



Best Tall Buildings

A Global Overview of 2016 Skyscrapers



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on
Tall Buildings
and
Urban Habitat

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Antony Wood & Steven Henry



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We would also like to thank our 2016 Awards Jury for volunteering their time and efforts in deliberating this year's winners and finalists.

About the CTBUH

The Council on Tall Buildings and Urban Habitat (CTBUH) is the world's leading resource for professionals focused on the inception, design, construction, and operation of tall buildings and future cities. Founded in 1969 and headquartered at Chicago's historic Monroe Building, the CTBUH is a not-for-profit organization with an Asia Headquarters office at Tongji University, Shanghai; a Research Office at Iuav University, Venice, Italy; and a Research & Academic Office at the Illinois Institute of Technology, Chicago. CTBUH facilitates the exchange of the latest knowledge available on tall buildings through publications, research, events, working groups, web resources, and its extensive network of international representatives. The CTBUH also developed the international standards for measuring tall building height and is recognized as the arbiter for bestowing such designations as "The World's Tallest Building."

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Winner

Best Tall Building Americas

VIA 57 WEST

New York City, United States of America



Completion Date: March 2016

Height: 142 m (467 ft)

Stories: 34

Area: 77,202 sq m (830,995 sq ft)

Primary Function: Residential

Owner/Developer: The Durst Organization

Architects: Bjarke Ingels Group (design); SLCE Architects (architect of record)

Structural Engineer: Thornton Tomasetti (engineer of record)

MEP Engineer: Dagher Engineering, PLLC (engineer of record)

Main Contractor: Hunter Roberts Construction Group

Other CTBUH Member Consultants: Cerami & Associates (acoustics); Cermak Peterka Petersen (CPP), Inc. (wind); Enclos Corp. (façade); Langan Engineering (civil); Van Deusen & Associates (vertical transportation); Vidaris, Inc. (façade)

“VIA 57 WEST brazenly overcomes the many challenges of its site on the edge of the Hudson River to brilliantly present a new high-rise residential typology: “the courtscraper.”

Karl Fender, Jury Chair, Fender Katsalidis

VIA 57 WEST accomplishes the ambitious goal of forging an entirely new high-rise typology. Coined by the architect as a “courtscraper,” the tower is a hybrid between the European perimeter block and the traditional Manhattan high-rise, while combining the advantages of both. It has the compactness, density, and intimacy of a classic courtyard building with the grandeur, airiness, and expansive views of a skyscraper.

Its atypical configuration responds directly to the design challenges presented by the site. By keeping three corners of the block low and lifting the northeast corner to the tower peak, the courtyard opens views towards the Hudson River, bringing low western sunlight deep into the block and graciously preserving the adjacent tower’s views of the river.

The appearance of the building is largely dependent on the eye of the beholder. While resembling a tetrahedron from the western waterfront, it turns into a dramatic glass spire along West 58th Street to the north. The



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Winner

Best Tall Building Asia & Australasia

Shanghai Tower

Shanghai, China



“While the tower structure is conventionally designed, with a square core and circular floor plates, the graceful, undulating shape of Shanghai Tower is achieved in the novel design of its impressive double-skin envelope.”

SawTeen See, Technical Jury Chair, LERA

Completion Date: December 2015
Height: 632 m (2,073 ft)
Stories: 128
Area: 420,000 sq m (4,520,842 sq ft)
Primary Function: Hotel / Office
Owner/Developer: Shanghai Tower Construction & Development
Architects: Gensler (design); Tongji Architectural Design (Group) Co., Ltd. (architect of record); ECADI (peer review)
Structural Engineers: Thornton Tomasetti (design); Tongji Architectural Design (Group) Co., Ltd. (engineer of record); China Academy of Building Research (peer review)
MEP Engineers: Cosentini (design); Aurecon (design); Tongji Architectural Design (Group) Co., Ltd. (engineer of record); WSP | Parsons Brinckerhoff (peer review)
Main Contractor: Shanghai Construction Group
Other CTBUH Member Consultants: Alan G. Davenport Wind Engineering Group (wind); Arup (life safety); Aurecon (façade); CBRE (property management); Edgett Williams Consulting Group Inc. (vertical transportation); Rider Levett Bucknall (cost); Rolf Jensen & Associates (fire); RWDI (wind); SWA Group (landscape)
Other CTBUH Member Suppliers: AkzoNobel (paint/coating); Beijing Jangho Curtain Wall Co., Ltd. (cladding); Dow Corning Corporation (sealants)

Shanghai Tower, the second-tallest building in the world at the time of its completion, has become a new symbol of Shanghai and the most prominent new development in China. Placed in close proximity to its supertall neighbors within the Lujiazui commercial district, Jin Mao Tower and Shanghai World Financial Center, the megatall Shanghai Tower rises high above the skyline, ultimately completing a precinct whose conception dates back to the 1990s. The tower exemplifies the city's transformation into a global metropolis, yet the impact of the building's conception extends far beyond its role as an icon for the financial capital.

Twisting toward the sky in a smooth yet pronounced gesture, the tower is organized into nine vertical zones, essentially nine smaller buildings stacked on top of one another. These divisions serve to organize the building's mixed-use program, while simplifying its



Winner

Best Tall Building Europe

The White Walls

Nicosia, Cyprus



Completion Date: April 2015
Height: 70 m (228 ft)
Stories: 18
Area: 10,000 sq m (107,639 sq ft)
Primary Function: Residential / Office
Owner/Developer: Nice Day Developments Ltd.
Architects: Ateliers Jean Nouvel (design); Takis Sophocleous Architects (architect of record)
Structural Engineer: KAL Engineering (design)
MEP Engineer: Mitsides, Samuel and Partners (design)
Project Manager: Lekton Consultants Ltd.
Main Contractor: Lois Builders
Quantity Surveyors: Nicolaou and Konnides Ltd.

“The White Walls is a radical exercise in materiality, serving as an expression of the architectural and environmental values of the Mediterranean across the vertical axis.”

Karl Fender, Jury Chair, Fender Katsalidis

Set within the historic center of Nicosia, the capital of Cyprus, The White Walls has single-handedly transformed the urban silhouette of the city, drawing upon its context to deliver a tower that is unmistakably Mediterranean, yet globally influential with its highly successful environmental considerations. The tower’s program includes 10 floors of residential apartments, a six-story office space, and two floors of retail at the base. Sited just south of the Venetian Walls, which were built as defensive structures in the 16th century and define the historic district of the city, the tower offers a massing that relates to the horizontal context of the nearby fortifications while setting the stage for a series of inversions that are characteristic of the building.

For a small island country like Cyprus, high-rise urban living is a decidedly preferable alternative to suburban sprawl as it preserves precious farmland and reduces the need for horizontal infrastructure and transportation systems. However, the dismal track record of energy performance for residential high-rises was seen as a



Winner

Best Tall Building Middle East & Africa

The Cube

Beirut, Lebanon



Completion Date: July 2015

Height: 57 m (186 ft)

Stories: 15

Area: 5,600 sq m (60,278 sq ft)

Primary Function: Residential

Owner/Developer: Masharii

Architects: Orange Architects (design); CBA Group (architect of record)

Structural Engineer: Bureau d'Études Rodolphe Mattar (design)

MEP Engineer: Ussama Mogharbel (design)

Main Contractor: K.Abboud

“The Cube is a clear alternative to the extruded box typology that defines the majority of residential high-rises around the world, instead comprising a stack of unique villas in the sky.”

Hashimah Hashim, Juror, KLCC Property Holdings

The Cube stands conspicuously on the hills of Sin el Fil, an eastern suburb of Beirut directly abutting the Emile Lahoud highway. The tower's parcel, measuring 30 by 40 meters (98 by 131 feet), is particularly steep compared to the surrounding topography, with a height difference of 20 meters (66 feet) along an incline that runs northeast to southwest. Thus, the unique site provides a dramatic backdrop, one that frames the tower's signature white appearance against a backdrop of earth, shrubs, and native wildflowers. With some of the surrounding area awaiting development, The Cube sets a sizeable precedent for the future residential makeup of the area.

The design concept for the tower revolves around a series of stacked, displaced, and rotated boxes. Each floor is offset significantly from the next, an intentional strategy to create one-of-a-kind outdoor areas on all sides of the tower, some wrapping around two complete elevations. Panoramic windows, measuring up to 12 meters (39 feet) wide and featuring steel mullions at regular intervals, achieve a high level of transparency



Winner

Lynn S. Beedle Lifetime Achievement Award

Dr. Cheong Koon Hean

Housing & Development Board of Singapore



Opposite: Aerial view of Marina Bay, Singapore

Above: Dr. Cheong Koon Hean

“Over her career, Dr. Cheong has been highly influential in steering Singapore’s urban development, which itself is a benchmark for vertical urban development around the world.”

David Malott, CTBUH Chairman, KPF

Dr. Cheong Koon Hean is an architect-planner who has been credited with shaping much of Singapore’s urban landscape. She was the first woman to head the Urban Redevelopment Authority (URA), which oversees the long-term strategic planning of Singapore, ensuring that the development needs of the small city-state can be met. She played a key role in the development of major growth areas. In particular, she led the planning of the new city extension at Marina Bay, creating a signature skyline for Singapore and a vibrant live-work-play destination.

A strong proponent of good design, Dr. Cheong initiated the Architecture and Urban Design Excellence Program, setting the stage for the development of many high-quality high-rise buildings. Taking a facilitative approach, she formulated policies and urban design plans that incentivized quality design and features, such as vertical greenery, public spaces, night lighting, and urban art. She also championed



place-making efforts to bring greater vibrancy to the city. Such integrated efforts have helped to transform Singapore into one of the most livable and beautiful cities in Asia.

Dr. Cheong also shares her experience internationally while serving on various international expert panels, and helped to formulate the Sino-Singapore Tianjin Eco City Master Plan. She conceptualized the Lee Kuan Yew World City Prize, to raise greater awareness of the need for excellent planning and good governance, and is a nominating committee member of the prize.

In 2010, Dr. Cheong was appointed the CEO of the Housing and Development Board (HDB), which develops and manages about one million public housing flats, providing homes to more than 80 percent of Singapore's population. To meet increasing housing demand, she carried out a comprehensive review of many housing policies to ensure that

housing remains affordable to most. Today, HDB has a home ownership rate of 94 percent, one of the highest in the world.

Dr. Cheong also launched a Roadmap for Better Living to develop well-designed, community-centric, sustainable, and smart developments. She steered the implementation of one of HDB's largest building programs in order to meet housing demand. New plans were formulated for several HDB towns, integrating innovative ideas for a new generation of good, quality public housing to meet changing lifestyles and rising aspirations. A strong believer in innovation and technology, Dr. Cheong ramped up HDB's research efforts to support more sustainable development. HDB is now harnessing information and communications technology (ICT) and big data to develop Smart Towns, which will provide a better environment and more efficient services for its residents.

Opposite: Aerial view of Marina Bay, Singapore. Dr. Cheong played a key role in the planning and development of this vibrant live-work-play urban extension destination.

Right: The Pinnacle@Duxton, Singapore, 2009 (163 m / 535 ft). An example of one of the many landmark housing developments Dr. Cheong facilitated to redefine Singapore's public housing.

To raise design standards, she guided the development of many landmark projects that have redefined Singapore's public housing from modest constructions to award-winning creations. These projects include the 50-story Pinnacle@Duxton, SkyTerrace, and SkyVille@Dawson, which are conceptualized as "Housing in a Park" and "Waterway Terraces," landmark housing projects that echo the lush terrace greenery of rice paddies.

Said Dr. Cheong, "Cities today face many pressures from rapid urbanization. Long-term comprehensive planning, thoughtful urban design and responsible governance will help cities to become more sustainable, livable and economically vibrant, bringing jobs and a better quality of life for people. It is heartening that CTBUH recognizes the role of urban planners in the government sector, many of whom work hard to shape cities for a better future."

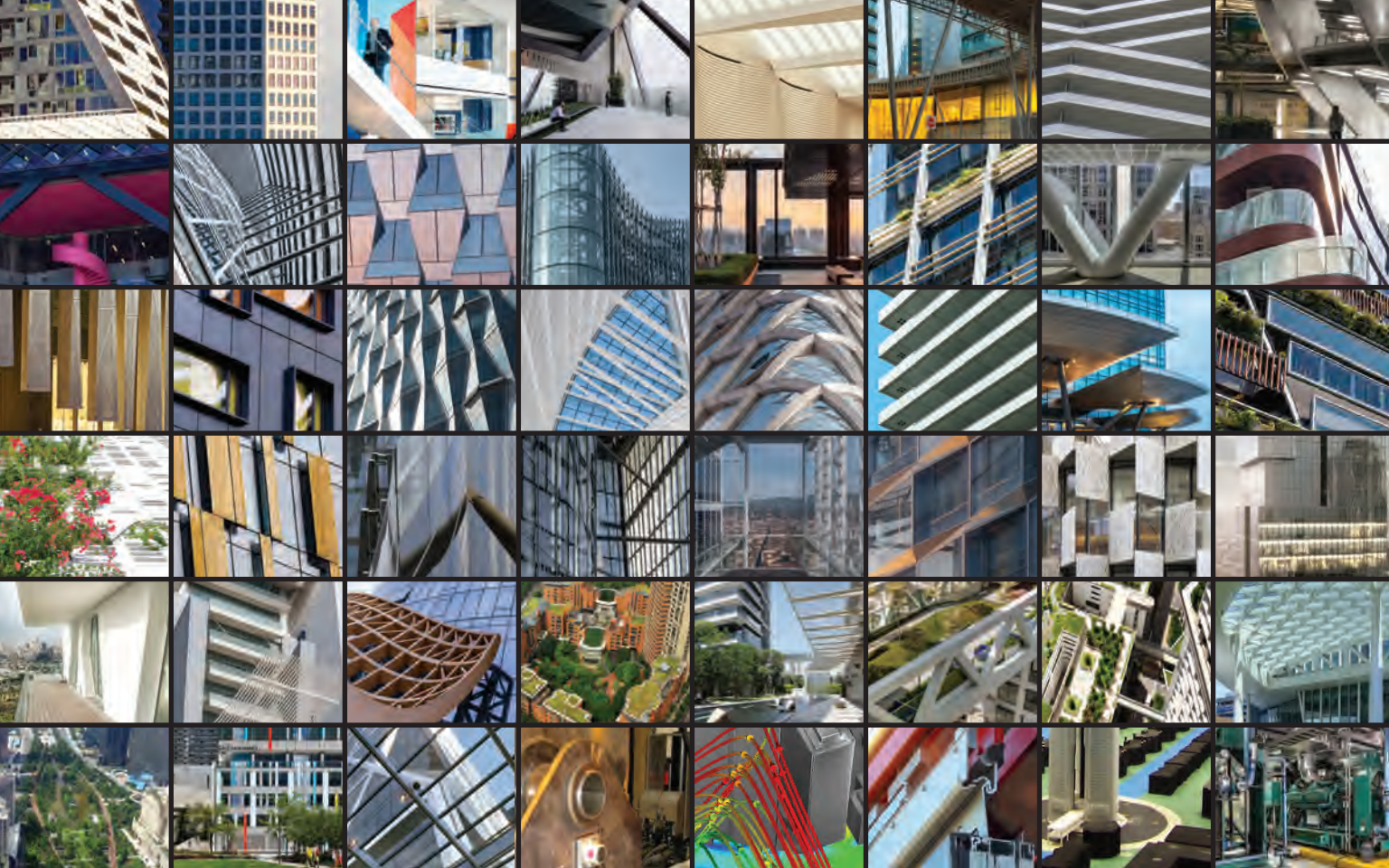
Trustee Statement

Through her various roles as an urban planner, Dr. Cheong Koon Hean has emerged as a leading figure in Singapore's innovative planning and development. As an advocate for quality urban design, Cheong has dedicated herself to spreading awareness of Singapore's planning experience to the benefit of cities around the globe. Her willingness to share in her knowledge, in coordination with her proven successes, speaks volumes to her role as a global leader in urban planning.



"Dr. Cheong Koon Hean's leadership in shaping Singapore into a world-class city is outstanding. Her ability to connect Singapore to other world cities, being visionary and inclusive in her approach, and to combine a commercial interest with social and environmental improvement has truly contributed to the quality of life in Singapore."

Tim Neal, CTBUH Trustee, ARCADIS



The Council on Tall Buildings and Urban Habitat (CTBUH) is the world's foremost authority on tall buildings. *Best Tall Buildings* chronicles the annual awards process, in which the CTBUH recognizes outstanding tall buildings and design innovations that advance the potential of integrated sustainability, economic productivity, and social prosperity in cities across the world.

More than an awards book, this volume serves as a global overview of tall building construction and activity in a given year, providing in-depth descriptions of the buildings' designs and significance, accompanied by stunning images, detailed drawings, and plans. This book provides fascinating and inspiring reading for all those interested in the planning, design, and construction of tall buildings.

CTBUH bestows 11 awards annually, four of which are given to buildings according to geographical regions: Americas, Asia & Australasia, Europe, and Middle East & Africa. The title of overall Best Tall Building Worldwide is then presented to one of the four regional winners at the annual CTBUH Awards Symposium and Ceremony. Additionally, the Urban Habitat Award recognizes significant contributions to the urban realm, in connection with tall buildings. The 10 Year Award recognizes proven value and performance – across one or more of a wide range of criteria – after a building has been completed and in operation for a decade. The Innovation Award recognizes a specific area of recent innovation in the tall building industry that has been incorporated into the design of, or significantly tested in, the construction, operation, or refurbishment of a tall building project. The Performance Award recognizes a building with proven value and performance over a minimum of three years. The CTBUH also gives two annual Lifetime Achievement awards to individuals who have made significant contributions to the design or technical advancement of tall buildings.

