

URBAN PLANNING AND DESIGN

CREATING HOLISTIC AND PRACTICAL PLANS TO SUPPORT CITIES GROW SUSTAINABLY IN AN INCLUSIVE ENVIRONMENT



FUTURE CITIES PRAGMATISM

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

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





GLOBAL FOOTPRINT



55 Offices Worldwide

60+
Years Track Record

500+

Awards Globally

5,000+

Professionals

\$25B

Value of projects annually

Meinhardt is one of the most respected engineering companies in the world and one of the largest independent engineering consultancies in Asia. For over 65 years, our innovative, highly build-able and sustainable solutions have helped clients save time and money.

A global company with more than 55 offices, we help solve the world's most pressing infrastructure and urban challenges, while maintaining the personal touch. That is why more than half of our clients are repeat customers who have been with us for at least 10 years.

As a connected global city, business and financial hub, Singapore is Meinhardt's base for its internationalisation efforts. From Singapore, we have grown Meinhardt's global footprint into Asia and beyond. Many projects were undertaken with expertise from Singapore's global headquarters.

BEIJING BANGKOK MELBOURNE AUCKLAND

GLOBAL AMBITIONS

As a connected global city, business and financial hub, Singapore is Meinhardt's base for its internationalisation efforts. From Singapore, we have grown Meinhardt's global footprint into Asia and beyond. Many projects were undertaken with expertise from Singapore's global headquarters.

- → ASSET MANAGEMENT
- → BUSINESS PLANNING
- → CIVIL & STRUCTURAL
- → CONSTRUCTION & PROJECT MANAGEMENT
- → DESIGN MANAGEMENT
- → ENVIRONMENTALLY SUSTAINABLE
- → EPCM
- → FAÇADE ENGINEERING
- → FIRE PERFORMANCE
- → INFRASTRUCTURE PLANNING
- → LEAD CONSULTANCY
- → LIGHTING
- → MECHANICAL, ELECTRICAL & PLUMBING
- → TECHNICAL ADVISORY
- → URBAN PLANNING
- → VALUE ENGINEERING



We aspire to be the World's preferred infrastructure and urban solutions partner.

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

Managing 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 Lan Principal Planner



Bhavya KukretyDirector Smart City
Infrastructure



Tan Kim LengSenior Advisor, KDI Asia
Governance & Digital
Transformation



Ho Lih LiangDirector, International Design Studio



Henry LagansuaDirector, 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.



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

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

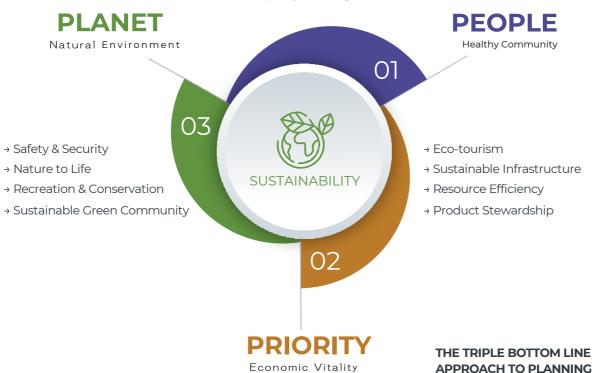
URBAN DESIGN

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

SUSTAINABLE APPROACH TO

INTEGRATED PLANNING

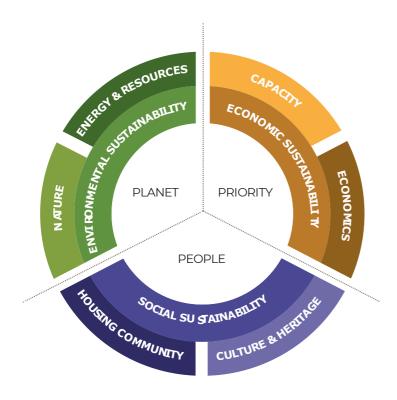
- → Job Creation
- → Skills Enhancement
- → Socio-Investments
- → Healthcare & Housing
- → Capacity Building



APPROACH TO PLANNING

Sustainable Planning in emerging regions is not just about creating 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

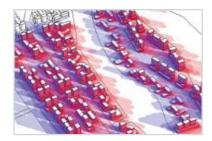
EXPLORING CREATIVE & CONTEXT SPECIFIC PLANNING SOLUTIONS

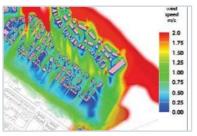
- → Visionary & Development Oriented
- → Prudent LU Planning
- → Cost Effective & Context Specific
- → Attractive & Community Oriented Living Spaces
- → Engaging Nature & Preserving Heritage

PLANNING TOWARDS RESILIENCE

At MPS, the planning process embraces the resiliency planning approach with holistic and systemic thinking methodology. The 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 and to be future-proof to withstand unpredictable city challenges. Together with our Clients and stakeholders, we are invested in the long-term preservation of our environment supporting cities to grow sustainability, resiliency and pragmatically.

SOLAR AND RENEWABLE ENERGY OPTIMIZATION





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

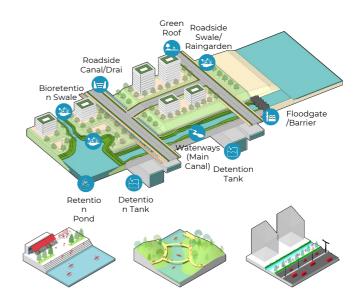
FOOD SECURITY AND WASTE MANAGEMENT





Applying food resilience technology and waste management system in the Master Plan allows higher food production and energy efficiency. Considering the full process of food production in the Master Plan enables effective process to undertake future global threats that may impact food supplies and energy shortages.

NATURE-BASED SOLUTIONS (NbS) & WATER SENSITIVE URBAN DESIGN (WSUD)



Nature-based Solutions (NbS) and Water Sensitive Urban Design (WSUD) are planned carefully in the Master Plan to understand how the project site can withstand future threats with minimum impact to the development. Specific strategies and treatments will be applied to improve site adaptability and resiliency during haphazard situations.



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 experience

100+ Projects Globally



ROADS & BRIDGES

More than **7300kms** of highways

25+ Major Bridges



PORTS & MARINE

20+ Completed Ports & marine and jettys



STRATEGIC ADVISORY & CONSULTANCY

BEST-IN-CLASS & INNOVATIVE SOLUTIONS

TRAINING & CAPACITY BUILDING



01. ICT & Communication Security



02. Integrated Operations



03. Smart Security & Surveillance



04. Platforms, Dashboards AR/VR



05. Intelligent Transport Services





06. Smart Energy Managemen t



07. Smart Water Managemen



08. Smart Sustainabilit y and Urban Resilience



09. Organization Restructurin g and Branding



10. Revenue and Financial Opportunitie

TECHNOLOGY PARTNERS







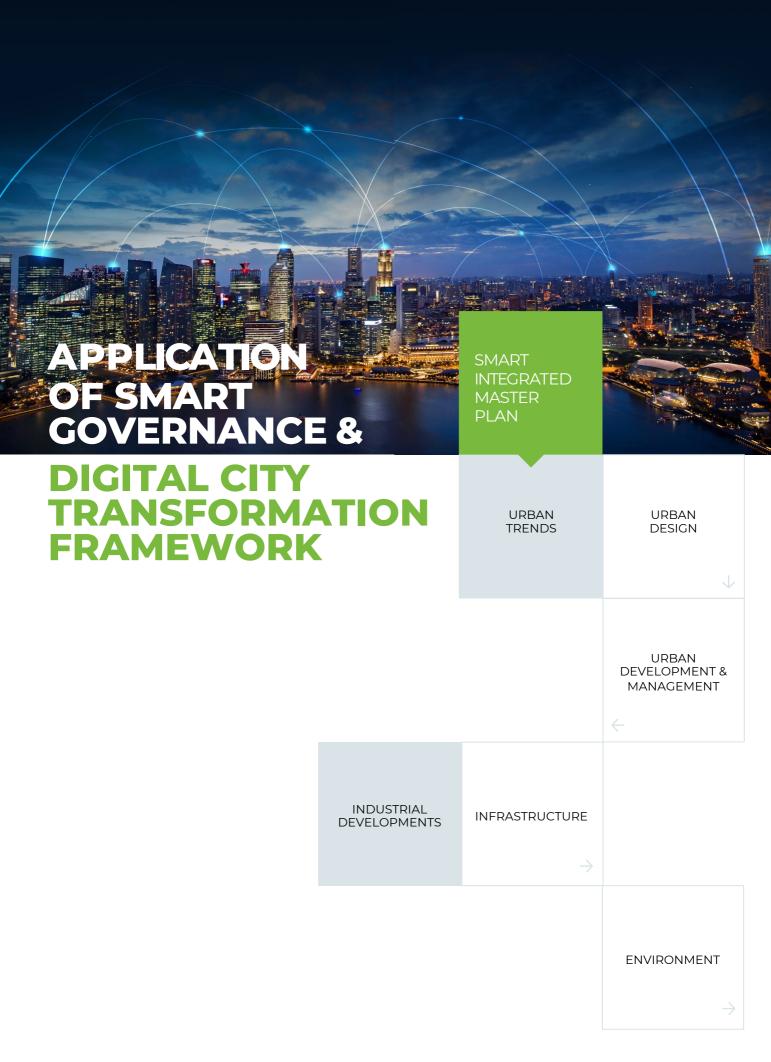












SMART GOVERNANCE BUILT IN RESILIENCE	→ Vision For Resilience → Strategic Goals	 → Human Capital → ICT Technology 	
		→ Financing & Processes → Investment & Information	→ Policy Levers → Capacity Building
DIGITAL TRANSFORMATION INTERFACE	→ Data Analytics → Systems Integration	→ Licensing Control → Event Coordination →	
		→ Security Technology → Community Outreach	 → Accessibility → Growth Sectors
	COMMON DIGITAL SERVICES		SMART DIGITAL ARCHITECTURE
 → Residents → Enterprises → Properties → Visitors → Through e-Government Platform 	DATA & INFORMATION		 → Network Facilities & Infrastructure → Data-Center Facilities
	 e-Payment e-Profile e-Access e-Notice e-Feedback e-Submission e-Appointments Through Dev't Platform 		→ Endpoints – Video Camera, Sensors & other Devices for Intelligent Monitoring & Control → Analytics Application

HOW WE CAN HELP

At Meinhardt Planners Singapore, we offer global customized expertise for various scales of masterplan projects. Our proposition is to provide the best practice advice in urban development to ensure cities become successful, vibrant and sustainable.

SMART INTEGRATED URBAN & INFRASTRUCTURE PLANNING

- City Visioning and Branding Regional Concepts & Structure
- Positioning Strategy for Townships & Industrial Developments
- → Strategic Urban Planning Studies & Review Audits
- → Demographics, Socio & Economic Analysis
- → Zoning & Land-use Design Programming
- → Transit Oriented Planning & Urban Design
- → Development Control Parameters & UD Guidelines
- → Smart Governance Built-In Resilience
- → Digital Transformation Data Interface
- → Architecture & Design
- Preparation of Infrastructure, ICT & Water Sensitive Developments
- Community Consultation, Capacity Building & Engagement, Project Showcasing
- → Technical Planning & Design for Smart Cities Implementation
- → Sustainable Infrastructure & Transportation Planning
- → Leadership in Energy Planning/ Resource Reduction



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PROJECT HIGHLIGHTS

For over 60 years, our innovative, highly buildable and sustainable solutions have helped clients save time and money. As a global company with more than 55 offices, we help solve the world's most pressing infrastructure and urban challenges, while maintaining the personal touch.

That is why more than half of our clients are repeat customers who have been with us for at least 10 years.



SERVICES
Concept Master Plan
Urban Design
Competition

CLIENT
Barwa Real Estate
Just Real Estate (JRE)

SIZE 348 HA PROJECT YEAR 2020

"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."

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 simultaneously and complementing one another around the clock. An Urban Tapestry is a new planning paradigm to create an environment that will attract a new generation of creative talents.

The unique identity for the Proposed Districts derived from Qatar's culture, tradition, art, and history. Both districts will have distinctive colors, patterns which is reminiscent of AL Sadu fabric. Vibrant colors (red, blue, brown, green, and white) and intricate patterns define both aesthetics and identity.

The color coding and patterns will be captured in the landscape, community signage, lighting design, pavement and hardscape patterns, and proposed public art, parks, and shading structures.

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.



Creation of a Golf Enthusiast Community (Club House, Commercial Hub – Active Shade Canopy)



Integration of Work and Play (Enterprise District and Golf course)

PLANNING APPROACH

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

Also, other existing golf course developments in Qatar mainly serve the conventional approach of an institutional training facility or recreational purposes. The Project site presents opportunities to adopt a more integrated system of recreational facilities such as a golf course with various land use (research, mixed-use and residential).

The Golf Course Land at Lusail is designed as the focal point and to be a comfortable, convenient, 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.

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 exciting expression of the social values of its inhabitants.

Furthermore, houses are a physical expression of society's reproduction of these values.



Consideration of the Core Community Needs



Integration of Different Urban Functions



Multi Active Connectivity





SERVICES
Concept Master Plan
Urban Design
Competition

CLIENT Dien Ban People's Committee, Quang Nam SIZE 21,471 HA PROJECT YEAR 2020

"Food cycle innovation integrated into every element of sustainable urban development to create a more vibrant, prosperous, and resilient city with culturally rich food security system."

AWARDS: The project received the Singapore Institute of Planners (SIP) Award 2021.

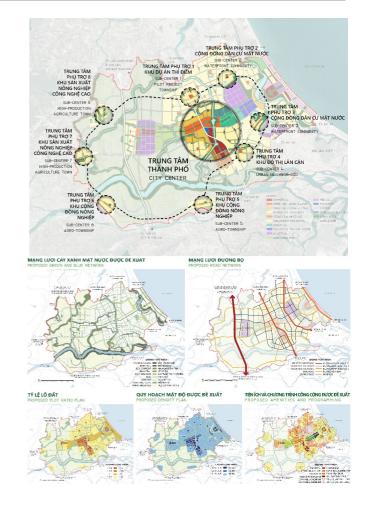
PLANNING APPROACH

The coastal city consists mainly of agricultural land with minimal industry, and major tourist destinations surround it. The city needs a long-term Master Plan as the current industry and land use are inefficient to fulfill current and future needs.

Our approach has three pillars that connect to the concept of "Smart Agro-Urbanism."

The city should become a:

- 1) self-sustainable Agro-City that
- 2) supports surrounding towns 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 essential urban functions with agriculture and logistics systems while utilizing contextual advantages.

The outer ring of the Quang Nam "Necklace" corridor integrates the communities by decentralizing the city center from sub-centers. These centers are connected to form the "Innovation Corridor" aligned with the preservation and use of the 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 leading eco-system of Agro-Urbanism.

The educational and R&D sector will provide innovative technologies and workforce, 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 prosperous environment that can serve the recreational and leisure needs of current and future residents.

The Master Plan accommodates future flexibility and adaptability, including a 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.



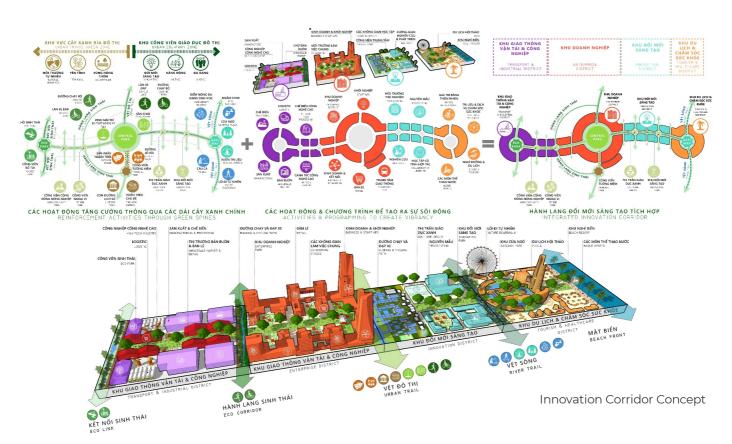
Agriculture and Aguaculture Eco-District

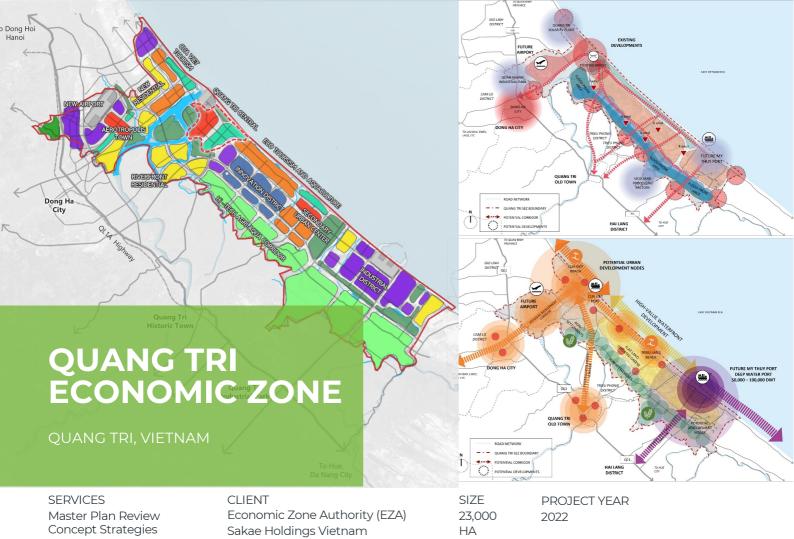


Innovation and Enterprise District



Tourism & Healthcare District





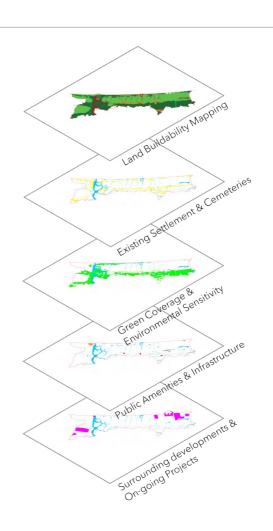
Shaping The Future Of Economic Zones: A pragmatic, scalable, and environmentally sustainable perspective of new regenerative and transformative planning is introduced to promote innovative manufacturing, processing and energy sectors along with tourism and knowledge-based industries.

PLANNING APPROACH

The Quang Tri Economic Zone Project has a unique opportunity to transform its land potential to support its regional growth further and start a new paradigm of a more sustainable and livable Economic Zone in Vietnam. As the Project re-visits the initial Master Plan (2016) six years later, the adjustment considers multiple variables concurrently (Global Climate Change Agreements, COVID-19 Pandemic, Existing settlements, Ongoing construction of infrastructures, and committed developments).

The Master Plan aims to create a healthy and prosperous new urban agglomeration to nurture a self-sufficient dynamic urban community. The strategies help create a holistic environment where all needs of the residents are met within the New Urban Area.

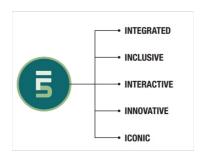
The Master Plan considers the physical constraint and infrastructures to fulfill Quang Tri EZ's potential of becoming a key player in the region to actively participate in the GVC (Global Value Chain) and attract investments.





Economic Zone Planning Strategy

SHAPING THE FUTURE OF ECONOMIC ZONES



A nature-centered approach is established, guided by

I-5 planning principles

for regenerative and transformative planning.

STRATEGIC APPROACH

Based on the best practices of Economic Zones in Singapore and major global cities, Industry-City Integration is proven more advantageous than exclusively industry-based economic zones.

The Project adopts the integration of the Community, Environment, and the Seaport to create a more holistic and future-proof Economic Zone.

To realize the full potential of the economic zone and ensure future growth, the new master plan identified strategic correlations between the vital urban nodes (industrial areas, commercial urban areas, residential areas) and major infrastructures (Seaport, airport, transportation network).

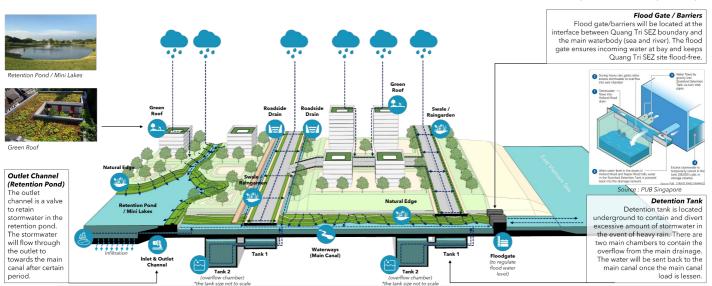
The Project pioneers to create an ambitious and flexible ground for future technology and global economic industries. For this, the Master Plan Review considers Hi-Tech Agri-Aqua Industries, Circular Economy and Closed Loop Systems, SMART City Considerations, and Industry 4.0.

The proposed adjustment comprise of the following 4 zones:

- 1) Quang Tri Aviation Zone
- 2) Eco-Tourism Zone
- 3) Industry Energy Zone
- 4) Agriculture & Mixed-Use Zone



Demonstration SEED Development Zone (150 ha)



Sustainable Urban Drainage System Strategies



SERVICES
Concept Master Plan
Port Planning
Urban Design

CLIENT Dong Tam Group Sakae Holdings Vietnam SIZE 1,935 HA PROJECT YEAR 2020

From Opportunity To Reality: Catalyzing Action For A Future Economy - New Long An Harbourfront City intersects with two major economic regions and would provide an opportunity to be nexus for both; it generates the need to develop an innovative concept for integrating sustainability and resilient city planning.

PLANNING APPROACH

The Project Site is the main water gateway of Long an Province. It is also in close-proximity to the key cities of Tan An, Ben Luc and Can Giouc. With connections to these cities, the project site can become a regional center to support the economic growth in the region.

The urban plan with a multidisciplinary approach aims to translate intelligent interventions and technological solutions into a holistic approach. Instead of a sum of single silver bullet solutions, the master plan facilitates crossfertilization between infrastructure and mobility, climateresilient and sustainable planning, innovation, identity, ecology, and biodiversity.

Salient Features of the Master Plan as follows:

- A new exciting, innovative manufacturing, cultivation paradigm
- Next generation industrial districts for manufacturing in the city



Demonstration SEED Development Zone (100 ha)



Harbourfront Features and Landmark Development

REGIONAL SATELLITE CENTER – SEED DEVELOPMENT HARBOURFRONT DISTRICT HEART OF LONG AN

Adjacent to the committed HCMC Ring Road 4 and Southern Vietnam Railway corridor, The Harbourfront District is the main gateway of New Long An Harbourfront City developments.

Careful utilization of the natural landscape setting enables a unique urban environment where the local culture and community can thrive along with economic growth.

A NEW VIBRANT DESTINATION AND A NEW LANDMARK OF SOUTHERN VIETNAM

Sits atop prime waterfront land -the office and residential towers sculpt a dramatic skyline, marking it the dominant focal point along the waterfront.

The Long An marina, Signature Towers, and Anchor facilities create a modern and vibrant development that envisions Long An Province's and Southern Vietnam's future.

The Harbourfront CBD offers a fertile ground for collaboration and partnership, inviting tourists, innovators, and entrepreneurs to live, work, and play.

CREATING THE MOST DESIRABLE & LIVABLE ENVIRONMENT FOR BUSINESS AND LEISURE

A continuous waterfront promenade seamlessly connects all anchor facilities, such as The Marina, Celebration Plaza, and the Cultural Theme Park along the waterfront, creating a vibrant public space for all.

Encourage a healthy and vibrant community, where the residents have ample choices to enjoy nature by cycling, jogging along the river, or experiencing various water sports and activities.

BIOPHILIC URBANISM: CREATING ENVIRONMENTS FOR COMMUNITY GROWTH

A GREEN TOWN that offers a variety of natural and recreational spaces that will increase daily proximity to green spaces and enable opportunities for the community to come together and bond over activities



Green and Blue Networks



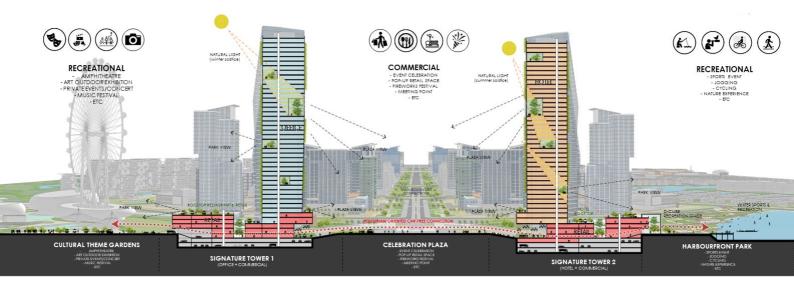
Deck Connectivity Amenity Network



Climatic Urban Design



Walkability Design - Open Space Connectivity





Concept Master Plan Urban Design MHT Pakistan

410.5 HA

2020

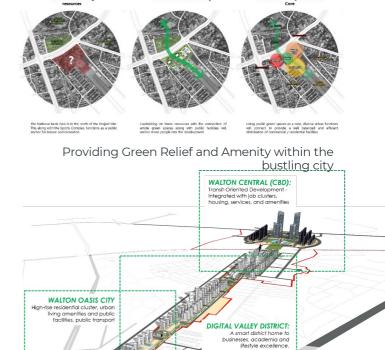
"A new Integrated Development Destination in the city to attract growth through new sustainable environment supporting the economies of the transit hub.

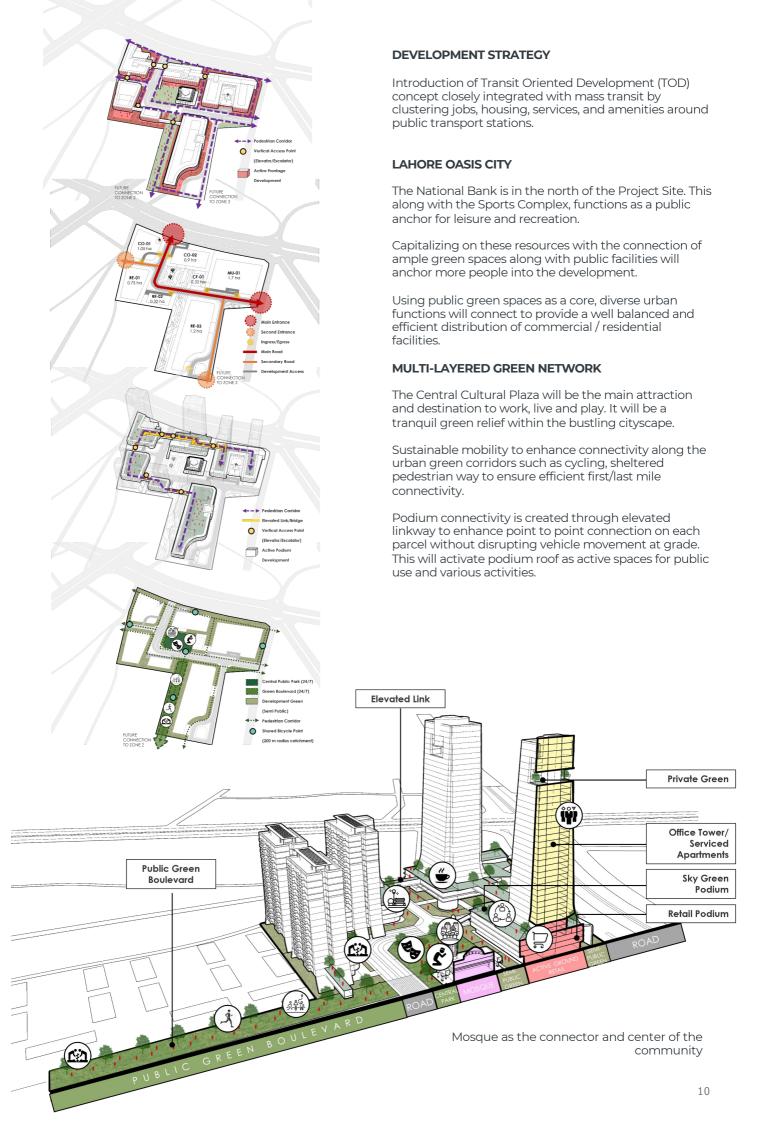
PROJECT BACKGROUND

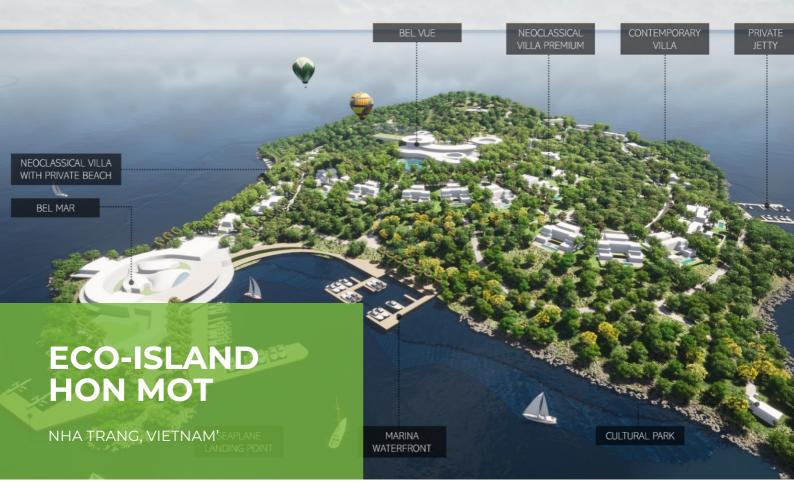
The Project Site is located in the Lahore City next to the Model Town. It encompasses a total of 410.5 acres of land including the existing Walton Airport. Walton Airport is 10 km from the city center of Lahore. It caters to the general aviation and is used by several private flying clubs. Lahore's main airport is Allamah Iqbal International Airport. The Lahore Railway runs through the Project Site connecting industrial areas in the north to the south.

RATIONALE OF THE DEVELOPMENT

Lahore recently started operations of it's first LRT Orange Line. The Orange Line has a length of 27.1 km and is operational since October 2020. Next phase of the mass transit system is the MRT Green Line which runs parallel to the Project Site. The length of the Green Line is to be 27 km of which 11.6 km will be underground and 15.4 km overhead. The Project Site is well connected in terms of railway and future mass transit networks. It is located adjacent to many new developments and the city center ensuring accessibility to public amenities and workplaces.







SERVICES Concept Master plan Urban Design CLIENT VinGroup/ VinHomes SIZE 48 HA PROJECT YEAR 2021

"Hon Mot luxurious tropical landscape transpires into an environment exclusively designed for an Elite few to relish in the bliss of elegance, peace, and inspiration for the senses to behold."

PROJECT BACKGROUND

Hon Mot Project is in Nha Trang, Khanh Hoa, Vietnam, about 9 km southeast of the city of Nha Trang. The total area of the Island is 48 ha. Hon Mot Island is anchored in the warm, tropical waters of the South China Sea, surrounded by pearl-white sands and caressed by crystal clear turquoise waters.

Hon Mot offers breathtaking views of the infinite ocean, majestic rock formations, multi-colored coral reefs, and picturesque undulating hills with abundant flora and fauna.

Masterplan Layout Proposal is inspired by contemporary pearl necklace jewelry that features a captivating, elegant, 3D curvy form. Proposed layouts are intended to showcase free-flowing design language that interlaces programs, buildings, and natural patterns of the existing landscape into a unique and genuine perspective freed from stereotypes.



Efficient Planning based on the natural conditions and view



Exclusive Private Housing Cluster

NORMAN TO MAN TO

Arrival Plaza Marina



Club House overlooking the horizon



PLANNING CONTEXT

Hon Mot is located within 10 km distance from The Nha Trang city center. Current through several modes of transport transfer (vehicle, cable car and ferry). Hon Mot is located within 20 km (45 minutes trip duration) from The Cam Ranh International Airport. The Cam Ranh International Airport handled more than 9 million passengers in 2019, making it one of the busiest airport in Vietnam and one of the fastest growing airports in the country. The National Route 1A (connecting north-south Vietnam), runs through the Nha Trang City.

PLANNING RATIONALE

Vietnam's recent economic growth and the increasing middle class are changing the urban landscape of Nha Trang City. In recent years, hospitality and residential real estate (vacation property) investments have been in demand with the attraction of many local and international investors.

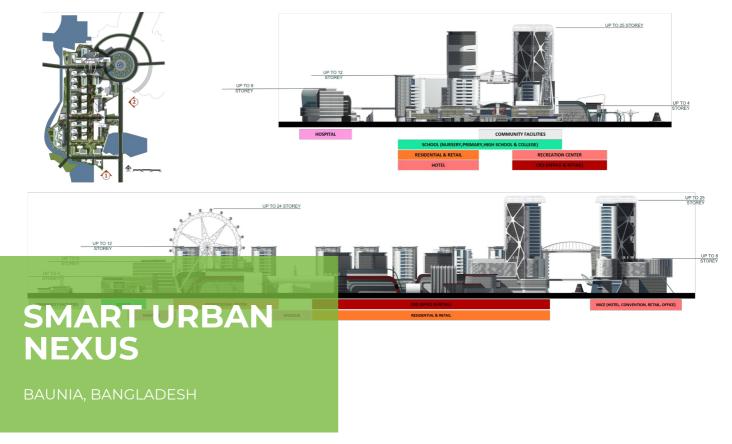
Island tourism is an essential economic driver of Nha Trang City. The Nha Trang Bay is comprised of 19 islands (an area of 507 km2), of which 14 are developed for tourism. As the city grows further, infrastructure investments will gradually increase regional residential and urban demand.

The Coastal areas, especially near Nha Trang Bay, are heavily utilized for tourist areas and resort hotels. Most of the large-scale developments are for Tourist resort purposes. New urban residential developments are developing towards the west to accommodate the growing middle class.

More premium residential and housing options will be needed in the future as the Nha Trang City population expands and the economy grows.

The Project Site is a chosen location for groups wishing to live/own vacation property in Nha Trang Bay.





SERVICES Concept Master plan Urban Design CLIENT Techno Foki (Bangladesh) Ltd. SIZE 48.6 ha PROJECT YEAR 2020

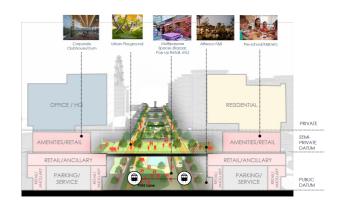
"The vision for Baunia project zone 1 is to realize a vibrant mixed urban destination by introducing innovative programs to sustain SMART strategies that support the emergence of a Living Hub and the birth of a 'New City Centre.'

The concept is to create a microenvironment that is full of naturally enhanced spaces, play areas, open green spaces, public and semi-public plazas, entertainment spaces, and uninterrupted multilevel pedestrian connectivity between the different functions and zones. The design will ensure a successful combination of the natural and artificial, the private and the public. A carefully designed landscaping and free-flowing natural spaces will create an urban garden.

This concept to be carried into different levels of the buildings by designing elevated green plazas, which will give a true ambiance of a green city.

PLANNING APPROACH

The Smart Urban Nexus will be completely walkable and accessible, creating a vibrant street and daily life. The developments will also interact, promoting a more physical and visual connection between buildings, corridors, and each public amenity.



Multi Layer (Ground, Podium, E-deck) Concept







Mixed-use Ground Level

E-Deck (Environmental Deck) Elevated Level

A CLUSTERING OF VARIOUS PROGRAMMATIC ELEMENTS

Encourage anchor and ancillary usages to develop in various areas of the Smart Urban Nexus. By creating anchor industries or business parks at ideal locations, ancillary industries can be propelled to cluster together appropriately.

The concept of the Festival Corridor is to create two layers of the pedestrian street that connect all the development in Zone 1, creating a quality of life that attracts people with multiple functions. On the ground floor, a car-free zone with an intensive landscape serves as event space and outdoor F&B. The E-deck is integrated with the building podium to create an elevated shopping street.

EFFICIENT PROVISION AND LAYERING OF INFRASTRUCTURE

E-Deck or the Environmental Deck is proposed to be the adhesive holding Smart Urban Nexus together. A corridor for pedestrians, cycling, and People Mover System will also have trees, creating shade on deck. Provision of district-wide scalable and adaptable infrastructure for efficiencies and enabling plug-n-play. Below the road is the Common Service Duct, which provides uninterrupted flexible infrastructure throughout the district.

A SMART DISTRICT

Create a futureproof district where smart technologies can be integrated for better operations and sharing. SMART infrastructure components can optimize resources and services for different land use. Lighting, Landscape watering, traffic management, fire control, and other essential services will be made SMART reducing manpower requirements. Security, real-time maps, and crowd control management is a key aspect of SMART District proposals reducing incidents and increasing user-based decision making.



Elevated Deck Connectivity - Amenity Networks



Integrated MICE and Hotel - Urban Plaza





SERVICES Concept Master plan Urban Design CLIENT Techno Foki (Bangladesh) Ltd. SIZE 48.9 ha

PROJECT YEAR 2020

Sector 15 is planned to be a central business district (CBD) of which features developments such as iconic office towers, commercial, mixed-use, convention center, mosque and central park.

PLANNING APPROACH

Sector 15 is a 48.9 ha of land which is part of the Jolshiri Abashon master plan located at the eastern part of Dhaka city. The project site is located at the center of the Jolshiri Abashon master plan.

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:

- 1) Create vibrancy
- 2) Reinforcing connectivity and interaction
- 3) New paradigm of mixed-use typology`z

The masterplan 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.



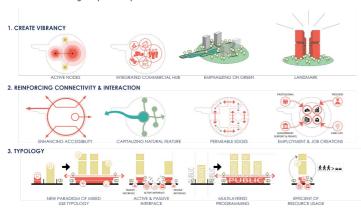
Integrated Community



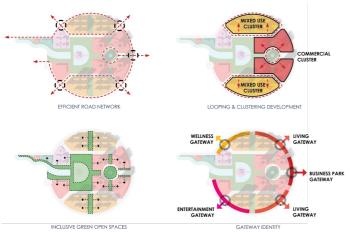
CBD Community



Community Open Space - urban anchor



Sector 15 Integrated Planning Concept



In Sector 15, the site is planned carefully to improve people connectivity and vehicular access efficiently. The green open spaces integrate several functions such as pedestrian walkway, public spaces and greeneries.

Furthermore, the new mixed-use typology could maximize the land and improve people connectivity for daily commutes. Therefore, commercial activities at the ground floor can be maximized and create a vibrant 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 to 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 are four main gateways:

- 1) Business Park Gateway,
- 2) Living Gateway,
- 3) Entertainment Gateway and
- 4) 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.





SERVICES Concept Master plan Urban Design CLIENT Techno Foki (Bangladesh) Ltd. SIZE 39 ha

PROJECT YEAR 2020

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

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:

- 1) Synergy and integration
- 2) Reinforce the connectivity
- 3) 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.

Improved connectivity and road networks along with the capitalization of green spaces from existing river will improve walkability and profitability of commercial facilities along the "green corridor". Additionally, the creation of new mixed-use typology maximizes land value by re-layering necessary programs and ensures land use efficiency. The plan features diverse programs of mixed use, commercial, MICE, mosque, institutional and residential which are planned carefully to ensure connectivity. Variety of mixed programs not only enhance the urban quality but also attracts local talents and job creations in the entire Jolshiri Abashon Region.





Residential Community Clusters



Iconic Landmark Cluster



Culture and Community Cluster

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.





SERVICES Infrastructure Master plan CLIENT MIVIDA Pakistan SIZE 354 ha

PROJECT YEAR 2020

Mivida Pakistan is the first eco-sustainable city. Meinhardt provided detailed master planning, field survey and infrastructure planning.

MIVIDA City Islamabad is the first-ever eco-sustainable city in Pakistan. It is a project by Khanial Builders. The company is already known for developing world-class living spaces and the outstanding work all over the world. MIVIDA City is a master-planned housing society that is soon going to be launch at the ideal location of Islamabad.

It is a modern housing society with all the integrated residential amenities. Moreover, its location is just excellent. MIVIDA City will offer you a lavish lifestyle with an eco-friendly atmosphere.

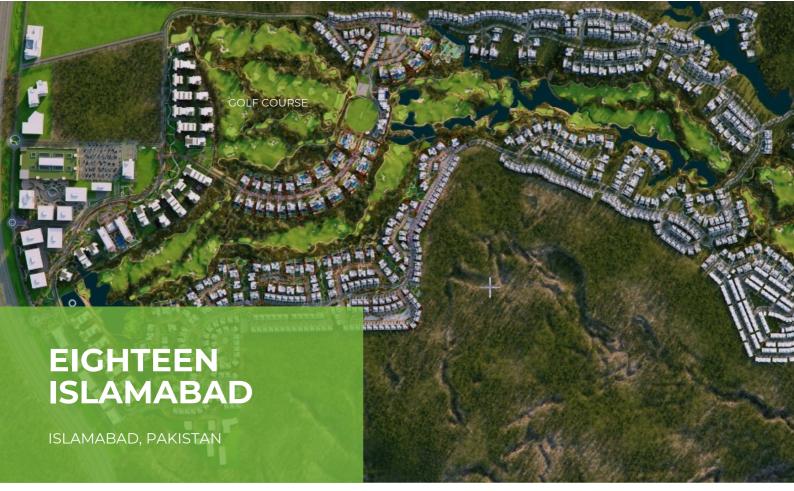
SUSTAINABLE DEVELOPMENT

Following the United Nation`s SDG (Sustainable Development Goal) No. 13 and Clean Green agenda of Government of Pakistan, MIVIDA is the first Eco-sustainable development in the housing industry of Pakistan with major sustainable features.

There will be lowest water, soil and air pollution in MIVIDA managed through Bio-domes, Grey water management, Organic markets, Green swales, wetlands etc. to provide the best living environment for a healthy lifestyle to the generations to come.







SERVICES Infrastructure Master Plan Civil & Structural CLIENT Elite Estates Pvt. Ltd SIZE 225 ha PROJECT YEAR 2020

Meinhardt provided Detail Design, Infrastructure Design, Site Supervision.

"Elite Estates" the proud owner of "Eighteen", a mixeduse project in Islamabad, Pakistan, which comprise of residential villas, multistorey apartment buildings, Office Buildings, Hotels, Educational Institutes and hospitals

Detail Designing (Architectural, Structural, MEP & HVAC) Detail Infrastructure Design (Roads, Sewerage, Drainage, Water Supply, Electrical Works and Fire Hydrants) Tender drawings and documentation, Bill of Quantities, Cost Estimate Detail Site Supervision







SERVICES Concept Master Plan Detail Design CLIENT T.H.T Development Co. Ltd. (Consortium of Korean Construction Company) SIZE 208 ha PROJECT YEAR 2012

Meinhardt provided 1/500 master plan, basic design, detail design, tender document and the evaluation services for 208 ha of the new urban area located in the west of West Lake.

The area is being developed as a luxury community, combined with the villa area with about 200-400m2 for each villa/apartment, main business center including International Finance Center and commercial areas with entertainment area, together with the main axis of green area conforming with the social and technical infrastructure.









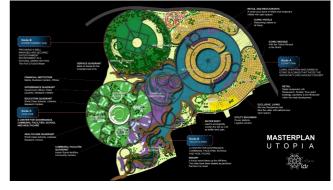
CLIENT

SIZE 150 ha PROJECT YEAR 2012

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.







CLIENT

SIZE 80 ha PROJECT YEAR 2013

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 runoff characteristics and the likes. Eco Oasis follows this basic principle and applying it in a more complex but playful design of the terrain.







CLIENT Confidential SIZE 63 ha

PROJECT YEAR 2012

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 the local community

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 inward-looking units are directly looking to this vast landscape.







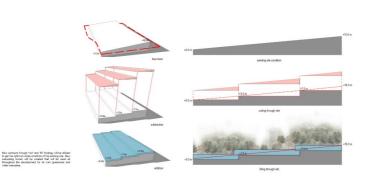
CLIENT Confidential SIZE 28 ha

PROJECT YEAR 2015

Meinhardt IDS provided Architecture Design. The Al Jazi Gardens was envisioned to be one of the jewels of the new Cairo City. It will showcase a new style of tropical living at its best.

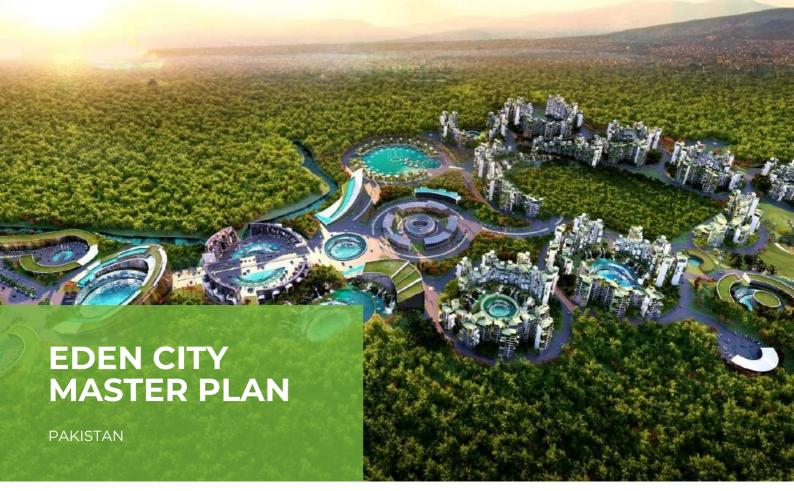
Starting from the entrance gateway, guests and owners will be greeted by a spectacular architectural statement of its gateway. Lush greeneries all over the site will be the foreground of the outstanding architectural statement of the residences to its retail and shopping areas.

The client envisioned this project to be a development like no other in New Cairo city. The Client wanted a development where nature is part of the architecture. The client wanted a fusion of modern-look and tropical to be incorporated in the design of the buildings except for the Al Jazi Mall where they wanted a classical looking building.









CLIENT Confidential SIZE 21 ha PROJECT YEAR 2012

Eden City is strategically located to follow the existing 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.







CLIENT Confidential SIZE 14 ha PROJECT YEAR 2020

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.

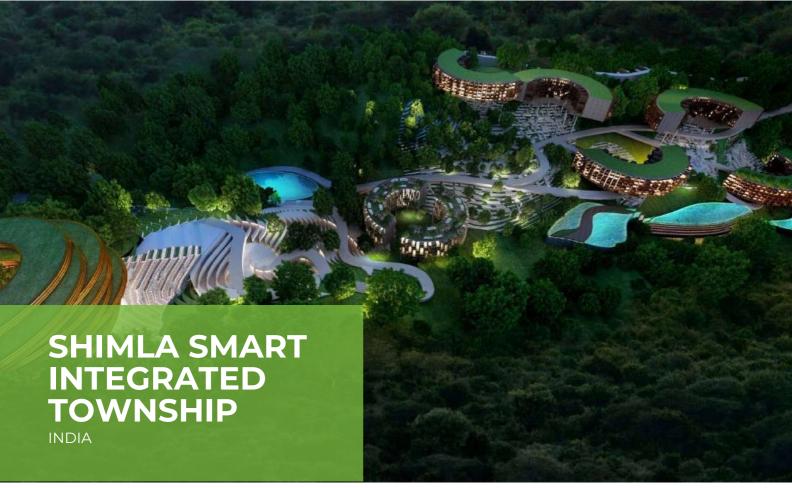
The name is a combination of two words meaning gold and line in Indian languages. Kharkai on the other hand was derived from the Sanskrit word Kharakaya meaning "fast-flowing river" which is the major tributaries of the Subarnarekha River.

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.







CLIENT Confidential SIZE 10 ha

PROJECT YEAR 2018

Meinhardt IDS provided Architecture Design. Shimla is located in the lofty and mysterious ranges of the Himalayas. It is the capital of the Himachal Pradesh.

The Shimla township development shall acknowledge its past traditions uniquely to develop a suitable platform for Shimla's dramatic move into the future - To transcend many of its heritage, music, dance, and religion and to allow the people to be a part of significant and iconic development.

The design shall respect the cultural heritage, arts, and crafts as well as traditions of Shimla integrating the design of contemporary architecture and connecting to the senses of an existing fabric of natural and post-colonial Shimla which is another key part of how we have developed our scheme.

We consider this as a good and new approach for Shimla in conceiving the new blueprint for the future.

The best thing about this city is the fact even if it is one of the tourist destinations in India; it has still relatively untouched by globalization and commercialization, which is prevalent among the other tourist destinations. It has retained the oldworld charm and is very different from the other Indian states. The culture of Shimla is the perfect blend of modern thoughts and traditional values. Shimla has a very rich cultural heritage that is rural and traditional.









SERVICES Civil, Structural Building Services CLIENT Confidential SIZE 10 ha PROJECT YEAR 2012

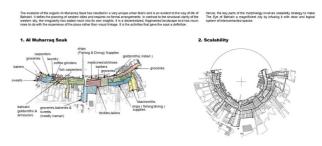
Meinhardt IDS provided Architecture Design.

AWARDS: WAN Awards 10 Commercial Sector Building of the Year; Arabian Property Awards Asia Pacific 2011 Highly Commended for Mixed-Use Development

The introduction of architecture and landscaping of the residential section brings a new spectrum of color of smooth beige, clean white, forest greens to Manama Lagoon recreating, redefining, and reemphasizing the site as a unique masterpiece in terms of its collective design elements. The use of gardens terracing from level to level creates an architecture of randomness and spontaneity blending it back to the parent framework of the Bahraini vernacular.

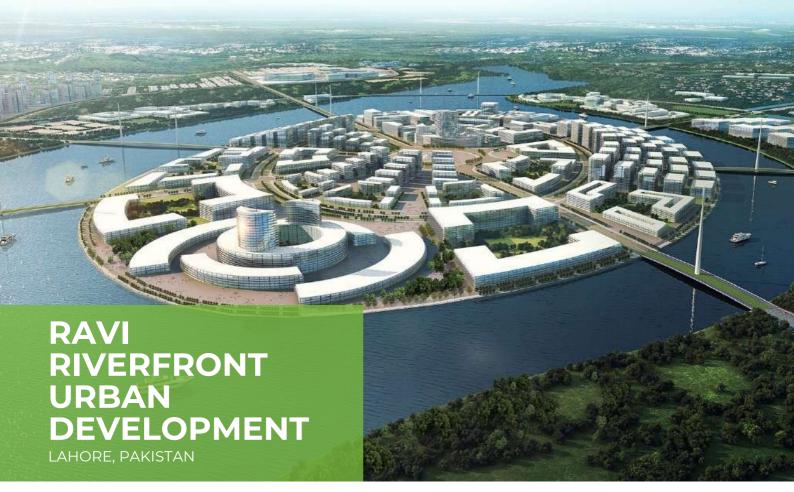
The residential component emulates the Bahraini architecture with a series of rectilinear forms and geometrical planning on a micro-level of the concentric grid derived from the master plan. The planning begins to address a centralized point on the space which then attempts to establish a modular grid in which each space and proportion is geometrically mapped creating pockets of intimate yet unique spaces with views towards the inner sanctions of lushly landscaped courtyards and water features looking out towards perfect views if the Bahraini waterfront edge conditions. The spectrums of color of the water and the sky in Bahrain ranging from deep blue to jade greens set the beautifully enhanced framed backdrop of each living space to a level that exuberates a lifestyle above any.

Muharraq- Cultural & Heritage



Urban Morphology





SERVICES Master plan Infrastructure Urban Design CLIENT Ravi Riverfront Development Authority SIZE 76,684 ha PROJECT YEAR 2015

The prime objective of the Ravi Riverfront Urban Development Project (RRUDP) is to revive the dying Ravi river 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 lifestyle 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.







SERVICES
Infrastructure
Master Plan
Civil & Environnent

CLIENT

SIZE 10,000 ha PROJECT YEAR 2012

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







SERVICES Infrastructure Master Plan CLIENT Provincial Housing Authority (PHA) SIZE 4,046 ha PROJECT YEAR 2014

Meinhardt provided detailed infrastructure design (Roads, Sewerage, Drainage, Water Supply, Electrical Works and Fire Hydrants), Transport planning, and Financial Feasibility Services

The areas of Swabi and Nowshera represent the second largest metropolitan area in KPK. Strategically located between Peshawar, Islamabad and Kashmir, the area is rapidly developing into a regional urban center of commercial, financial, industrial and socio-cultural significance.

Cost of the Project: 18 Billion PKR 2014 - 2016

Covered Area: 80,000 Kanal

Client: Provincial Housing Authority (PHA)







SERVICES Smart City Infrastructure Master Plan CLIENT GMR SIZE 2,023 ha PROJECT YEAR 2017

A "Smart Airport 4.0 in 2027 vision" achieved by integrating and upgrading all three terminals and 1327 acres of landside (including 295 acres of Aerocity development) into a Smart Airport city.

The project is anchored on the strong principles of bridging digital divide between sectors, enhancing customer experience, integrating and achieving efficiency in operations, monitoring, control and optimization.

It also focuses on smart utilities and asset management framework for energy, water and security management, climate resilience, and takes part in the Smart Green Initiative.

The role of the integrated infrastructure and ICT team was to look at aspirational and accountable KPIs, various architectures (with a technical focus for implementation), and technical solutions for various areas such as transport, energy, environment, utilities and the APIs integration. This final aim was for large- scale implementation and interoperability.

Meinhardt conducted ground surveys, sector-wide gap assessment and strategic visioning workshops to formulate comprehensive technical blueprints and tender documents for the development of terminals and am integrated smart city.







SERVICES Infrastructure Master Plan CLIENT Confidential SIZE 1,375 ha PROJECT YEAR 2021

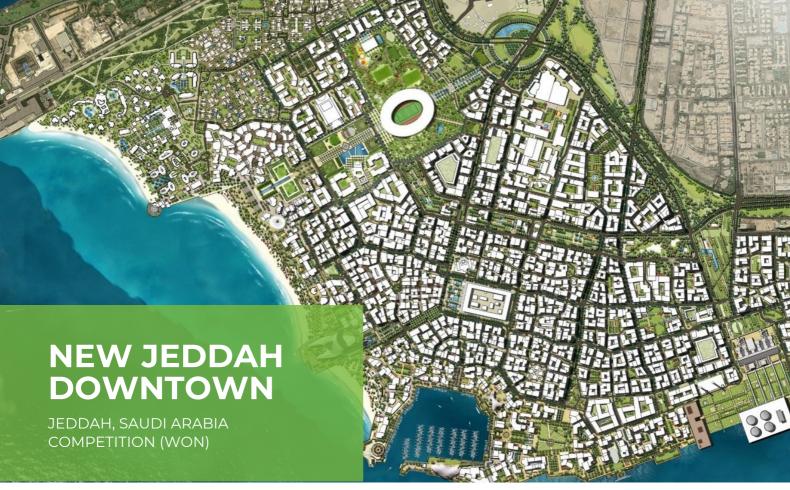
Meinhardt provided Concept master plan development for Mobility and Connectivity, Sustainable Infrastructure and Utilities Planning, Sustainability and Environmental Strategy

Situated on a natural Red Sea promontory one hour north of Jeddah. This new 13.5 km2 development will set a global benchmark for water-based entertainment. With 8 km of turquoise blue coastline, sandy beaches, lagoons, and mangroves, The Water-based Entertainment District will combine state-of-the-art water parks and attractions with a full range of leisure, adventure, and eco-based tourism activities, creating a destination of unparalleled and world-class appeal for both domestic and international visitors. It will be supported by a complete offering across hospitality, retail, and F&B, plus extensive residential options aimed at creating a 'coastal community' of weekend retreats and second homes.

Meinhardt has been appointed to provide Concept Master Plan Consultancy Support for this prestigious competition in Kingdom of Saudi Arabia. Meinhardt team with its smart city team at SUIT and integrated infrastructure, traffic and transportation team (transport planners, Road Engineers, Simulation experts, Civil Engineers) is working together for the Concept Master Plan.

Meinhardt's Smart City Strategy includes:

- Existing engineering information review and query
- Explore the site internal and external transportation framework (mobility story)
- Key sustainability design and planning principles
- Green infrastructure, ecology, and landscape
- Guidance on internal water system from environment perspective
- Sustainable initiatives in the use of renewable energy, waste management solutions, installation of shading devices, irrigation and use of water
- Estimation of energy consumption based on project-wide development programmes
- Smart utilities framework for energy, potable water, wastewater treatment, solid waste, data and communications
- Multi-service infrastructure such as common utility ducts
- Local prototypical park irrigation system
- Integrated community safety and security technologies
- Future ready city strategy



SERVICES Infrastructure Master Plan CLIENT Confidential SIZE 501 ha

PROJECT YEAR 2020

Meinhardt provided sustainable Infrastructure Master planning & Smart City Vision Study

Designing for a Smart and Sustainable Environment in Jeddah

- Green Infrastructure supporting active lifestyle, outdoor comfort, smart energy and water sensitive urban design.
- Smart environment built with smart utilities, smart sensors and smart urban furniture.
- Smart Buildings offering smart façade and sustainable building materials.

Anchored on the vision to create a healthy and resilient city focusing on climate change adaptation across actions and reduction of greenhouse emissions through sustainable infrastructure practices.

Integrated urban infrastructure systems: wastes from one process are seen as fuel for another - integration of energy, solid waste, transportation and sewage systems.

Smart city technologies creating opportunities for collaboration – smart transportation, smart energy grids, smart waste and water management systems.

A unique mixed-use waterfront corniche development with a 5 million square meter development site, the project aims to create a unique and attractive environment to support Jeddah's ambition of becoming one of the world's top 100 cities.

The prestigious project is part of the Jeddah's Program to transform and revitalize its downtown; An initiative to create an iconic mixed-use waterfront area that includes museums, shopping districts, commercial areas, parks, resorts, central innovation area, beaches and residential areas.

Meinhardt's Smart City Strategy includes:

- Sustainable initiatives in the use of renewable energy, waste management solutions, installation of shading devices, irrigation and use of water.
- Estimation of energy consumption based on project-wide development programs;
- Smart utilities framework for energy, potable water, wastewater treatment, solid waste, data and communications.
- Multi-service infrastructure such as common utility ducts
- Local prototypical park irrigation system.
- Integrated community safety and security technologies
- Smart city operation management strategy and IOT integration



CLIENT Confidential SIZE 750 ha

PROJECT YEAR 2012

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.







SERVICES Concept Master Plan CLIENT

SIZE 1,000 ha PROJECT YEAR 2013

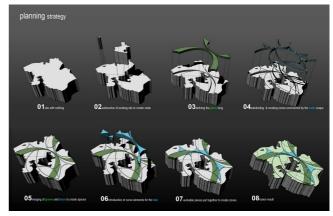
The tale of two cities - due to existing parcels of land in the centre of the site that need to be retained, two separate districts needed to be created. Functionality of the two cities would act and function as one through efficient network of park connectors, green lung connectors, water ways and lakes; creating a seamless experience between the two districts.

PLANNING STRATEGY

Even though the 2 major zones (residential & commercial) are separated from each other, the project will embark a hybrid zoning for each component. For one zone to work independently, the residential hybrid for example will have some commercial areas to cater the needs of its residential users and likewise to the commercial zone.

HYBRID ZONING

The development although facing some challenges created by the huge chunk of existing parcels that cannot be touched, the designer used this challenge to develop a suitable solution for the entire project to work. By using a hybrid zoning into each side of the site will make each zone work independently to each other. Having its own elements for it survive such as its own residential, commercial, offices, parks and other components for a city to be alive. And although separated, the two major zones will be connected with lakes, lagoons and other water features together with lush greenery of parks, landscapes and path walks for its user to use for connectivity.



Planning Strategy



Project Site Location

GREEN COMPONENTS

The development embraces a new vision of green, ecological ideas of living. It is not just green architecture through ESD (ecological sustainable design principles) but has a truly integrated green factor with aesthetics. The site incorporates various kinds of gardens and sanctuary spaces, while the amorphous/organic form gives it a semblance that the development is breathing organism.

"Green Lung" will be introduced to the entire development that will consists of different types of park, sizeable chunk of land will be utilized for parklands within the city, and this was considered by the designer in terms of the healthier environment it provides.

CONNECTIVITY THROUGH GREEN LUNG

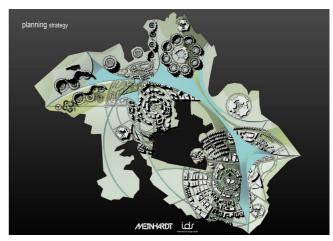
Connecting parks that will serve as passageways to different components while enjoying the view and shades of the forested landscape around the city that will complete the "green lung" concept of this project.

CONNECTIVITY THROUGH LAKE

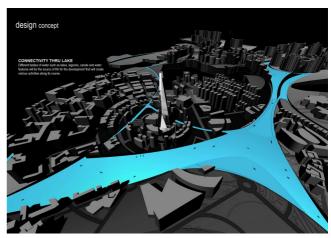
Connectivity through waters will create different activities born of waterfront. These activities will be the function of the various components along the lake such as waterfront living, marina and yacht clubs, retail shops along the lake connected with linear boardwalks and will eventually create a skyline of office buildings reflecting both above the horizon and the lake beneath.

WATERFRONT ACTIVITIES

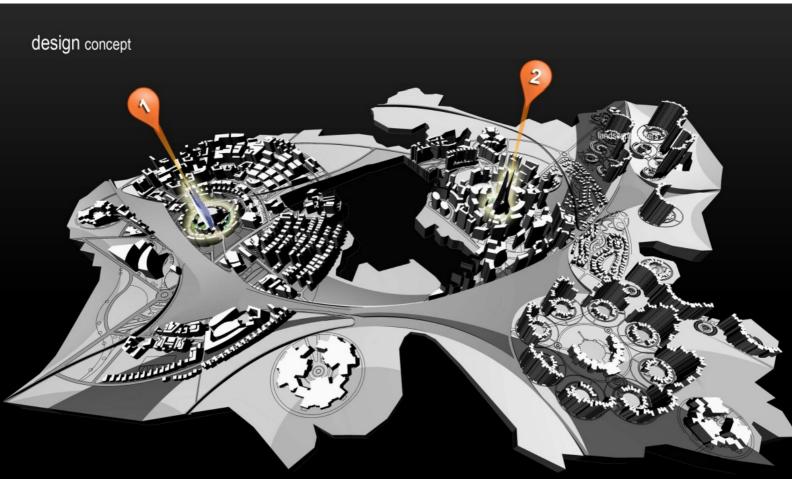
The waterfront borne various water activities the users will enjoy. These activities on a microlevel such as boardwalks, water alleys, fishing grounds, water parks and cascading water features will entice the users to go out and enjoy the benefits of living in a water town.



Green Components



Blue Network As Recreational Space





Shuttle bus and Bicycle Network



Mass Transportation Strategy

COMMERCIAL COMPONENT

This will deliver the elements of generous footpaths. Offices, retails and shopfronts with a lake frontage or a park frontage, avenue tree planting for shade and amenity, and space for boardwalks dining. A town center plaza, being the core of the commercial zone will set as the focal access. It will also stand as the landmark and a unifying element to all the commercial plots.

RESIDENTIAL COMPONENT

The residential plots will enjoy both privacy and spectacular views. Some residents can relax on a cosy environment of marvel landscape and nature of the forest, while others will enjoy the serenity of the lake and waterfronts.

MEDICAL COMPONENT

The medical hub's strategic location has proximity to both residential zone and commercial zone for easier access, especially in times of emergency. It is surrounded with parks and landscaped spaces to give a relaxing environment for the users.

INSTITUTIONAL COMPONENT

The university will compose of different buildings that will cater students from all levels with all the components needed for learning. Institutions are segregated to each zone for the convenience of closer access to school. The facilities will ensure

the best future for all student. A continuous space on ground provides a seamless network of services and provides ease of connectivity so students will have a smooth flow around the campus.



Iconic Landmarks



Light Rail Transit LRT Strategy

UTILITIES COMPONENT

All the utilities component will be zoned in this area which are strategically located away from the residential and commercial zones. This zone will cater for the supply of power for the entire development, providing clean and sustainable energy and services through its power plant, water treatment facilities and waste management system. This will also house the facilities management office of the entire site to ensure that all services will be delivered in all the areas of the development on time

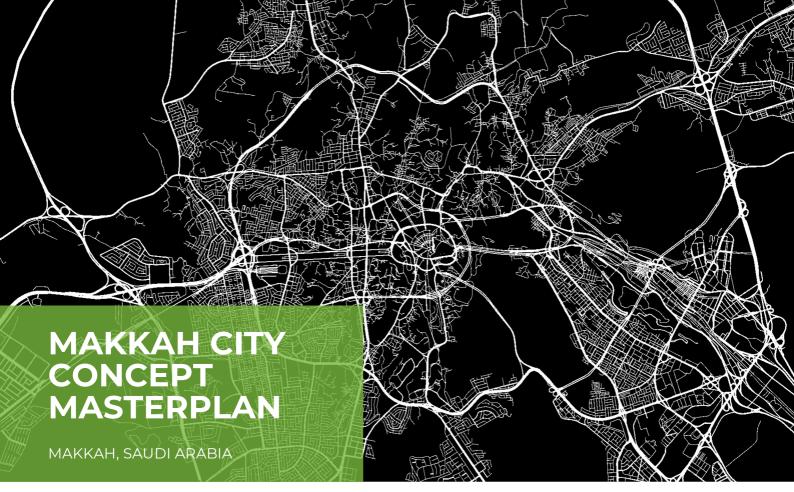
WATERFRONT COMPONENT

Major activities will be catered here such as marinas, yacht club activities, swimming, fishing and other outdoor water funs. The lake will also be used as a tool to transport people from different places accessible by boardwalks, a user will just hop out to it and go to different retail shops, stores, office and other waterfront buildings around it.

PARKLAND COMPONENT

A parkland that is strategically positioned to serve as a buffer between the residential area and the public spaces. The project's ecological design and green architecture concept give an exciting experience and relaxing environment to all the project users.

Landscape features will be developed not only as green buffers, but as scenic views that gives cosines on the entire area. The landscaped has been understood as integrated component to overall project, is not just building within a park, but is a park within a building.



SERVICES Infrastructure Master Plan CLIENT Royal Commission for Makkah City and Holy Sites (RCMC) SIZE Confidential PROJECT YEAR 2020

Meinhardt provided Infrastructure Master planning & Smart City Vision Study

The Concept Master Plan is to establish and define the long-term (50 years) strategic land use, development intensity, Transportation and infrastructural needs to meet the aspirations of the Saudi Vision 2030 and Makkah City's Strategic Direction taking into consideration the need to preserve Makkah City's unique positioning to bring out its distinctive character as a City for Worship, Work, and Living.

The Concept Master Plan will provide the macro land use, intensity and mobility parameters to guide the preparation of the Land Use Master Plan, based on the population and economic projections.

Meinhardt provided Sustainable infrastructure Planning and Smart City Strategies including:

- Smart Energy solutions
- Smart Water & Wastewater Management solutions
- Smart Mobility solutions
- Smart Infrastructure Management solutions
- Smart Security Strategy



SERVICES Architecture Design CLIENT

SIZE 124.3 ha PROJECT YEAR 2012

Meinhardt IDS provided Architecture Design

The design intends to recreate an oasis of tranquility in the cityscape, by employing thoughtful and strategic zoning to avoid the modern ills faced by developed cities, as well as setting a new layout to the actual area. The free waveforms of the buildings refer to a mixture between modern and vanguard architecture creating in this way unique sculpture standing buildings.

The Wave shows pure and clean lines to generate organic curve forms, which are elegant and soothing. Zoning for the different buildings has been carefully considered to enable beautiful views and also avoiding overlooking into other units. The overall undulating platform level was set up at 20m above street level to set up new ground-level hiding in this way, the existing old city below, as well as keeping people away from pollution, traffic congestion, and carbon monoxide. The incorporation of nature is one of its most important features.

The proposal carries its nature heart openly. It has long skyline gardens and playgrounds as one of its main themes representing the development and its future. Green spaces, an ecology of landscaped areas, and park gardens are for the community to use passively. The River is to be revitalized as well, and it will be of utmost importance to the city. It will flow into the site and will bring the most spectacular aquatic wildlife. The new and poetic interpretation of the relationship between ground and water, architecture, and landscape architecture, is evident. The design also creates a microcosm of the world made up of water and ground.







CLIENT Confidential SIZE 150 ha

PROJECT YEAR

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.







CLIENT Confidential SIZE 98 ha PROJECT YEAR

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.







CLIENT Saudi Arabia Ministry of Interior SIZE 100 ha

PROJECT YEAR

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.







CLIENT

SIZE 80 ha PROJECT YEAR

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.







SERVICES Infrastructure Master Plan CLIENT Essondon Fields Pte Ltd SIZE 70 ha PROJECT YEAR 2012

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







SERVICES Infrastructure Master Plan CLIENT CAA SIZE 80-600 ha

PROJECT YEAR 2008-2012

Meinhardt provided detailed master planning, concept design of infrastructure and design development guidelines.

The 1600-acre development envelopes the Jinnah International Airport Karachi. The project mainly consists of four Precincts, Commercial, Aviation, Recreational and Residential. The Commercial Precinct features lots allocated for Large Mixed-use Developments, Business Parks (Aviation Tower), Convention Center, Cultural Attractions, Dinning and Premiere Shopping Malls.

The 200-acre development envelopes the Allama Iqbal International Airport, Lahore. The project mainly consists of two Precincts, namely Commercial and Aviation. The Commercial Precinct features lots allocated for Large Mixed-use Developments, Business Parks, Convention Center, Cultural Attractions and Premiere Shopping Malls. The Aviation precinct has been developed to enhance the aviation facilities that cater to the airport, and it includes land allocated for the development of an Exhibition Center, Cargo complexes, Warehouses, Factory Outlet Stores etc. All these precincts are well linked through a highly efficient Multi-Modal Transportation network.







SERVICES Lead Consultancy Architecture Civil, Structural, MEP CLIENT Hamad International Airport Expansion Project Steering Committee (HIAEPSC) SIZE 53 ha PROJECT YEAR 2019

Meinhardt provided Lead Consultancy, Architecture, Civil, Structural, MEP, Façade and other specialist engineering, PM/CM

The new Doha International Airport's Passenger Terminal Expansion Project (PTCE) will bring this annual capacity from 24 million to 53 million passengers per year. Meinhardt is providing engineering design services for 3-storey terminal building expansion, concourse D&E, expansion of baggage handling, terminal metro station, substructure for future connection to satellite terminal, underground services tunnel and utilities. Total area of 537,259 sqm.







SERVICES
Civil, Structural
Building Services

CLIENT Knight Dragon SIZE 60 ha

PROJECT YEAR 2015

Meinhardt provided Civil, Structural, Building Services, Façade. We helped to reduce the project's carbon footprint by more than 35%.

The Greenwich Peninsula is undergoing a major redevelopment and is the largest planning application submitted in Europe. The project will expand over 25 years and will provide a mix of residential, commercial, retail, leisure, entertainment, casino, hotels, parks & green space areas. It will be located on Greenwich Peninsula, over the existing public transport interchange of North Greenwich. It will feature a new entrance to the Underground Station, and a completely new Bus Station.

A main focal point for the scheme are the three illuminated tower blocks, each rising to approximately 30-storeys, which will house offices, apartments, retail, as well as the new winter gardens below. Visitors and residents of Peninsula Place will emerge from the tube station into a 24-metre-high glazed gallery containing the gardens.

Some Key Features include:

- New transport interchange with a hub building, built above the largest underground station in Europe
- 5 districts of tall buildings up to 41-storeys in height
- · Incorporation of new Silvertown crossing
- Sitewide energy strategy
- Fast track approvals from government agencies







SERVICES Architecture Design CLIENT

SIZE 39.7 ha PROJECT YEAR 2012

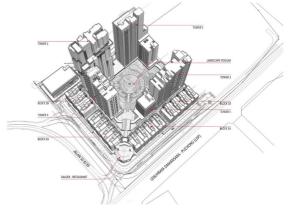
Meinhardt IDS provided Architecture Design.

AWARDS: International Property Awards 2012-2013 Highly Commended Office Development in Malaysia; International Property Awards Asia Pacific 2012-2013 5 Stars Best Commercial Renovation/Redevelopment in Malaysia

Icon City is a mixed development comprising 2 towers of service apartment, 2 towers of office suite, 1 office tower, 4 blocks of commercial retail podium with 3 basement carpark levels at Petaling Jaya, Malaysia. (Gross Floor Area approx. 1,800,000 sqft). The whole development is designed to be like a self-contained city where one can live, work, and play. The towers sit around a lush podium garden, which is the community heart for the development. There are also staggered roof gardens, a clubhouse, and a swimming pool in the sky.

We understand that the external environment around the places where one work and play is equally important as the buildings themselves. One of the much sought-after features in development in a city is the garden and the opportunity to access outdoor spaces easily. These outdoor spaces not only act as visual relief but also provides spaces where one can relax, exercise, or just simply enjoy being close to greenery. The soft breeze, the rustling of leaves, the ever-changing light, and shadows of the leaves on the ground all gives a calming and healing effect on a person's well-being. In this development, one is never far away from the outdoors, communal spaces, and gardens.







SERVICES Infrastructure Master Plan CLIENT T.R. Hamzah & Yeang Sdn Bhd SIZE 45 ha PROJECT YEAR 2019

Meinhardt provided Infrastructure Master planning & Smart City Vision Study

NEOM will be the first independent special zone within the Kingdom of Saudi Arabia. It encompasses a total area of 26,500 km2 and it is projected to emerge as a leading global hub that exemplifies the future of human civilization by offering its inhabitants an idyllic lifestyle combined with exceptional economic prospects. It will be at the forefront of digital transformation. The region will be powered by 100% renewable energy, primarily by a combination of solar and wind energy generation.

The targeted economic sectors encompass a wide range of advanced technology, research and 'high-value' businesses, including; Energy, Water, Mobility, Biotech, Food, Advanced Manufacturing, Media, Entertainment, Technology & Digital sciences.

The 45 sq.km Silver Beach will be a mixed-use development with appealing street and public space design that facilitates pedestrian movement, outdoor living, and the intensive use of public space.

Meinhardt provided Sustainable infrastructure Planning and Smart City Strategies including:

- → Smart Energy solutions
- → Smart Water & Wastewater Management solutions
- → Smart Mobility solutions
- → Smart Infrastructure Management solutions
- → Resilient Structures



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