International Urban Design Competition - Urban Redevelopment Project at Tainan Main Station Area - 2012

Original

Availability:
This version is available at: 11583/2518622 since: 2016-02-21T16:36:49Z

Publisher:
The Journal of the National Association of Architects R.O.C. (Taiwan)

Published
DOI:

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PLANNING ANALYSIS

The new Tainan Re-development Plan is based on a strong relation with the surroundings, thinking at the new Station Area as an enzyme which will start to bring new life to the city. Slowly, the site will be developing in all its aspects and will be a pleasant place for living, enjoying, studying, relaxing, being absorbed into culture. Tainan has a strong cultural tradition and the new development will reinforce its peculiarities, thus in a new contemporary vision. The new development will become an icon both for its urban design, open to the city and for the environment, where many of the fabulous aspects of Tainan region will be revealed, focusing on the presence of biological diversity.

Mixity is looking for new balances among architecture, life, nature and culture. It will create an iconic landscape and skyline.

Mixity will stimulate relations and reinterpretations of the surrounding areas. According to the environmental analysis, the new project will reinforce the concept of different areas of the city, characterized by interesting peculiarities and functions. The site enters into relations with:

- Neighbourhood living areas
- Cultural and Educational living area
- Cultural and Commercial district
- Leisure Area
- Arts living area
Taking into account the cultural presence of several important Taiwanese monuments in Tainan, Mixity focuses on the relationships between the existing traditional areas and the new development. Culture and innovation will find a blend with the presence of a new museum for History and Arts of Tainan. Moreover, cultural activities will be next to the Creative Industry Park, where an incubator for new creative industries will find place. The station itself will host an important cultural and touristic info-center. Being Cheng Kung University Campus, a leading center for culture and creativity, next to it concert and congress halls will be displayed. Spaces for cultural activities will be next to the museum, which expands at second floor, while at the ground floor, the park opens towards the university.

The blue path in the diagram is a cultural/educational path linking all the main activities of the surrounding areas. On the West side, a ‘Green Observatory’ will host butterflies and flowers and will be an indoor glass house between two parks, the Tainan Park and the Old Rail Park of Mixity. Here, people could observe the beauty of Taiwan nature with plants, flowers, butterflies, etc.

The new Old Rail Tracks Park enhances the ecosystem continuity with the surrounding green areas. The Park is both urban, being easily accessible, but it is also differentiated into five main parts. Being linear it finds different characteristics based on the surrounding functions.
**URBAN PARK**

The empty space where rail tracks are memories is transformed into an urban park. Rail tracks create paths and green areas:

- pedestrian paths
- bicycle paths
- rice fields
- flower stripes
- water basins, etc.

Bicycle and pedestrian path move from North to South and then connect with smaller paths East to West through the site. The stripes change in functions based on the functions of buildings. From North to South we find:

- the *emotional park* is next to more cultural activities, such as congress centre, library, mediateque. Here the chosen species are: rice fields, stripes of coloured flowers, water basin.
- the *tonic park* opens to public uses, for families, children playground: it is next to residential areas, to the Cultural Creative Industry Park. Here open fields will permit people to play into the park, enjoying festival such as the Lantern Festival.
- the *forest like park* has on the East side a roller-coaster, operating during the nights, filtered by a dense palm zone, with water basin and open fields. On the West side, still flower stripes.
- the *urban activities park*, where the green leaves the space to paved, when we arrive at the plaza, where several activities take place -ancillary to the Station, commercial, food corners, etc.
- the *waiting and admiring park*, continuing in fruit trees, such as mangos, and papayas, close to the bus terminal stations.

Intriguing bridges cross the park. They remind the traditional bridges, such as the Sanxiantai-Bridge in Taiwan.
According to the railway Reconstruction Bureau (RRB) official description of the Tainan Railway Underground Project, the Tainan Urban District Railway Underground Project was approved by the Executive Yuan in June 2004 as part of the TRA Rapid Transit Systematization in the Metropolitan Areas Project. The project is designed to meet urban renewal needs in the Tainan Station area, integrate city transportation systems, and provide a more convenient and modern transportation system.

The Tainan Project involves the construction of an 8.23-kilometer-long underground rail line from the south end of the Zhonghua Land Bridge (Yongkang Bridge) to the south end of Shengchan Road. The old Tainan Station building was preserved as a historic site. The new Tainan Station was established along with two new commuter stations—Linsen and South Tainan. The project eliminates nine railway crossings and four underpasses.
Considering Tainan Railway Station as one of the five “Gateway Transport Facilities” for Metropolitan Tainan; others are:

- Tainan Airport
- Tainan High Speed Rail Station
- Tainan Bus Terminal (yet to be built)
- Tainan Ferry Terminal (serving Cross-Straight traffic; yet to be built).

It would be essential that Gateway Transport Facility should be linked in by convenient public transport services (taxi, bus, BRT, LRT, etc.) Considering Mixity Area and its Long Narrow Strip of Land (1,000m x 150m): the need of a “shuttle service + good pedestrian environment” should be function as an “integrated development”.

A (1). Public Transport Assumptions for the Site – BRT or LRT and Local Buses
- Although Tainan does not yet have a Rapid Transit, BRT or LRT system, it is reasonable to assume that Metropolitan Tainan, with an urbanized population of 1.2 million, will have an extensive BRT or LRT service network in the near future.
- This BRT or LRT network will complement the Taiwan Railway Administration (TRA) commuter/intercity rail line, and future Bus Terminal Plans for Tainan.
- The BRT or LRT system will definitely have one or even two lines that will link to the Main Tainan Railway Station (our Mixity site).
- Therefore, we will provide adequate spatial arrangements for a BRT or LRT stations platforms on the plaza in front of the Station.

A (2). Reasonable Public Transport Assumptions for the Site – Taxi and Public Bicycle Facilities
- The Tainan Railway Station is currently served by a significant number of taxis (our estimate is that, during peak periods, up to 20 taxis queue at the station) and they are provided with off-road queuing space.
- Our Mixity site will provide comparable off-road space for taxi queues, on the ground floor.
- The demand for bicycle and motorcycle parking is also high. However, rather than trying to satisfy the demand with free parking of private two-wheelers, we recommend the assumption of a future Public Bicycle System in Tainan (like Velib in Paris or Bikemi in Milan).
- Therefore, we will try to make spatial arrangements for public bicycle racks within our site.
- We assume that parking for private two-wheelers are provided off-street, perhaps underground with a usage charge.

A (3). Reasonable Public Transport Assumptions for the Site – Intercity and Regional Bus Facilities
- The Tainan City Government has expressed interest in the development of Bus Terminals for intercity and regional bus services.
- Currently, the intercity and regional bus operators use kerb-side bus stops near Tainan Railway Station for their services.
- Tainan Transportation Government will build a large Bus Terminal near the new “Dawan Expressway Interchange” (to be built; the EIA has just past the review process).
- We think that it is reasonable to assume that the long-distance intercity buses will terminate at that new facility.
while the regional buses will use that facility as well as at the Railway Station.
- Our Mixity site shows that we have already thought of providing space for a bus terminal within the development

B(1). Reasonable Private Vehicle Assumptions for the Site – Private automobile Drop-Off and Pick-Up
- This circulation plan has been done with the following principles:
  - Provide safe and comfortable environment for pedestrians
  - Provide efficient and safe movement for bus, BRT or LRT vehicles
  - Provide reasonably easy access and egress for private auto drop-off and pick-up
- We need to discuss the circulation through/around the site, and identify space for private auto drop-off and pick-up

B(2). Reasonable Private Vehicle Assumptions for the Site – Private Car and Motorcycle Parking
- We do not want to provide too much parking for private motorized vehicles
- Scarcity of parking would encourage greater use of public transport and bicycles: sustainable transport!
- Only provide the parking that the building codes require
- Entry and exit points to parking lots should avoid the private auto drop-off and pick-up zones

C(1). Reasonable Internal Circulation Assumptions for the Site – Electric Shuttle Buses
- Because the site is such a long one, an electric shuttle service within the site would be beneficial
- One could also extend the shuttle service beyond the site into the surrounding area, if the length of the shuttle routes are below 3 kilometers.
An **electric shuttle bus** connects our site from North to South. It is located into the park. A bus terminal station is located at the Eastern part of our site. Escalator, elevators connect different parts of the site with the surroundings and within the site itself. The metro and train are centred on the site. The space around the Station is empty, giving the possibility to mass people to move and reach trains and buses. The main plaza in front of Tainan Station is directly connected to the Station. It crosses and extends until the East side of our site. It becomes a strong connection area between the two parts of the City (East and West). Moreover, new ancillary functions are settled between the Station and the park. The main plaza is enriched by a new urban design, with green area, water basin with a mangrove tree, benches and lighting. Open areas give the opportunities to people and artists to gather, bringing life into the plaza. The Plaza in front of the Station is a sunken plaza which creates pedestrian connection at B1, to the ticketing areas of the Rail Station and commercial stores.
TRAFFIC CIRCULATION CONCEPT

- Arterial Road
- Local Small Road
- Signalized Intersection
- Possible Signal
- Pedestrian Underpass
- BRT or LRT

- Car Drop-off And Pick-up
- Bus Terminal for Regional Bus, with Platform Like This. Each berth is 4x14m
- Covered Plaza
- Sunken Plaza With Transit Station at Ground Level, Platform is 4m Wide
- Pedestrian Underpass To Plaza
- Taxi Queue
Considering the site as a unique opportunity to develop a strong vision for Tainan City, we started to think about a bulk, to be modified as a sculptor does with his raw material. We thought about pre-existence as a tool of intervention. Rail tracks become elements to design a unique space, keeping and transforming them. Then, historical buildings will enter into relation with the new project. The Station and the platforms will be preserved with new added functions and activities. The traces of the old rail tracks work as inspiring elements, opening possibilities to melt memory and new emotions. The rail tracks are transformed in tools of memory. They become generator of a unique urban park. Each track opens to new functions bringing new life into the new design. The rail tracks become an integral part of the main void in the new site. The void becomes the hearth of the project, full of memories of its previous functions. The Cultural Creative Park will have new buildings for incubators of small innovative enterprises. Old and new architecture will create a new space balanced between tradition and contemporary visions. In order to create new connections with the surrounding areas - from East to West - the bulk is broken into several parts. A ‘layered city’ starts to be in place, through the creation of several vertical layers of development. Keeping the height of 20 meters as the main level for a new horizontal public path. From it, higher buildings host new functions, both cultural, tertiary and commercial ones.

DESIGN PROCESS

From a single volume

We cut the space of the existing train tracks

Keeping space for the historical monuments and the future

Creating connections between surrounding areas and different functions

We have a ‘Layered City and ‘Mix-City’: a first more compact layer four stories high, a new horizontal platform for public uses and higher buildings, for a contemporary and vibrant Tainan
HISTORICAL MONUMENTS

The Tainan Station building will be preserved. It will be possible to have open areas around the buildings itself. The open areas will be covered by very high porches, that create continuity in the site. They will be higher then the Station and they will create a balance with the old building, embracing it into a light contemporary structure, bringing shadows and repair from rain. The existing platform will be reused, hosting functions beneath. The Cultural Creative Industry Park will have preserved historical buildings that will match with newer structures, such as incubator for small enterprises. Some bridges high level will connect with the top roof at level + 20 meters.

HISTORICAL REFERENCES

The traditional making of city and Taiwanese architecture furnished us suggestions and supported our concept of city, as composed by layers and based on modules. Specifically, we referred to Taiwanese traditional housing, orientation, monuments.

Among our references:
Temples in Tainan, such as the Chih-Kan Tower and garden, bridges and other cultural icon in Taiwan. The use of water in the park has been thought very close to housing, in order to mirror them and create a pleasant environment, with human scale, green and water reflections.
MASSING AND DESIGN

The definition of massing and design are based on:
- Tainan skyline
- module and multiple
- historical references

Considering the size of the project, we took into consideration the issue of dealing with big areas, thus creating pleasant human scale space to be in. On one side we wanted to keep a strong identity of the place, offering opportunities to new sense of proportions based on traditional Taiwanese architecture, working on human scale diagrams, going from a unique vision to the details, which make rich the people’ perception and involvement.

Tainan is mainly characterized by four stories high buildings. We wanted to create a relation with those buildings’ scale and the new design.

We created two basic rules:
- a first layer of city will be developed in four stories. The roof will be a continuous slab. We used it as a new horizontal public plane for the new city. There, on the top, many activities will take place: night market, swimming pool, open air auditorium, walk-ways with view to the city, restaurants, etc.
- the design will be based on modules. Analyzing the context, we considered a base module of 9 x 12 meters.
FACADES AND ROOF SYSTEM

The facades are based on modules 3x3 meters and its sub-multiples, as in the schemes.
Vertical green facades are next to bus terminal stations.
The roof top at level + 20 meters, presents photo-voltaic cells, coloured in vivid colours as a palette of existing colours on roofs and urban landscape in Taian City.
Mixity is based on the concept of interaction. Interaction between functions, both horizontally and vertically. From the following schemes, it is possible to see how residential is mixed to small commercial and offices at first levels. As, the night market moves on the top roof at +20 meters, where entrances to new functions and open air public activities take place. The mixing of functions furnishes to the project a strong flexibility. Moreover, the mixing guarantees liveable quarters.
FUNCTIONS

- Department Store
- Information Centre
- Small Business
- Cultural Creative Industry
- Covered Plaza
- Business Incubator
- Night Market
- Hotel
- Library
- Housing
- Auditorium
- Green Observatory
- Museum
- Offices
- Sporting Center
- Parking
- Bus Terminal/Taxi Queue
- Electric Shuttle Bus Station
- Urban Public Space
- Old Rail Park
- New Tainan Station and Railway
According to the UN definition, ‘Sustainability’ should be constituted of the triple bottom line: 1) Environmental, 2) Economical and 3) Social issues. Regarding 1) for instance, the IPCC (the Intergovernmental Panel on Climate Change) has been warning to the world to reduce emission of greenhouse gas including CO2 to mitigate the critical global warming phenomenon. Consequently, some of developed countries have set a long term goal to reduce greenhouse gas emission by 50% of the current level by the year 2050.

Further to such a slogan, ‘Carbon-neutralisation’ became a relevant keyword beyond ‘energy efficiency’ or ‘Design for Environment (DfE)’ within the architectural and urban design and planning. In addition, the ‘BACKCASTING’ method (as opposed to the conventional ‘FORECASTING’ method) has been understood to be applied to architectural and urban/regional planning in terms of sustainability. It involves envisioning a future scenario first, and then tracing the needed steps back to the present clarifying what and how to create the future sustainable model for our next generations. Such a method, based on time specific analysis, includes naturally the ‘Life Cycle Analysis’ including post occupancy evaluation and improvement.

Mixity, as the state of the art urban development model in Tainan, has been elaborated conforming to the above requirements and new method from the beginning at each level of indoor and outdoor of buildings, landscaping, district as well as regional environment. Also vital design quality was the top priority to enhance the Quality of Life of Tainan people to combine joy and ethic of our time.

Among others, Mixity has been planned focusing on the followings, maximising:

1) The adoption of energy efficient solutions through the life cycle of buildings and landscaping
2) The use of renewable energy sources provided on-site and off-site
3) The use of eco-materials for the whole facilities
4) The comfort and health of users and visitors through green and passive solutions
5) The flexibility of the whole facilities for long-life and feasible usage
6) The bio-diversity even in the given central urban area
7) The cultural and region specific development preserving old and new heritages of the place
8) The convenience for users and visitors through a variety of transportation systems and the nodes
9) The social and economic benefits for the designated area and the neighbouring areas

All those proposed initiatives have been selected and applied to the planning on the basis of minute investigations of the designated region, as the ‘Pre-design,’ in terms of climate, geology, geography, water system, flora and fauna, industrial and economic activities, social activities of the adjacent communities, and etc.
FEASIBILITY AND FINANCIAL PHASES

The new re-development project at Tainan Station introduces a strong flexibility. Being considered as a ‘layered city’, it will be possible to develop different phases according with the local community needs and the stake holders wills. Following the interventions with the new underground rail tracks, four phases have been thought:

**PHASE 1**
Public, Semi-public development:
- the re-development of the plaza in front at the Tainan Station: new urban design, sunken plaza in connection with B1, new transportation system (LRT)
- re-development and enlargement of the new station with info-center-commercial and cultural areas
- new bus terminal
- cultural activities
- a portion of the new park

Private development:
- Small business (local entrepreneurs)
- Night market
- Department store (private investors and managing companies, such as Takashimaya, Sogo, Westfield)

**PHASE 2**
Public, Semi-public development:
- a portion of the new park

Private development:
- residential areas (private investors, construction companies, stake holders)
- Small business (local entrepreneurs)

**PHASE 3**
Public, Semi-public development:
- a portion of the new park

Private development:
- Small business (local small entrepreneurs)

**PHASE 4**
Public, Semi-public development:
- a portion of the new park, completing it
- Green Observatory
- Congress hall
- Concert hall
Mixity_A04
Urban Redevelopment Project at Tainan Main Station Area
Lorena Alessio architetto
alessiostudio

CONSULTANTS
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David Ta-Wei Poo
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International Urban Design Competition 2012
Two Phases Competition - Honorable Mention
Mixity A04
Urban Redevelopment Project
at Tainan Main Station Area
Lorena Alessio architetto
alessiostudio

Press:
Taiwan Architect - 2012/10 no. 454

International Urban Design Competition 2012
Two Phases Competition - Honorable Mention
都市再生——台南車站周圍都市設計國際競圖之後的視野與決策行動

文／林政賢 臺南市政府副市長 獨立交通大學人文社會學院教授

台南區鐵路地下化案，是台南市近幾十年來最大的都市更新工程案。台南市空間結構與都市社會時時刻刻都在 değişikliklerde。因此，台南市政府的鐵路地下化政策，決策過程與落實社會上都有著重要的意義。台南為台灣重要之鐵路交通樞紐，鐵路地下化後，將可改善都市中心部的運輸環境，提升城市機能，並對周邊發展產生積極影響。台南市政府為此政策的實施，耗費了長期的努力與資源，進行多種不同的Plan B，許多方案都已落實於實地，並取得顯著的成果。台南市政府的鐵路地下化政策，不僅對台南市的經濟發展有著重要的影響，也對整個台灣的鐵路運輸體系有著重大的意義。
Mixity_A04
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Lorena Alessio architetto
alessiostudio

International Urban Design Competition 2012
Two Phases Competition - Honorable Mention

Mixity

【佳作 Honorable Mentions】

台南市政府規劃以現在龜山島之
聚落風貌為基礎，將新車站
地標作為轉換為以現代生命新生命
的顏色，此蘆筍將南綠洲站作為新的跳板，
也將會是一個快樂的未來，享受、學
習、生活風格轉型為文化的新階段。
台南市具有豐富的文化クラ
斯，南綠洲車站將為台南的歷史
以新的面貌展現，製造台南未來的發展
在南區

南科產業園區內通過交通樞紐之連接（沙沙支線與高雄市
地下化相關的重點）

台南市交通局，高雄捷運公司，與南科工業園區開發公司等，
在國家重大的基礎設施工程中扮演著重要的角色。

南科產業園區內交通樞紐之連接

綠色太陽能板

地鐵車站橋樑架構

台南市在規劃時也考慮到能源的使用，採用太陽能等可再生能源，
農業生產逐漸轉型為觀光農業，

台南市交通局，高雄捷運公司，與南科工業園區開發公司等，
在國家重大的基礎設施工程中扮演著重要的角色。
Gentile Architetto,

Stiamo giunti alla seconda fase del progetto di internazionalizzazione IN/ARCH “ARCHITETTURA: ENERGIA PER IL MADE IN ITALY”. Desideriamo innanzitutto ringraziarla per aver voluto contribuire alla ricerca promossa dall’Istituto Nazionale di Architettura - con il sostegno del Ministero per lo Sviluppo Economico e dell’ITA-ICE, del CNAPIC, dell’OICE, dell’ANCE e di Confindustria Ceramica – segnalando il vostro progetto realizzato all’estero.

Grazie sempre alla collaborazione del MISE e di ITA-ICE, abbiamo la possibilità proseguire il lavoro avviato cercando di diffondere e di dare la massima visibilità ai risultati conseguiti dalla ricerca e quindi alla promozione del Made in Italy nel mondo.

Siamo ora impegnati nella pubblicazione di un catalogo dei progetti selezionati (tra cui i vostri “Mixity”, “Saizeriya - Re-styling of restaurants’ chain”, “StilNovoCity”) che verrà editato (in italiano ed inglese) in una versione cartacea (distribuita nelle sedi delle Ambasciate Italiane nel mondo, nelle sedi dell’ITA-ICE, degli Istituti italiani di cultura,...) e in una versione digitale (e-book, che verrà inserito all’interno del portale www.contractitaliano.it promosso e gestito dall’ITA-ICE).

Per poter concretizzare questa nuova fase di lavoro abbiamo ancora bisogno della vostra cortese collaborazione. Vi siamo concretamente chiesti di inviarci entro il 15 settembre 2015:

1. N. 5 immagini dell’opera realizzata ad alta risoluzione min 300 dpi;
2. Le schede (scheda studio professionale e scheda progetto) che inviamo in allegato predisposte in entro il 15 settembre 2015:

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2. Le schede (scheda studio professionale e scheda progetto) che inviamo in allegato predisposte in collaborazione con ITA-ICE compilete in tutte le parti, possibilmente in italiano ed in inglese.

Naturamente, se riuscite ad inviarci il materiale nel più breve tempo possibile, ci aiutereste nella consegna puntuale a ICE.


Siamo consapevoli di chiedere un ulteriore impegno ma siamo sicuri che questa iniziativa potrà contribuire a diffondere e promuovere sempre più il progetto italiano di architettura nel mondo.

Cordiali saluti

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SOSTIENI L’IN/ARCH. DIVENTA SOCIO SOSTENITORE. DESTINA IL 5xMille all’IN/ARCH.

Roma, 29 gennaio 2015

Spettabile Alessiostudio,

in relazione al progetto di ricerca IN/ARCH per il Ministero dello Sviluppo Economico “Architettura: energia per il Made in Italy”, finalizzato a promuovere una rassegna dell’attività progettuale di società di Architettura e di Ingegneria all’estero, Le comunichiamo che i vostri progetti, inviati alla piattaforma Archilovers, sono stati selezionati per il rapporto che sarà inviato al Ministero per lo Sviluppo Economico e per una prossima pubblicazione.

Allo scopo di completare il lavoro di documentazione la preghiamo di fornirci i dati richiesti nelle schede allegate.

La sezione della scheda dedicata ai prodotti Made in Italy utilizzati per la realizzazione del vostro progetto è di particolare importanza: essa consentirà di avviare una riflessione sul rapporto tra imprenditoria del progetto all’estero e l’export dei prodotti italiani delle costruzioni. Siamo convinti, infatti, che trai due settori si possano stabilire maggiori sinergie per un reciproco sviluppo.

Le saremmo grati inoltre se volesse inviarci le sue considerazioni seguendo lo schema di intervista allegata.

Nel ringraziarla per l’attenzione, invio i miei più cordiali saluti.

arch. Michela Basile