

URBAN PLANNING AND DESIGN

CREATING HOLISTIC AND PRACTICAL PLANS TO SUPPORT CITIES GROW SUSTAINABLY IN A TOTAL ENVIRONMENT



FUTURE CITIES PRAGMATISM

Meinhardt Group provides master planning services through its wholly owned subsidiary Meinhardt Planners Singapore.

> As part of the Meinhardt Group's integrated multi-disciplinary engineering, planning and project management services, MPS designs comprehensive urban and infrastructure masterplans for cities and industrial townships at various stages of development. From concept to detailed masterplans, city visioning and planning to capacity building, MPS provides a full suite of planning services.

What distinguishes MPS' services is our ability to develop plans that complement a city's social and economic objectives, with a strong emphasis on improving the quality of life, growing communities and promoting sustainability.

Backed by established teams with deep experience, we adopt global urban design practices grounded in planning principles honed from Singapore's famed urban planning methodology.

As part of the Meinhardt Group, we are able to mobilise multidisciplinary expert teams to deliver solutions that cover the entire project life cycle, from planning and design, through to implementation, execution and management, and conduct capacity building for post-project works.



Whether you are looking for complete turnkey solutions or specific service support, we have a complete suite of capabilities across the urban, industrial and infrastructure development value chain to cater to your needs.

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MEINHARDT LED BY EXPERTS IN THEIR FIELDS

The leadership team brings extensive experience from working on global projects, delivering pragmatic solutions of value to clients and shaping sustainable environment for communities to grow into becoming better cities around the world.

They are integrators of multidisciplinary teams and have a long track record of leading sizable projects and successful teams – efficiently integrating master planning and urban design with SMART City infrastructure and architecture, furthering the aspirations of Meinhardt's Future Cities Transformation.

Philip YM Tan

Director - Meinhardt Planners Singapore

Philip has over 20 years of experience as an urban planner and architect in managing development-oriented master plans and urban design works for global corporate and government clients. He has held several senior executive roles during his career, leading the process of transforming, expanding and creating value for his stakeholders.







Louis Tay Strategic Advisor



Lau Bee Lian Principal Planner



Bavya Kukrety Director Smartcitiy Infrastructure



Tan Kim Leng Senior Advisor, KDI Asia Governance & Digital Transformation



Ho Lih Liang Director, International Design Studio



Henry Lagansua Director, International Design Studio



We understand a project is more than a manifestation of vision; it is equally the embodiment and realization of aspiration, dreams, ambitions, and goals. Therefore, in approaching any urban planning project, we always start by looking at ways to plan for a conducive environment that would create inspiring communities.

OUR VALUE PROPOSITION

The delivery of 'meaningful value' is a mandate for every element of our activity. We bring to our client a unique sense of understanding that ensures the vision, ambitions and aspirations of a project, not just its physical ideas are realised but catalysis any planning challenge into a live-able future one that enriches into the next century.

OUR SMART INTEGRATED MASTER PLAN

Within the larger SG–DTF Framework will ensure that cities need to take steps to future proof their urban development. This process is about supporting cities to respond to the risks to their social and economic prosperity associated with complex environmental change.

OUR OWN SOCIO-ECONOMICS POSITIONING

approach within the SIM framework will determine that community and vitality can future proof themselves and this can generate environmental, social, and economic benefits.

OUR OUTPUT OF THE POSITIONING STUDIES

for key Urban Economic Concepts aims to define the basis on which the SIM will establish the following:

- → Conducive environment for economic & social growth scenarios;
- → Key economic sectors/pillars that will drive growth & social cohesion;
- → Talent and skills required to support the sectors/pillars; Key areas of policy support & SMART Governance;
- Demographic & population growth needed to support economic vitality.

Successful urban planning is not just creating spaces to meet the physical needs of the people, it is planning for integrated communities that can thrive in an economically and socially vibrant environment

SMART INTEGRATED MASTER PLAN

URBAN TRENDS

- → Socio Culture Studies
- → Demographic Analysis
- → Political Analysis
- → City Branding
- → Tourism Planning
- → Recreational Planning
- → Agriculture & Food Park
- → SMART Technology

INDUSTRIALISATION

- → Industrial Positioning & Strategies
- → Industrial policies & Studies
- → Industrial Institutional Setup
- → Industrial Ecology Analysis
- → Industrial Investment Strategies
- → Industrial Marketing Strategies

URBAN DEVELOPMENT & MANAGEMENT

- → Real Estate Economics
- → Urban Economics
- → Land Use Planning & Management
- → Master Plan Audit
- → Development Programming
- → Implementation Strategies
- → Market Strategies
- → Place Management Strategies Policies
- → Training & Capacity Building

ENVIRONMENTAL

- → Landscape Planning
- → Sustainability Design
- → Conservation Studies
- → Geographical Information System
- → Environmental Impact Assessment
- → Biological Impact Assessment
- → Water Sensitive Urban Design

INFRASTRUCTURE

- → Port & Airport Planning
- → Transportation Planning
- → Utilities Planning
- → Coastal & Reclamation Strategies
- → Traffic Impact Analysis
- → Environmental Engineering

URBAN DESIGN

- → Urban Studies
- → Urban Conservation & Revitalisation
- → Urban Form & Space
- → City Image
- → Place Making
- → Vehicular / Pedestrian System
- → Development Guide Plans

SUSTAINABLE APPROACH TO INTEGRATED PLANNING



zero carbon cities; it's to address future developments with holistic approach towards synergy and compatibility to nature, social & economic activity. This will enable cities to uplift the quality of lives as well as living environment for communities to thrive in a conducive economic settings. Balancing the triple-bottom line concept of the 3Ps, People, Planet and Priorities will ensure Harmony between Communities, Nature and Economy to create sustainable livable environment that will be the model for future cities to follow.



URBAN SUSTAINABILITY FRAMEWORK

For all Urban Planning projects at MPS, an Urban Sustainability Framework would be defined in order to determine the planning direction arising from the Triple–Bottom–Line approach at the beginning of the planning exercise. The framework will set clear sustainability targets, KPI's, strategies and solutions to ensure the city's long–term sustainability objectives and issues would be addressed. The USF will be the overarching guide in the planning process and would be a reference for all planning resolutions.

IDENTIFYING KEY SUSTAINABILITY ISSUES

- → Resources & Carbon Emission
- → Nature & Living Environment
- → Affordable Housing & Communities
- → Culture & Heritage
- → Economic Growth & Employment
- → Capacity Building

SETTING URBAN

SUSTAINABILITY FRAMEWORK

- → Key Issues
- → Sustainability
- → Targets
- → KPI's
- → Strategies
- → Time-frame
- → Monitoring
- → Catalyst Project

EXPLORING CREATIVE & CONTEXT SPECIFIC PLANNING SOLUTIONS

- → Visionary & Development Oriented
- → Prudent LU Planning
- → Cost Effective & Context Specific
- → Attractive & Community Oriented Living Spaces
- → Engaging Nature & Preserving Heritage

GREEN DESIGNS

At MPS, the planning process embraces the Environmental Sustainable Design (ESD) methodology. The ESD expert teams are dedicated to delivering sustainable outcomes including integrating green solutions and technologies as early as during the preliminary design and concept stages of the Master Plan to allow ease of implementation. Together with our Clients and stakeholders, we are invested in the long-term preservation of our environment supporting cities to grow sustainability and pragmatically.













Environmental modeling allows the Master Plan to optimized development orientation ensuring that energy use is kept to the minimum and all environmental concerns including recycling, greening and conservation of water are carefully safeguarded.



METROS & RAIL

137 Metro Stations
128 Mass Transit Projects
455kms Of Interstate Railways
6 Multi-Model Transport Hubs
4 High Speed Rail Projects

URBAN INFRASTRUCTURE MASTER PLANS

SMART INTEGRATED PLANNING STRATEGIES

Cities, towns and individual developments all require integrated strategies to ensure transport, energy, water and communications services all work together seamlessly and as efficiently as possible. Whether minimizing ongoing maintenance costs, reducing environmental impacts or maximizing development potential, an infrastructure master-plan is the first step to ensuring a pragmatic framework is in place to support the accomplishment of the overall Urban Plan integration of a project's to its full development potential.

AVIATION

50+ Years of Aviation experience100+ Projects Globally

ROADS & BRIDGES

More than **7300** kms of highways **25+** Major Bridges

PORTS & MARINE

20+ Completed Ports & marine and jettys

APPLICATION OF SMART GOVERNANCE &

SMART INTEGRATED MASTER PLAN

DIGITAL CITY TRANSFORMATION FRAMEWORK

URBAN TRENDS

URBAN DESIGN

URBAN DEVELOPMENT & MANAGEMENT

INDUSTRIAL DEVELOPMENTS

INFRASTRUCTURE

ENVIRONMENT





- → Master planning
- → Urban Design
- **CLIENT** N/A

SIZE 21,471 ha

The Master Plan aims to develop the coastal city to become a smart and self–sustainable Agro–Townships to support growth in food security and high–tech agriculture production industries.

PLANNING APPROACH

The coastal city consists mainly of agricultural land with minimal industry. It is surrounded with major tourist destinations and cities that are rapidly urbanizing. The town is in crucial need of long-term Master Plan as current industry and land use is inefficient while it has ample develop-able land that can accommodate neighboring urbanization.

Before the planning approach, we raise the question of the city's future position in the area. As the town is situated in between prominent cities and tourist destinations, it needs a distinct identity as a self– sustaining city that can support neighboring cities.

Agriculture sector has great significance in the national economy of Vietnam. Central Vietnam is leading contributor to the agricultural sector.

The Coastal City has many prospects in terms of high-tech agriculture and food processing.





Our approach has three pillars that connects to the concept of "Smart Agro–Urbanism"

- → Self-sustainable agro-city that
- → Supports surrounding cities and has
- → A unique local environment with vibrant culture and people.

COMPREHENSIVE PLANNING METHOD

The master plan provides an integrated solution to create a self–sufficient industrial city that efficiently connects basic urban functions with agriculture and logistics system while utilizing the contextual advantages.

Outer ring of Quang Nam "Necklace" corridor integrates the communities by decentralizing the city center from sub-centers. These centers are connected to form the "Innovation Corridor" that is aligned with the preservation and use of green and blue network.

INNOVATION CORRIDOR

- → Tourism and Healthcare District
- → Innovation District
- → Enterprise District
- → Transport and Industrial District

Each district in the innovation corridor provides essential functions that complement the main eco–system of Agro–Urbanism.

The educational and R&D sector will provide with innovative technologies and work force while agritourism and aqua tourism will create additional economic opportunities for the local farmers.

The plan preserves the natural flow of the waterbody, to ensure that the city will have a unique and rich environment that can serve the recreational and leisure needs of current and future residents.

The Master Plan accommodates future flexibility and adaptability concept which includes plan for reserved land for industrial relocation. It also includes modular neighborhood cells that can be used for future expansions or modifications in the residential areas.









- → Masterplanning
- → Urban Design

CLIENT Techno Foki (Bangladesh) Ltd. **SIZE** 39 ha

Demonstration zone Sector 10 is a 39 ha land part of the Jolshiri Abashon masterplan at the eastern part of Dhaka city.

The project site is located at the north of Jolshiri Abashon master plan which has Balu river passes through on the west of site. It is the northern gateway to RAJUK Purbachal project which is within 3 km from the project site.

PLANNING APPROACH

The planning approach focus on maximizing the land value while considering the existing natural features of the site. The concept of Smart Living Hub has three main strategies:

- → Synergy and integration
- → Reinforce the connectivity
- → New paradigm of mixed-use typology

The plan considers the existing natural features as a root catalyst to enhance the development from the west to the east part of the site. The developments are integrated through multi–nodes, diverse programs and landmark to ensure a well–distributed convenient access to public amenities and commercial areas. In Sector 10, it is divided into several main clusters and zone to diversify the district and to create a livable neighborhood.





COMMERCIAL CLUSTERS

It is a hub for various activities for all ages where they can gather and work in one place. The location is well connected to the existing river and will be developed into river promenade in this sector. The urban plaza integrates both business and community activity.

LINEAR GREEN CORRIDOR

It stretches from west to east where connecting commercial cluster to bus depot in the eastern part. The concept is to improve connectivity and provide car free zone to enhance pedestrian experience. At this linear green corridor, it provides ample spaces for cycling, jogging, and urban playground to encourage the neighborhood.

RESIDENTIAL CLUSTER

The main idea of the residential area is to have a tranquil living hub where inhabitants could access the green open spaces easily. In between every clusters, it provides linear park that rooted to the main linear green corridor.

CULTURAL & COMMUNITY CLUSTER

Cultural & community cluster is located in between commercial cluster and residential cluster. It consists of mosque, Adamjee School & College and festival park. This forms cultural nodes along with festival hall and multipurpose outdoor park to provide a space to celebrate and gather during special occasions.





1. SYMBIOSIS









GREEN INTERLACE

LANDMARK











INTEGRATED BUSINESS HUB

CENTRAL BUSINESS DISTRICT IN JOLSHIRI ABASHON



SERVICES

- → Masterplanning
- → Urban Design
- **CLIENT** Techno Foki (Bangladesh) Ltd.

SIZE 48.9 ha

Sector 15 is 48.9 ha of land part of the Jolshiri Abashon master plan at the eastern part of Dhaka city. The project site is located at the center of the Jolshiri Abashon master plan. Sector 15 is planned to be central business district of which features developments such as iconic office towers, commercial, mixed–use, convention center, mosque and central park.

PLANNING APPROACH

The planning approach focus on the maximizing of land value while considering the existing natural features to incorporate with provision of open spaces of the site.

The concept of CBD has three main strategies:

- → Create vibrancy
- → Reinforcing connectivity and interaction
- → New paradigm of mixed-use typology

The master-plan considers to integrate the existing river branches into central park and mosque. Thus, whole developments well–integrated through series of open spaces that rooted from central park and spreads along the entire developments within CBD. By doing so, it gives relieve spaces in the midst of busy CBD development.



In Sector 15, it is planned very carefully in order to improve people connectivity and vehicular access efficiently. The green open spaces integrate several functions such as for pedestrian walkway, public spaces and greeneries as well.

Furthermore, the new mixed–use typology could maximize the land and improve people connectivity for daily commutes. Therefore, commercial activities at ground floor can be maximized and vibrant in this CBD area.

The plan is divided into three main clusters in order to improve accessibility and minimize traffic issues in CBD area yet well-connected each other.

COMMERCIAL CLUSTER

The commercial cluster is the main core cluster which consists of office towers, retail and other commercial functions. It also features iconic office towers (approx. 50 stories) as a main landmark for the Jolshiri Abashon master plan. At this commercial cluster, it is very well– connected to central park where people can gather and utilizes it as multifunction outdoor spaces.

MIXED-USE CLUSTER

On the other hand, mixed–use clusters are located at the north and south of the commercial cluster. It is planned to support the commercial and bring varieties of other commercial usages to support the CBD.

CENTRAL BUSINESS DISTRICT IDENTITY

Gateway identity has been planned in Sector 15 to give a sense of place to visitors. There area four main gateway such as:

- → Business Park Gateway,
- → Living Gateway,
- → Entertainment Gateway and
- → Wellness Gateway.

In each gateway, there is different themes and development characteristics accordingly. Eventually, these integrated developments will create vibrancy and interactions to activate the economic activities in the long term.









CLIENT Barwa Real Estate | Just Real Estate (JRE) **SIZE** 347.62 ha

The Golf Course Land at Lusail is a 347.62 ha land situated in the newly planned Lusail City 20km north from Doha.

PLANNING BACKGROUND

Masterplanning Urban Design

The Golf Course Land at Lusail must create a strong sense of place, and be a comfortable, convenient and an inspirational place to live, relax, and work. The planning and design of the Golf Course Land development at Lusail should set a standard for modern living in Doha and provide the physical framework for a high quality of life.

PLANNING APPROACH

The Lusail City land use distribution consists of commercial, recreational, office, sports, tourist etc. usages. There is lack of research and innovation, business parks usages. Thus, the project Site present opportunities to redefine spatial and social relationship between research, business [work] and urban life [community] usages.

Also, other existing golf course developments in Qatar mainly serves the conventional approach of institutional training facility or recreational purposes.

The Project site present opportunities to adopt a more integrated approach of recreational facilities such as golf course with various land use (research, mixed–use and residential).





Optimum solar vertical exposure orientation



The project site is very well connected with Mass Transit System such as MRT and LRT system. It present opportunities to capitalize on transit infrastructure by creating transit oriented development.'

The Project Site has potential to be developed as a catalytic community in the area of innovation and collaboration. One could view it as the epitome of Qatar's thrust towards value innovation and collaboration on a regional level.

AN URBAN TAPESTRY

"Integrating unique assortment of values respecting nature, culture and traditions where community, environment, economics and recreation closely knitted and weaved to cultivate livability and sustainability"

An Urban Tapestry concept is to achieve an innovative, inclusive, and SMART active community with the economic and social resources for tomorrow's technopolis. The strategy is to create Informal social networks, based on the juxtaposition of multiple activities and experiences of COLLABORATION, LIVE, RECREATION, and INNOVATION taking place at the same time and complementing one another around the clock. An Urban Tapestry is a new planning paradigm to create an environment that will attract the new generation of creative talents.

THE GRAND COURTYARD

In Qatar, as in much of the Arab world, the courtyard house has been the predominant form of traditional domestic architecture.

Hence, housing typologies are specifically designed to meet the demands of the family unit. Domestic architecture is often an interesting expression of the social values of its inhabitants.

Furthermore, houses are a physical expression of the way in which these values are reproduced by society.

The reference from Qatar's culture, tradition, art, and history into the urban design and landscape will create a community with a living identity that is linked to a sense of belonging.











LAHORE, PAKISTAN

SERVICES

→ Masterplanning

→ Urban Design

CLIENT Ravi Riverfront Development Authority **SIZE** 76,684 ha

The prime objective of the RRUDP is to revive the dying River Ravi into a perennial freshwater body and to transform the 5 km stretch of both banks into a vibrant, sustainable and high quality urban development hub.

Lahore Development Authority (LDA) on behalf of Government of Punjab, engaged a Consortium of Consultants lead by Meinhardt Singapore (Pte.) Ltd for the preparation of feasibility study and detail design for implementation of the proposed project. Meinhardt Pakistan (Pte.) Ltd. is leading the field work on the ground and Client coordination.

MAJOR CHALLENGES & KEY OUTCOMES OF RRUDP

The two major challenges faced in the proposed RRUDP are: The dying Ravi River to be developed as Perennial freshwater body; Attracting Investors for High Quality Riverfront Urban Development. Therefore the Project involves six major work scopes, which are discussed in the following sections, to overcome the challenges and to successfully design and implement the RRUDP:

- → River Training & Channelization
- → Wastewater Treatment & Other Public Infrastructure
- → Urban Economics
- → Urban Planning & Urban Design





RIVER TRAINING & CHANNELIZATION

In addition to the water flow from Chenab River through link canals to enhance the Ravi River flow, river training and channelization measures are proposed as follows, to augment the River Ravi water flow for the sustainable riverfront development:

- → Design channel width = 3,280.84 ft (1000m);
- → Design wall height = 33ft;
- → Construction of three Barrages; and,
- → Construction of retaining walls (RCC wall with sheet pile / sheet pile wall).

WASTEWATER TREATMENT & OTHER PUBLIC INFRASTRUCTURE

Feasibilities for treatment of wastewater generated from the RRUDP area, proper waste management (through sustainable infrastructure planning), Ravi River catchment pollution control through legal enforcements are assessed for the Ravi River water quality improvement. In addition to wastewater treatment, fundamental sustainable infrastructure including drainage system, water supply, transportation, low carbon energy systems, waste management-recyclingcomposting-investigation of potential synergies with power generation are also planned to support the proposed RRUDP. The transport planning activities have been developed in line with Transit Oriented Development (TOD) principles and the road transport network has been designed according to well-recognized international standards such as AASHTO – American Association of State Highway and Transportation Officials.

URBAN ECONOMICS

The urban economic analysis is carried with respect to population dynamics and environmentally friendly Economics Drivers (EDs). The projected Punjab population is approximately 18.3M people in year 2040 and whole RRUDP can accommodate up to 8.3M residents. It is understood that the chosen EDs can contribute approximately 214,507 direct employment and 209,300 indirect employments.

URBAN PLANNING & URBAN DESIGN

The proposed RRUDP will extend over an area of about 414 km2 and will be implemented over 30 years period in three phases (Figure 2). The above analysis supported the feasibility of having twelve sectors in RRUDP, namely: Medical City, Residential, Mix-use, Urban Farms, Downtown, Commercial City, Innovation City, Government / Financial City, Tourism, Central City, Knowledge City, Echo-City and Sports City. The environmental and social impact assessment highlighted the positive impacts of the project such as economic uplifting of the region and country,

improved quality of life, socio economic and life style enhancement, ecological uplifting of River Ravi, sustainable lifestyle, tourism and flood protection. There will also be some negative impacts (such as loss of agricultural lands of about 76,684 acres and impact on almost 65 settlements that include 20,723 households with the population of 80,000 along with their assets during project implementation and operational stages. However, these are expected to be temporary in nature and can be mitigated as suggested in EIA and SIA reports.





BANDAR SERI BEGAWAN MASTERPLAN

BRUNEI, DARUSSALAM

SERVICES

→ Infrastructure
 Master Planning
 → Civil & Environment

CLIENT

Jabatan Bandaran Bandar Seri Begawan Brunei Darussalam **SIZE** 10,000 ha

The master plan includes upgrading BSB into a more dynamic, vibrant and unique 21st century capital city with efficient communication and transportation systems and devising a landscape to make BSB as a progressive, competitive and sustainable commercial and financial centre (with special emphasis on Islamic Finance).

The concept infrastructure design is for a 25 year Masterplan (to 2035) and particular attention was given to the Kampong Ayer water village where infrastructure reticulation was fragmented and included untreated waste water discharges, poor quality access and high fire risks.

Infrastructure services include:

- → Storm water drainage
- → Potable water
- → Wastewater drainage and treatment
- → Power
- → Telecommunications / I.T.
- → Solid waste management
- → Road network







Infrastructure

Master Planning

CLIENT Bintan Resort Management Pte Ltd **SIZE** 1,500 ha

→ Civil & Environment
Meinhardt were the Infrastructure Masterplanner for the 1,500 ha Lagoi Bay, Bintan, Indonesia. Meinhardt were involved in the detail design & documentation; tender evaluation & award; contract administration & supervision; and

Infrastructure services include:

completion inspections.

- → Land & Arial surveys
- → Earthworks
- → Drainage
- → Water supply & distribution networks (both potable & non-potable water)
- → Roadwork & Transport System
- → Sewerage network & treatment system
- → Power & telecommunication distribution system
- → Waste disposal







→ Infrastructure
 Master Planning

CLIENT MMC International Holdings Limited **SIZE** 10,380 ha

The development consists of advanced industrial zone, equipped with the most superior network facilities specifically for heavy industrial projects, as well as secondary (processing) industries. A large portion of the residential area lies on the periphery of the gulf coast.

Infrastructure services:

- → Land & Arial surveys
- → Earthworks
- → Drainage
- → Water supply & distribution networks (both potable & non-potable water)
- → Roadwork & Transport System
- → Sewerage network & Treatment system
- → Power & Telecommunication distribution system
- → Waste disposal
- → Roads





→ Urban Planning
 Concept Design

CLIENT Saigon Dai Ninh Tourist Investment JSC **SIZE** 3,600 ha

Dai Ninh Commercial, Tourist, Resort, Ecological Urban Area Project is constructed on an area of approximately 3,600 ha (including about 2,000 ha of water surface) in the area of Dai Ninh hydroelectric power lake, Lam Dong Province.

The main construction items of the project include: botanic garden, hotel & resort, entertainment area, villas, combined villas, outdoor sport area, commercial center, school, and technical infrastructure.

This project is completed with total invested capital of about USD \$1.4B.





- → Civil & Structural
- → MEP

CLIENT Filinvest Development Corporation **SIZE** 9,450 ha

Meinhardt provided Civil & Structural, Electrical, Mechanical services. Clark Green City spans an area of 9,450 ha (23,400 acres) and is located within the Clark Special Economic Zone.

The development is located in the municipality of Capas, Tarlac although it is administered from Angeles, Pampanga.

The development is not a flood-prone area with its minimum elevation being at 56 meters (184 ft) above sea level and its planned central park also serves as a flood catchment basin. The Sierra Madre mountain range is located on the development's west while the Zambales mountain range is located on the east, with both geographical features providing Clark Green City a natural protection from typhoons.







→ Infrastructure
 Master Planning

CLIENT Myanmar Tourism Development Board **SIZE** 2,200 ha

Thadaoo Hotel Zone development master planning commissioned by Myanmar Tourism Development Board is for development of a 2,200 ha land use south of Irrawaddy River in Mandalay, Myanmar.

The Master Plan will consist of Foreign Direct and Local Direct Investment of 92 Hotel with keys ranging 150 to 300, Golf course estate with club house, Equestrian courses, Water Body, Leisure Parks, Education Institutions, Hospital, Residential Housing, Commercial Districts, Municipalities, and Conservation historical Sites.



→ Grading & Drainage Master Plan **CLIENT** PT Delta Mega Persada **SIZE** 2,600 ha

A new Township Project called Suvarna Sutera in Tangerang, Banten Province, which located approximately 45km driving distance from the Jakarta central area and 35km from the International Airport, and can be accessed directly from a major Toll Road.

The Area is surrounded by Industrial Estates, and there are 2 nearby existing major Townships of around 1000 ha each.

The Township of 2600 ha includes mixed-use development comprising the following:

- → Commercial mixed–use = 780 ha
- → Light Industry / Cyberparks = 520 ha
- → Residential = 1300 ha with a population estimate of 150,000people.





CLIENT Bintan Resort

Infrastructure Master Planning Civil & Environment Management Pte Ltd

SIZE 3,000 ha

Meinhardt Infrastructure were the Infrastructure Masterplanner for the 3,000 ha Lobam Commercial City at Bintan, Indonesia.

Infrastructure services include:

- → Land & Arial surveys
- → Earthworks
- → Drainage Water supply & distribution networks (both potable & non- potable water)
- → Roadwork & Transport System
- → Sewerage network & treatment system
- → Power & telecommunication distribution system
- → Waste disposal

SMART AEROCITY MASTERPLAN

DELHI INTERNATIONAL AIRPORT INDIA

SERVICES

EL EL

 → Infrastructure MasterPlan
 → Detailed Engineering CLIENT GMR SIZE 230 acre

-

The 230–acre Smart Aerocity comprises six districts including 'Hospitality District' which is almost built out; 'Gateway District' subdivided into three (City Center, North Park and South Park); and 'Terminal District' near Terminal 3.

Services provided including Infrastructure Masterplan, Traffic Planning, Civil, Electrical Engineering, Water and Wastewater Systems, Security & IT and SmartCity Framework.







CLIENT

SIZE 70 ha

Infrastructure Master Planning

Essodon Fields Pte Ltd

Continuity of project involvement and the effective management of multiple stakeholders have enabled a successfully co-ordinated implementation. Essendon Airport has been operating for over 75 years as a domestic and international passenger terminal with supporting aviation services.

Essendon Fields Pty Ltd, the development arm of Essendon Airport Pty Ltd, has been given a charter to regenerate approximately 70 ha in the northwestern sector of the site as a high quality commercial establishment.

Meinhardt created and implemented a private electricity network, which has enabled an additional revenue stream for developer.

In addition, storm-water management strategies were implemented to attenuate flood flows and to treat run-off prior to discharge into receiving waters to meet strict Melbourne Water and the City of Moonee Valley requirements.

As principal consultant Meinhardt worked on the Master Plan through to contract administration.





SECTOR

- → Infrastructure
 MasterPlan
 → Architecture
- → Residential High-Rise
 → Residential Low-Rise

SIZE 630,000 SQM

The Iconic Lake Garden master plan project in Sichuan, China is a maiden venture of our client in China through the proposed "city" project in JinYang Chengdu, paves the way to bringing a new approach to modern living to Chinese people.

Inspired by the client's approach, the planning of this township not only gave the people of Sichuan Province a modern style living but also a holistic approach of living in the city of lakes and gardens, thus we tagged this project as the iconic green masterplan due to its sustainable design.

One of the strategies that was considered is the development strategies where all towers were orientated to north-south direction to avoid all units facing directly to the morning and afternoon sun at the east-west direction. Approximately 50% of the units N, Ne & NW directions and 50% of the units are facing S, SE & SW directions.

Another strategy that was considered is the development of water bodies and contouring green landscapes. Cluster of water gardens were strategically located in the center of the development that majority of the inwardlooking units are directly looking to this vast landscape. Contouring the landscapes is also one strategy that was taken that created undulating ground landscape treatment for security and aesthetic.





JAMSHEDPUR MASTER PLAN

INDIA

SERVICES

SECTOR

- → Infrastructure
 MasterPlan
- → Market Place
- Architecture
- Museum & Tourism
 Centre

The site was situated in a rich resource land of Jharkhand state where the Kharkai and Subarnarekha rivers meet. As per tradition, Subarnarekha was named "streak of gold", legend has it that traces of gold were found in the riverbed.

The name is a combination of two words meaning gold and line in Indian languages. Kharkai on the other hand was derived from the Sanskrit word Kharakaya meaning "fast-flowing river" which is the major tributaries of the Subarnarekha River.

These rich resources are the main concept used in this project. The entire site will be interconnected with flowing waters that will intertwine with the architectural heritage and lush landscape of the site. This gave an impression of flowing life into the project which is like the two rivers around it.

The Heritage Building was strategically planned to follow the actual terrain topography, using it as a unique opportunity to create spectacular views. Cascades, lagoons, lakes, and forests immersed the users in a serene world where architecture and landscapes are read together as one.

SIZE 140,000 SQM







SECTOR

- Infrastructure MasterPlan
- Offices
- Service Apartments

Architecture

SIZE 1,250,000 SQM

Medini Central was designed to have clean lines and simple forms that are elegant and soothing; the challenge of the design was to create a high-density project that appears integrated and free.

Zoning for residential blocks has been carefully considered to enable beautiful view corridors into lush cascading landscapes but also avoiding overlooking into other units. The blocks are also positioned to maximize views to the golf course and lakes to the southern side and north to the retention pond (lake view) and east to the coastal view separating Singapore and Medini.

The commercial offices flank the main street axis in order to maximize their exposure to the main street giving them maximum advertising exposure creating further value to the iconic architecture of the buildings.

Another strategy which the project aims to undertake is to have complete physical integration of the connectivity of the buildings through bridges, covered corridors, linkway, and walkways.

The effect of doing this would enable a sharing of facilities and of different lifestyles and functions of retail, residential and commercial elements forming the marriage of a harmonious and ideal living environment.

SECTOR

- → Infrastructure
 MasterPlan
 → Architecture
- Residential Low-Rise
 (Bungalow, Cluster,
 Semi-Detached.)

Eco Oasis is strategically located to follow the actual terrain topography, using it as a unique opportunity to create spectacular views. Cascades, lagoons, and forests will immerse the users in a serene world where architecture and landscape are read in together as one living entity.

The existing topography was used in recognizing the peak and low points as the central areas to diagram the different components of the master plan. The design utilized key peak and low points that determined the locations of major elements and vistas of the whole development such as plazas, landscapes, and water features.

One of the most important investments in this project is the knowledge of utilizing and developing the terrain of existing conditions. This is the foundation for the rest of the design decisions throughout the project. For example, knowing where the existing highs and lows of the site will evaluate current stormwater run-off characteristics and the likes. Eco Oasis follows this basic principle and applying it in a more complex but playful design of the terrain. **SIZE** 800,000 SQM

UTOPIA MASTER PLAN

BAHRAIN

SERVICES

SECTOR

- → Residential Villas
- MasterPlan → Architecture

Infrastructure

- → Entertainment Area
- → Hotel & Resort

SIZE

1,500,000 SQM

Utopia is a truly visionary place that encourages and fosters a novel lifestyle – it acknowledges its traditions uniquely to develop plans that will define the abundant prosperity that comes naturally with the authenticity of the place. Utopia is an ideally perfect place, especially in its social, political, and moral aspects.

This scalability exercise enables the physical development to be structured to support multiple investments by multiple development partners simultaneously, to ensure the most rapid development and resulting economy of scale are achieved at the earliest possible time. This is a preliminary study on the concept of master plan to raise possibilities of how new industries may be introduced into the Utopia. These are some examples of global locations that demonstrate the scale regarding the physical size and programs of utopia.

The conceptualization of the city involves the introduction of 5 main centres that contain multiple planned "lifestyle precincts." The planned lifestyle precincts will generate new relationships within the environment that are reflexive in use, symbiotic to context and inclusive of the surrounding environment. The Utopia is aimed to generate a new and exciting way of life.

SECTOR

- → Infrastructure
 MasterPlan
 → Architecture
- → Office & Commercial
- → Hospital, School
 - → Cultural Centre

Beyond the symbolism, the lotus pattern has been used to carve a landscape pattern that adds more dimensions to the site. The water body is strategically carved into the development, meandering around and integrating with existing resources and services. In creating the water body, the amount of soil dug will be filled to generate new terrains.

This cut and fill strategy will generate new landscape interface with every phase of the developments. The symbolism has been used to make the design more contextual. It opens up to an exciting landscape, to a modern form of waterfront & lush living. It creates a more intimate dialogue between building and nature.

Water bodies in Lotus City are composed mainly by three categories, lakes, lagoons and water features. Most of them will be formed by the natural conditions of the site and will play an important role like the project. Water will define the character of the buildings and villas, gives Lotus project a unique and amazing personality. Also, several water features have been placed on the main entrance to the commercial buildings and gateways, this can be understood as the new and poetic interpretation of the relationship between ground and water, buildings and landscape architecture.

SECTOR

- → Infrastructure
 MasterPlan
 → Architecture
- → Residential Villas
- → Entertainment Area
 - → Hotel & Resort

SIZE 1,500,000 SQM

Utopia is a truly visionary place that encourages and fosters a novel lifestyle – it acknowledges its traditions uniquely to develop plans that will define the abundant prosperity that comes naturally with the authenticity of the place. Utopia is an ideally perfect place, especially in its social, political, and moral aspects.

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SECTOR

- → Infrastructure
 MasterPlan
- → Residential Villas
 → Schools & Mosques
- MasterPlan Architecture
 - → Sporting & Social Club

The South Border Housing is the housing project of Saudi-Arabian Ministry of Interior in the cities of Najran and Jizan includes 10,000 residential units spread on 14 sites in the Kingdom extending over 1500 km, including housing and all related support facilities and infrastructure.

The project is a "Design Build" type and comprises the design and construction of Apartments, Villas and Ancillary Buildings such as Administration Buildings, Primary & Secondary Schools for boys and girls, Mosques, Civil Defense Buildings, Police Buildings, Shopping Centers, Warehouses, Workshop Buildings, Stores, Guard Houses, Fuel Stations, Car Service Stations, Water Desalination & Sewage Treatment Plants and all associated infrastructure.

SIZE

- 1,000,000 SQM
- → Clinics
 - Supermarkets

Fire Fighting Building

SOUTHVILLE CITY

MALAYSIA

SERVICES

SECTOR

- → Infrastructure
 MasterPlan
 → Architecture
- → Convention Centre→ Offices
- Unices
 Unices

The South Ville City project was designed to adapt to the "living hill" concept wherein the entire development was cultivated with the natural environment and characteristic of the site which is on a hilly side.

The master planning of the development went through different options for its overall planning from the linear, slight curve, curve blocks in the cluster until finally evolved to the best option of curved blocks with a flat façade in the cluster. This option, in particular, has high aesthetic value, a panoramic view out from the towers, high permeability, and most importantly it is not costly.

The podium for each cluster was not the typical design for the most common development. The typical design has an ugly podium façade facing the street. It provides less area for landscape and less aesthetic value making the street façade dull and boring. The south Ville City boasts of its podium design. Our design crafted the podium and orientates the block to form a cluster space for the public. The public can enjoy the landscape and open spaces in the crafted area designed.

All the towers have roofs and sky gardens. It creates a relaxing and recreation space, communal to the building occupants. It also modifies the building's temperature, providing an ultimate solution of co-existence between building and vegetation within the same domain.

EDEN CITY MASTER PLAN

PAKISTAN

SERVICES

SECTOR

- → Infrastructure
 MasterPlan
 → Architecture
- → Residential Villas
 → Institutional Centres
- → Sporting & Social Club
- , sporting a social cit

Eden City is strategically located to follow the actual terrain topography, using it as a unique opportunity to create spectacular views. Cascades, lagoons and forests will immerse the user in a serene world where architecture and landscape are read in together as one.

Water bodies in Eden City are composed mainly by three different categories, lagoons, cascades and water features. Most of them will be formed by the natural slope of the site and will play an important role in the nature of the project.

Water features has been placed on the main entrance to the residential are and in internal courtyards, this can be understood as the new and poetic interpretation of the relationship between ground and water, architecture and landscape architecture. The design also creates a microcosm of the world made up of water and ground.

SIZE 210,000 SQM

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168 Jalan Bukit Merah #09–01, Connection One Singapore 150168

+65 6274 3373 +65 6274 3320

philip.tan@meinhardtgroup.com

MEINHARDTGROUP.COM