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

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(Article begins on next page)
Mixity_A04
Urban Redevelopment Project at Tainan Main Station Area
Lorena Alessio architetto
alessiostudio
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 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, mediatheque. 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.
TRANSPORTATION SYSTEM

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”.
POSITIONING “MIXITY” IN THE PUBLIC TRANSPORT NETWORK

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

Bus Terminal for Regional Bus, with Platform Like This. Each berth is 4x14m

Car Drop-off and Pick-up

Sunken Plaza With Transit Station at Ground Level. Platform is 4m Wide

Covered Plaza

Taxi Queue

Pedestrian Underpass To Plaza
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 works 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.

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
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 than 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.
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.
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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
SUSTAINABILITY

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.
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:**
- Hotel, different categories (private investors, hotel chains, such as Hyatt, Hilton, hotel, or others)
- Small business (local entrepreneurs)

**PHASE 2**

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

**Private development:**
- Hotel, different categories (private investors, hotel chains, such as Hyatt, Hilton, hotel, or others)
- Small business (local entrepreneurs)

**PHASE 3**

**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 4**

**Public, Semi-public development:**
- a portion of the new park, completing it
- Green Observatory
- Congress hall
- Concert hall
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Mixity_A04

Urban Redevelopment Project at Tainan Main Station Area

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International Urban Design Competition 2012
Two Phases Competition - Honorable Mention

Press:
Taiwan Architect - 2012/10 no. 454
都市再生
台南車站站區都市設計國際競圖之後的視野與決策行動
文／林政賢、臺南市政府長壽路區體育大學人文社會學院教授

南區鐵路地下化計畫案，是臺南市近年來的的都市更新工程之一。市政府在鐵路地下化計畫案後，提出一系列的都市設計競圖案，其中最受關注的為“MIXITY-A04”方案。此方案由義大利建築師Lorena Alessio所主導的alessiostudio設計。方案以“未來城市”為概念，將台南車站周圍的都市設計概念與鐵路地下化設計結合，創造出一個現代化的台南都市形象。

鐵路地下化計畫被視為是公共政策與市民對話平台的這篇文章，文章從鐵路地下化計畫的背景開始，介紹了台南車站地區的歷史與現狀。接著討論了鐵路地下化對台南車站地區的影響，包括鐵路地下化後對車站周圍的交通、商業與綠地的影響。最後，文章提出了對鐵路地下化設計的未來展望，認為台南車站地區在鐵路地下化後，應該成為一個現代化的都市設計範例，並發揮其在鐵路地下化後的交通與商業機能。

關鍵字：鐵路地下化、台南車站、都市設計、公共政策、市民對話平台
混合与与针对平台的构建

铁道地下化计划不仅受到居民们的关注，同时也是城市发展的重要里程碑。该项目计划将原有的地上铁道搬迁至地底，从而实现城市土地的高效利用。

研究并推行创新城市发展策略的必要性

城市化进程的加速，要求我们以新的发展策略和模式来推动城市的建设。Alessi architects在本次国际都市设计竞赛中展示了他们在项目开发和实际操作中的创新策略。

国际都市设计竞赛2012

两阶段竞赛-荣誉 Mention

Mixity

/工程师团队/Alessi studio

台北市政府计划以台北捷运工程为背景，推动铁道地下化的计划，旨在提升城市的交通效率和整体环境。

在竞赛中，工程师团队展示了他们对现有问题的深刻理解和解决策略，旨在通过合理的规划和设计，实现铁道地下化的成功实施。他们提出的方案包括了对现有铁道的搬迁、土地的重新规划以及城市景观的提升。

竞赛评审团在对每个参赛作品进行评审后，最终决定给予此团队荣誉提及。评审团认为，该团队的方案不仅考虑了实际的建设问题，同时也注重了城市景观的提升和居民的生活质量。

竞赛的成功也为城市的发展提供了新的思路和可能性。未来，城市将继续探索和实践更多的创新策略，以实现城市的可持续发展。
Gentile Architetto,

siamo 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 – segnalandoci 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 promotore e gestito dall’ITA-ICE).

Per poter concretizzare questa nuova fase di lavoro abbiamo ancora bisogno della vostra cortese collaborazione.

Vi saremo pertanto grati se poteste 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 collaborazione con ITA-ICE compilate in tutte le parti, possibilmente in italiano ed in inglese.

Naturalemente, se riconosce 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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Oggetto: selezione Vs progetto ai fini dell’inserimento nel dossier “Architettura: energia per il Made in Italy”, richiesta dati e intervista.

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’esport dei prodotti italiani delle costruzioni. Siamo convinti, infatti, che trai due settori si possano stabilire maggiori sinergie per un reciproco sviluppo.

Le saremo 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.

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