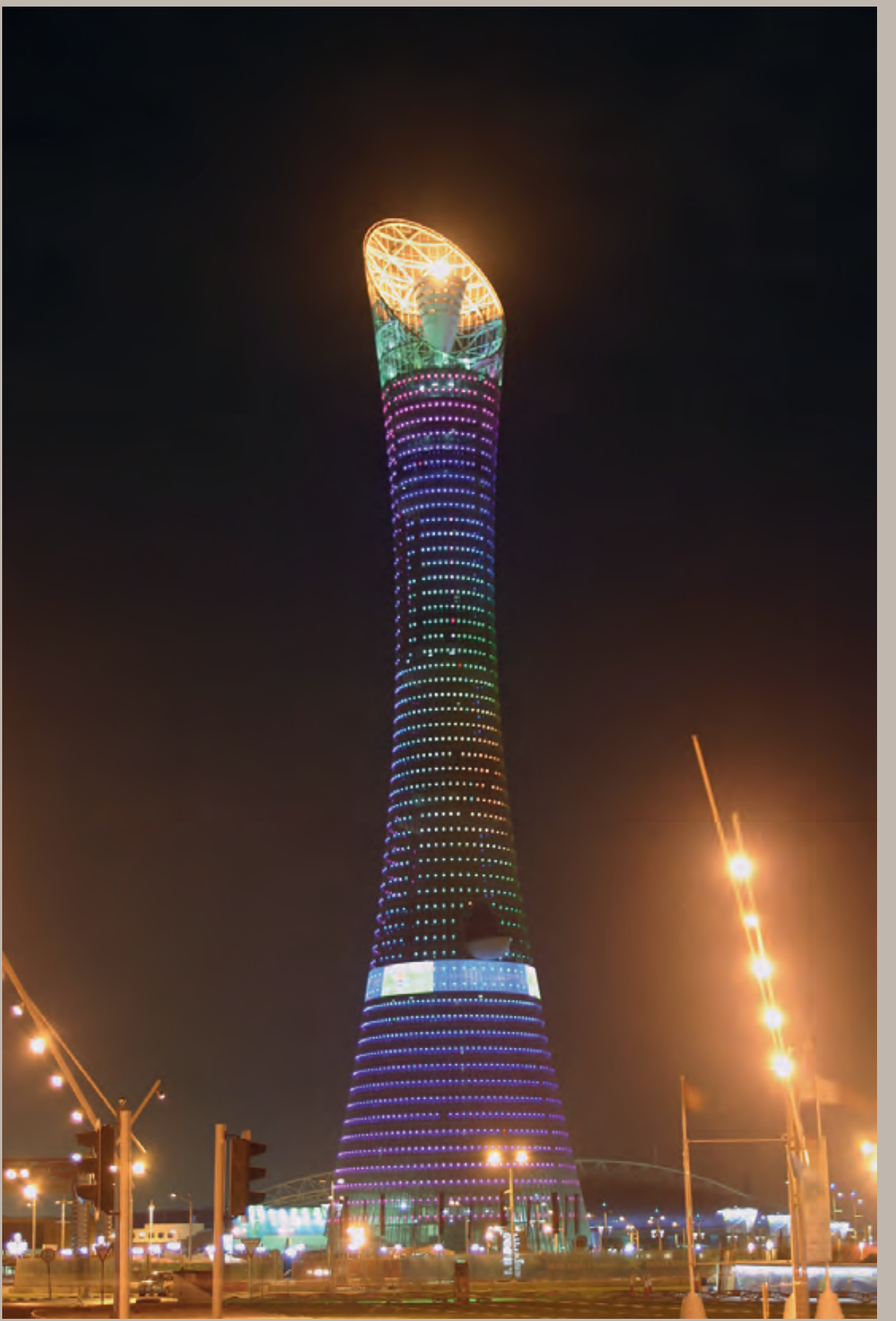


8

Sports Projects

Serving National Pride and Commerce

Sports facilities fulfill roles that extend beyond the merely utilitarian. The projects featured in this chapter provide two divergent examples of these roles. On the one hand, Khalifa Sports City and the Sports City Tower are intentional expressions of national pride. This is particularly evident in the Sports City Tower, which rises to a height of 300 m and housed the Fifteenth Asian Games' flame at its top when the Games took place in Qatar. The tower is essentially a symbolic monument announcing to the world Qatar's significant accomplishment of hosting the second largest multi-sport event after the Olympic Games. In contrast, the various functions that the tower is intended to house, including a conference center, hotel, restaurant, and sports museum, are superfluous to its form. They even seem like an afterthought, and they mostly remain unrealized after the games. In 2010, Qatar built on this accomplishment by winning the bid for hosting the 2022 World Cup.

The Khalifa Sports City complex therefore takes on symbolic significance that other building types such as museums, mosques, or airports also often assume. It therefore may be viewed within the wider context of other large-scale architectural and urban interventions taking place in Qatar. These include Education City and the new Doha International Airport, which express the high ambitions of this small but extremely wealthy Emirate in areas such as higher education and research and global air transportation. One may add the media to these ambitions, since the Qataris own the well-known international Al Jazeera television network, and it is located in Doha. In contrast to these other symbols of national identity and pride, however, Al Jazeera has a strong visual presence through the medium of the televised image, and therefore does not require representation or celebration through architecture.

On the other hand, the Dubai Motor City Autodrome and the four stadiums of the Dubai Sports City are income-generating commercial endeavors that are intimately linked to Dubai's tourism strategy. Tourism makes up about a fifth of Dubai's economy, and the emirate received the impressive number of 5.64 million tourists during the first three quarters of 2009, even though this was a period of global economic downturn. The Dubai authorities are marketing the emirate as the "sports capital of the Middle East," and international sports events that attract both residents and visitors are regularly held there. The projects featured in this section from Dubai are intended to solidify its position as a center of regional and international sports tourism.

Doha Sports City Tower, Khalifa Sports City, Doha, Qatar

Designed by the French firm AREP in association with the Lebanese-American architect Hadi Simaan of Hadi Simaan and Partners, with the London-based international engineering firm Arup as structural engineers.

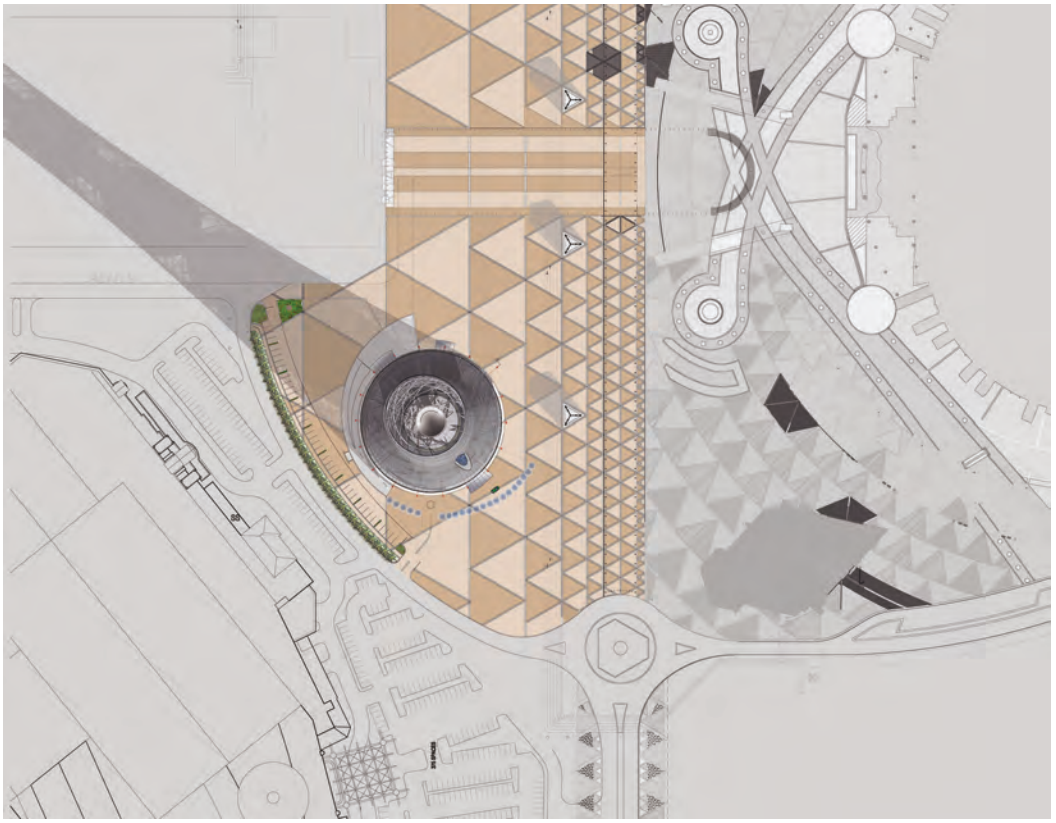
The tower exterior was completed in 2006, in time for the Fifteenth Asian Games. The tower's internal components, however, remain unfinished.

The $175 million Doha Sports City Tower, located in proximity to Khalifa Stadium, rises to a height of 300 m, making it the tallest in Qatar and a major landmark in Doha. It has a facade surface of 30,000 m^2 and a built-up area of 45,000 m^2. The tower was built to hold the flame for the 2006 Asian Games at its top, which was the largest flame in Olympic history, and it was kept burning for the duration of the games. The flame was shielded from the wind by a glass canopy 30 m tall.

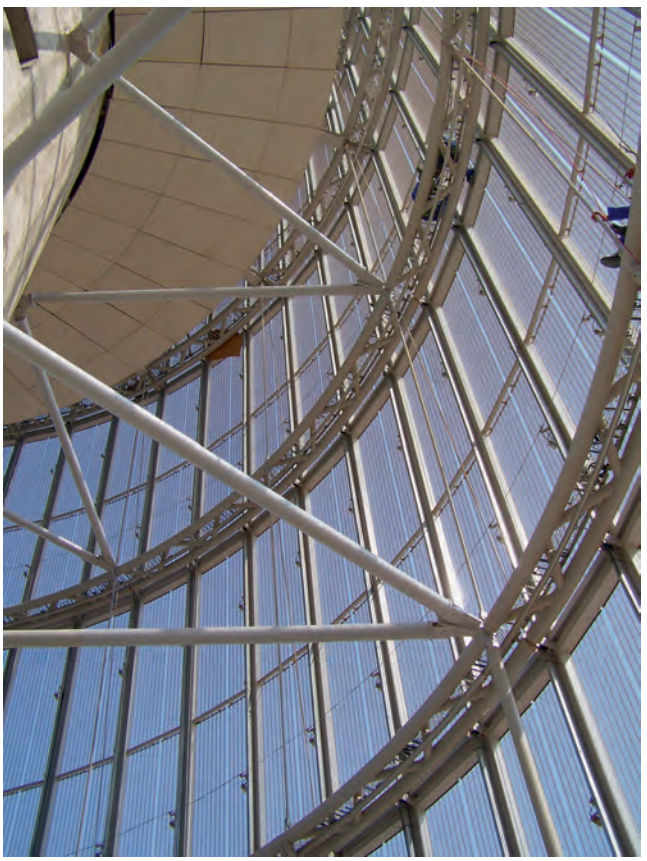
The design of the structure includes a central concrete core from which the tower's various functional modules are cantilevered. The tower is sheathed by a steel parabolic mesh facade with varying perforation ratios that differentiate the northern and southern exposures to minimize solar gain. The area of perforations also increases as one moves toward the top of the tower to better accommodate increasing wind speeds.

The structure is intended to house a number of functions, all of which will be grouped around the central tower core and wrapped by a curved glass outer shell. The lower levels eventually will include an atrium 60 m high as well as a ballroom and conference center. Above that will be a series of stories containing hotel rooms, with a health club and a cantilevered swimming pool on top. Above the hotel will be a sports museum, a revolving restaurant, and a viewing deck.

The tower also integrates a sophisticated surface lighting system consisting of a network of LED lamps installed within its mesh. These may be programmed to project various images and patterns or even to broadcast videos.



Figures 8.1.1–8.1.4. The 300 m high Doha Sports City Tower was built to hold the flame of the 2006 Asian Games, the largest flame in Olympic history. The tower is to eventually house a number of functions including a ballroom and conference center, a hotel, a sports museum, a revolving restaurant, and a viewing deck.



Khalifa Sports City Master Plan and Khalifa Stadium Upgrade, Doha, Qatar

The master plan for Sports City was developed by the Australian firm GHD (Gutteridge, Haskins & Davey). The stadium upgrade was carried out by GHD in association with the Australian firms Cox Richardson Architects and Planners and PTW Architects, with the London-based international engineering firm Arup as structural engineers.

Stadium upgrade was completed in 2005; Sports City was completed in 2006.

The Khalifa Sports city was developed to host the 2006 Fifteenth Asian Games in Doha, which drew over 10,000 athletes from 45 countries in Asia. The sporting event is second in size only to the Olympics.

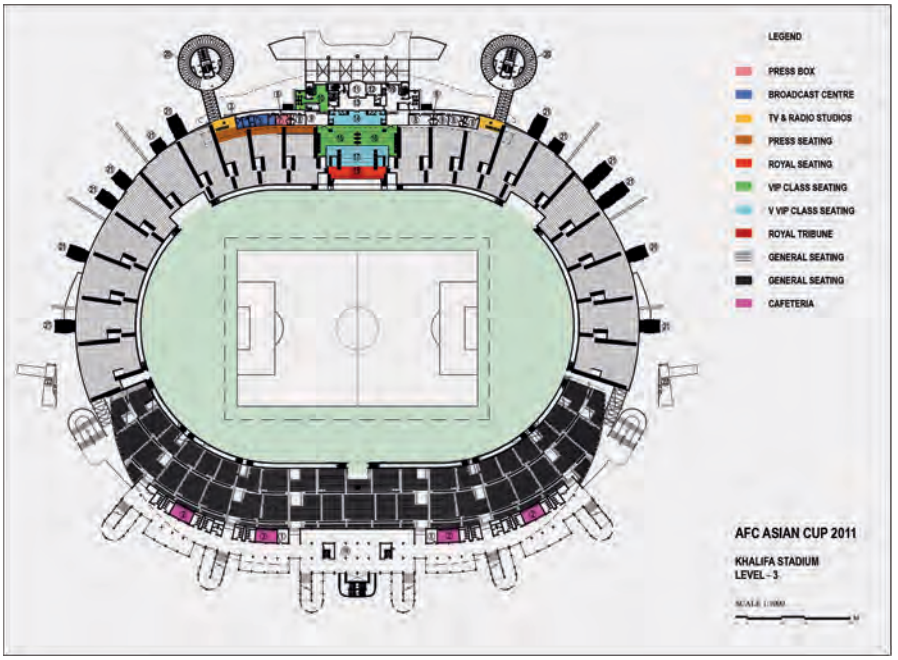
The Qatari government pledged $700 million for building sports facilities for the event and devoted an area of over 230 hectares for a sports city.

The master planner for the project, GHD, also was the project manager for the 2000 Olympic Games in Sydney. In addition, GHD won the contract to plan and implement the Asian Games, which included preparing the strategic plan outlining the planning and delivery of sporting venues, security, transportation, and accommodation, as well as the opening and closing ceremonies.

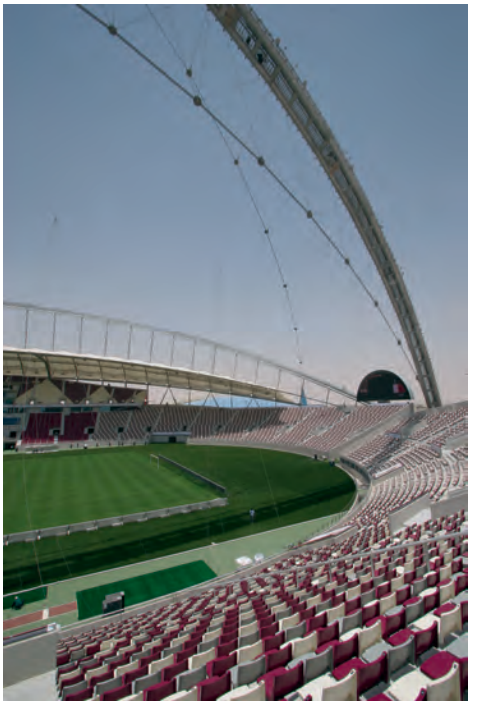
A host of complexes have been built to accommodate the various events associated with the games. These include the Khalifa Stadium, the Doha Sports City Tower, a variety of sports halls and clubs, a sports academy, a mosque, a park, and the 17,600 m^2 Orthopedic Sports Medicine Hospital designed by the American firm Ellerbe Becket.

Khalifa Stadium was the main venue for the games and the centerpiece of the Khalifa Sports City. It hosted the opening and closing ceremonies, as well as main events, including soccer games. The stadium originally was built in 1976, but underwent an extensive upgrade and expansion that has more than doubled its original 20,000-person seating capacity in time for the games. The main visual features of the upgrade/expansion project include a tensile fabric roof, which covers its west stand, and a parabolic steel arch, which holds the lighting system and speakers and spans 265 m over the east stand. The stadium includes a range of facilities located over six levels such as changing rooms, toilets, administration facilities, and lounges. It also is linked to warm-up fields and an additional building for changing rooms through a 120 m underground tunnel. The stadium's elevations are articulated with red and silver aluminum panel cladding, and art works adorn its front side.

The stadium is the focal point of the main east-west axis that passes through the Sports City. Another north-south axis organizes the site's main road network.



Figures 8.2.1–8.2.4. Khalifa Stadium is the centerpiece of the Khalifa Sports City, and it was the main venue for the Doha 2006 Fifteenth Asian Games. The stadium was built in 1976, but it was extensively upgraded and its seating capacity was more than doubled in time for the games.



Dubai Motor City Autodrome, Dubailand, Dubai, United Arab Emirates

The Autodrome is the first phase of the Dubai Motor City. Its master plan was developed by the American firm HOK Sport Architecture (Hellmuth, Obata + Kassabaum Sport Architecture; renamed Populous in 2009). The second phase was developed by the American firm Burt Hill. The 7,000-seat Grandstand and the Marketing and Management Building were designed by HOK Sport Architecture, with detailed design drawings developed by the British firm RMJM.

The first phase, which includes the racetrack, the Marketing and Management Building, and the Grandstand, was completed in 2006. The second phase is under construction.

The Dubai Motor City Autodrome is part of the $4.9 billion Dubailand leisure and entertainment city located outside Dubai. The 345-hectare project centers on a 100-hectare, 5.39 km long motor racetrack. The track allows for six configurations and can accommodate three racing events concurrently. In addition to its use for racing, the track also may be used by auto manufacturers for product launching, testing, and development.

The complex includes supporting buildings such as a media center, a medical center, a control tower, a racing school, a 3,000 m^2 indoor recreational kart center, and a piazza that can accommodate outdoor performances.

The Grandstand is 225 m long and 32 m high. The aluminum-roofed building includes two seating tiers with 7,000 seats in addition to nine viewing boxes at the top. It is located at the highest part of the site to maximize views for the spectators and allow them to see 50 to 90 percent of the track, depending on the location of seats. The client also stipulated that the Burj Al Arab hotel be visible from the Grandstand seating. The Grandstand features function rooms for large gatherings and press conferences. Temporary stands also can be erected next to the Grandstand with a capacity for 35,000 spectators.

The high-tech Marketing and Management Building was the first to be completed in the $95 million complex. It is a fully glazed structure that includes offices and also a function room at its top level that can accommodate 200 people. Viewing galleries occupy most of the rest of the building. The building incorporates large aluminum cantilevers to provide shade, and it is oriented at 50 degrees east of north so that each floor provides some shading for the floor below it from the intense afternoon sun. The architects state that the Grandstand and the Marketing and Management Building were designed on the principle they identify as that of "active balance." Accordingly, both structures "appear to lean to one side to represent the excitement of motor sport as if the car or motorbike is just on the point of losing traction."

The second phase of the project features a residential hotel, office buildings, an Auto Mall that covers 6.5 hectares and consists of an office tower and a showroom, and more than 3,000 housing units occupying an area of 55 hectares. Motor City also will include a Formula One Theme Park with simulator rides, demonstrations, a museum, and retail facilities.

Left and Below: Figures 8.3.1–8.3.3. The Dubai Autodrome centers on a 5.39 km racetrack that can accommodate three racing events concurrently. Spectators can view the races from the 7,000-seat aluminum-roofed Grandstand.

Bottom Right: Figure 8.3.4. The fully glazed, high-tech Marketing and Management Building at the Dubai Autodrome features offices, a function room for 200 people, and viewing galleries. The building incorporates large aluminum cantilevers to provide shade, and its orientation and shape are configured so that each floor partially shades the floor below it from the afternoon sun.

Dubai Sports City, Dubailand, Dubai, United Arab Emirates

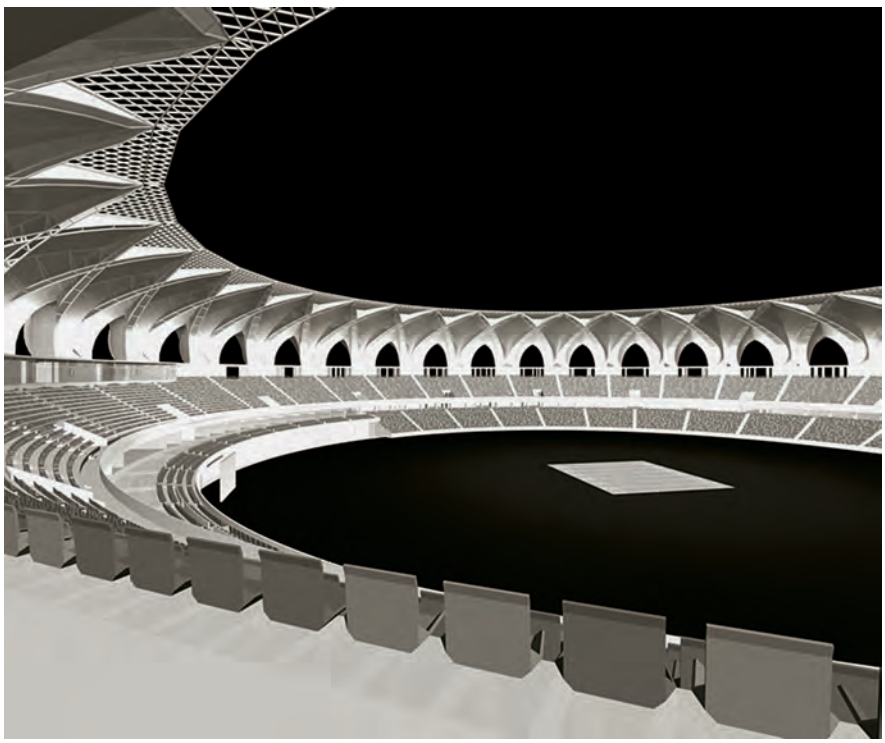
The project's four stadiums are designed by the German firm von Gerkan, Marg und Partner (GMP). The British firm Mott MacDonald and the American firm RTKL designed the two mixed-use hubs located at the ends of the project's canal.

The cricket stadium was completed in 2009. Other parts of project are under construction.

The $2 billion Dubai Sports City is part of the Dubailand mega-project, which will include five themed cities and will be twice the size of Disney World in the United States. Dubailand is part of a plan aimed at strengthening Dubai's position as a tourist destination, for which the target of attracting 15 million tourists was set for 2015.

A main component of the 460-hectare project is a group of four stadiums: a 60,000-person outdoor multipurpose stadium for soccer matches as well as track and field events; a 10,000-person multipurpose indoor arena for hard-court games, ice hockey, and concerts; a 5,000-person field hockey stadium; and a 25,000-person cricket stadium, all linked by a shopping mall and a parking structure for 10,000 vehicles. The project also will include training facilities and schools for various sports, about 1,200 residences occupying an area of 930,000 m^2 and surrounding a golf course, commercial facilities, hotels, and a specialized sports medicine hospital. One of the development's main features is a 1.5 km canal along which a number of the project's components are located.

GMP is especially known in the area of stadium design, and has designed about 40 stadiums around the world.



Figures 8.4.1–8.4.4. A primary component of the Dubai Sports City is a group of four stadiums intended to accommodate a variety of sporting events. As is common in large-scale master planned developments in Dubai, however, it also will include commercial and retail facilities, a large residential development, and hotels.