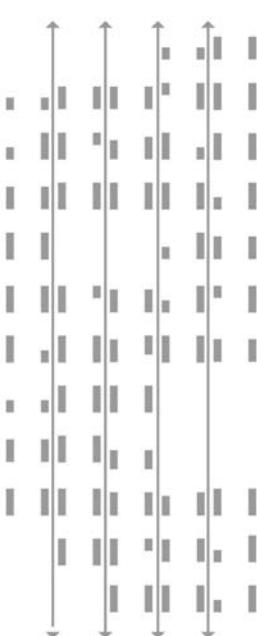
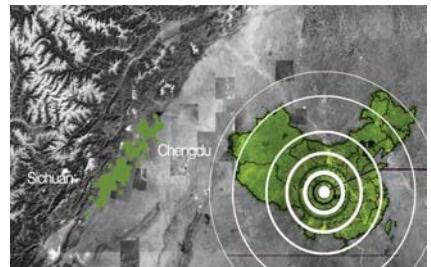


Sichuan Intermediate Relief Settlement Proposal

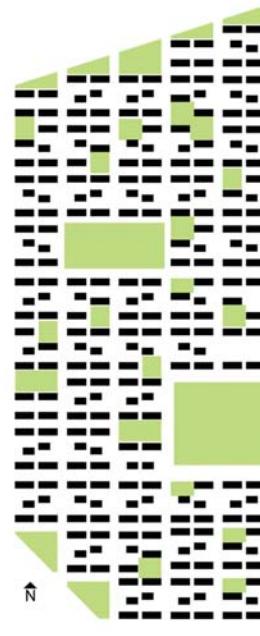
Gravity Partnership Ltd in association with Wang Weijen Architecture

After the devastating earthquake in Sichuan, over 15 million buildings were damaged and/or collapsed. At least 5 million were left homeless and many for them still living in tent.

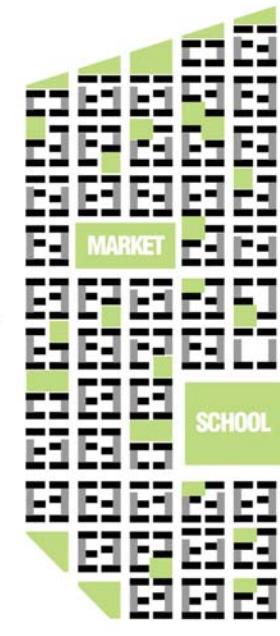
Immediate after the disaster, local authorities utilized various means in providing temporary accommodation for the emergency situation - tents, canvas, collapsible houses, self-built houses etc.. The Chinese Government followed soon with policies for intermediate relief settlement, this includes relocating vast number of homeless to various suitable settlements in the Sichuan Provinces, and in other neighboring cities.



all services along main street



living units arranged in north south orientation



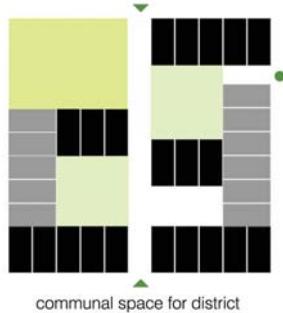
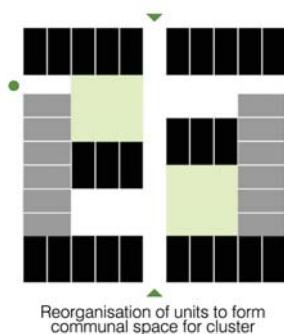
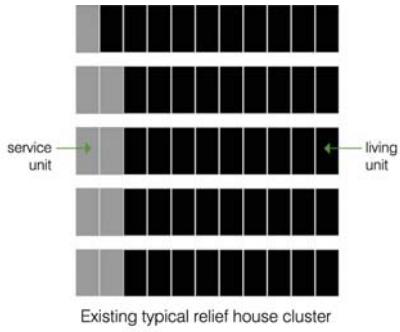
proposed settlement for 2200 units

Current intermediate settlement

- poor security
- thermal discomfort
- noises
- lack of privacy
- limited diversity of lifestyles
- poor sense of belonging
- criminal
- forgotten society

Proposed intermediate relief settlement

- Ease of construction, practicality: prefabricated units, low technical requirements, easy to adapt to site
- Economic viability: the availability of building materials, the re-adaptability of housing modules, recycle, remake
- Safe and healthy abode: robust, earthquake and fire resistant, hygienic and sense of security
- Consideration to the users' dignity, mental and communal needs: community, interactions, productivity, privacy

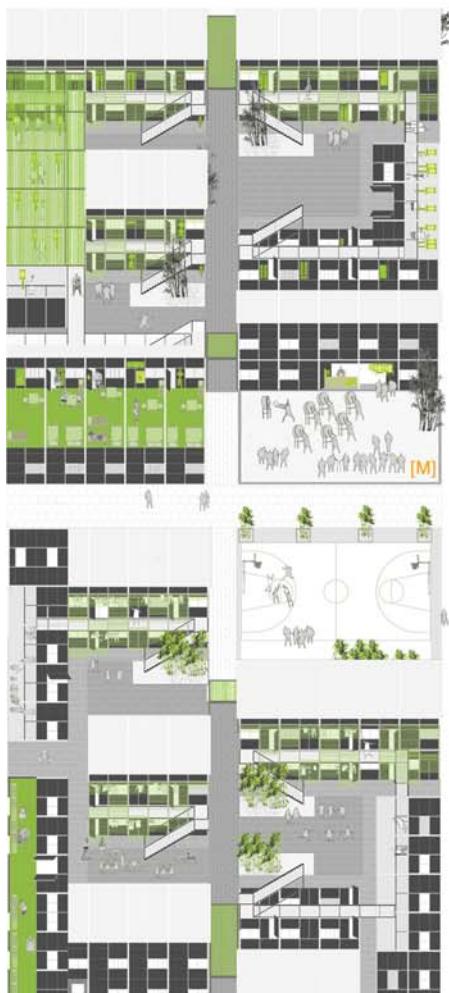
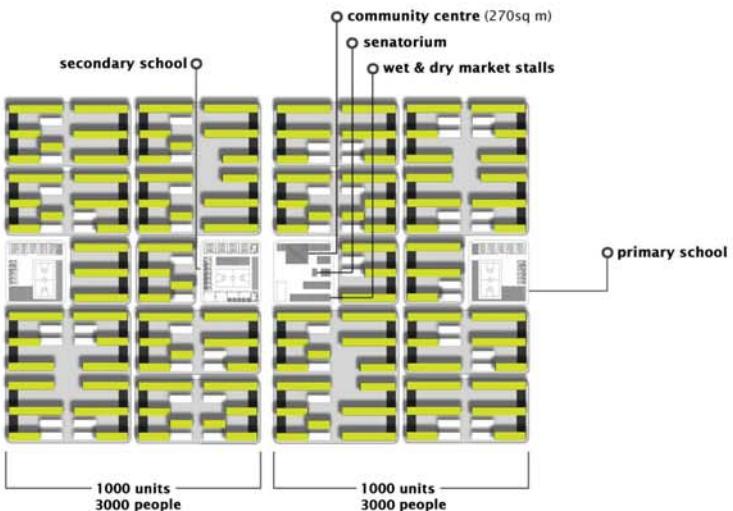


● service access
▲ cluster entrance

The **current intermediate relief settlement** adopts a modular construction system. Rows upon rows of single storey sheds are erected monotonously on a linear grid, these 'sheds' are fast and economical to build, and can satisfy the very basic living requirement; but it is **far from adequate from a social and environmental perspective**, especially when these 'units' are to be 'home' for thousands of families for the **next 3 to 5 years**.

Thus the investigation of an **improved settlement scheme**, which takes on a more humane approach and aims to provide a better living environment, is proposed.





combination of different-sized cluster community



overall view of clusters



communal courtyard



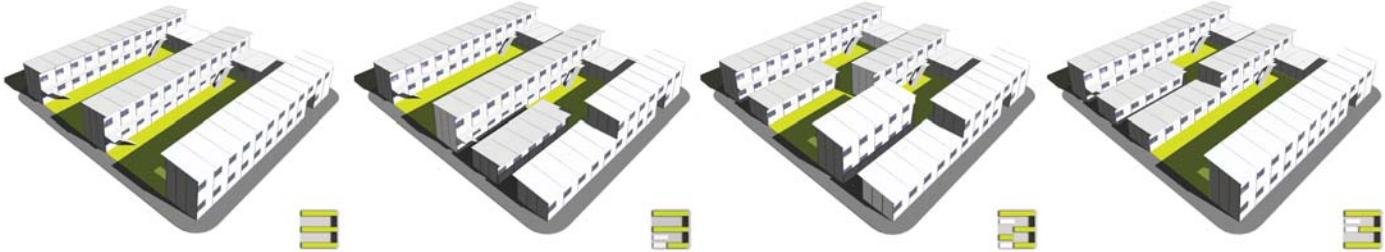
common corridor



cluster entrance



courtyard



Spatial configuration possibilities



Typical cluster plan
52 Living units 12 Service units



Cluster plan with district communal space
42 Living units 11 Service units

Courtyards with various sizes are scattered on the community to form a network/ field for social activities. These courtyards are neither generic nor neutral but designed to suit there proximity condition by manipulation of scale, accessibility, activity and atmosphere. [Small] courtyards are situated near communal kitchen as extension of cooking/ dinning & housewife gathering space. [Medium] courtyards are located at road junctions for leisure activities while [Large] courtyards on nodal points can serve festival events. The main idea is to create a sense of place to reinforce community value and neighborhood interaction.

To improve the **environmental performance** of existing modular house, we propose adding bamboo screen that can be fabricated and installed by residents themselves on common corridors to promote **heat deflection** without sacrificing natural cross ventilation. These corridors will become more intimate and therefore an informal gathering space.



Communal courtyard



Design model



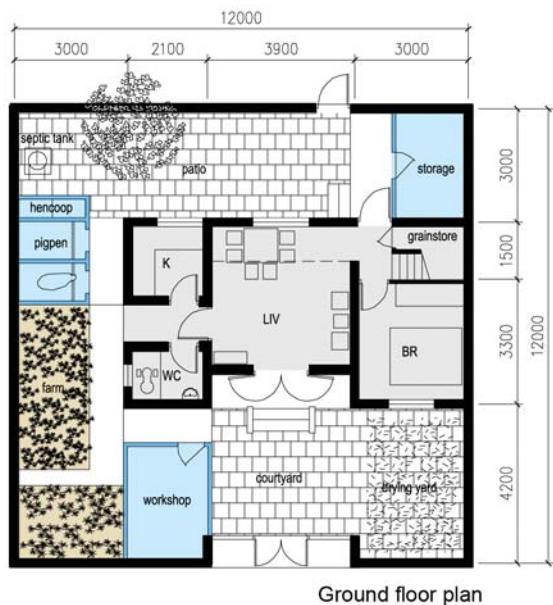
Common corridor



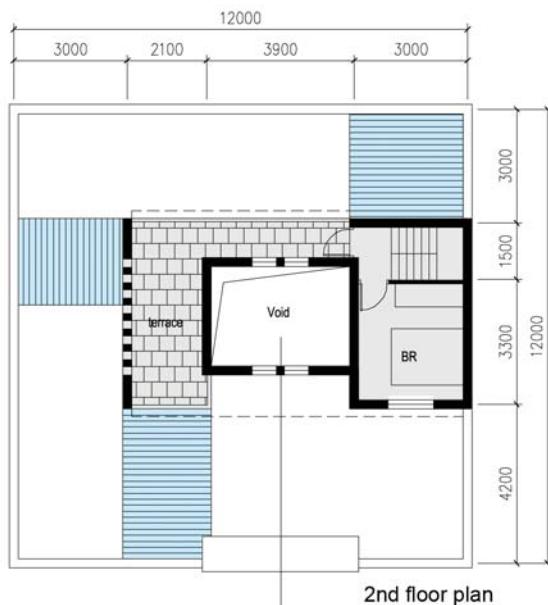
The design aims to provide permanent accommodations for families who survived the 5.12 earthquake based on the following principles; economically feasible, structurally reliable, and environmentally sustainable.

Master planning concept:

1. Standardized construction ensures maximum safety and efficiency during the construction period of the village while providing the basic necessity of a village family.
2. By recycling wall panels from the temporary relief houses, one can take advantage of these modular based components, making the village houses expandable/expendable according to the change of family size, while keeping construction waste at a minimum.
3. Site sensitive design - Modular house units can be organically configured to suit various topographies and minimized site formation work.



Add-on space, which accounts for 17% of the total floor area



Void above main hall can be transformed into extra room

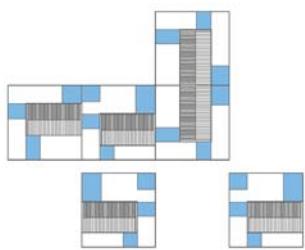


[1] - the bare minimum spatial unit satisfying the basic necessity of a village family.

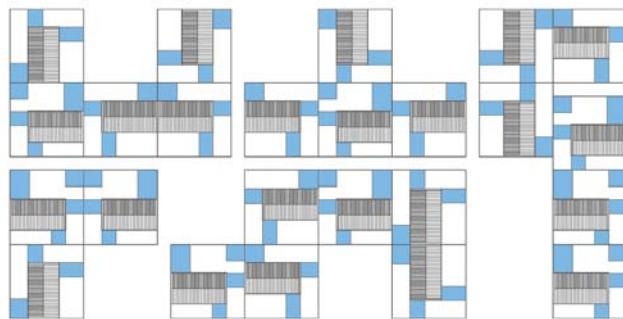
[X] - the add-on/ organic spatial unit made by recycling wall panels from the temporary relief houses, allowing the house to expand in relationship to the family size growth



[1 + 3]



[6 + 21]



[24 + 78]



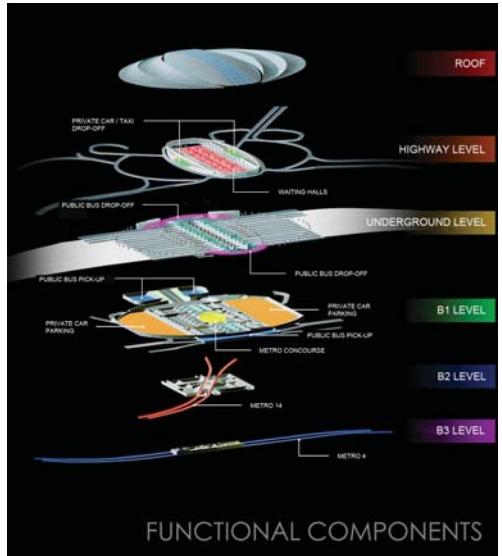
Railways as a Catalyst for Community Building

TFP FARRELLS

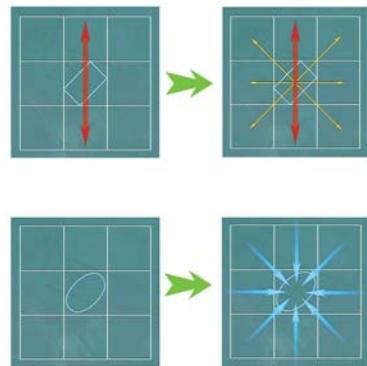
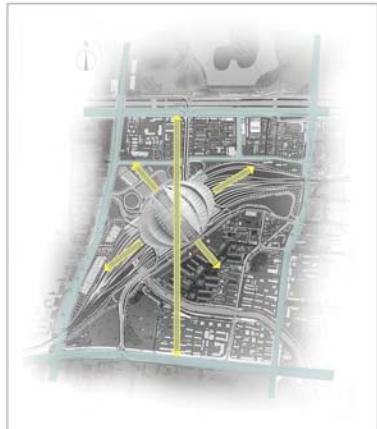
Stefan Krummeck



Beijing South Station, CHINA



A catalyst for urban regeneration is the building of transportation infrastructure creating links that ebb and flow with the influx of people commuting to and from an ultimate destination to live, work, and play. Urban design is a powerful tool in developing communities, a neighbourhood, a lively urban centre that connects its inhabitants. It boosts the wealth of the community and provides a better environment through enhanced basic public amenities including water, sewage, and electricity; reduces traffic on the road; relieves congestion and pollution. A positive urban vision looks at ways to unify neighbourhoods, drive regional economic growth and create environments which foster a vibrant sense of community.



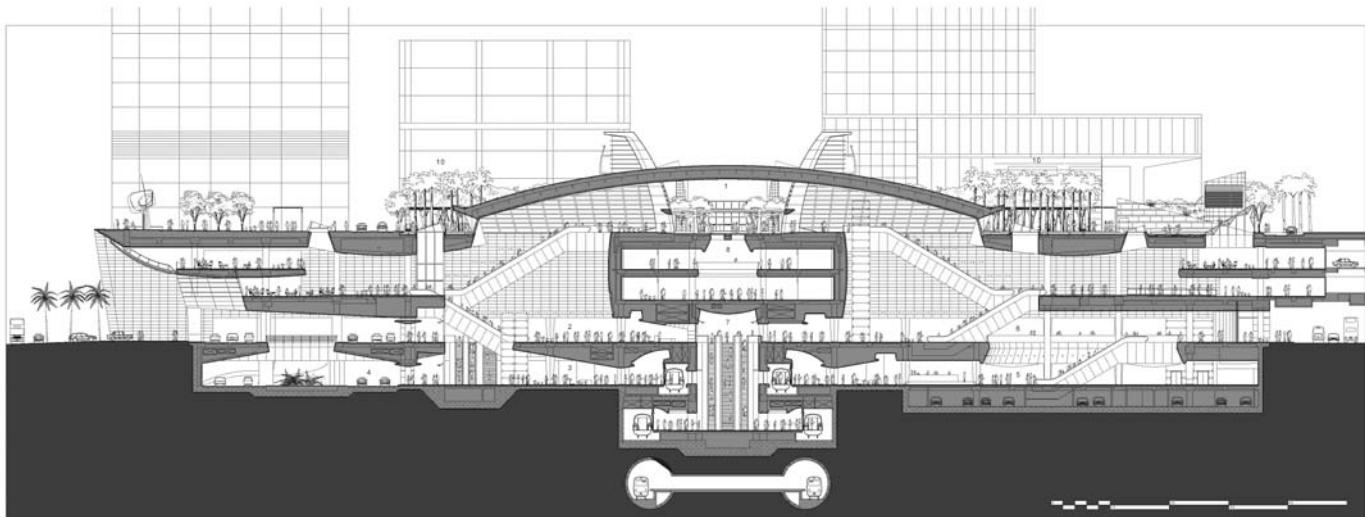
For decades, Metro rail systems have been the arterial networks of our cities and with half of the world's population now living in these cities, the importance of mass transportation infrastructures has dramatically increased. Many Asian cities have seen a population and development explosion which mandates the expansion of public transportation and multi-modal systems within and between commercial and residential hubs. Similarly, our expanding cities have grown closer in



Kowloon Station, HONG KONG



Photo Credit: Daniel Wong / IMAGES28



proximity and the railway is the most convenient and sustainable means of connection between destinations. Railway systems are now designed for greater speed and are competitive with regional and national air traffic. The railway is seen as one of the safest, economical, sustainable and environmentally friendly ways of travelling. In addition, with the recent economic downturn many governments have decided to stimulate the economy through transportation infrastructure projects. This will further propel the growth in the railway sector. We are

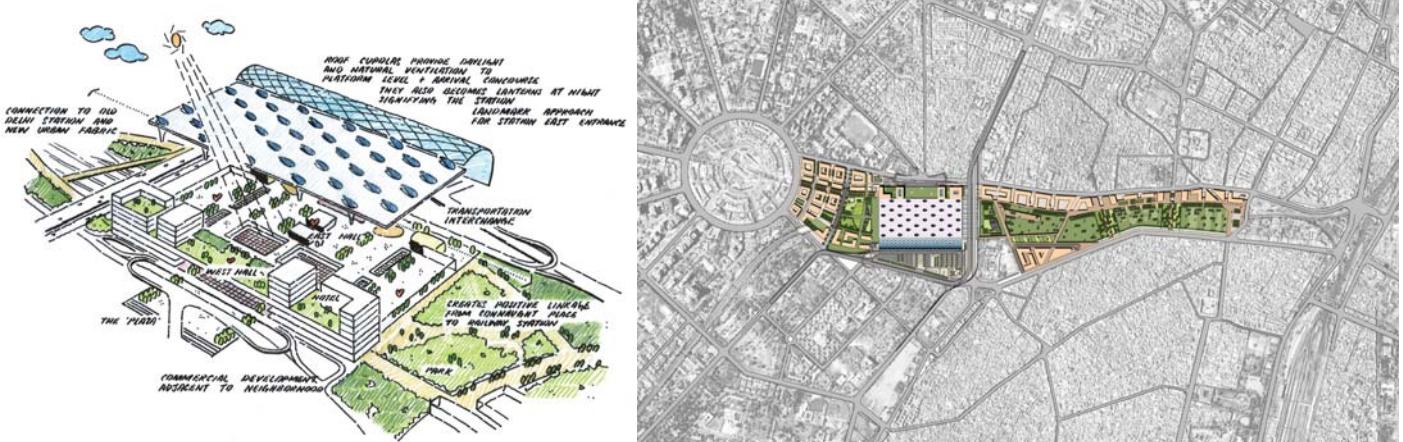
currently seeing a dramatic increase in railway related projects and are confident that this trend will continue throughout 2009.

Asian railway infrastructures are designed for very high patronage, with stations in China and in India catering to more than 500,000 people a day, approx. 180 million passengers per year. In comparison, annually Heathrow (LHR) caters to 68 million and Hong Kong International Airport (HKG) caters to 50 million passengers. The strategies adopted to deal with commuters within the stations as well as

adjacent transport facilities are comparable to those of modern airport terminals.

The emphasis is on unifying railway stations to their surrounding city context, integrating old and new into a spatially continuous urban centre that combines mixed-use amenities and public open spaces. They become urban gateways, creating and connecting existing and new communities.

In the design of contemporary stations, the prime objective is to clearly segregate between



New Delhi Railway, INDIA



arriving and departing passengers. This is typically achieved through vertical segregation, i.e. a departure level is provided above the platforms and an arrival level is provided below. Multi-modal drop-offs are located adjacent to the departure halls; the pick-ups are divided into the various modes to ease congestion. The hall contains lounges, VIP rooms, retail etc. In short the design principles of modern stations and modern airports are becoming increasingly similar.

China opted to segregate development and station. Flexibility and large open floor plates

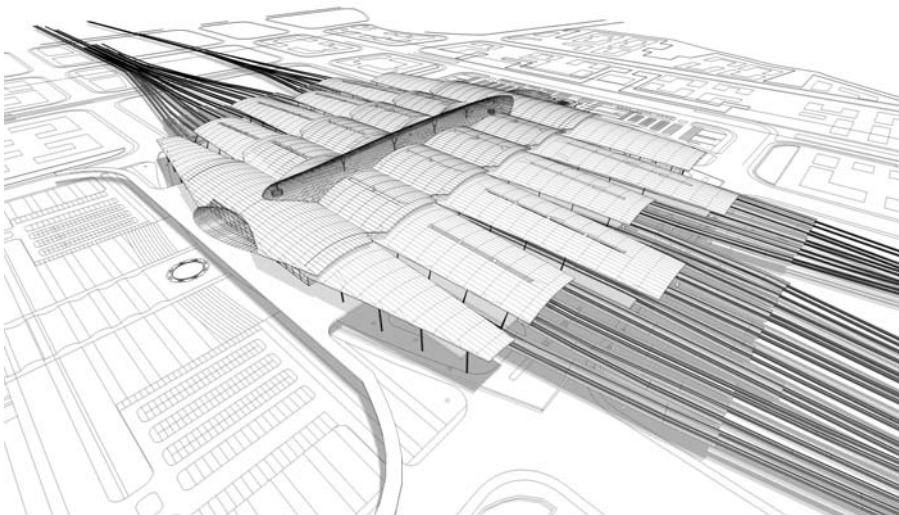
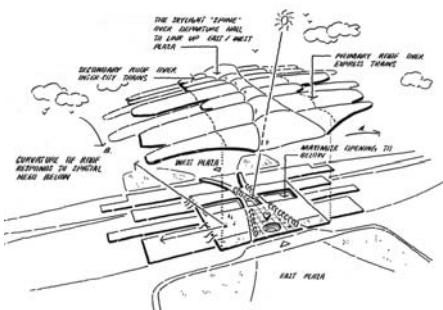
are primary objectives. Their railway stations are integrated with several metro systems which ease the pressure on road networks and provide convenient transportation interchanges. The use of simple, balanced and unifying forms provide an integral architectural solution to the complex functional and contextual requirements of a site, such as **Beijing South Station**. The strategy for the design of the station was flexible, with its permeability and central landscaped pedestrian spine unifying the connection between the North Park and the South Park communities. It creates a generous

contribution to the public realm, significantly enhancing the civic character of the Beijing South Station area, acting as a catalyst for new development to the surrounding urban areas.

The primary theme of the **New Guangzhou Railway Station's** design is the connection of the local districts of Guangzhou and Foshan to either side of the station and the opportunity afforded by the greenfield site to make this essentially a 'garden' station which will act as a catalyst for an entirely new urban area. The master plan addresses both districts with the



New Guangzhou Railway Station, CHINA



creation of two landscaped urban plazas constituting the entrances to the station. Ensuring that the station acts as a unifying element in the new city, the tracks are elevated allowing free pedestrian access through a landscaped arrival concourse.

The integration of railway projects with commercial property is gaining in importance. Many rail operators understand the value of land reserves within cities and are starting to capitalize on the commercial opportunities. Mixed-use development helps to finance railway projects and results in new models for sustainable living and working in the city. Examples are the "transport super city" in Kowloon and New Delhi Railway station whereby these projects promote a symbiosis between development and station.

The design criteria can vary significantly on a case by case basis. In Hong Kong the property development above and adjacent to the station helps to finance the railway system. With significant buildings placed on top of the station, property enabling works become a critical factor. The design of **Kowloon Station** provides for passenger interchange between two separate rail lines, airport check-in, coach, bus, and other road transport. Each element is linked by a central concourse which is, in

turn, linked by a major atrium to the air rights development above (Union Square). One of the world's largest station infrastructure developments Kowloon Station grosses over one million metres of mixed-used space and has created a new City in the West Kowloon reclamation. Constructing a city is not the same as constructing an individual building. It is not simply big architecture. By its nature, a city is diverse and ever-changing entity that is constantly being made and remade, built and torn down, repaired, replaced, converted and recycled. In this dynamic process it is the infrastructure that endures, while the individual buildings change to suit the peoples' ever evolving needs. The essence of city-making is the design of the infrastructure: the roads, transit systems, public space and the architecture of organization and connection that provides a framework for evolution.

New Delhi's station and masterplan stretches over an area of 86 ha, replacing the current rather chaotic and unorganized structure. Here the aspiration for the masterplan was to repair the city fabric and to create a new city centre. Some of the key concerns of the Ministry of Railway (MoR) was to maintain the operation of the existing station, to expand the capacity of the railway systems to allow for greater through-put of trains, and to provide

a solution to accommodate the road traffic generated by the station into a road network which is already beyond capacity. It was crucial for the MoR to provide a convenient, rational station that minimizes the overlap of pedestrian flow and adopts local conditions. Escalators are relatively foreign to local travelers and had to be replaced with travelators wherever possible. Rather than having parcels carted across the tracks an underground system has been incorporated with direct access to the end of the platforms.

The great advantage of railway stations over airports is that they are placed within the urban fabric, with convenient access developed to integrate the stations into our cities. Due to their location they are focal points in the cities, and create civic structure. In Recent times, railway stations have reinvented themselves as hubs within the cities and places to live and work. Rail travel is not only fast and efficient; its networks extend deeper into more rural areas than airports, bringing communities closer together. Rail travel provides a positive experience and allows for appreciation of cities and landscape, whilst having less impact on the environment. Contemporary railway infrastructures are designed in layers, all parts of the design work together in the formation of an integrated and balanced city. The socio-economic and environmental impacts of developing stations and the redevelopment of the surrounding railway land and its communities create a sustainable future.

We believe that the railway is the life blood of our cities and that railway stations once again are regaining the status as one of the most important building typologies in contemporary urban life.

Stefan Krummeck is a Director of TFP Farrels where he leads the design of corporate headquarters, commercial buildings and civic facilities. He is an expert in the delivery of large-scale, multi-modal, urban projects from design, through planning and construction of mixed-use and transport related infrastructure developments.