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Quanhong Li is a vice president at CallisonRTKL in Shanghai, and served as a member of the Steering Committee of the CTBUH 2016 International Conference in the Pearl River Delta. With more than 10 years of experience in commercial, retail, mixed-use and civic design, Li understands the details in every phase in a project. Expertise gained from working in several prestigious international design firms enables him to apply his diverse experience in his projects at CallisonRTKL. Li also inspires his team with his proactive altitude and passion towards architecture.

As the high-rise phenomenon moves from first- to second- and third-tier cities in China, high-density vertical urban developments are shaping the future identities of these cities by way of their strategic locations, massive scale, significant functional mix, and large social, economic and environmental impact. Meanwhile, infill projects in more established skyscraper cities have begun to reflect a new consciousness about cultural continuity and the integration of historic structures. In both cases, a clearly defined overall architectural identity, merged with an impressive range of functions, circulation choices and sense of scale, together form the fundamental linkage of these projects to their sites. If this is done successfully, such projects will become essential exemplars of twenty-first century urban destinations, without erasing the cultural and environmental history that inspires them.

“Unseen” Planning Logic Drives the Design

When designing large-scale mixed use projects, especially when there is a large retail component of the program, the overall planning of the project becomes very important. Naturally, in commercial projects, the driving force of the design is financial, and other objectives will need to be reconciled with that. The first objective is to determine how to make the retail center work: What's the market positioning of the project? How big does this retail component

need to be? Where should it be placed on the site? What's the circulation pattern? All of these questions need to be asked and answered clearly before the design team can move on to place the office, hotel, and residential tower components.

Changsha's Meixi Lake Jinmao Plaza (see Figure 1) is a good example of a project that started with the retail planning. The shopping center needed to be no less than 100,000 square meters. The main frontage of the shopping mall needed to face the major city road in order to get enough urban presence. One of the main entrances needed to directly connect with the subway in order to absorb incoming customers. The main concourse leads the flow of people to the other side of the site, connecting with the two iconic twin towers of the project, as well as to the neighboring Meixi Lake Culture Center, designed by Zaha Hadid Architects (ZHA).

The luxury hotel and office on the south side face the lake directly (see Figure 2). The podium of the tower includes hotel amenity functions, which are also oriented toward the lake view. The office tower on the north side has a slight offset to avoid overlooking into the windows of its south-side twin. The rest of the site was planned with residential towers to form two distinct communities, both of which take advantage of maximum lake frontage and views.



Figure 1. Meixi Lake Jinmao Plaza, Changsha.

Chengdu Yintai Center also provides a good example of a project in which retail priorities shape the overall design. The total development area is about 540,000 square meters, with the shopping center component comprising around 160,000 square meters above ground and 30,000 square meters underground. Given the proportion of the project's overall floor area devoted to retail, the first priority of the planning of the project was, again, how to make the shopping center work.

The project is located in south Chengdu, occupying a strategic location at the intersection of Tianfu Avenue and Yizhou City park, the central park of a new financial district. The map of the financial district clearly identifies several important aspects of the site: the most valuable retail frontage will be along Tianfu Avenue and the main thoroughfare Jinhui First Street at the north side; the park on the south side of the site provides great urban and green views, as well as open space for pedestrians and sports activities for the whole district (see Figure 3).

Given these strong edges of activity, the design team began to lay out the shopping center main frontage along the west and north side of the site, then created an internal path from the southwest corner of the site all the way to the northeast corner of the site, which comprises the main concourse of the shopping center and sets a major anchor at the center of the site. To take full advantage of the south-facing park view, two 180-meter luxury residential towers totaling 100,000 square meters are placed at the south side of the site directly facing the park. Another 220-meter tower consisting of 100,000 square meters of luxury apartments and a Waldorf-Astoria Hotel is placed at the most prominent location of the site along Tianfu Avenue, facing the park directly. Lastly, two 200-meter office towers totaling 160,000 square meters are placed at the northeast corner of the site, forming the impression of a gateway to the site (see Figure 4).

While the two preceding projects reflect new-build conditions and thus the



Figure 2. Chengdu Meixi Lake Jinmao Plaza's office towers, with Meixi Lake in the foreground and Culture Center to the right.



Figure 3. Chengdu Yintai Center, Chengdu – location map and circulation connections.



Figure 4. Chengdu Yintai Center – view from southwest.

“The negative impact a big retail podium would have on old villa buildings had to be reduced. As a result, two small roads separate the three parcels, breaking up the mass of the project.”

obligation to form a new identity for the site, a third project reflects a different set of priorities in a dense section of a more established skyscraper city. Shanghai Suzhou Creek Ankang Yuan project, as an example of an urban project in central Shanghai, is also a very interesting and complicated case. Located in Zhabei district, with its southern side along Haining Road and eastern side along Henan Road, the Ankang Yuan Project site covers a total of six parcels. Three parcels along Haining Road are commercial mixed-use developments, while two parcels on the northern side are residential developments; one parcel along the eastern edge is for an elementary school.

The greatest challenge of this project is the large area of existing old Shanghai-style townhouse buildings (*shikumen*) on the site, all of which are required to be preserved and restored to new commercial functions. Some of the most important ones need to be

preserved intact; other, less important buildings can be rebuilt on the site once an overall underground parking and retail space is developed.

Like the others, this project also has a large-scale retail component: a 150,000-square-meter retail shopping area. As with the other project examples, the retail planning comes first, albeit with an additional set of preservation considerations. Here, it was not a simple case of finding the best frontage for the retail project. Instead, the negative impact a big retail podium mass would have on old villa buildings had to be reduced. The project also needed to fully utilize available space for its underground retail area, for this would not be counted against the total FAR limit. As a result, two small roads separate the three parcels along Haining Road, breaking up the mass of the project.

Underground, 90,000 square meters of retail on two floors connect all three parcels together, maintaining a continuous experience, while avoiding destruction of historical preservation areas. The large retail floor plate then allows the placement of attractive anchor tenants at both ends of the retail spine. The remaining 60,000 square meters of retail is distributed among three parcels, keeping the new above-ground massing at two to three floors, to achieve a more pleasant shopping experience in harmony with the surroundings (see Figure 5).

The two 220-meter-plus office towers in the project are being placed at both ends of this commercial retail axis along Haining Road; these serve as the anchor function that pumps people into the site. Two 150-meter luxury apartment towers are placed along Haining Road, so as to minimize the shading impact of the residential buildings on the neighborhoods to the north and create a more dynamic layer for the overall project skyline. On each parcel, the retail block above ground will have a large glass-covered atrium that will bring light all the way down to the B2 level. In this way, a unique yet efficient and pleasant enclosed shopping experience is created, complementing the 24-hour accessible outdoor open space and pedestrian alleys around the preserved *shikumen* blocks. Along the north side of the three parcels, an outdoor lifestyle and entertainment street is created to connect all the three parcels together through ground-level pedestrian alleys, including the preserved group of *shikumen*, maintaining the rich architectural heritage while adding art installations along the paths. These features aim to enhance both customers' and local residents' experience (see Figure 6).

“Hidden” Local Cultural and Geological Characteristics Inspire the Design

Once overall planning is settled, the team then uses a rigorous analytic design approach to dig out site specifics and expose the unseen character of local cultural, geological, and landscape features to bring forth memories and experiences of the city and



Figure 5. Suzhou Creek Ankang Yuan, Shanghai.

place. All of these can be identified and transformed into design solutions that open opportunities to create some of the most exciting and impressive urban destinations.

Sometimes this refinement occurs at a large and abstract scale that may not be immediately obvious. When designing the Changsha Meixi Lake Jinmao Plaza project, the team conducted thorough studies of the history of the area and undertook intensive visits of the local cultural attractions of Changsha. They also had dialogues with local scholars and artists. The architectural concept was naturally originated through this deep local-culture “reading” process.

Often called the “Land of Crystals” in ancient history books, Changsha’s geological

environment is the result of centuries of the Xiang River cutting through layers of quartz, sandstone, siltstone, agglomerates and shale to create pristine white “sandbars.”

Here, the “Sand Crystals of the Xiang River” imagery suggests the eroded forms of the towers and base as the iconic historical remnants of the Xiang River’s flow. The sand crystal-shaped tower and the fluid form of the shopping mall together form the iconic image of the overall project, leaving visitors with a strong impression (see Figure 7).

The overall architectural design concept of Chengdu Yintai Center also originated from the unique local culture and lifestyle. Sichuan’s capital Chengdu is the leisure capital of China. “Happy living” is a cultural

spirit that expresses Chengdu’s lifestyle and is the starting point of this project’s concept. Yet at the same time, people in Chengdu take their rich cultural heritage seriously. “Delicacy,” “elegance,” and “sophistication” are the keywords that the team developed in order to create a project that was responsive to the local spirit.

Sichuan embroidery is a key symbol of local culture; it became the direct inspiration for the soft and smooth form of the towers and retail podium, the delicate composition of the bright and shiny horizontal cantilevered metal fins, and the dark-colored vertical stone strips. The light-gray glass curtain wall completes the image by delivering a vivid and rich tower façade, just as Sichuan embroidery art does. When the view angle changes, the pattern also changes, creating a dynamic image (see Figure 8).

The Shanghai Ankang Yuan project required unearthing the spirit of the place as well as physically preserving selected buildings. The site, located near the point where Suzhou Creek empties into the Huangpu River, is in an area famous for its long cultural and artistic history. Combined with the preservation mandate, the brief was thus to create a new urban destination that would



Figure 6. Suzhou Creek Ankang Yuan, Shanghai.

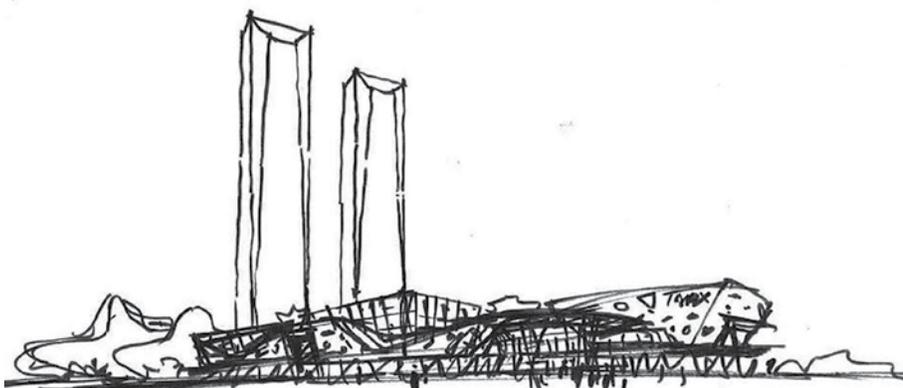


Figure 7. Meixi Lake Jinmao Plaza, Changsha – conceptual “sand crystal” drawing.



Figure 8. Chengdu Yintai Center – street-level perspective.



Figure 9. Suzhou Creek Ankang Yuan – showing the insertion of the towers into the lines established by older villas.

be a forward thinking, futuristic project that would also reveal, upon closer inspection, a wonderful cultural experience and stories from the past. The team conceived of a “secret garden” in the city that can provide an “upside-down” experience, in the sense that major anchors are placed underground, and “inside-out,” bringing the old buildings’ exterior architectural expression into the interior space as storefronts.

The design team also thought of the project as a vessel that travels along Suzhou Creek from the past towards the future, just as the plot of the Wong Kar-Wai movie *2046* depicted people traveling to the future on a train in order to find their lost memories. The idea of traveling in a contemporary vessel (the new mixed-use space) amid fertile memories (represented by the shikumen) inspired and set the tone of the design (see Figure 9).

The Urban Design Guidelines and Historical Heritage of the Site Form the Design

Often in the project’s early planning stages, the regulations and planning requirements



Figure 10. The final positioning of the Jinmao Plaza towers was the result of extensive site study and negotiation.

create a big influence on the final realization of the project: zoning requirements, site coverage, height limits, floor area ratio, and landscape ratio all play a role. At the same time, whatever previously existed on the site will inevitably guide the spirit of the project. The interaction of regulation, commercial imperatives, and historical context drives the future direction of new projects.

Using the Meixi Lake Jinmao Plaza project as an example, there was already a strong context, albeit a contemporary one. The

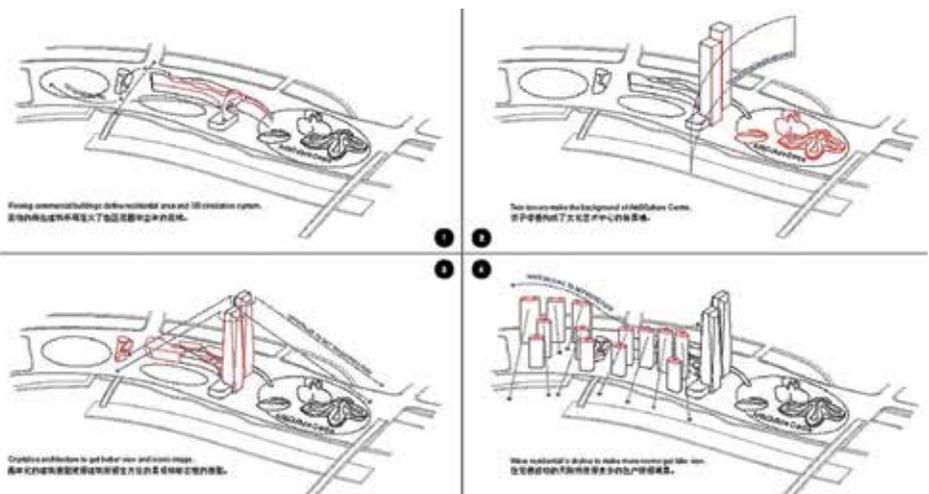


Figure 11. Meixi Lake Jinmao Plaza – studies analyzing strategic placement of towers.

Meixi Lake Culture Center was the first project on the site. Its architect drew inspiration from the local cotton rose hibiscus flower, whose fluid, dynamic form gave the Culture Center its distinctive character.

This dominating concept also created a huge influence on the Jinmao Plaza project, because both projects share an integrated ground-level pedestrian route and landscape concept. Additionally, a shared underground tunnel serves as the parking and service entrance for both projects.

Even though CallisonRTKL is the design architect of the Jinmao Plaza project with the developer Jinmao Group as its client, ZHA was the design architect for the Culture Center, hired by the local government. The Culture Center was already in the construction documents phase when CallisonRTKL started the master plan and concept design of the adjoining Jinmao Plaza. The initial visioning proposal from ZHA for the overall site had pushed the two tall towers away from the Culture Center, so as to avoid the creating a negative impact on it. But the planning department of Changsha saw it differently. Considering that the twin towers of Jinmao Plaza and the Culture Center are both very significant projects, one a commercial icon while the other is cultural, it was felt that the commercial-cultural dichotomy symbolized the identity of the core area of Xiangjiang New District, one of the most promising new developments in the city. It was also considered that the 238-meter twin towers

would block views of some older, somewhat disheveled-looking residential towers along the west side, while visually uniting the Culture Center and Jinmao project along the eastern edge (see Figure 10).

When the design team first settled on the tower locations, the Culture Center team strongly opposed the relocation of the towers until the Jinmao Plaza design team presented a careful sun path analysis for the whole year. The analysis demonstrated that the twin towers would create useful shadows on late summer afternoons for the open public spaces between the two projects, leaving enough sunlight to warm those spaces during the wintertime.

From an architecture/design point of view, the question of how to design and shape the twin towers so that they would have a strong dialogue with the Culture Center while still keeping their own identity posed a challenge, but it was one that was worth resolving (see Figure 11).

The author's team carefully balanced its original inspirations from the "sand crystal" concept against a desire to keep the forms as calm and simple as possible, so as not to overtake the dynamics of the Culture Center. The smoothness of the tower curtain wall was achieved by eschewing operable windows in favor of mechanical ventilation. In this way, the design dialogues created here could be described as "inorganic vs. organic," "simple vs. dynamic," and "vertical vs. horizontal."

Strong dialogues also shaped the evolution of the Shanghai An Kang Yuan project, as the great heritage of the large shikumen community in dialogue with the new buildings became the project's most recognizable feature.

The leftover streets, alleys, and buildings from different periods, together with the historical cultural heritage embedded within them, make Shanghai a charming and unique city. The confluence of traditional *lilong* (alley) and modern, centralized retail can mutually benefit each other if the design is well optimized. Thus, when customers and tourists

“The team conceived of a “secret garden” in the city that can provide an “upside-down” experience, in the sense that major anchors are placed underground; as well as “inside-out,” bringing the old buildings’ exterior architectural expression into the interior space as storefronts.”

come to the site, they can experience the “old Shanghai” in contemporary retail spaces; yet at the same time they can experience the vivid dynamics of the futuristic metropolis by meandering through juxtaposed groups (see Figure 13).

Conclusion

When designing large-scale, complex mixed-use projects, it is obvious that starting with a “blank slate” and aiming to create “icons” from whole cloth is not the optimal approach. Instead, the diligent work of unearthing “hidden” or “unseen” factors – social, cultural, financial, historical, geological – can lead to a strong central logic that

becomes increasingly apparent through the design process. This does not happen “naturally,” however. It must be nourished and then defended. This is especially important in urban China, where development is occurring extremely quickly and there are strong incentives to ignore these details and proceed with a purely commercial objective. A complex, dense urban destination rendered through this process can then become a new icon and favorite attraction of the city by offering a great experience and deep impression to visitors, resulting in enormous financial, social and cultural influence. ■

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Figure 13. Suzhou Creek An Kang Yuan – contemporary designs and preserved historic buildings mesh at a human scale against a backdrop of sleek new towers.