Muniverse – Concept, Validation, and Implementation

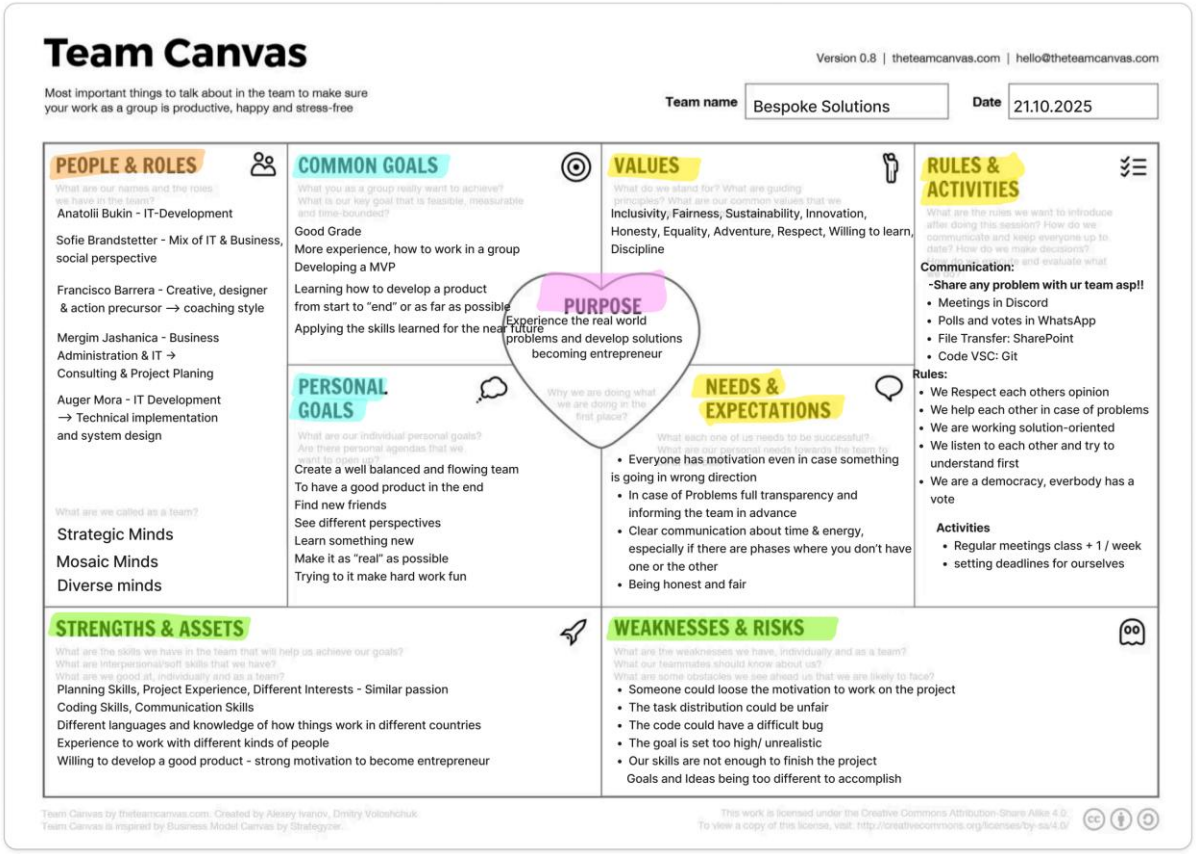
1. Introduction & Project Context

This project was developed by the student team Bespoke Solutions as part of a university course focusing on user-centered product development and validation. The goal of the project was to identify a relevant real-world problem in an urban context, explore it through structured research, and translate the resulting insights into a validated digital product concept.

The outcome of this process is Muniverse, a mobile app designed to help young adults in Munich make better use of their free time. Rather than focusing solely on social coordination, Muniverse supports users in understanding, structuring, and actively shaping their available time by discovering activities in the city that match their interests and schedules. Social interaction, such as inviting friends or meeting new people through shared activities, is supported as an optional extension, but the core focus remains on empowering individuals to turn free time into meaningful experiences.

1.1. Team Canvas (All)

In the first week, we used the Team Canvas to align as Bespoke Solutions on shared goals, expectations, and ways of working. We discussed each team member's motivations for the course, defined what success would look like for the project, and clarified roles and responsibilities across research, prototyping, business modeling, and implementation. In addition, we agreed on collaboration principles such as communication style, decision-making, and feedback culture. This early alignment helped us work efficiently throughout the iterative Design Thinking process and ensured consistent coordination during research and development.



Team Canvas

Version 0.8 | theteamcanvas.com | hello@theteamcanvas.com

Most important things to talk about in the team to make sure your work as a group is productive, happy and stress-free

Team name: Bespoke Solutions

Date: 21.10.2025

PEOPLE & ROLES

What are our names and the roles we have in the team?

Anatolii Bukin - IT-Development

Sofie Brandstetter - Mix of IT & Business, social perspective

Francisco Barrera - Creative, designer & action precursor → coaching style

Mergim Jashanica - Business Administration & IT → Consulting & Project Planing

Auger Mora - IT Development → Technical implementation and system design

What are we called as a team?

Strategic Minds

Mosaic Minds

Diverse minds

COMMON GOALS

What you as a group really want to achieve? What is our key goal that is feasible, measurable and time-bounded?

Good Grade

More experience, how to work in a group

Developing a MVP

Learning how to develop a product from start to "end" or as far as possible

Applying the skills learned for the near future

VALUES

What do we stand for? What are guiding principles? What are our common values that we

Inclusivity, Fairness, Sustainability, Innovation, Honesty, Equality, Adventure, Respect, Willing to learn, Discipline

RULES & ACTIVITIES

What are the rules we want to introduce after doing this session? How do we communicate and keep everyone up to date? How do we make decisions? How can we track and evaluate what

Communication:

-Share any problem with ur team asp!!

- Meetings in Discord
- Polls and votes in WhatsApp
- File Transfer: SharePoint
- Code VSC: Git

Rules:

- We Respect each others opinion
- We help each other in case of problems
- We are working solution-oriented
- We listen to each other and try to understand first
- We are a democracy, everbody has a vote

Activities

- Regular meetings class + 1 / week
- setting deadlines for ourselves

PURPOSE

Experience the real world problems and develop solutions becoming entrepreneur

Why we are doing what we are doing in the first place?

PERSONAL GOALS

What are our individual personal goals? Are there personal agendas that we need to take into

Create a well balanced and flowing team

To have a good product in the end

Find new friends

See different perspectives

Learn something new

Make it as "real" as possible

Trying to it make hard work fun

NEEDS & EXPECTATIONS

What each one of us needs to be successful? What are our personal needs towards the team to

- Everyone has motivation even in case something is going in wrong direction
- In case of Problems full transparency and informing the team in advance
- Clear communication about time & energy, especially if there are phases where you don't have one or the other
- Being honest and fair

STRENGTHS & ASSETS

What are the skills we have in the team that will help us achieve our goals? What are interpersonal/soft skills that we have? What are we good at, individually and as a team?

Planning Skills, Project Experience, Different Interests - Similar passion

Coding Skills, Communication Skills

Different languages and knowledge of how things work in different countries

Experience to work with different kinds of people

Willing to develop a good product - strong motivation to become entrepreneur

WEAKNESSES & RISKS

What are the weaknesses we have, individually and as a team? What our teammates should know about us? What are some obstacles we see ahead us that we are likely to face?

- Someone could loose the motivation to work on the project
- The task distribution could be unfair
- The code could have a difficult bug
- The goal is set too high/ unrealistic
- Our skills are not enough to finish the project

Goals and Ideas being too different to accomplish

Team Canvas by theteamcanvas.com. Created by Alexey Ivanov, Dmitry Voloshchuk
Team Canvas is inspired by Business Model Canvas by Strategyzer.

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2. Problem definition (All)

At the beginning of our project, we brainstormed a variety of challenges and pains that we and our peers face in daily life in Munich. One recurring issue stood out: social loneliness. This problem, however, was broad and could be approached from many angles different types of loneliness, various causes, and diverse sources of disconnection.

Through further discussions, we narrowed our focus and quickly recognized that one of the most pressing issues for us and many people in our age group was a lack of

community. Despite the large population in Munich, we felt there was a distinct gap in social connections, especially among young adults. However, the scope of "social loneliness" was still too vast to address effectively without further insights.

To better understand the problem and define our target group, we decided to conduct an online survey among our peers. Although the survey sample of 35 people wasn't statistically representative, it provided valuable insights into the lived experiences of young adults. We learned that a significant percentage (68.6%) of respondents experienced loneliness at least sometimes. When asked what helped alleviate these feelings, the most common answer was the opportunity to "meet with friends." Furthermore, 39,4% are mainly looking for somebody to share activities with like hobbies or sports.

This finding was consistent with existing research that highlights the high levels of loneliness among young adults. For example, according to a report by the Bertelsmann Stiftung, 51% of young adults aged 18-35 report moderate loneliness, while 12% experience severe loneliness (Bertelsmann Stiftung, 2023). In addition, younger adults in Germany tend to feel lonelier than older adults, with lower educational levels contributing to higher rates of loneliness (Bertelsmann Stiftung, 2023). This supported our hypothesis that loneliness, particularly social loneliness, is a widespread issue among young people in Munich, and further emphasized the need for a solution tailored to this demographic.

Additionally, our findings aligned with studies showing that most existing loneliness interventions focus primarily on older adults, leaving a gap in services for younger people (Nurminen et al., 2023). This observation led us to refine our focus on young adults, particularly those who are newcomers to Munich, as they often face social isolation due to factors like relocation, language barriers, and lack of stable social networks.

Munich itself also presents unique challenges. According to local statistics, 30.1% of residents are non-German nationals, and 54% of households consist of just one person. Furthermore, 25% of the city's population is made up of international students, many of whom may experience heightened loneliness due to their transient status (Stadt München, 2024). These figures helped us pinpoint that our target group young adults, including newcomers and international students are at higher risk of social isolation and loneliness in the city.

With the results of the survey and these additional insights, we were able to define our target group more clearly: young adults, particularly those new to Munich, who face challenges in building social connections. This laid the foundation for further refinement of the problem through in-depth qualitative interviews, which we will discuss in the next section.

References

Bertelsmann Stiftung. (2023). *Loneliness in Europe: Insights from the Generation Now Study*. Retrieved from

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Stadt München. (2024). *Munich Statistics 2024: Population, Demographics, and Household Information*. Retrieved from

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3. Design Thinking Process & Ideation

3.1. Persona & Point of View (All)

A persona is a fictional character created to represent a specific user type that might use a product or service in a similar way. In the design process, personas serve as a "north star," helping us move away from abstract demographics and toward empathetic, human-centered solutions.

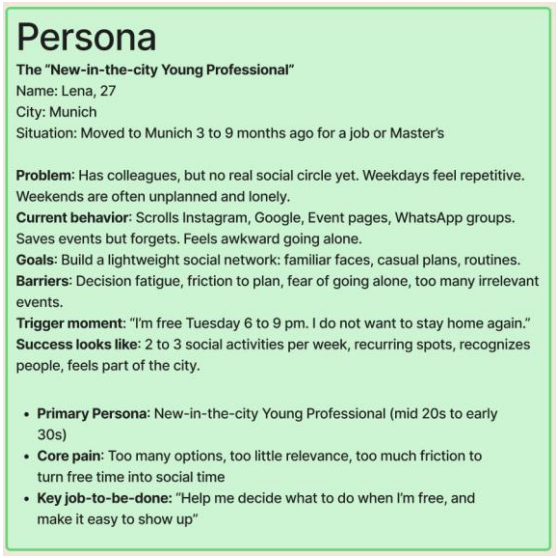
In our project, we developed a persona named Lena, a 27-year-old "New in the city Young Professional" living in Munich. When crafting her profile, we focused on the emotional and logistical friction she faces, such as having work colleagues but lacking a true social circle, which often leads to repetitive weekdays and lonely, unplanned weekends. We identified her core pain point as having "too many options but too little relevance," which results in decision fatigue and a fear of attending events alone.

Our thought process centered on the "Key job to be done," which for Lena is to have help deciding what to do when she is free and making it physically and socially easy to show up. By identifying her "trigger moment" the specific time she feels the urge to connect, such as a Tuesday evening we were able to design a prototype that focuses on converting free time into meaningful social time. This persona allowed us to measure the success

of our app not just by technical metrics, but by whether it helps a user like Lena achieve 2 to 3 social activities per week and feel like a true part of the city.

- Age: 27
- Name: Lena
- Bio: A young professional who moved to Munich 3 to 9 months ago for a job or a Master's degree. While she has professional colleagues, she has not yet established a personal social circle in the city.
- Hobbies: Exploring the city, attending local events, and seeking out recurring social spots to meet familiar faces. She currently spends free time scrolling through Instagram, event pages, and WhatsApp groups looking for things to do.
- Needs: A lightweight social network that offers casual plans and routines to help her recognize people and feel like part of the community. She needs a way to reduce the friction of planning and the "awkwardness" of attending events alone.
- Pain Points: Repetitive weekdays and unplanned, lonely weekends. She suffers from decision fatigue due to too many irrelevant options and often forgets the events she previously saved.
- Ideal Experience: Being able to identify a 3-hour window of free time (e.g., Tuesday 6 to 9 pm) and easily find a relevant activity where she feels comfortable showing up. Success for her is engaging in 2 to 3 social activities per week that turn the city into a familiar, welcoming home.

From the Figma Board:



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3.2. Crazy 8 (All)

During one of our virtual team meetings, we utilized the Crazy 8s method to rapidly generate and explore diverse solutions for the social challenges we identified. This time-

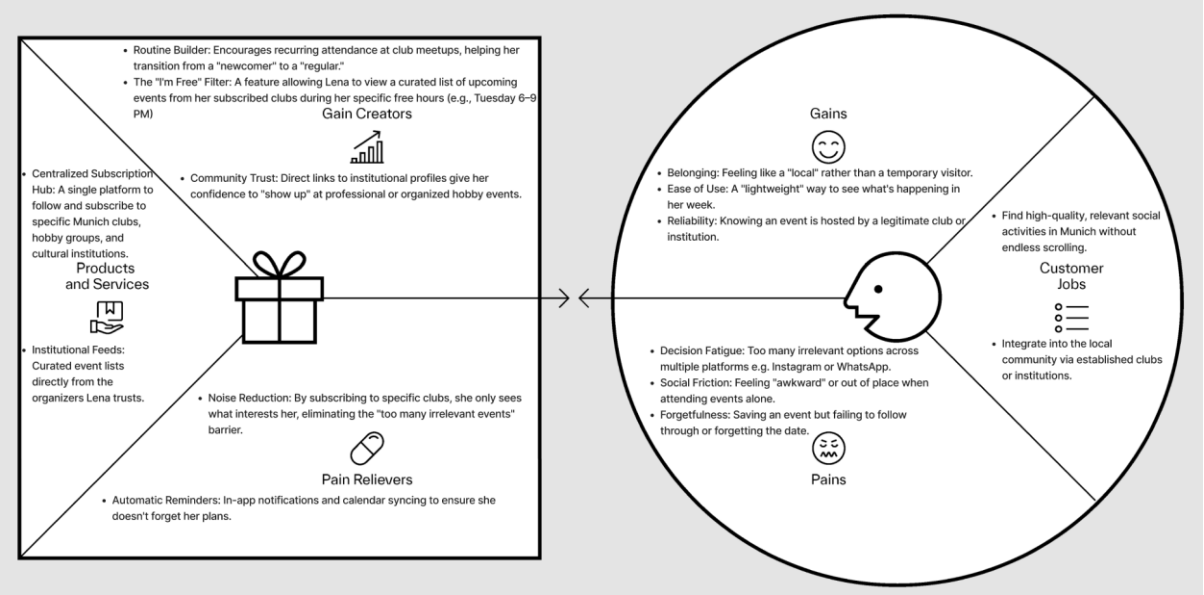
constrained exercise encouraged us to move beyond conventional thinking and explore more creative approaches to addressing isolation in Munich. Following the session, we evaluated the results and integrated the most compelling and high-impact ideas into our Figma board.

3.3. CIAO, HOW, WOW, NOW (All)

After identifying social isolation in Munich as our primary challenge, we began brainstorming using the CIAO HOW WOW NOW matrix. We initially gathered a broad range of ideas to evaluate their feasibility and impact. This structured approach allowed us to distinguish between realistic 'quick wins' and innovative 'moonshot' ideas, helping us define the boundaries of what was possible for our prototype.

3.4. Value Proposition Canvas (Anatolii)

After developing our persona, Lena, and gathering a wide range of potential features, we utilized the Value Proposition Canvas to ensure our product effectively addresses her specific needs. This tool allows us to map the functional and emotional "jobs" Lena needs to fulfil against the specific features of our app. By doing so, we can clearly visualize how our platform, which focuses on institutional and club's events subscription acts as a direct solution to her feelings of isolation and decision fatigue. It gives us a structured way to ensure that every design choice we made in our Figma prototype creates tangible value for a newcomer trying to build a life in Munich.



4. User Research – Qualitative Interviews (Sofie)

4.1. Research objective

After defining an initial target group through our survey, we conducted qualitative interviews to better understand the lived experiences behind the numbers and to refine both our target group and solution direction. The goal was to explore how young adults in Munich, especially newcomers, plan and experience their free time, what challenges they face when looking for suitable activities, and which forms of digital support they would actually use. Insights from these interviews also helped us iteratively sharpen our concept toward an individual-centered free-time organization and activity discovery approach.

4.2. Sample Description

The qualitative interviews were conducted with 30 young adults aged between 19 and 31. Participants included students, dual students, early-career professionals, job seekers, and international newcomers. A substantial share had moved to Munich within the last few months or years, while others had lived in the city longer but were still navigating challenges related to time management and social integration.

Living situations ranged from shared flats and student residences to living with partners, family members, or siblings. Daily routines differed significantly, influenced by study schedules, work demands, commute times, and financial situations. This diversity allowed us to capture a broad range of experiences related to free-time use, social connection, and personal organization.

4.3. Key findings

4.3.1. Loneliness reframed: from social isolation to unused free time

While loneliness was initially assumed to be the core problem, the interviews revealed a more nuanced picture. Most participants did not describe themselves as constantly lonely. Instead, feelings of loneliness or disconnection appeared situationally, often during unstructured free-time slots, evenings, or weekends.

Many interviewees emphasized that they generally *have* people in their lives but still struggle with deciding what to do with their free time or turning free time into meaningful experiences. Several participants described moments of boredom, low motivation, or defaulting to passive activities such as scrolling on social media, even though they would have preferred to do something more active or fulfilling.

One interviewee summarized this shift clearly:

“It’s not that I don’t have friends. It’s more that I don’t always know what to do when I suddenly have time.”

This insight marked an important turning point in the project. The issue was no longer understood primarily as *finding people*, but as making better use of available free time in a city that offers many possibilities but little orientation.

4.3.2. The role of time fragmentation and mental load

Across interviews, free time was described as fragmented, irregular, and mentally exhausting to manage. Participants reported long commutes, irregular schedules, exam phases, and fluctuating energy levels. As a result, free time often appeared in small windows that felt “too short” to plan anything meaningful.

Several participants noted that even when they technically had free time, they lacked:

- ideas for suitable activities
- clarity about what was realistically possible in that time slot
- motivation to actively plan something

This often led to default behavior, such as staying at home, using social media, or postponing decisions altogether. Importantly, this behavior was frequently accompanied by dissatisfaction or a feeling that time had been “wasted”.

One participant stated:

“I have free time, but I don’t really *use* it. I just end up on my phone.”

This recurring pattern highlighted that the core problem lies in orientation and decision-making, not in the absence of opportunities.

4.3.3. Limitations of existing tools

Most participants currently rely on a combination of messaging apps (WhatsApp), social media, and personal calendars. While these tools work well for communication or formal appointments, they fail to support personal free-time planning.

Key limitations mentioned were:

- no overview of how free time could be used
- difficulty connecting interests with concrete activities
- lack of inspiration tailored to available time slots
- social planning being too dependent on others’ availability

Earlier ideas around shared calendars and overlapping availability were perceived as helpful in theory, but many interviewees pointed out a critical dependency:

“It only works if everyone else uses it too.”

This insight became decisive. The team recognized that a solution dependent on an existing user community creates a high entry barrier and limits immediate value for individual users.

4.4. Concept shift: from coordination tool to personal free-time companion

Based on the interviews, the focus shifted from coordinating free time with others to helping individuals structure and enrich their own free time first.

Participants expressed strong interest in a solution that:

- starts with *their* available time slots
- suggests activities happening in the city during those times
- matches suggestions with personal interests and energy levels
- allows social interaction, but does not require it

Many interviewees stated that they would like to:

- discover events, activities, or places aligned with their hobbies

- decide spontaneously whether to go alone or invite others
- meet new people naturally through shared activities, rather than forced matching

One interviewee described this ideal clearly:

“I want to see what I can do *now*, with the time I have, and then decide if I go alone or with someone.”

This feedback validated the revised concept: an app centered on individual free-time awareness and activity discovery, with social interaction as an optional extension rather than a prerequisite.

4.5. Validation of the problem-solution direction

Overall, the interviews strongly supported the final solution direction. Participants perceived clear value in an app that helps them:

- become more aware of their free time
- reduce mental effort in planning
- discover relevant activities in their city
- turn idle time into meaningful experiences

Social features, such as inviting friends or meeting new people, were seen as valuable but secondary. The primary value lies in empowering users to actively shape their own free time, regardless of whether others participate.

The qualitative findings therefore validate both the problem redefinition and the strategic pivot of the app concept. By focusing on the individual first and enabling social interaction as an optional layer, the solution addresses real user needs while avoiding dependency on an existing user base.

5. Concept development

5.1. Final app concept & core features (Sofie, Toli, Fran)

Based on the insights gained from the qualitative interviews and the iterative refinement of our problem definition, we developed the final concept for Muniverse: a personal free-time organization and activity discovery app centered around the individual user.

The core idea of Muniverse is to start with the user’s available free time rather than with predefined social groups or events. Users can easily mark their free time slots within the app through a simple, low-effort interaction. By selecting a specific time slot, users are

then guided to choose what kind of activity they are in the mood for, such as sports, languages, arts, museums, bars, or other leisure categories.

Based on the selected time slot and activity preferences, Muniverse displays relevant events and activities happening in the city during that exact time window. These results are filtered according to the user's interests, location, and chosen activity type, helping users quickly identify options that realistically fit their schedule.

In addition to time-based discovery, users can define their general interests within the app. Muniverse uses this information to provide personalized suggestions and inspiration for future activities, reducing the cognitive effort required to search for ideas. Rather than acting as intrusive advertising, these recommendations are designed to function as contextual prompts that align with the user's preferences and availability.

To support orientation and planning, activities the user has registered for are displayed both in a calendar view and an optional list view, allowing users to choose the representation that best fits their planning style. This dual visualization helps users maintain an overview of their upcoming free-time activities without relying on external tools.

Social interaction is supported as an optional feature. Users may invite friends to join specific activities or attend events together, but the app does not depend on a pre-existing social network to deliver value. Muniverse remains fully usable for solo activities, spontaneous exploration, or meeting new people through shared interests.

Overall, the final concept of Muniverse focuses on lowering the barriers between having free time and actively using it in a meaningful way, by combining time awareness, personalized activity discovery, and flexible social engagement in a single, user-centered solution.

Core functionalities:

- Simple selection of free time slots with one-click interaction
- Mood- and interest-based activity filtering per time slot
- Discovery of city events aligned with real availability
- Calendar and list views for activity overview
- Personalized recommendations based on user interests
- Optional social features without dependency on others

The app name Muniverse originates from the city of Munich, where the team met, conducted the research, and developed the initial concept. Munich therefore represents the starting point of the project and the real-world context in which the problem was explored. By combining "Munich" with "universe," the name also reflects the broader

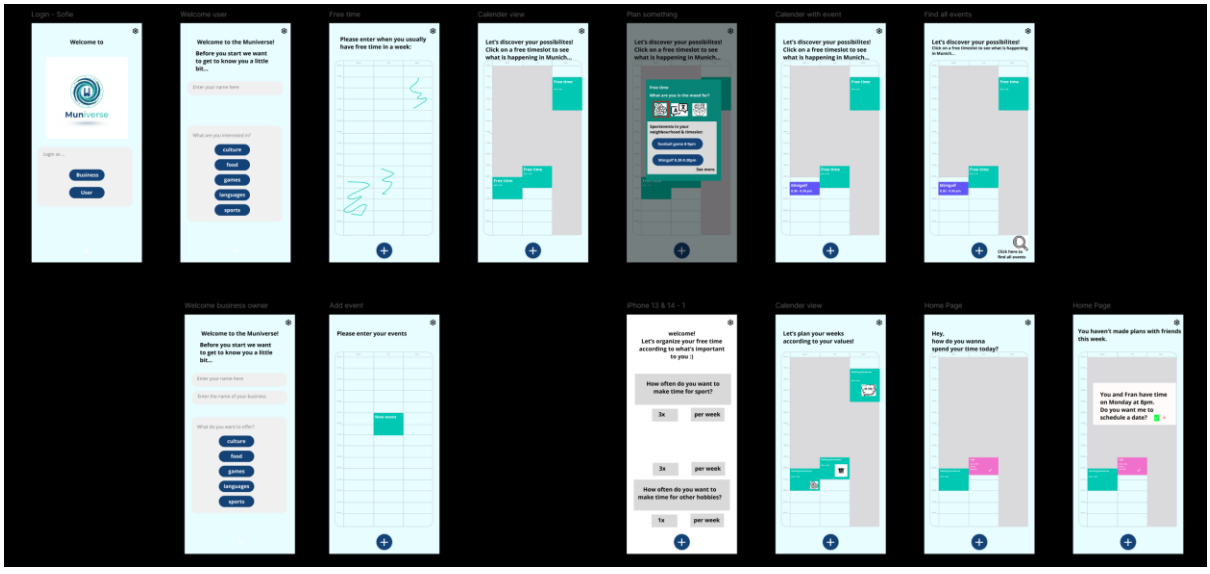
vision of creating a scalable platform that can be adapted to other cities. While the first implementation focuses on Munich, the concept and technical structure are designed to support future expansion to additional urban environments.

6. Prototyping (Anatolii, Sofie, Fran)

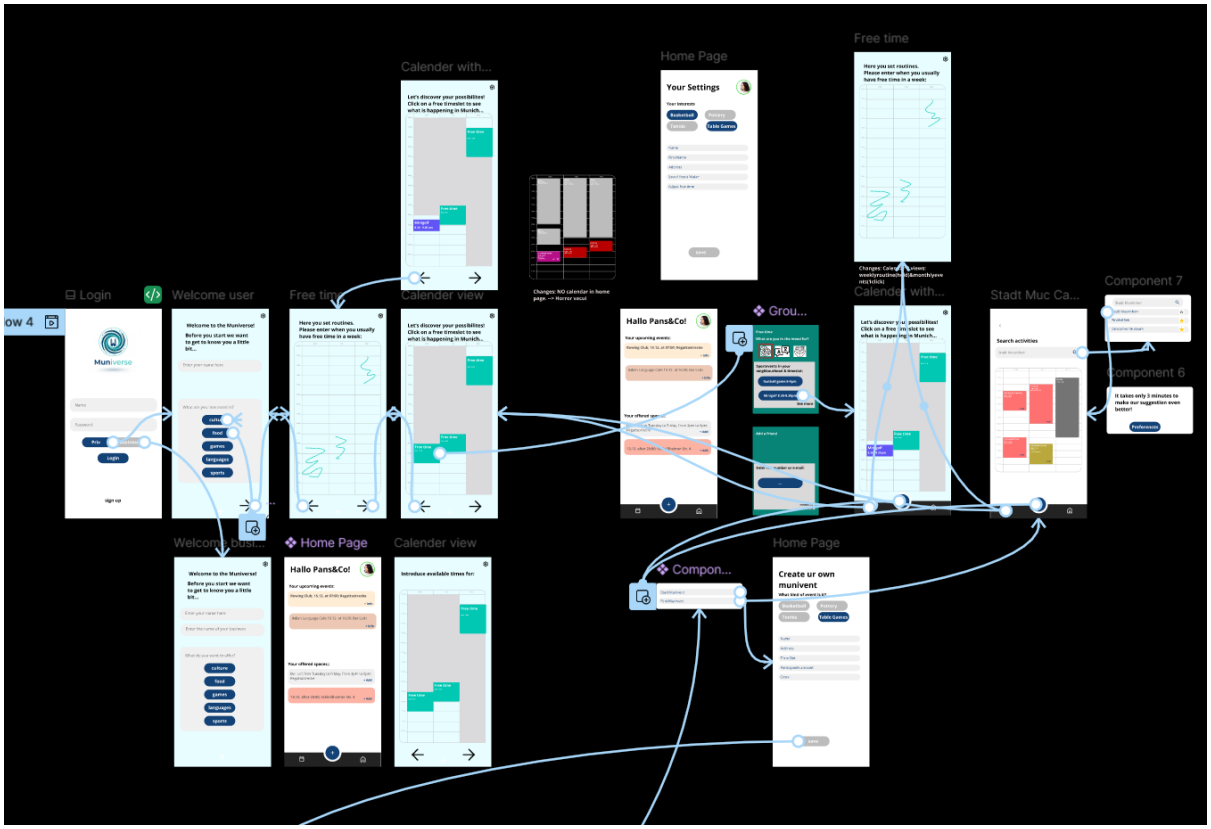
6.1. Figma Wireframes

To collect and structure our ideas for the final prototype, we utilized Figma for its capacity for real-time collaboration and its ability to simulate an authentic app experience. Our design process followed a three-step progression, beginning with an individual ideation phase where each team member developed specific components of the application. In the second stage, we synthesized these contributions by merging the strongest ideas and design elements into a single cohesive vision. Finally, we implemented the remaining features to ensure they aligned seamlessly with our chosen design language. The resulting Figma project functions as a high-fidelity prototype regarding its interactive features, while maintaining a medium-fidelity aesthetic to balance visual clarity with time efficiency.

First ideas Prototype



Final Prototype with Screen Flows



Link to the Figma Wireframes: LINK

6.2. Testing (All)

Due to the limited timeframe of the project, we focused our validation efforts strictly on the core product hypothesis. While we developed a structured experiment and documented it via a Test Card on our Figma board, we primarily prioritized qualitative research. We conducted in-depth interviews followed by a rigorous evaluation process, which provided a more meaningful and nuanced overview of user needs and behaviours than quantitative testing alone would have allowed. This approach ensured that our final design decisions were rooted in direct, high-quality user insights.

Figma Board: LINK

7. Validation interviews (Sofie)

7.1. User validation results

We conducted 15 interviews for user validation. Overall, the interviews strongly confirmed the core value proposition of Muniverse. Participants consistently understood the concept as a time-based activity discovery tool, rather than a social network or event platform.

Most users were able to complete the tasks without assistance and quickly grasped that the app helps them decide what to do when they are free, not weeks in advance. Many participants explicitly compared the experience to their current behavior, describing it as faster and less mentally exhausting.

A recurring pattern was the reduction of decision friction. Users reported that seeing a small, relevant set of options inside a specific free-time slot felt more manageable than browsing large event platforms or social media feeds. Several interviewees noted that this made them more likely to actually attend an activity.

“This feels like it removes the hardest part, which is deciding *if* and *what* to do.”

The calendar-based interaction was generally perceived as intuitive, especially the one-click selection of free time slots. Both calendar and list views were valued, as they supported different planning styles. Users appreciated being able to see upcoming activities in one place without manually transferring information from chats or websites.

Trust and emotional barriers emerged as critical factors. Users stated that they would be more likely to attend activities if clear information was provided, such as duration, group size, atmosphere, and whether an event was beginner- or newcomer-friendly. Many users expressed that they would attend activities alone if the presentation reduced uncertainty and social pressure.

Importantly, social features were perceived as optional but valuable. While some users liked the option to invite friends, most emphasized that the app should remain usable without coordination or commitment. This validated the decision to position Muniverse primarily as an individual free-time tool.

Key concerns raised by users included:

- the risk of low-quality or irrelevant events
- fear of the app becoming too advertisement-heavy
- the need for fast interaction and minimal setup

Despite these concerns, the majority of users stated that they would try the app if it existed, particularly during weekday evenings, after work or study, and when feeling bored or undecided.

7.2. Business validation results

To validate the supply-side feasibility and monetization approach, we conducted four interviews with local Munich businesses that regularly offer activities or events and therefore match our envisioned client profile. The interviewed businesses covered different categories and customer dynamics:

- Kreativhütte (Trudering) – an arts house where customers paint pottery, offering weekly and monthly creative events
- Balan-Stüberl – a café with board game and community-style events
- Johanniscafe – a local café with a neighborhood-oriented customer base
- Monopol Kino – a small independent local cinema with scheduled screenings and special formats

Across all four interviews, a central theme emerged: businesses struggle less with “having an offer” and more with filling specific time slots consistently, especially outside

peak times. Each business could clearly identify quiet periods (e.g., weekday afternoons, slow evenings, or specific days with low spontaneous foot traffic) where additional customers would directly improve their business performance.

A key validation result was that the Muniverse value proposition “show my activity to people when they are free” resonated strongly, because it reframes marketing from general awareness to moment-based relevance. For example, the cafés emphasized that traditional promotion methods (Instagram posts, stories, Google visibility, occasional flyers) create awareness, but do not reliably translate into attendance in slow hours. The cinema and Kreativhütte highlighted a similar pattern: people often like the idea of going, but forget or postpone it unless reminded at the right moment.

All businesses expressed interest in the concept under the condition that the platform remains simple, low-effort, and provides measurable outcomes. The willingness to pay a monthly fee was consistently tied to tangible value, such as increased attendance during quiet times, improved fill rates for events, or more first-time visitors.

Concrete expectations and success criteria mentioned across interviews included:

- More visitors during quiet hours, not only online impressions
- Clear visibility into performance, e.g., how many people viewed, clicked, saved, or actually attended
- Minimal effort to post events, ideally in a few steps and without heavy “content creation” requirements
- Trust and quality control, so that the platform feels curated and not spammy
- A good match between audience and offer, meaning users who attend are genuinely interested and likely to participate

In addition, businesses emphasized that Muniverse should not try to replace existing channels such as Instagram or event platforms, but rather complement them by targeting a different moment in the user journey: the point where someone thinks, “I’m free now, what can I do?” This was described as a gap in their current marketing toolbox, especially for last-minute capacity and spontaneous visits.

Overall, the business interviews validated that the concept is attractive across different business types, as long as Muniverse can deliver a reliable user base, keep the posting experience lightweight, and provide clear value metrics that justify a recurring monthly fee.

Impact on the final concept and further development

The validation interviews provided clear guidance for how Muniverse should evolve. Across both user and business feedback, we identified several priorities that will shape

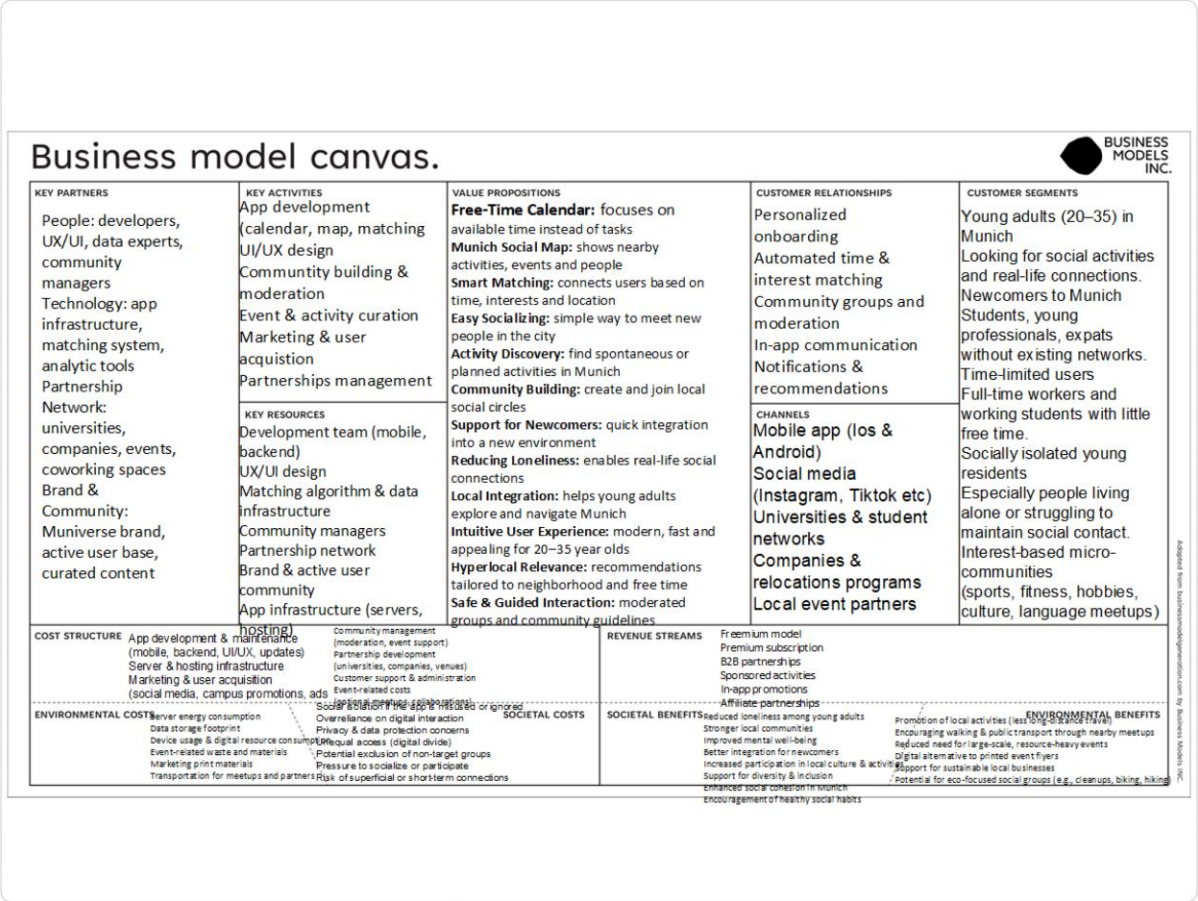
the next development steps. First, users repeatedly emphasized the need for clarity, speed, and low-effort interaction, especially when selecting free-time slots and browsing suggestions. Second, interviewees highlighted that their decision to attend depends strongly on trust and context, meaning Muniverse should increasingly communicate event expectations and atmosphere (for example: vibe, duration, group size, beginner or newcomer friendliness) in a simple and transparent way. In addition, the interviews confirmed that social interaction should remain optional, enabling users to invite friends or meet others, without making the core value dependent on coordination.

From the business perspective, the interviews showed that willingness to pay depends less on visibility alone and more on measurable outcomes (ROI) and low effort. This indicates that further development should focus on frictionless event creation, clear presentation that does not feel overly advertising-like, and lightweight performance tracking that helps businesses understand whether Muniverse generates real value (such as visits, bookings, or increased attendance during quiet time slots).

Overall, the validation interviews confirmed both user demand and business-side feasibility of the concept. At the same time, they helped us define concrete design and product priorities that will guide the next iterations and strengthen the foundation for the financial model.

8. Business Model & Financials

8.1. Business Model (Fran, Mergim, Anatolii)



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8.2. Profit and Loss (Fran, Mergim, Anatolii, Sofie)

The profit and loss outlook for Muniverse is based on conservative and realistic assumptions that reflect the early-stage nature of the project. The financial model is designed to demonstrate economic feasibility while remaining aligned with the platform's ethical principles. Revenue generation relies exclusively on organizations using the platform, while individual users are never charged for participation.

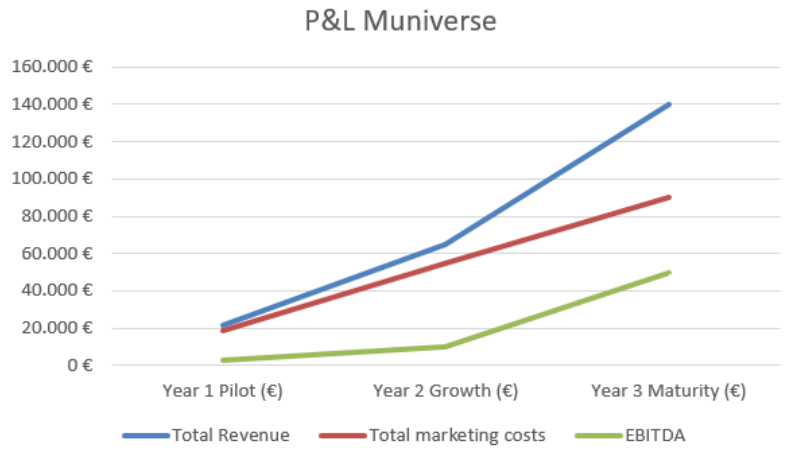
In the first year, Muniverse operates as a pilot project within the Munich metropolitan area. Revenue is generated through monthly subscription fees paid by organizations, differentiated by size and usage. Small cafés, bars and local clubs contribute a low fixed monthly fee combined with a small participation-based component, while medium-sized organizations and larger institutions such as companies or universities pay higher flat monthly fees. Based on these assumptions, total annual revenue in the first-year

amounts to approximately 21,000 euros. At the same time, operational costs remain deliberately controlled. Marketing and sales expenses are initially higher due to launch activities and partner onboarding, while platform, administrative and development costs remain relatively low. As a result, total annual costs amount to approximately 18,800 euros, leading to a slightly positive EBITDA of around 2,400 euros. This outcome reflects a realistic pilot-phase scenario in which early investments are balanced by modest but stable revenues.

In the second year, Muniverse enters a growth phase characterized by an increasing number of recurring organizational partners and higher average participation per organizer. Revenue grows as more cafés and organizations adopt the platform and participation-based fees scale accordingly. At the same time, marketing costs decrease due to increased brand awareness and word-of-mouth effects. Under these conditions, annual revenue increases to approximately 65,000 euros, while costs rise at a slower pace to around 55,000 euros. This results in a positive EBITDA of approximately 10,000 euros and marks the break-even point of the business model.

By the third year, our project reaches a more mature stage with a stable partner base and a higher proportion of medium and large organizations. Recurring monthly fees represent the majority of revenue, providing predictability and financial stability. Operational costs remain controlled, as the platform does not require proportional increses in staffing or infrastructure to support growth. In this phase, annual revenue is projected at approximately 140,000 euros, while total costs amount to around 90,000 euros, resulting an EBITDA of approximately 50,000 euros. This demonstrates the long-term profitability and scalability of the model. Overall, the profit and loss development shows that Muniverse can achive financial sustainability through gradual growth, recurring organizational partnerships and controlled cost structures. Our model confirms that profitability can be reached without monetizing social vulnerability or excluding users from participation. Thereby supporting both the economic and ethical objectives of the project

Category	Year 1 Pilot (€)	Year 2 Growth (€)	Year 3 Maturity (€)
Revenue			
Small organizers – monthly base fees (4.99 €)	2.395 €	4.790 €	8.985 €
Small organizers – participation-based fees (0.20 € per confirmed user)	2.880 €	17.210 €	36.015 €
Total revenue – small organizers	**5.275 €**	**22.000 €**	**45.000 €**
Medium organizations – monthly subscription fees	7.020 €	18.000 €	35.000 €
Large organizations – monthly subscription fees	8.940 €	25.000 €	60.000 €
Total Revenue	**21.235 €**	**65.000 €**	**140.000 €**
Operating Costs			
Marketing			
Marketing – digital local campaigns	6.000 €	10.000 €	12.000 €
Marketing – offline promotion and partnerships (flyers, QR codes, local venues)	3.600 €	8.000 €	13.000 €
Total marketing costs	**9.600 €**	**18.000 €**	**25.000 €**
Sales			
Sales – partner onboarding and acquisition	4.000 €	6.000 €	8.000 €
Sales – partner support and relationship management	2.000 €	4.000 €	7.000 €
Total sales costs	**6.000 €**	**10.000 €**	**15.000 €**
Platform and Production			
Platform operations – hosting and infrastructure	720 €	3.000 €	4.500 €
Platform operations – APIs and third-party services (maps, notifications)	480 €	2.000 €	3.500 €
Platform operations – app store and developer tools	240 €	1.000 €	2.000 €
Total platform and production costs	**1.440 €**	**6.000 €**	**10.000 €**
General and Administrative			
General and administrative – software and tools	900 €	1.500 €	2.500 €
General and administrative – legal and accounting basics	900 €	1.500 €	2.500 €
Total general and administrative costs	**1.800 €**	**3.000 €**	**5.000 €**
Human Resources			
Human resources (founder-led phase / first hires)	0 €	18.000 €	35.000 €
Total Operating Costs	**18.840 €**	**55.000 €**	**90.000 €**
Result			
EBITDA	**2.395 €**	**10.000 €**	**50.000 €**



P&L Excel is uploaded in Github.

9. Technical architecture (Auger)

9.1. Database overview

The Muniverse database supports a social platform where users can create, discover, and join events based on interests, availability, and location. The system differentiates between normal users and business users, allowing the latter to offer sponsored spaces or activities.

The database is implemented using MySQL (InnoDB) and follows a relational architecture, ensuring data integrity, scalability, and clear separation of concerns.

9.2. Main entities and tables

9.2.1. user_roles

Defines the different types of users in the system.

- id (PK): Unique role identifier
- role_name: Role name (e.g. normal, business)
- description: Role description

Purpose: Enables role-based behavior and permissions.

9.2.2. users

Stores registered platform users.

- id (PK): User identifier
- name: User or business name
- email: Unique email address
- password: Encrypted password
- role_id (FK) → user_roles.id
- onboarding_completed: Indicates profile completion
- created_at / updated_at: Audit timestamps

Purpose: Central entity representing both individuals and businesses.

9.2.3. user_preferences

Stores users' interest categories.

- id (PK)
- user_id (FK) → users.id

- category: Interest category (culture, food, games, language, sports)
- created_at

Constraints:

- Unique (user_id, category)

Purpose: Enables personalized event recommendations.

9.2.4. user_availability

Represents weekly availability of users.

- id (PK)
- user_id (FK) → users.id
- day_of_week: 0 (Monday) – 6 (Sunday)
- start_time / end_time
- created_at

Purpose: Allows matching users with events that fit their schedule.

9.2.5. events

Stores events and sponsored activities.

- id (PK)
- user_id (FK) → users.id (creator)
- title
- category
- description
- location
- event_date / event_time
- max_participants
- participants
- is_sponsored
- created_at / updated_at

Purpose: Core entity representing activities available on the platform.

9.2.6. event_participants

Manages event registrations.

- id (PK)
- event_id (FK) → events.id
- user_id (FK) → users.id
- joined_at

Constraints:

- Unique (event_id, user_id)

Purpose: Resolves the many-to-many relationship between users and events.

9.3. Entity Relationships

user_roles 1 → N users

users 1 → N events (event creator)

users 1 → N user_preferences

users 1 → N user_availability

users N ↔ M events via event_participants

9.4. Referential Integrity & Constraints

- All foreign keys enforce referential integrity.
- ON DELETE CASCADE is used to automatically clean dependent data.
- Unique constraints prevent duplicated preferences and registrations.
- Indexed fields improve query performance (email, dates, categories).

9.5. Normalization

The database follows Third Normal Form (3NF):

- No redundant data
- All non-key attributes depend only on the primary key
- Relationship tables resolve many-to-many associations

9.6. Data Flow

1. Users register and are assigned a role.
2. Users define preferences and availability.
3. Users or businesses create events.
4. Users join events via event_participants.
5. Sponsored events are distinguished via role and flags.

9.7. Architecture Justification

This architecture ensures:

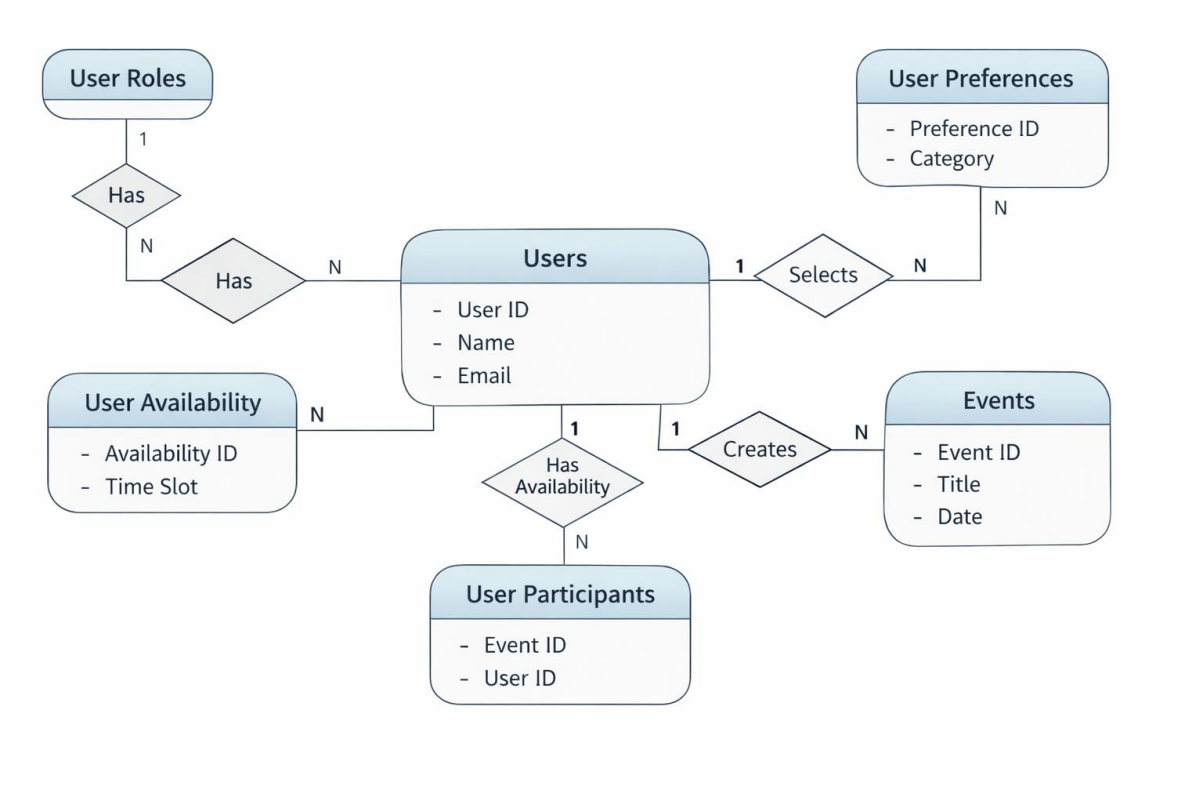
- Scalability for future features (payments, reviews, messaging)
- Clear separation between business logic and persistence
- Flexibility for recommendation and matching algorithms
- Academic clarity and maintainability

9.8. Conclusion

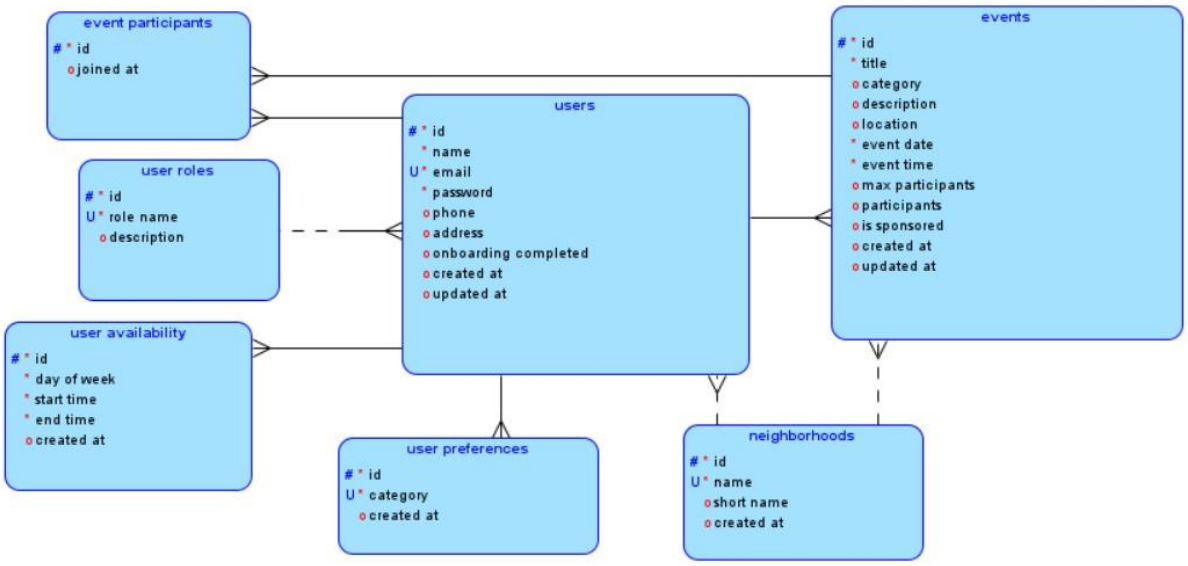
The Muniverse database architecture provides a robust and normalized foundation for a social event discovery platform, supporting both user interaction and business participation while maintaining data consistency and performance.

9.9. Visual Diagrams & Supporting Material

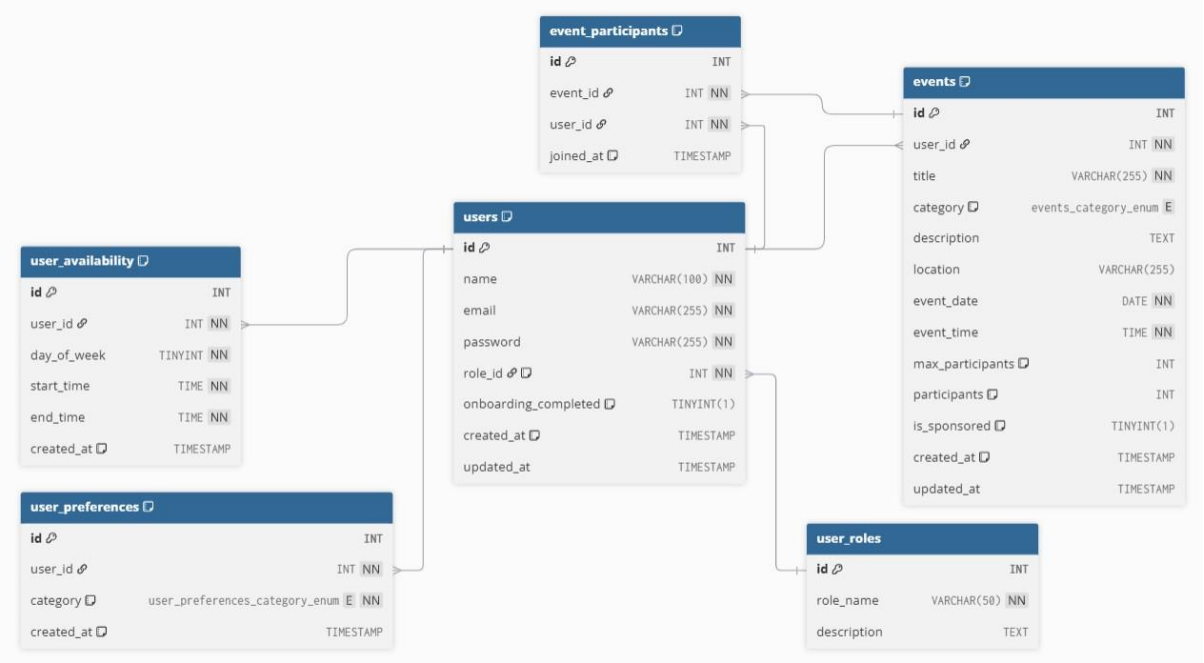
This section includes visual representations of the database architecture, providing a clearer understanding of the database structure, entity relationships, and data flow, complementing the technical explanations provided in previous sections.



Conceptual database model. Shows entities, attributes, and relationships at a high level.



Logical database model. Visualized using Oracle SQL Data Modeler, showing entities, attributes, and relationships with primary and foreign keys.



Relational database model. Visualized using dbdiagram.io, including table structures, primary keys, foreign keys and attribute datatypes for implementation.

10. Proof of Concept & Final App (Auger)

10.1. Proof of Concept (change title)

Objective

To prove the technical feasibility of a community-based social activity platform that enables Munich residents to discover, create, and join local activities based on their

preferences, availability, and neighborhood. The POC demonstrates that integrating user personalization, geolocation-based neighborhood, and a calendar-driven event discovery system is achievable using a traditional PHP/MySQL stack with modern frontend enhancements.

Scope

Included:

- User registration and authentication (normal users & business accounts)
- Onboarding flow capturing user preferences (categories) and availability (time slots)
- CRUD operations for events/activities
- Event participation system (join/leave)
- Neighborhood auto-detection from addresses using postal code mapping
- Calendar view for event discovery
- Role-based functionality (normal users vs. sponsored business spaces)
- Address autocomplete integration via Photon API (OpenStreetMap)

NOT Included:

- Payment processing or monetization features
- Push notifications or real-time updates
- Advanced recommendation algorithms (AI/ML)
- Chat/messaging between users
- Admin panel for moderation
- Email verification or password recovery
- Social authentication (OAuth)
- Native mobile application

Core features implemented

The prototype implements a complete user registration and authentication system using PHP sessions and bcrypt password hashing. Upon registration, users are guided through a multi-step onboarding process where they select their preferred activity categories (such as sports, culture, gastronomy, or workshops) and define their weekly availability by choosing specific time slots for each day. This personalization data is stored in the database and used to filter the calendar view, showing only activities that match the user's interests and schedule.

The event management system allows authenticated users to create, edit, and delete community activities. Each event includes essential information such as title, category, description, date, time, location, and an optional participant limit. The system distinguishes between regular users and business accounts: while regular users can

create informal community activities, business users can mark their events as "sponsored," giving them visual prominence in the interface.

A key technical achievement is the automatic neighborhood detection system. When a user enters an address during event creation, the system queries the Photon geocoding API to provide real-time address suggestions. Once an address is selected, the system extracts the postal code and maps it to one of Munich's predefined neighborhoods using a comprehensive postal code dictionary. This eliminates the need for users to manually select their neighborhood and ensures geographic accuracy for location-based filtering.

The participation system enables users to join and leave events with automatic capacity management. The system prevents users from joining their own events, enforces maximum participant limits when defined, and maintains an accurate count of current participants. Users can view all events they have joined through a dedicated "My Events" section.

The calendar interface presents activities in a weekly view, automatically filtered by the user's saved preferences and availability. Events are color-coded by category for easy visual identification, and users can navigate between weeks to discover upcoming activities in their area.

Technologies used (frameworks, tools, APIs)

Layer	Technology
Backend	PHP 8.x (vanilla, MVC pattern)
Database	MySQL/MariaDB with InnoDB engine
Frontend	HTML5, CSS3, Vanilla JavaScript
Styling	Tailwind CSS
Geocoding API	Photon (OpenStreetMap-based, free, no API key required)
Architecture	Server-side rendered PHP views with MVC structure
Session Management	Native PHP sessions
Password Security	bcrypt hashing (password_hash)

Limitations (what is missing or simplified)

The current implementation operates without real-time updates, meaning users must manually refresh the page to see new events or participation changes. This could lead to race conditions where multiple users attempt to join an event simultaneously when only one spot remains.

The neighborhood detection system is hardcoded specifically for Munich postal codes. Expanding to other cities would require manually adding new postal code mappings for each location, which does not scale efficiently for a production application.

The authentication system lacks email verification, allowing users to register with invalid or non-existent email addresses. Additionally, there is no password recovery mechanism, meaning users who forget their credentials have no self-service option to regain access.

The prototype does not include any search or text-based filtering functionality. Users cannot search for events by keyword, organizer name, or specific date ranges beyond weekly navigation.

Security measures are basic and suitable only for demonstration purposes. The application lacks CSRF token protection on forms, rate limiting on login attempts, and comprehensive input sanitization beyond what PDO prepared statements provide.

The user interface, while functional, has not been optimized for mobile devices or smaller screens. Some elements may not display correctly on phones or tablets.

All interface text is in a single language with no internationalization infrastructure, limiting the application's accessibility to non-German or non-English speaking users depending on the implementation language chosen.

Finally, the address autocomplete depends entirely on the external Photon API. If this service becomes unavailable or rate-limits requests, the location input functionality would be degraded.

Conclusion: Is the concept viable?

The concept is viable. The POC successfully demonstrates that:

1. User personalization is achievable – The onboarding flow effectively captures preferences and availability, storing them in a normalized database structure.
2. Geolocation integration works – Combining Photon API for address autocomplete with postal code-to-neighborhood mapping provides a seamless location experience without requiring GPS permissions.
3. The MVC architecture scales – The separation of models, views, and controllers allows for maintainable code that can be extended.
4. Community features function correctly – Event creation, participation tracking, and role-based access (normal vs. business) work as intended.

Recommendation: Proceed to MVP development with the following priorities:

- Add email verification and password recovery
- Implement event search and filtering
- Add push notifications for event reminders
- Develop a responsive mobile-first redesign
- Consider migrating to a modern framework (Laravel/React) for production scalability

10.2. Final App

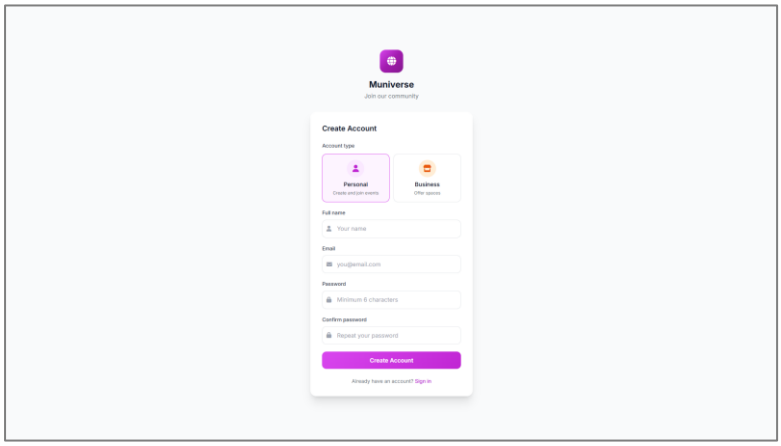
Access Information

Resource	URL
Live Demo	https://www.injected.club/
GitHub Repository	https://github.com/Real-Project-2025-2026/deliverables-real-project-bespoke-solutions
Test Credentials	User Email: auger.mora@hm.edu User Password: 123456

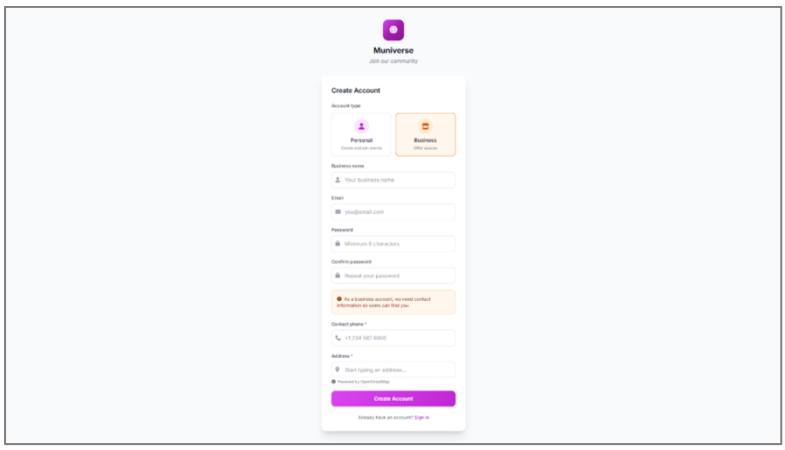
Key Features (with Screenshots)

User registration & login

This feature allows users to create an account and securely authenticate using their email and password. The user is able to create a Personal or a Business account.



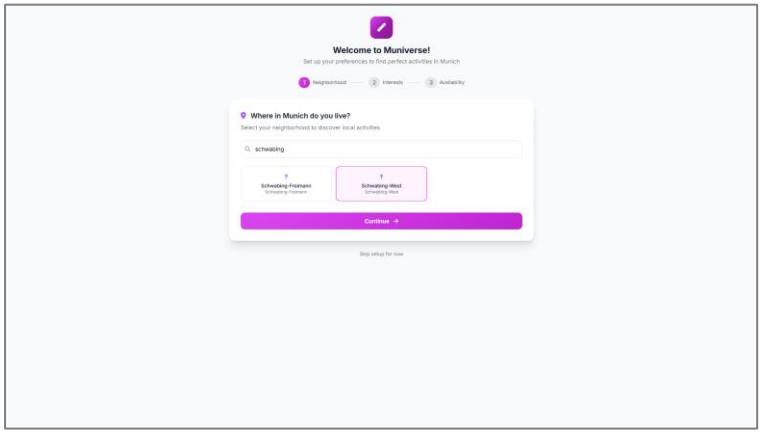
1.1. Registration process of a Personal Account



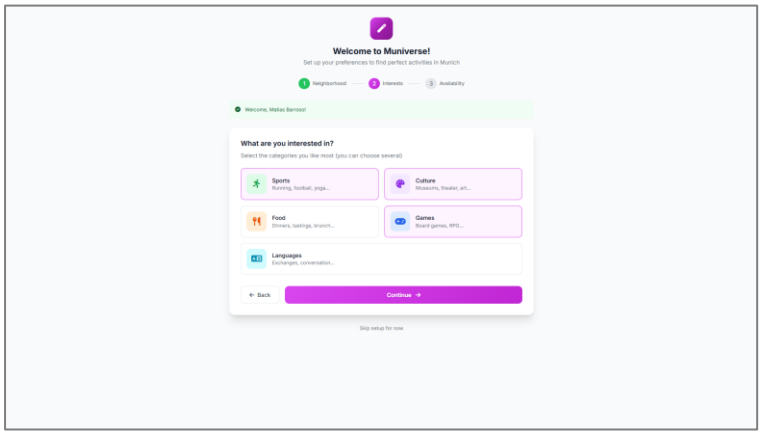
1.2. Registration process of a Business Account

Onboarding flow (preferences/availability)

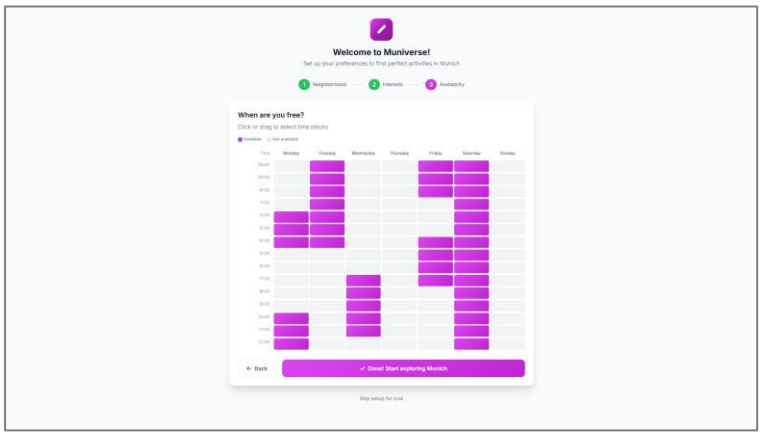
During onboarding, users define their neighbourhood, interests and weekly availability to personalize event recommendations. This information is used to improve matching between users and relevant activities.



2.1. User defining his neighbourhood



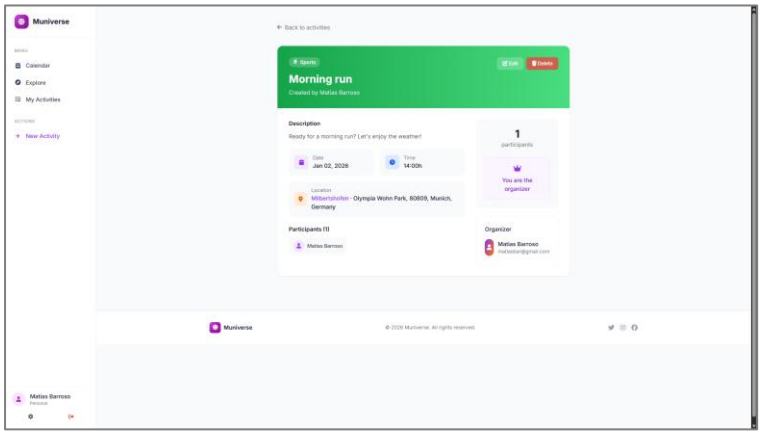
2.2. User selecting his interests



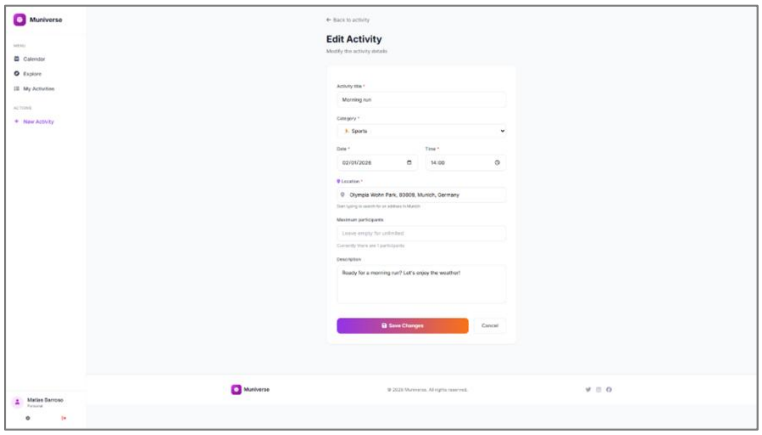
2.3. User defining his weekly availability

Activity creation & management

Users can create, edit, and manage activities by defining details such as title, category, date, time, location and participant limits. Event creators can track participation and update event information when needed.



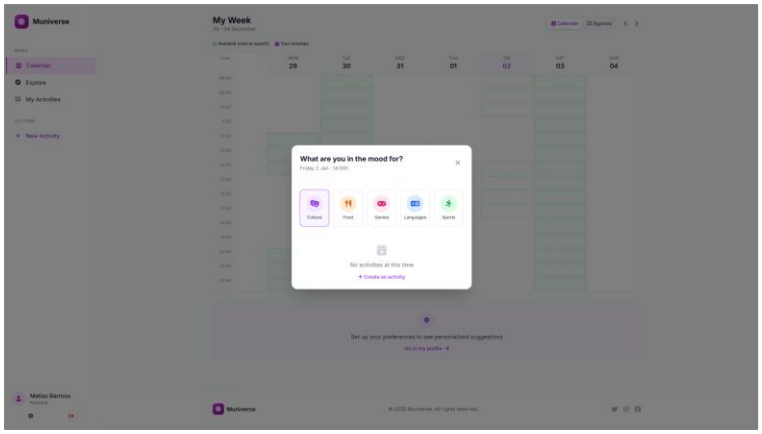
3.1. Visualization of a created activity



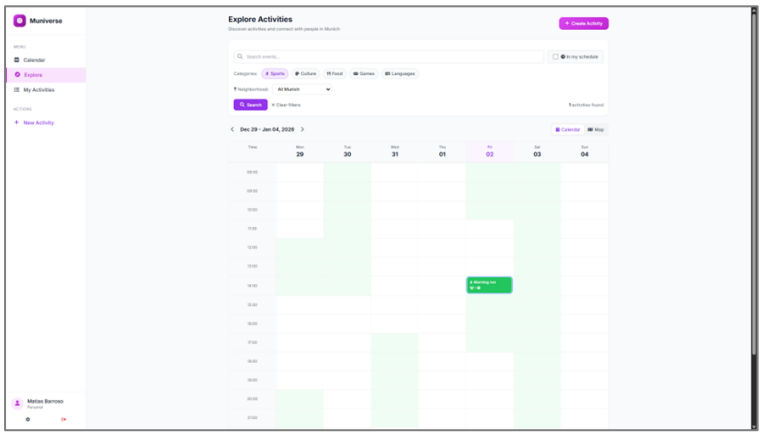
3.2. Edit process of a created event

Calendar view with filtering

The calendar view displays upcoming activities in a chronological format, allowing users to easily browse activities and filter them by availability, category and location.



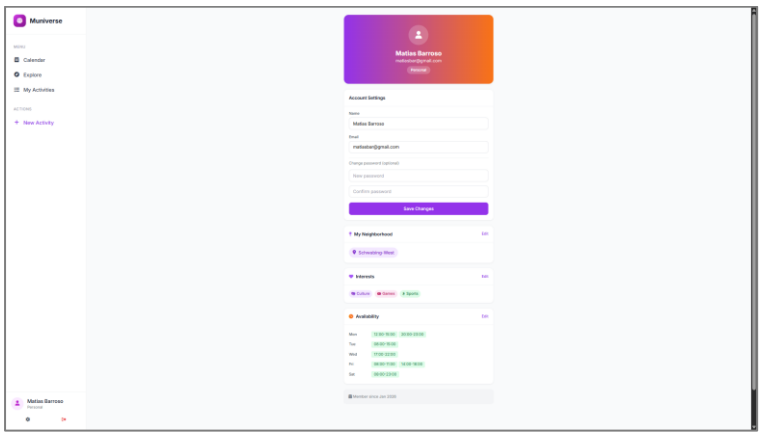
4.1. Calendar view of the user after clicking an available time slot.



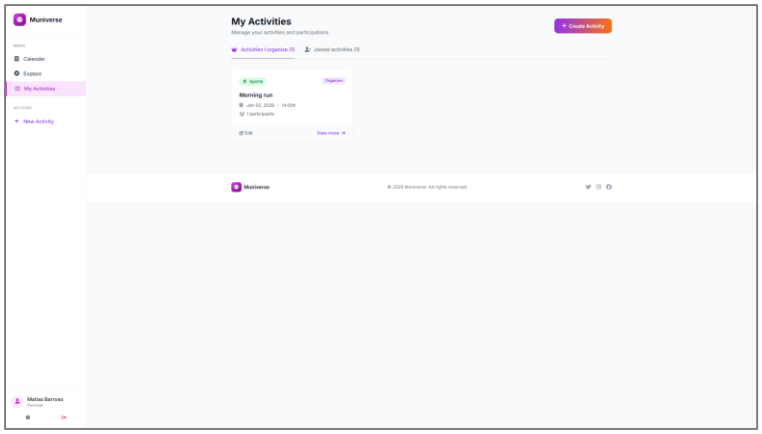
4.2. Calendar view of the listed activities with filtering.

User profile & activities organized / joined

The user profile displays personal information, preferences, and a history of joined or created events. This allows users to track their activity and engagement within the platform.



5.1. User profile visualization



5.2. Activities owned by the user

Installation Instructions

The following steps describe how to deploy and run the Muniverse application in a standard web hosting environment, assuming access to a hosting provider with FTP or cPanel support, as well as a MySQL database managed through phpMyAdmin. By following this process, the application can be installed locally or on a remote server using the source code provided in the project repository.

1. Upload files to your web hosting via FTP/cPanel
2. Create MySQL database in your hosting panel (phpMyAdmin)
3. Import schema: Run public/database/schema.sql in phpMyAdmin
4. Configure database: Edit public/config/db.php with your credentials:

   define('DB_HOST', 'localhost');

   define('DB_NAME', 'your_database_name');

   define('DB_USER', 'your_username');

   define('DB_PASS', 'your_password');

5. Access site via your domain URL

11. Conclusion & reflection (All)

11.1. Conclusion

In this project, Bespoke Solutions developed Muniverse, a user-centered app concept that helps young adults in Munich make better use of their free time through time-based activity discovery. Starting from an initial exploration of social loneliness and

community-building, our research revealed that the core barrier is often not the lack of opportunities but the difficulty of turning fragmented free time into meaningful experiences. Based on qualitative interviews and iterative prototyping, we refined Muniverse into an individual-first solution that supports users in selecting free time slots, filtering activities by mood and interests, and maintaining an overview of planned activities in calendar and list formats. Validation interviews with users and local businesses indicated demand for the concept and confirmed its feasibility from both the user and supply side, supporting the logic of our business model.

11.2. Reflection, limitations, and next steps

The project also highlighted several limitations and development priorities. First, the validation was conducted with a limited sample size and primarily within the Munich context, meaning that results should be interpreted as directional rather than statistically representative. Second, long-term retention and real behavioral change could not be fully validated within the course timeframe, as repeated usage and habit formation require longitudinal testing. Third, the business model depends on trust, quality control, and measurable outcomes for local partners. Future development should therefore focus on expanding the event inventory, improving trust signals (clear event expectations, atmosphere, newcomer friendliness), and ensuring that the user experience remains fast, curated, and not overly advertisement-driven. On the business side, the next steps include frictionless event creation, simple analytics that demonstrate value, and testing pricing assumptions under real-world conditions. Overall, the project demonstrates the importance of iterative learning and concept pivots based on user insights and provides a validated foundation for further product development.

12. Tasks

Person	Task
Problem identification	Sofie, Anatolii, Auger, Fran, Mergim
Solution ideas	Sofie, Anatolii, Auger, Fran, Mergim
CIAO, HOW, WOW, NOW	Sofie, Anatolii, Auger, Fran, Mergim
Crazy 8	Sofie, Anatolii, Auger, Fran, Mergim
5x Why	Sofie, Anatolii, Auger, Fran, Mergim
Value Proposition Canvas	Anatolii
POC Programming	Auger
Figma Wireframes	Anatolii, Sofie, Fran
User Interview Guideline	Sofie, Fran

Conducting Interviews	Sofie, Anatolii, Auger
Validation Interviews	Sofie
P&L	Fran, Anatolii, Mergim, Sofie
Business Model Canvas	Mergim, Anatolii, Fran
Final App	Auger