIENT.	B.4 THE INPUT BY DIGITAL PERSPECTIVE WAS SUFFICIENT.	B.5 THE INPUT BY SPATIAL/ARCHITECTURE PERSPECTIVE WAS SUFFICIENT.	B.6 DESIGNING SOCIAL HUBS SHOULD BECOME A FUTURE KEY SUBJECT FOR TUM.
strong agreement	10	6	10	6	6	6
agreement	3	8	4	5	6	5
either or	1			2	2	3
refusal		1	1	1		
strong refusal	1			1	1	1

On Process

Legend: strong agreement, agreement, either or, refusal, strong refusal

Value	C.1 THE WORKLOAD OF THE COMMUNITY DESIGN LAB WAS ACCEPTABLE.	C.2 THE PROCESS WAS CLEAR.	C.3 THE GOALS WERE CLEAR.	C.4 THE PROCESS SHOULD BE USED MORE OFTEN AT TUM EDUCATION.
strong agreement	10	8	7	9
agreement	3	4	5	4
either or	1	3	2	
refusal	1		1	1

69

On Collaboration

			100%
1	1	1	90%
	1	4	80%
	6		70%
			60%
14			50%
	7	10	40%
			30%
			20%
			10%
			0%

D.1 THE COMMUNITY DESIGN LAB FOSTERED INTERDISCIPL. COLLABORATION.   D.2 THE QUALITY OF GROUP WORK INCREASED OVER TIME.   D.3 I HAD STRONG IMPACT ON THE DEVELOPMENT OF OUR PROJECT.

On Results

			100%
1		1	90%
1	2		80%
3	4	5	70%
			60%
10	9	4	50%
			40%
		5	30%
			20%
			10%
			0%

E.1 I AM SATISFIED WITH OUR RESULT.   E.2 THE TIME SLOTS AND WORKING TIMES WERE SUFFICIENT.   E.3 I WOULD LIKE TO DEVELOP OUR RESULT FURTHER.

On Benefits

| | strong agreement | agreement | either or | refusal | strong refusal |

F.1 I COULD MAKE USE OF MY SKILLS.
F.2 I LEARNED SOMETHING NEW.
F.3 I WILL USE SOME OF THE APPLIED METHODS IN MY STUDIES.

Did the Community Design Lab meet your expectations?

- Yes!

- It overcame them.

- I didn't know what to expect, but it exceeded my expectations

- Yes, it did and I will strongly recommend it to everyone.

- Yes, it was really interesting.

- Yes, for the future I would wish for a greater diveresed group of people.

- Yes.

- Yes.

- Yes.

- Yes. It was as good as expected.

If not, what did you miss?

- I just wish more info before the event was available.

- Maybe more intro to design thinking.

- Changing facilitators. More diverse input

- Nothing.

- More diversed backgrounds, e.g. sociologists.

- More support by facilitators.

- Concepts for Design Thinking.

- More background information/data.

- Nothing.

- Would have been nice to have some more formal processes/knowledge transfer. The working process and interdisciplinary approaches were already very familiar to me, therefore learning was limited.

What worked in the process, what did not?

- Probably more time coming up with a solution, although it was fine as it was.

- For my team and my experience: Everything.

- Sometimes the group situation was difficult.

- Team building skills, team collaboration, friendly environment, accessible material, breaks. Everything worked perfectly well.

- Group dynamics were good. The talks in the first session were really interesting.

- Good: Collaboration with other fields of studies, getting on the same page. Not good: Nothing.

- The tools were not enough explained. The tool box was small.

- Mentor (Marion) was really helpful.

- Organisation worked. Moments of uncertain clients did not worked not.

- Working with the ream (community), though they were unknown.

- Good challenge definition and gradual output development. Workshop structure, organisation and support, food and social events were great.

What can be done better?

- Prototyping process: Time, material.

- Maybe more balanced assignment of groups.

- Nothing.

- Better guidance on the tools and processes used for the design sprint.

- A more comprehensive review of the historical development of social communities should be done.

- Time should be extended.

- More different methods of ideation.

- Clearer info about how to get the credits up front.

- Nothing.

- More time given for the pitch presentation and idea refinement. Encouragement of more students attending from other BauHow5 universities.

- Tiny bit more time to develop the end product.

Do you think this format should be applied more often?
If yes: 5 days, 3 days, 1 day?

- 3 days is the perfect duration.

- Yes, 3-5 days.

- Yes! No more than 3 days! Thank you!

- Yes! 3 days is a good time to develop a short project and present it!

- Yes, 3 days.

- It should be possible to test the hypothesis with qualitative research e.g. questionnaires. Therefore 3 days would be better.

- Yes, 3 days.

- 3 days and no more is sufficient.

- 5 days, to come up with solid idea/solution.

- 3 days, please weekends (a lot of students are working).

- 1 or 3 days, actually 2 days was just fine.

- Yes, no perfect time frame.

- Yes, 3 day is fine.

- Yes, 5 days.

- Yes. I believe a day more would be ideal (e.g. 3-5 days) and allow time for a stronger output.

Open answers to questions within evaluation, n = 15 / 24 answers.

Imprint

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