LUMINOUS ARCHES

REWEAVING CITTÀ STUDI

The 16th Virtual Design World Cup

Introduction

Project Overview
The Luminous Arches is a strategic urban regeneration proposal for Milan's Città Studi. It transforms the district's scattered layout into a compact, logical campus ecosystem, bridging historical heritage with future academic innovation.

Core Concept & Fusion

Anchored by monumental arched gateways and classic orange tile roofs, the design preserves Italian architectural identity while acting as light and air channels, bringing natural daylight deep into the complex.

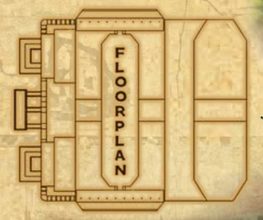
Urban Reorganization
Unifies the fragmented campus into a cohesive urban ecosystem while retaining the historical logic of classic yellow-brick facades and radial street patterns.



OVERALL SITEPLAN



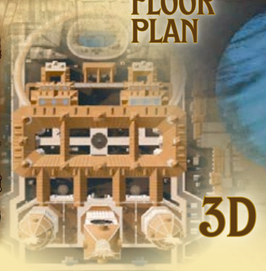
ECOLOGICAL INTEGRATION



FLOOR PLAN

Concept & Site Analysis

Functional Landmarks
The luminous arches serve as striking visual landmarks and natural light conduits, transforming the district into a seamless, smart-mobility hub for future education and research.



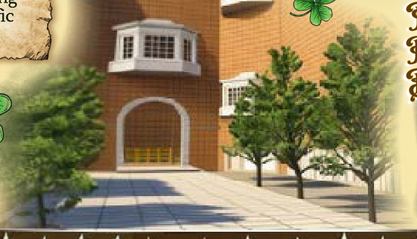
FLOOR PLAN

3D



Contextual Preservation
The intervention integrates harmoniously with the existing layout, keeping ground-level pathways fluid, safe, and seamlessly connected to the surrounding neighborhood without traffic disruption.

INTERIOR BUILDING ZONES



PRESERVED HERITAGE BUILDINGS





FIRE SAFETY SIMULATION

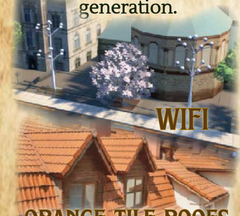


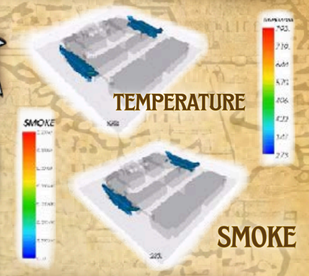
Public care & climate architecture (Aura-bots & Infinity Arch Pool:
Orange-hued AI robots glide around public zones to provide emergency guidance, event management, and wellness support, while the interlocked structural arch pool functions as an ecological climate-cooler reflecting heritage structures.

Technologies

Smart infrastructure hubs
Multi-functional structural pillars serving as interactive public furniture, student Wi-Fi hubs, and EV/device charging stations.

Photovoltaic orange tile roofs
Heritage-matching orange roofs embedded with solar panels, seamlessly blending historical preservation with renewable energy generation.





The Macro-Arch System

Climate & Cooling
The monumental arches serve as natural air conduits, maximizing daylight and wind flow to cool the dense urban complex.

Multi-arch frames provide exceptional load-bearing stability, while open-span arches improve sightlines, streamline emergency exits, and facilitate rapid firefighting access.





The Sparkling Luminous Skybridge

A large-scale elevated skybridge integrated as a structural statement, providing scenic pedestrian pathways and housing smart parking zones.



Transportation

Radial-circular nodes & the "Luminous Tram": Respecting traditional Italian piazzas and radial patterns, a dedicated "Luminous Tram" network connects campus zones while eliminating historical traffic congestion.



FORUM8 UC-win/Road DesignBuilder EXODUS Wind and Heat Movement Analysis Support Service.

CLOVER MAVERICKS