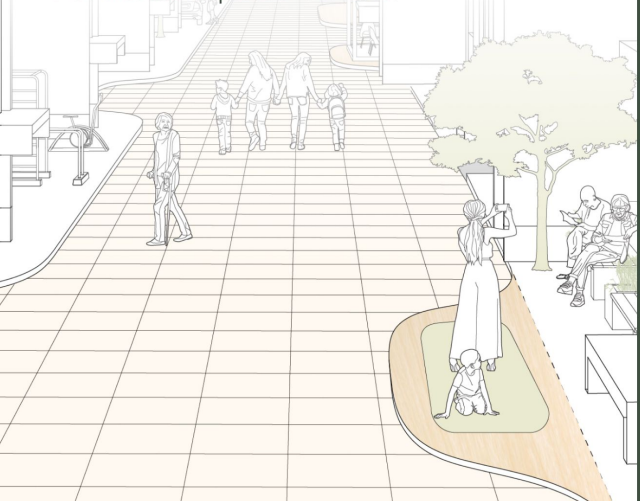


# LIVING STREETS

**STREETS ARE THE MISSING LINK IN NEW TAIPEI CITY'S 10-MINUTE CITY DREAM.**

In the past decades, external factors superseded citizens' needs in urban planning, creating crammed, disconnected and unsafe streets. Nowadays, many residents live on unpleasant streets only to save money, while their work and life remain centered in the walkable core of Taipei City. To transform into a 10-min city, New Taipei City needs tools to overcome the systematic issues that created unpleasant streets:



**Problem**  
**OUTDATED DESIGN PRACTICES**

Living Streets proposes a **street design template** to create streets that connect residents safely to their daily needs, while maximizing the activation of the little public space available.

**Solution**  
**STREET DESIGN SYSTEM**

We categorized Banqiao District's streets into 3 main types based on size and function. Then we proposed standardized human-centric design principles for each street type based on their future roles in our 10-min city.



**Commercial Street**  
*Local access to your daily needs*  
How can we improve the shopping experience to maximize the local access to assets on these medium sized market streets?

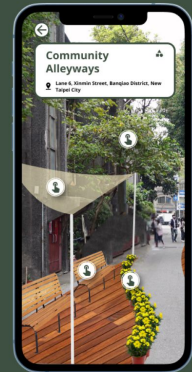
**Community Alleyways**  
*A place to go to, not through*  
How can we turn these narrow alleys used by parking and through traffic into inclusive public spaces for recreational needs?

**Traffic Artery**  
*Better and safer connectivity*  
How can we balance traffic efficiency and safely connect neighbourhoods simultaneously?

**Problem**  
**LOW CIVIC ENGAGEMENT**  
Living Streets incorporates our street design template into our **UrbanPlanAR app**. This tool allows planners and residents to easily communicate their visions in new exciting ways through augmented reality.

**Problem**  
**NO ADAPTATION**  
Living Streets collects preferences and engagement data from UrbanPlanAR app and our smart street furniture. This data helps us **adapt the design template** to stay in tune with the residents' needs.

**Solution**  
**UrbanPlanAR - CO-CREATION APP**  
*SHAPE THE FUTURE OF YOUR OWN COMMUNITY*



*"I have so many ideas for improvement, but I don't know who to go to or how to share feedback."*

- Banqiao City Resident

To solve this, we leverage New Taipei City's prevalent mobile technology and accessible 4G connection to create a localized solution: UrbanPlanAR. The app integrates with our street design system to help planners and residents easily communicate their visions in augmented reality. It bridges the existing gap between the government and residents to inspire a data-driven city that nimbly adapts to shifting local needs.

- 1 Review Proposed Designs in AR
- 2 Give Feedback on Designs
- 3 Submit Own Designs (Optional)

# 樂活·新民街

# STREET DESIGN SYSTEM

New Taipei already boasts the structure for a 10-min city, but mismanagement hijacked the livable city dream. Many Banqiao District residents we interviewed felt alienated from their city due to safety issues and lack of recreational venues. We tackled this massive problem with the streetscape. We categorized Banqiao District's streets into 3 main types based on size and function. Then we proposed new design principles for each street type and showed our vision by applying the principles to the Xinmin community. Finally, we organized all of this in a template to make the design system accessible and scalable.

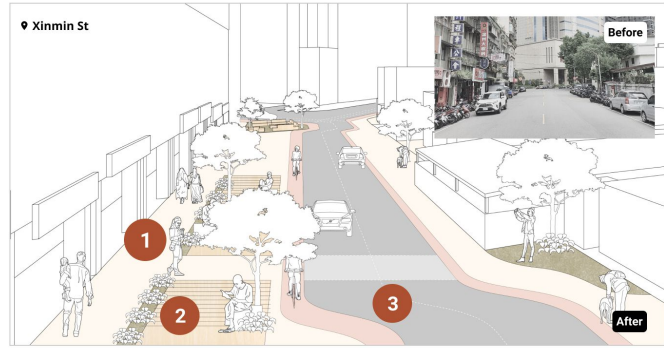
street type

## COMMERCIAL STREET LOCAL ACCESS TO YOUR DAILY NEEDS



Businesses already conglomerate around these medium sized roads at the center of existing neighbourhoods. However, shopping among roaring scooters with fellow pedestrians crammed to the side is stressful and discouraging. How can we improve the experience to maximize the local access to assets?

Vision



### 1 Pedestrian Priority

A shopping street's priority should be the shoppers. Maximise available sidewalks and block vehicles from entering the pedestrian space to ensure a safe shopping experience for kids and elderly alike. Protect against the elements by covered walkways or arcades under buildings.

### 2 Amenities Lane

Activate roadside parking space for a new flexible lane that adapts to the needs of commerce. This lane can host a variety of amenities: street food vendors, drop off locations, modular parklets or even container offices. If there's enough space, the amenities lane also includes a protected bike lane for those who come shopping from the edge of the neighbourhood. Residents can propose new amenities through the UrbanPlanAR app.

### 3 Winding Roads

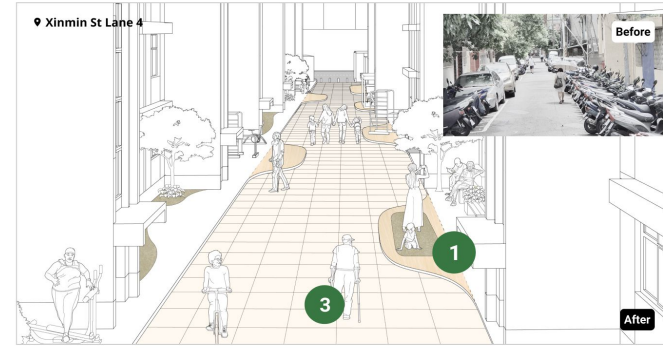
Commercial streets can host lanes for motor vehicles only after pedestrian priority is met. Even then, chicanes will keep the traffic slow and provide space for the amenities lane in its curves.

Principles

## COMMUNITY ALLEYWAYS A PLACE TO GO TO, NOT THROUGH



Leaving your apartment often means stepping out on these few meter wide alleys. As you walk, be ready to jump aside as cars honk and buzz past you. How can we turn these deserted traffic battlegrounds into inclusive safe havens of community life?

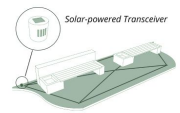


### 1 Modular Parklets

Community alleyways activate previous parking spaces with social infrastructure that is easy to manufacture, install and modify thanks to their modular design. The standard base platform can host a variety of modules such as workout equipment, community garden, shaded seating, Mahjong tables, or local art exhibitions (See a bench module below).

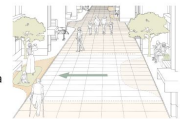
### 2 Measurable Engagement

The base platform of parklets is equipped with cheap pressure sensors that sense people standing on the platform. The solar powered LoRa transceiver on each platform uploads the usage analytics. Thanks to this smart system, the city can experiment and optimize the placement and type of each parklet.



### 3 Transformable Roads

The road should discourage any type of through traffic. Normally, the placement of the parklets creates winding roads to slow down the traffic, while in emergencies parklets can move to one side on their wheels to transform the street into a clear path.



## TRAFFIC ARTERY BETTER AND SAFER CONNECTIVITY



These streets transport resources and people between neighbourhoods like the artery supplies blood to our bodies. However, these streets nowadays cut through cities prohibiting access between the two sides. How can we balance efficiency and connect neighbourhoods simultaneously?



### 1 Pedestrian Connections

Nothing discourages walking more than having to wait for 3 minutes for a light to switch then having to watch out for scooters almost hitting you as they cut the corners on roads. Safer intersections increase foot traffic and increase activation of neighbourhoods.

### 2 Adaptable Sidewalks

Building hundreds of kms of traditional elevated sidewalks is expensive and time-consuming. However, Covid has taught us alternative lightweight infrastructure options to protect sidewalks through visual and physical barriers. This infrastructure will also help future autonomous vehicles navigate New Taipei's roads.

### 3 Fast Traffic for All

The main goal of these streets remains a quick and safe traffic flow. This should include slower modes of transportation like bicycles or e-bikes. These lighter vehicles frequently have to take traffic arteries on the way to the local transportation hubs. On these key routes, protected bike lanes are necessary for the best outcomes.

# UrbanPlanAR APP

To create resilient communities, we need to bridge the gap between designers and residents. We believe **augmented reality** can bring realism and efficiency to the engagement process for proposed street designs. Residents can see the exact scale and locations of changes and easily provide feedback on elements. They can also create their own designs. Together, these features create a seamless co-creation cycle that builds adaptable, data-driven cities.

## REVIEW

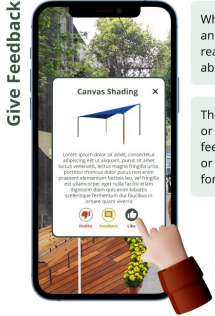
**Yun-Te walks through the proposed designs and gives feedback.**

UrbanPlanAR invites residents to engage with designs proposed by the city government in AR. Residents can vote or give written/recorded feedback on the overall design and individual amenities in exchange for reward points.



Move phone camera around the street to see proposed amenities and street design.

User sees the 3D size and location of various virtual objects.



When user clicks on an object, they can read more details about the proposal.

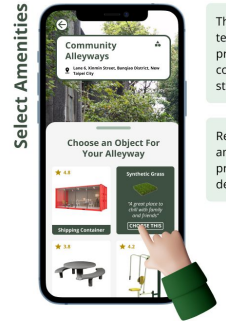
They can Like, Dislike, or give more detailed feedback in open-text or voice recording formats.



## DESIGN

**Ming proposes an outdoor table for hangouts after work**

UrbanPlanAR also provides creative residents the option to build their own designs in AR with the amenities from the street design template. By making co-creation accessible and fun, residents are encouraged to shape the future of their own community.



The street design template contains premade modular components for each street type

Residents select the amenities they want to propose for the designated area in AR



Choose an area to put your object



Submit Design



## BUILD

City officials review and implement the design

Consolidate quantitative and qualitative feedback for design



Iterated design implemented, empowering more users to participate



Amenities monitored for usage and feedback for future iterations

# PRIVACY

Data privacy is held in the highest regard in our design. We ask for consent when collecting feedback and monitor the amenities through anonymous sensors that only collect the data we need. We do not use cameras as they can be easily abused for surveillance purposes. All feedback collected through the app can be provided anonymously.

# PARTICIPATION

Civic participation is key to creating an adaptive community. Meaningful co-creation and feedback opportunities through an easy to use tool lowers the barriers to participation in urban planning. This transparent process for engagement is fitting for Taiwan's democratic society.

Local governments can further encourage participation with reward points that can be used for public transportation, bike share and public facilities such as gyms and museums.