

Conceptual Prototypes for Inclusive Transformations of Public Spaces in Munich

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Abstract

Munich, a vibrant city known for its beautiful spaces, faces pressing challenges like increasing density and temperatures, necessitating resilient and inclusive urban infrastructure. Two spaces are already being considered by the city for transformation. Georg-Kronawitter-Platz is a small parking lot in the old city area. Our prototype would convert it to a vibrant pedestrian plaza with more greenery, seating areas, a playground and a fountain, in addition to expanding the pedestrian zone. These changes provide a much-needed urban oasis that decreases noise and air pollution in addition to heat. Our second prototype addresses the capacity and safety issues of Reichenbachbrücke and encourages active mobility by restructuring the street layout and turning car lanes into more space for pedestrians and cyclists. Our research in Ljubljana illustrated the importance of shared space that can accommodate the diverse needs of both current residents and newcomers. Adapting spaces to be more inclusive and people-first can lead to improved safety, comfort, accessibility and sustainability in Munich.

Problem Definition

Munich, like many cities, faces modern challenges like population growth and hotter summers every year^{1,2}. A core problem lies in the infrastructure's inability to accommodate the growing and diverse needs of Munich's residents. The current design prioritizes vehicular traffic, leading to inefficient use of space and compromised safety for pedestrians and cyclists. Additionally, the lack of green spaces exacerbates the urban heat island effect and diminishes the city's overall livability. The challenge is to reimagine these spaces in a way that promotes sustainability, safety, and inclusivity, creating a more resilient and vibrant Munich.

Inspiration

The city of Ljubljana was the main inspiration in developing ideas for these two public spaces. Specific aspects were considered, like closing streets to private cars and encouraging active mobility, access for people with various needs and abilities, and having multi-purpose spaces where different activities are encouraged such as meeting friends, eating, reading or relaxing. Bridges were also renovated or rebuilt in ways that allowed for using them as gathering spaces in addition to the valuable networks they connect, and dedicated to cyclists and pedestrians in the city center.

Project Plan & Rollout

As inspired by the approach in Ljubljana, an important aspect of these transformations is the overall strategy. A strategic vision provides a strong narrative that projects can be considered against, an easier way to discuss proposals with the public, and more awareness of the various impacts and potential benefits of such transformations. We envision these individual projects as building upon one another, thereby offering opportunities for adapting to local needs and demands, more creativity in deciding what following stages might look like, and more learning opportunities for future designs based on how the public interacts with the spaces.



Figure 1: Georg-Kronawitter-Platz - Stage 0 (own work).*



Figure 4: North City Park, Ljubljana (own image)



Figure 5: Butcher's Bridge, Ljubljana (own image)

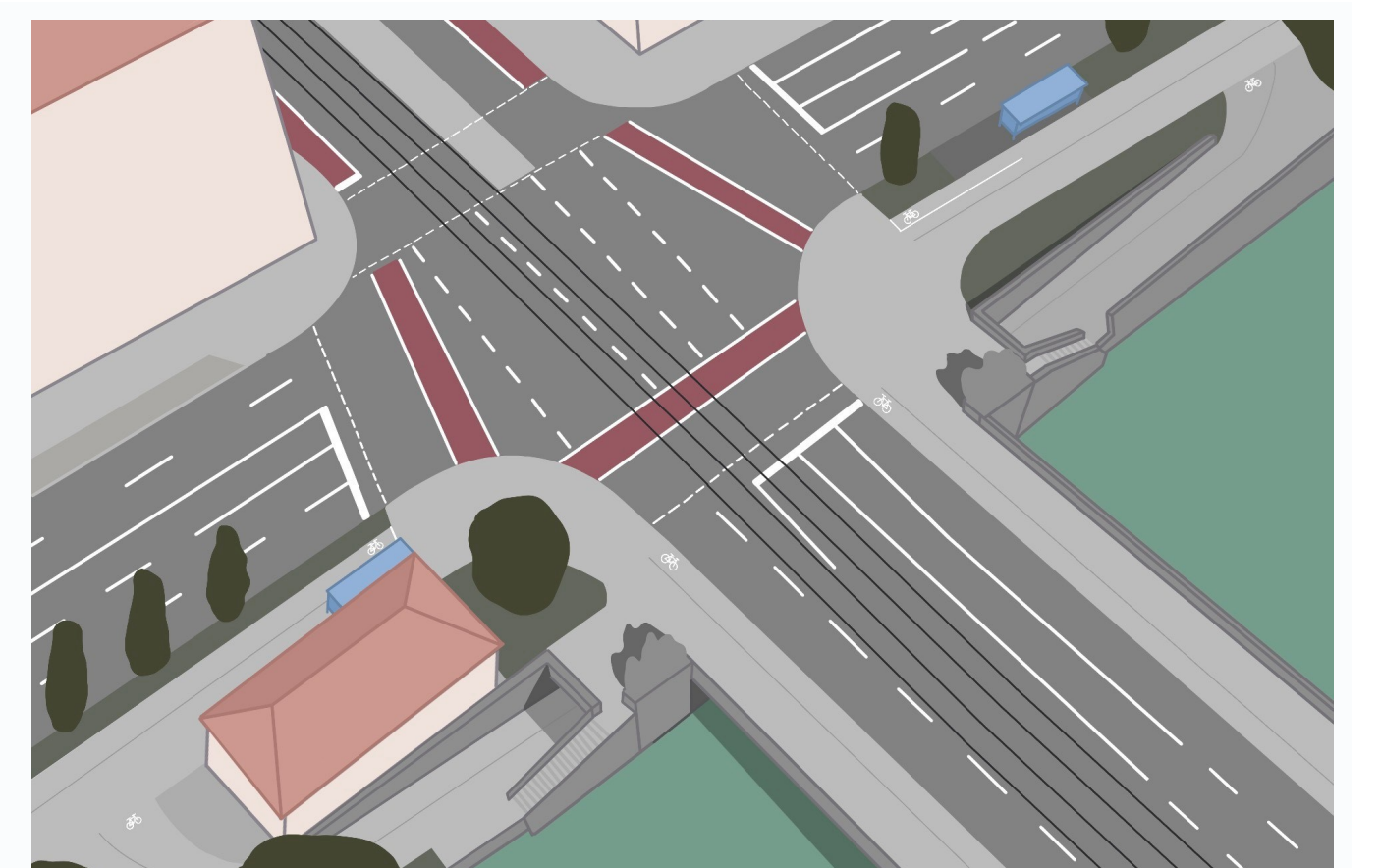


Figure 6: Reichenbachbrücke - Stage 0 (own work).*

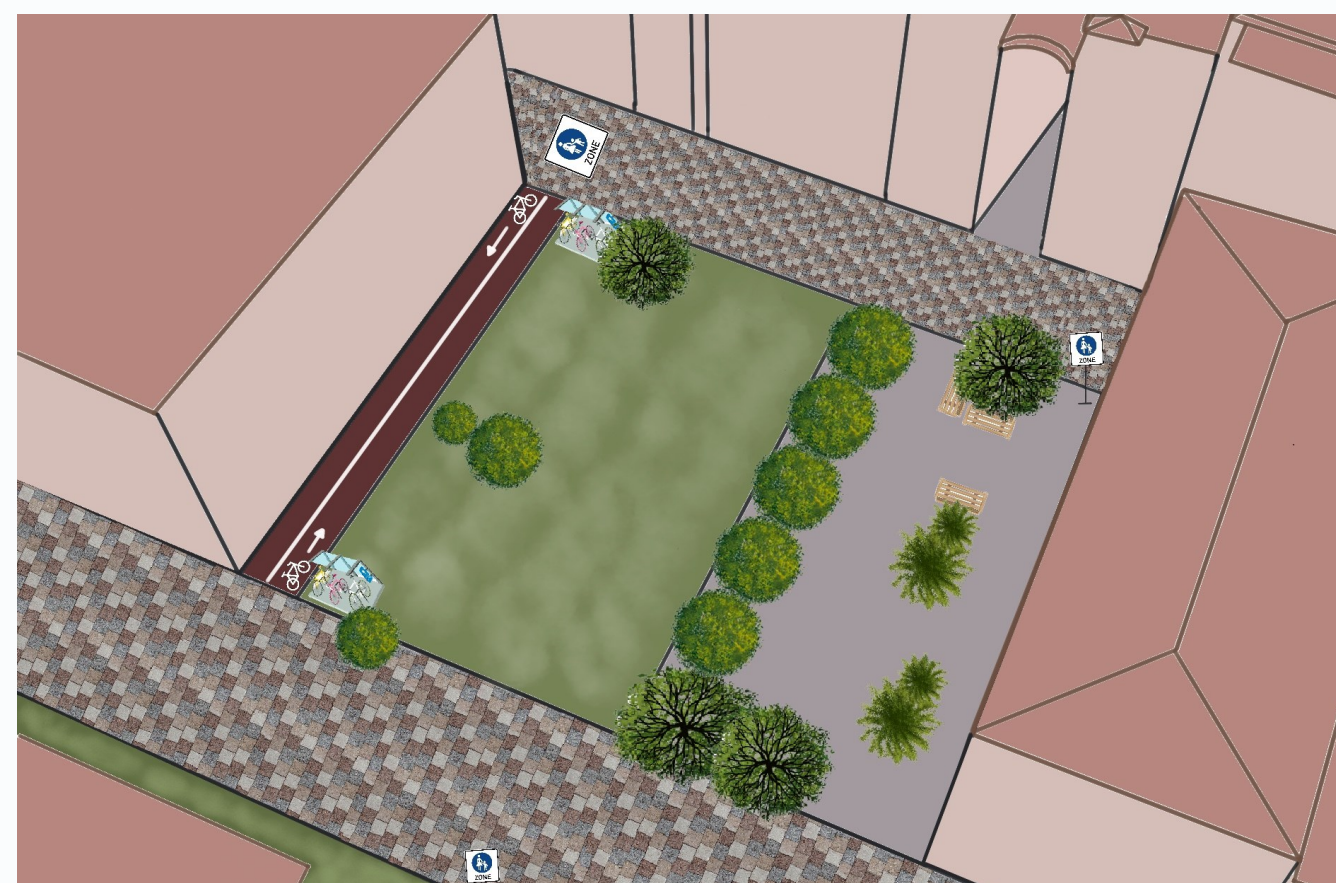


Figure 2: Georg-Kronawitter-Platz - Stages 1 + 2 (own work).*

Georg-Kronawitter-Platz

This urban space is located in Munich's old town, close to the shopping area and pedestrian zone on Kaufingerstraße. It currently offers a small parking lot, a pedestrian walkway, and the terrace of a nearby restaurant. Transformations for the space are already being considered, including tearing down the parking garage on the north-west side to allow for new buildings³. Our vision involves first closing the street and removing the parking spaces (Stage 1). With an additional green space, something that is hard to find in the vicinity, we lay the foundation for an urban retreat. The greenery makes it additionally attractive for people working nearby, improves the cooling of the city, and makes the ground more permeable to deal with heavy precipitation. In Stage 2 we add bike racks for secure parking of bikes, and since the north-west corner is already an entrance to a pedestrian zone, expanding it into the surrounding streets would allow for improved network connections and easy access to the newly designed space. Lastly, in Stage 3 the space is made even more welcoming by offering a playground, a water fountain, additional greenery such as trees and bushes, a variety of seating possibilities, and other elements that improve comfort, cleanliness and safety⁴. With these changes we aim to encourage people to not just travel through but to stay and enjoy a break from the hustle and bustle of the city.

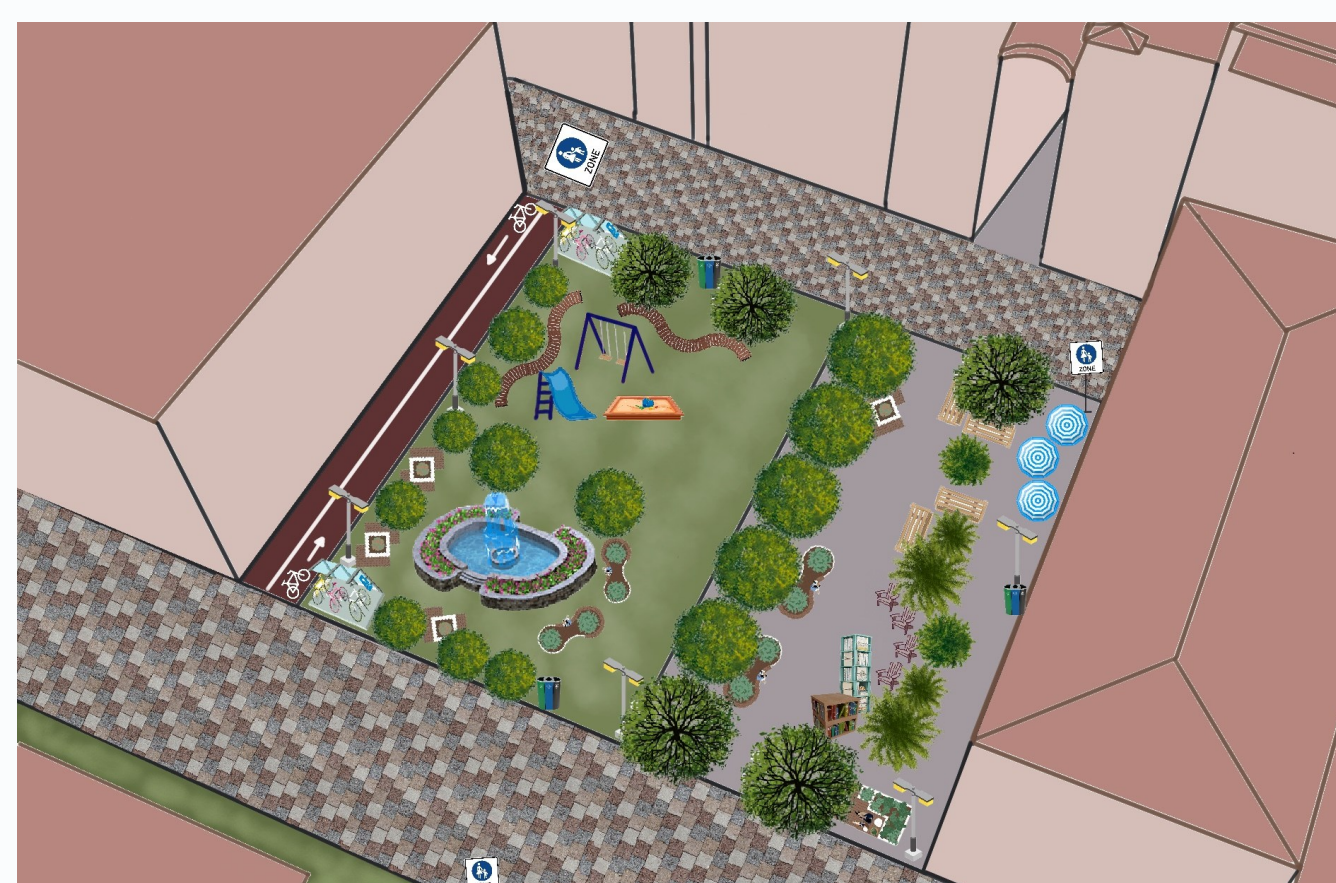


Figure 3: Georg-Kronawitter-Platz - Stage 3 (own work).*

Reichenbachbrücke

Reichenbachbrücke is a bridge south of Munich's old town, busy with cars, cyclists, pedestrians and tram riders getting in and out of the nearby neighborhoods. The bridge itself is a popular hangout for people wanting to enjoy the sun as well as those going to the banks of the Isar. Crowding at the north-western intersection is common due to the kiosk, restaurants and the Fraunhofer subway station, and further intensified by narrow sidewalks and double-lane bike path. The busy road and crowded paths have caused dangerous moments and accidents involving cars, pedestrians, and cyclists^{5,6}. Munich already desires to tackle these capacity and safety issues⁷. We suggest to first focus on these issues by restructuring the street layout, reducing the speed limits, and removing the cycling path under the bridge to avoid accidents between cyclists and pedestrians (Stage 1). Since cyclists will need to stop at the intersection, traffic lights will also be prioritized for them. The car lanes on the bridge will then be reduced to improve the flow of pedestrian and bicycle traffic (Stage 2). Finally, two options are presented for sharing space even further - closing the bridge to cars fully (Stage 3a), or creating a new bridge entirely that acts both as a safe route for pedestrians to either side of the river as well as a new public space for people to gather and enjoy the river and the sunshine (Stage 3b). The proposed bridge would integrate with the existing kiosk to offer additional space as well as a bathroom.

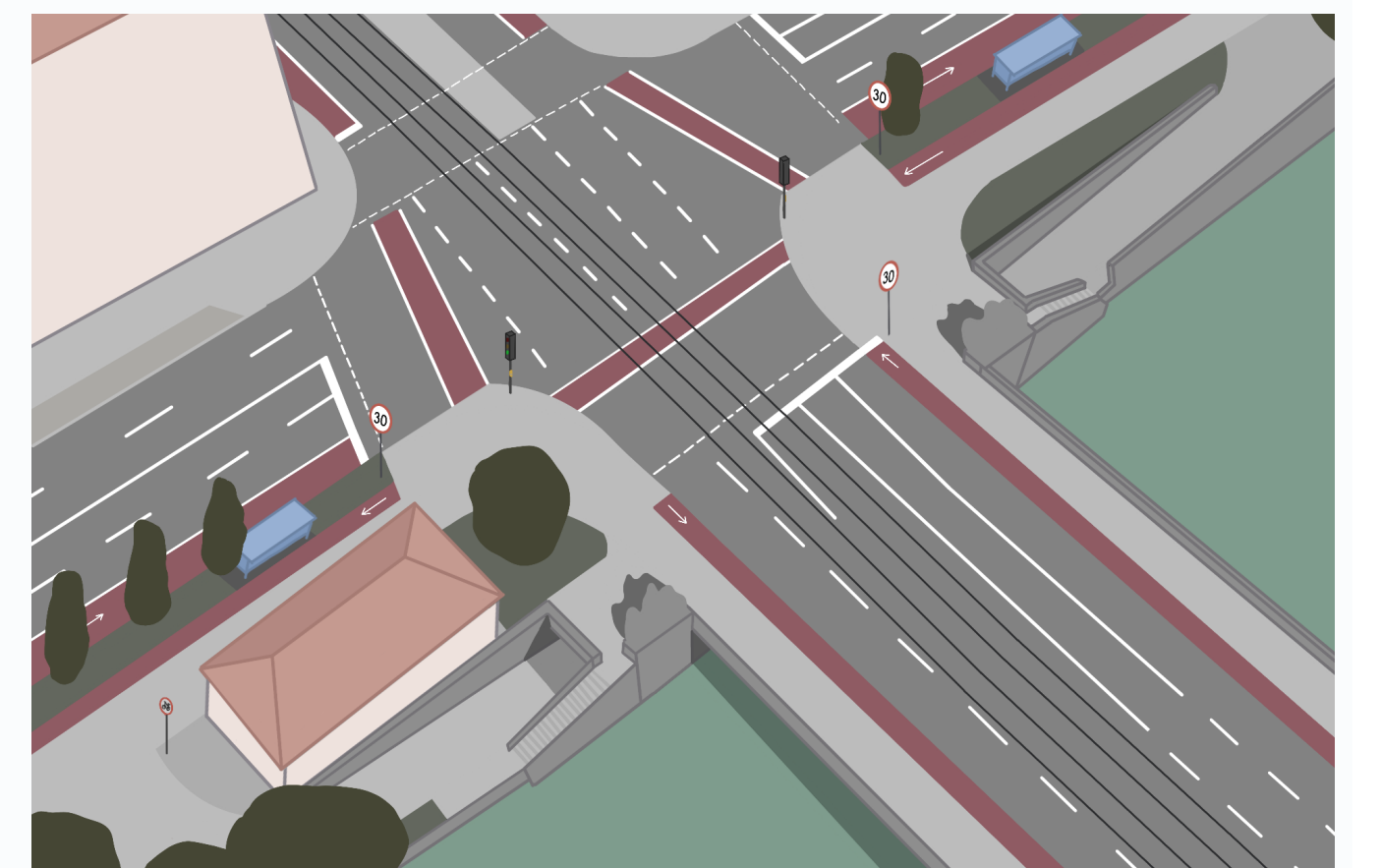


Figure 7: Reichenbachbrücke - Stage 1 (own work).*

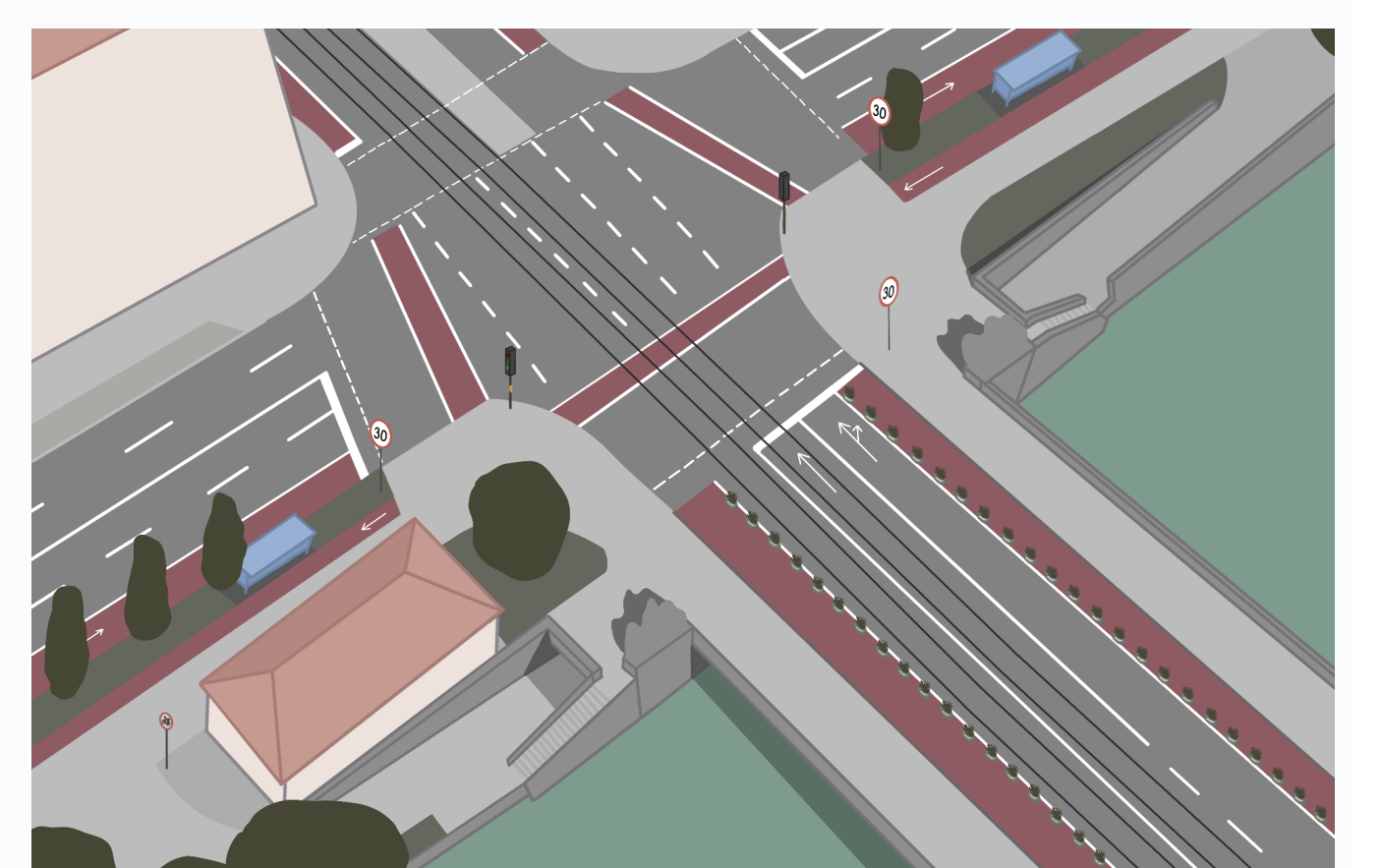


Figure 8: Reichenbachbrücke - Stage 2 (own work).*

Costs

The proposed bridge was inspired partly by Ljubljana's Butcher Bridge. A similar one over the Isar may range from 9 to 14 Mio €⁸. Planter barriers for safe bike lanes can be made affordably and sustainably with recycled materials⁹. Shade sails could cost up to 12.000 €¹⁰, but there are cheaper alternatives. Bike racks are not very common in Munich despite being relatively cheap; a basic one for 12 bikes is 370 €¹¹. A larger expense is the public toilet (potentially up to 600.000 €), however there are already plans to install more throughout the city, and the one we envision can be smaller and therefore cheaper¹². Funds may also be saved through reduced maintenance costs from less wear and tear from cars, and damages resulting from rainwater and flooding are mitigated by more permeable surfaces¹³. Finally, studies show that driving accounts for substantially more costs than walking and cycling, making such changes better for people's well-being and the economy^{14,15}.

User Groups & Space

These inclusive innovations consider people with various needs, preferences and values. Potential user groups affected are diverse and include pedestrians, cyclists, local residents, tourists, business owners, and commuters. The prototypes are designed to ensure accessibility for the elderly, children, people with disabilities, and economically disadvantaged individuals. The space itself is intended to evolve over time and have multi-functional features. For instance, planters that beautify a space as well as act as barriers for safety. Improved air quality and increased active mobility through the reduction of cars also contribute to the health and well-being of all, particularly those who are more vulnerable to environmental stressors such as children and the elderly.

Impacts & Challenges

Our prototypes envision spaces that are more inclusive, safe, and enjoyable, with outputs that range from increased greenery, areas for play and relaxation, and increased pedestrian areas and bike infrastructure. These can lead to outcomes such as improved air quality, safer roads and walkways, greater social cohesion, enhanced mental health, and economic benefits for local businesses. Acceptance could be threatened by those who use the existing parking, and lane closures may inconvenience drivers and local businesses worried about lost income. Congestion may shift to nearby roads. Concerns may be raised regarding overall cost and construction noise. Reimagined bridges would offer opportunities for recreation, active mobility, and community gatherings, but need to be balanced with traffic needs, existing driving habits, and accommodating potential increases in the popularity of the space. Addressing these issues with public consultations, communicating long-term benefits, and transparent planning is essential. Such a process would provide a sense of ownership and pride among residents, and phased implementation allows for gradual adaptation and generates insights for future stages. Communicating successful outcomes at each stage can attract further investment and support.

Participation Prototype

In addition to our suggested transformations, we want to encourage participatory planning and gather feedback that could inform such projects in Munich. By scanning this QR code, you can access a website that provides additional info and research, as well as an opportunity to share your thoughts on our prototypes and make your own suggestions for improvements to public spaces.



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