# DIVERSE SHARING: APSARA CONVENTION AND EXHIBITION CENTER ROOFTOP PARK

IFLA ASIA-PAC LA Awards 2023

Award Categories –BUILT CATEGORY:  Park and Open Space

# PROJECT STATEMENT

The project site is located in Cloud Town, Hangzhou City. For actively embracing imagination, a once abandoned industrial campus has now become the industrial hub of cloud computing, big-data and artificial intelligence. Every autumn since 2015, the world's largest scientific and technological fiesta, the Apsara Conference, hosted by Alibaba Group, takes place here. As the increased scale of the conference each year, the existing exhibition center cannot accommodate tens of thousands of participants. Therefore, the client's objective was to develop a more remarkable landmark. However, Alibaba, the conference's initiator, did not want the public's imagination to be limited to the building's design alone.

Therefore, the design teams for both landscape and architecture collaborated on the concept of a rooftop park that can be flexibly used. In the second phase of the project, the convention and exhibition center was transformed into a low-rise vertical park where the landscape takes precedence over the building, creating a more inviting public space. The goal was to provide more leisure areas for the citizens of Cloud Town and turn the convention center into a more accessible and welcoming public space. This project serves as a successful model for designing rooftop parks for urban public buildings.

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**Project Title:** Diverse Sharing: Apsara Convention and Exhibition Center Rooftop Park
**Project Address:** Cloud Town
**City & Country:** Hangzhou, China
**Project Size:** 25,5591 SqM (the roof park covers an area of 15,039 SqM)
**Completion Time:** 2017.09
**Award Category:** BUILT Category - Park and Open Space

# PROJECT NARRATIVE

## Project Background

The original site was used as a parking lot, with temporary tents erected during the annual Apsara Conference to serve as exhibition halls. Despite being surrounded by mountains and having excellent landscape conditions, most of the 3.5 square kilometers of land in Cloud Town had already been developed into industrial buildings, making it challenging to create a public urban park for the town's residents to use for public activities.
The design team was tasked with meeting two main demands: providing a large-scale exhibition space to meet the needs of the Apsara Conference, and addressing the shortage of public activity areas in Cloud Town.

## Design Goals

As a large-scale public building that consumes significant social resources, the design should not only meet the needs of exhibitions but also create greater social value. Therefore, the design goals focused on a larger urban area, going beyond the exhibition functions and exploring more possibilities beyond that. This helped the team to examine the possibility of using a composite overlay method to share a body with other urban public facilities and achieve higher resource utilization efficiency.

## Redefining the Rooftop Park

During the initial design phase, the design team proposed the concept of a shared rooftop park and collaborated with the architecture team to shape the building in a way that was most suitable for the environment. With the aim of returning the fifth facade of the building to the citizens in today's increasingly crowded urban environment, the design team broke away from the traditional focus on the aesthetics of rooftop parks and reprogrammed the rooftop as a civic space with programs such as an aerial track that integrated various activity areas along the way.

The rooftop park functions as a sports park for daily use, and during exhibitions, it can serve as a large temporary exhibition hall. This breaks away from the traditional design thinking and typical features of large rooftop parks, transforming the building into urban green infrastructure, which is the project's greatest significance.

## Design with Flexibility

In today's society, the theme of health is receiving more and more attention. Therefore, the design of the rooftop park gives it the attributes of a sports park, emphasizing the public participation of the site, and providing a place for leisure and exercise for the residents of the town and nearby business employees.

All of the landscape facilities on the site can be flexibly dismantled, such as skateboard ramps, children's entertainment facilities, court nets, benches, vegetable planting boxes, etc., which can be transformed from sports activities to exhibitions. The design also includes hidden infrastructural components for assembling temporary exhibition halls, various electrical equipment, etc. on the site, which can meet various needs during exhibitions. The flat surface area can reach 10,000 square meters, truly achieving the landscape function greater than the building itself.

## Hidden Indoor and Outdoor Boundaries

The design breaks away from the traditional form of clear boundaries in buildings, connecting them to the ground through gentle grass slopes, blurring the boundaries between indoor and outdoor areas. The building looks more like the undulating microtopography of a city park, where stepping along the grass slopes with stones can easily interact with the site. It invites people to step onto the roof with a completely open attitude.

The rooftop park covers the sunken square up to the main entrance, combined with a semi enclosed staircase, making it an outdoor small theater. This place can be used for various functions such as rest and organizing semi outdoor activities. A freight ramp is set up on one side of the square, which can meet the freight requirements of general exhibitions, and this ramp has also become a playground for skateboarding enthusiasts.

## Extensive Green Roof

The building's large interior span, with a north-south span of up to 245 meters and an east-west span of 94 meters, combined with a low roof load, means that the soil cover can only be 300mm. This limitation makes it challenging to grow large vegetation and undertake grading work. Thus, the planting strategy focuses on using simple components to create diverse vegetation and maintain a low cost of maintenance. The roof is mainly covered with a lawn, along with tree boxes and ornamental grasses. Bermuda grass turf, supplemented with winter Ryegrass in autumn, makes up most of the lawn. The ornamental grass varieties include coreopsis, feather reed grass, sweet alyssum, and brown leaf moss, all of which are both visually appealing and ecologically beneficial. Lightweight soil is used as the matrix material for some of the sloped areas. This construction form is simple, with low roof load and less investment in later maintenance.

In terms of leak prevention on the roof, the design uses waterproofing and water-guiding measures, combined with a ground rainwater garden to recycle and utilize rainwater.

## The Vision of Cities for All

After completion, the project is open to public with no restriction, truly implementing the concept of returning the public to the public. The rooftop park incorporates over ten interesting facilities, such as two five-a-side football fields, a sandpit, a grassy theater, a skateboarding platform, a community vegetable garden, a mobile cabin, etc., and connects them through a 760-meter undulating rooftop running track. The large soothing grass slopes make the roof a natural extension of the ground square. This place attracts a large number of citizens to exercise, relax, and occasionally hold various community activities such as town music concerts, football matches, marathons, etc. The park provides an opportunity for citizens to take a break from their busy urban lives. The entire park is accessible, providing equal opportunities for all ages, and is a must-visit for nearby residents, office workers, families, and children in their daily lives. The free, equal, relaxed, and open experience is like a microcosm of the town atmosphere, allowing all users who come here to gain a sense of belonging and joy.

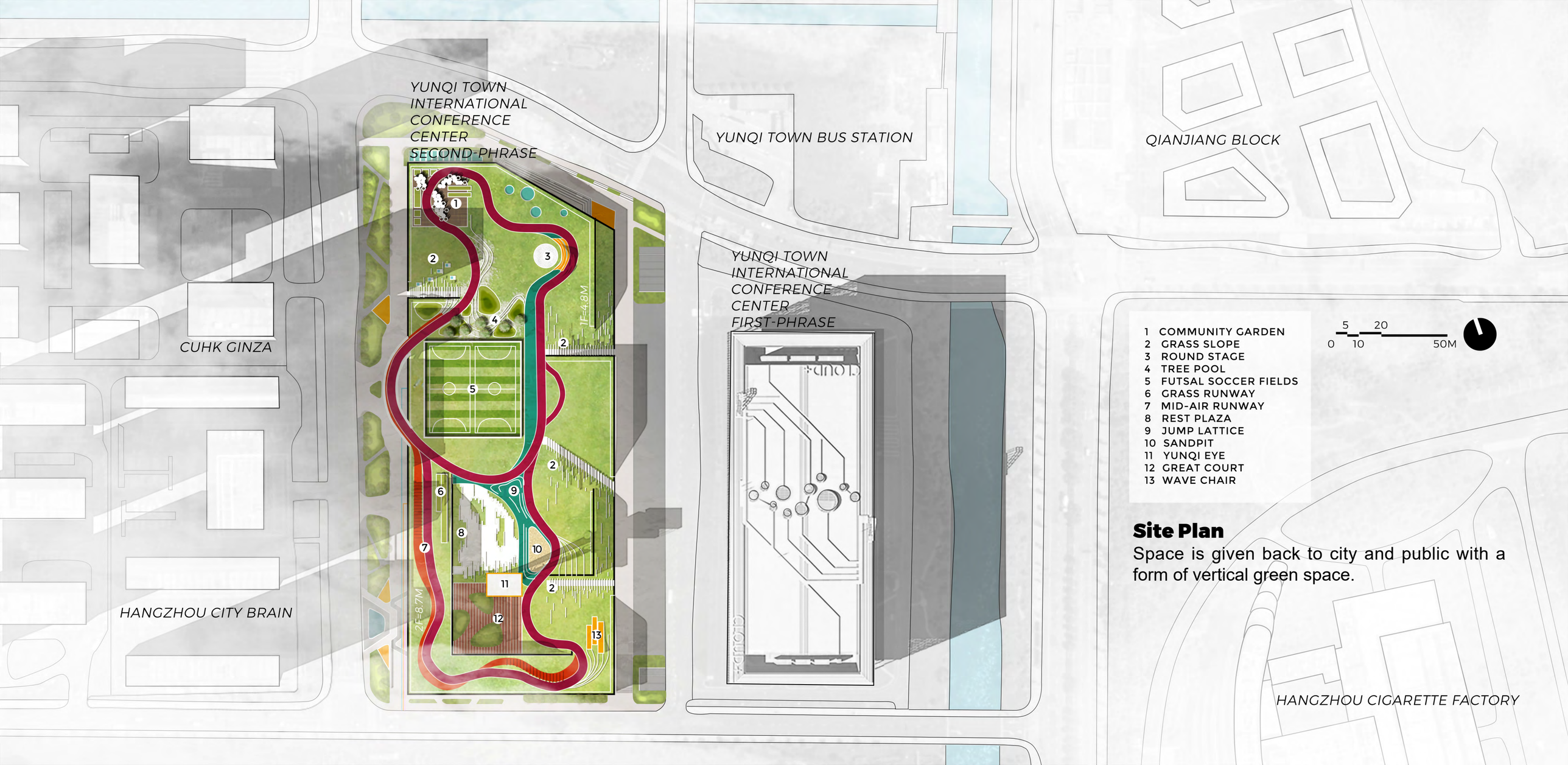
## Social Impacts

This plan was once heavily controversial and was asked to be overturned and redone several times. The design team invested a lot of time in persuading clients and local stakeholders to believe that the plan could maximize land benefits. This process of building trust was crucial to the ultimate success of the project. Since its completion, the park has received considerable attention and praise from the surrounding community and the entire city, bringing noticeable urban vitality and landmark effects to the Cloud Town.

Overall, this is a three-dimensional park that can accommodate various activities and has attractions, a sustainable development site that can generate economic, cultural, and radiating benefits, and a new urban open space with spiritual attributes.

# THE ROOFTOP PARK

Landscape rather than architecture that activates the site and integrate buildings, people, and city together.




## Site Plan

Space is given back to city and public with a form of vertical green space.


## Conversion Between Different Functions

The rooftop park functions as a sports park for daily use, and during exhibitions, it can serve as a large temporary exhibition hall.

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SOCCER FIELD

RUNWAY

## PARK SETTING: SPORTS PARK

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**MID-AIR RUNWAY**

The undulating rooftop runway is the greatest feature of the project. It was the only rooftop runway in Hangzhou at that time.

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## PARK SETTING: CELEBRATION CULTURE PARK

The park has become the stage of cultural life in the Cloud Town.

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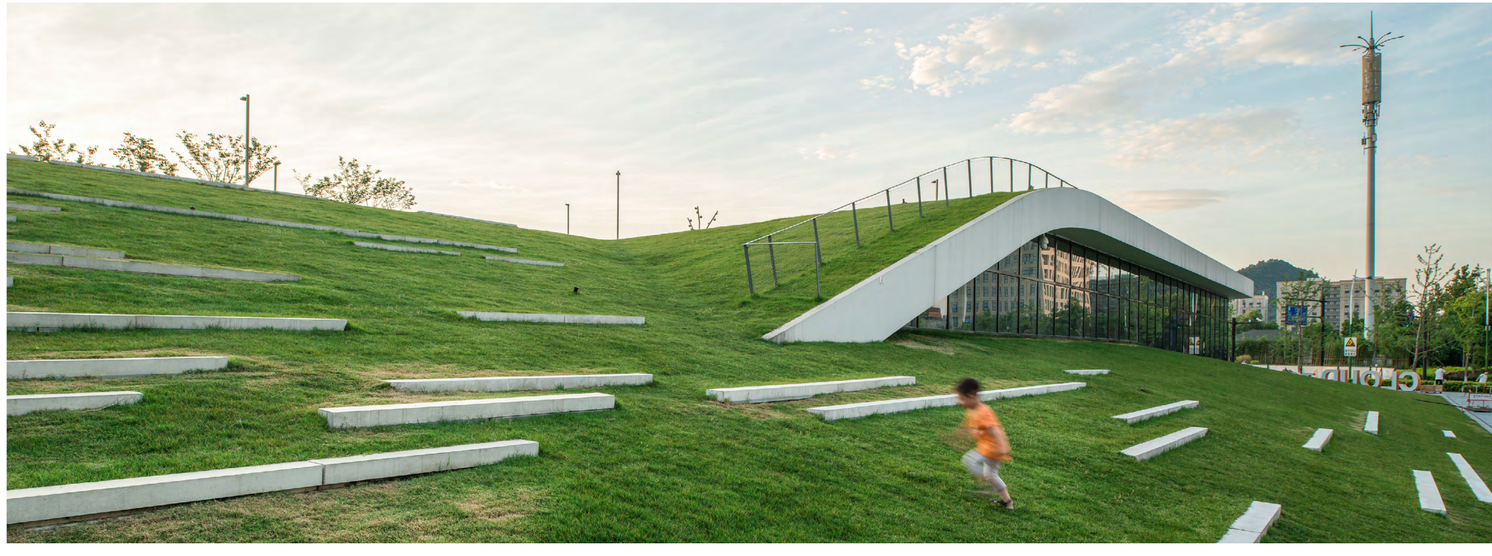

**GRASS SLOPES**

The gentle grassy slope attracts people to rest and stay here. The whole roof looks like a natural extension of the ground, inviting people to step onto the roof with a fully open attitude.

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**SINK-STYLE SQUARE AT THE ENTRANCE**

The roof garden covers a sunken plaza at the building's main entrance, and the freight ramp is designed in an undulated origami shape.


SANDPIT


REMOVEABLE WOODEN HOUSES


CURVED STEPS


ROUND STAGE


VEGETABLE GARDEN

## CITIES FOR ALL

The rooftop park is composed of various programs and are able to provide flexibility for events and pop-up activities.And it is an attractive open place for all ages.


## LOW MAINTAINANCE PLANTS


Lobularia Maritima


Dianthus


Coreopsis


Daylily


Brown Leaf Moss


Feather Reed Grass


Abelia


Inkberry

## EXTENSIVE GREEN ROOF

Grading, rain garden, and permeated materials are integrated for rainwater harvesting to promote ecology and resilience.