



## Our Philosophy

The Metropolitan Group believes in the relentless pursuit and delivery of their clients' business vision. Our strategic intent is to help our clients focus on three critical success factors:

- Creative conceptual design
- Innovative construction process
- Energy efficiency management

## **Our History**

In April 2007, founders Martin Lim and Junji Shirai decided to pool their extensive working experience in the building, construction and facilities management industries to establish the Metropolitan Design Group to meet the future needs of the building and construction industry.

With their proven track records in architecture, urband master planning, project management, engineering, marketing, financing and strategic business planing, the Metropolitan Group believes it is well-positioned to integrate critical components of the value chain into the client's business model.

Junji Shirai is recognized internationally as a world-class architect and urban planner. His visionary style has culminated in many iconic buildings including Ngee Ann City (in collaboration with Raymond Woo & Associates, Singapore) and the development of futuristic cities like Ark Hills and Ropponggi Hills (under Mori Company, Japan) which are internationally recognized as the benchmark of modern architecture and city dwellling.

Collaborations between the founders started in 1993 when they initiated the Global Network Concept to execute cross border projects across Singapore, Indonesia, Vietnam, Malaysia, USA, Japan, China and the Middle East.

Martin Lim, with more than 18 years in the constructive and building industry is also closely associated with world renowned precast technology expert - Dr Alfred Yee on various pre-cast initiatives in Singapore.

Previously, as Director of Business Development with an US MNC, he was involved in new business initiatives; Public Private Partnerships (PPP), Total Services Facilities Management (TSFM). He has experience managing a facilities company with more 400 technical staff.







## Scope of Services

#### Architecture

- Architecture conceptual design services
- Urban master planning
- Interior design consultancy

#### Construction

- Precast & prefab design
- Architectural precast facades and exterior design works
- Value-engineering services

### **Energy management**

- Chiller optimization and energy management
- Energy audit services
- Green Mark consultancy
- Facilities optimization and energy management
- Building automation consultancy and systems integration

## Our Core Values

Reliability - Knowledge, experience and expertise to realize your business vision

Integration - Customizable business solutions that are integrated to your organizational needs while ensuring compliance, quality, safety and timely delivery.

Innovativeness - Managed by professionals who will partner you to maximize the lifetime value of your investments and reduce operation costs.

## **Selected Project List**

## ARK Hill Urban Redevelopment Akasaka-Roppongi, Tokyo

Completed and opened on March 1986, Ark Hills sits on 5.5 hectares of land with a developed floor area of 360,000 square metres for office, residential, hotel, shops/restaurants, academy hills with 2000 seats full concert hall; 481 units in residential twin towers, each 23 stories high.

This was Mori Building Company's first large scale urban redevelopment project ever undertaken to bring people together to live in close proximity within the central business district integrating all elements of work place, culture and arts. It took more than 15 years to consolidate the various tiny and privately owned land parcels into a large piece of property so that unified value of the land would multiply to allow a large scale redevelopment to be realized. The planted cherry trees have blossomed beautifully and serve as a colourful backdrop for festivities every Spring.

Junji Shirai was appointed to be fully responsible for the design of the entire outdoor open space including all rooftop gardens and street trees. He created some of the most unprecedented, extensive rooftop gardens around the business district. The entire roof of the concert hall and sports facilities under residential towers are devoted to a series of gardens and public open space where people can stroll all day, and are extremely popular place for office workers at lunchtime.



# Atago Green Hills Urban Redevelopment Atago, Tokyo

Opened on July 2001, the Atago Green Urban Redevelopment occupies an area of 3.8 heactares.

Originally, a large part of the site belonged to the Seishoji Temple. Mori Building Co. spent a long time negotiating with them to redevelop the surrounding areas into one integrated complex, using the air right of the temple as one advantage.

The result was of a spectacular twin tower complex juxtaposed upon a newly renovated and expanded temple in between. One tower is designated for office use while the other caters to luxury residential units.

The residents can enjoy the spa and gym with swimming pool on the top floor in addition to enjoying the commanding views of the city from most of the units.

Green Hills residents can enjoy the healthcare services provided by the hospital belonging to Jikei Medical University, located just across the street. The extensive campus of temple is open to the public 24 hours a day and the hills behind the temple's main hall has been redeveloped to offer a nice and peaceful place to stroll.









## **Towards a Sustainable Environment**

Presently, 50 percent of the world's population of six billion people live in large cities. By 2050, it has been estimated that 67 percent will be living in big cities. This trend indicate that there will be more construction activities in large cities which inadvertently leads to more congestion and pollution issues. Our approach to green or sustainable building is to ensure that the environmental impact of buildings is inter- linked with the process of creating healthier and more resource-efficient models of construction, renovation, operation, maintenance, and demolition. Research and experience increasingly demonstrate that when buildings are designed and operated with their lifecycle impacts in mind, they can provide great environmental, economic, and social benefits. Elements of green building include:

- Energy Efficiency and Renewable Energy
- Water sustainability
- Environmentally Preferable Building Materials and Specifications
- Waste Reduction
- Toxics control/management
- Indoor Environment
- · Smart Growth and Sustainable Development

In the United States, buildings account for:

- 39 % of total energy use
- 12 % of the total water consumption
- 68 % of total electricity consumption
- 38 % of the carbon dioxide emissions

Compiled by: U.S. Environmental Protection Agency Green Building Workgroup December 20, 2004

Our strategy is to advocate the use of more precast construction, prefabrication of structural and architectural concrete products which can be fabricated in controlled environments in areas with adequate operational and storage spaces and ideally away from city centres.

The precast components are formed with high strength, durable steel and high quality concrete in steel or fibreglass moulds which provide for extensive repetitive and economical re-use. Recent international concerns over greenhouse gas emissions and global warming have led world renown scientists to repeatedly stress the dangers of environmental pollution. Precast concrete construction in unison with innovative architecture design will provide sufficient economic advantages to serve as an incentive. Recent demand in the Britain for lighter and more energy efficient buildings, concrete incorporating recycled materials and reuse of demolition rubble, has led the building sector to become durably greener and reduce the carbon footprint for construction activities.

The built environment has a vast impact on the environment, human health, and the economy. By adopting green building strategies, we can maximize both economic and environmental performance. Green construction methods can be integrated into buildings at any stage, from design and construction, to renovation and deconstruction. However, the most significant benefits can be obtained if the design and construction team takes an integrated approach from the earliest stages of a building project. Potential benefits of green building can include:

#### Environmental benefits

- Enhance and protect biodiversity and ecosystems
- Improve air and water quality
- Reduce waste streams
- Conserve and restore natural resources

#### Economic benefits

- Reduce operating costs
- Create, expand, and shape markets for green product and services
- Improve occupant productivity
- Optimize life-cycle economic performance

#### Social benefits

- Enhance occupant comfort and health
- Heighten aesthetic qualities
- Minimize strain on local infrastructure
- Improve overall quality of life

The company's focus is to work closely with property owners and operators to upgrade their facilities so as to optimize building performance and reduce operating expenditure. A number of innovative packages have been developed to address the critical operation and maintenance areas such that the best possible building with regards to ongoing performance, life cycle and energy costing is developed. This is fundamental with regard to meeting all the financial criteria of investors and developers to ensure that their investment return is maximized.







## **Metropolitan Green Design and Technology**

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