



Source: Tibah Airports Development Co

## TRANSPORT CASE STUDY: KINGDOM OF SAUDI ARABIA

# Madinah Airport - Prince Mohammad Bin Abdulaziz International Airport (PMIA)

### Location

Madinah, Kingdom of Saudi Arabia

### Owner

General Authority of Civil Aviation (GACA)

### Private Partner

Tibah Airports Development Company (TAV Holdings of Turkey, Al Rajhi Holding Group, Saudi Oger)

### PPP Model

Build-transfer-operate (BTO)

### Operating Term

25 years

### Contract Value

USD 1.2 billion

### Asset Class

Transport (Aviation)

### Awards

- World's Top 100 Airports by Skytrax (ranked 96th) – 2018
- Best Airport in Middle East (5-15 MPPA) – 2017
- Middle East & Africa Infra Financing Deal of the Year – 2012
- Best PPP Deal in the Middle East – 2012
- Best Project Finance Deal of the Year – 2013
- Best Transport Project MENA – 2013
- Best Airport in MENA Region (4-20 mil pax) – 2014
- World's Best Airport Project – 2015

The Kingdom of Saudi Arabia recognises the importance of the air transport sector and under the direction of the King, the Prince Mohammad Bin Abdul-Aziz Airport in Medina was transformed into an international airport. The airport became one of the two major gateways to Saudi Arabia and the holy city of Madinah for Hajj and Umrah pilgrim and visitors to the Prophet's mosque.

The General Authority of Civil Aviation (GACA) of the Kingdom of Saudi Arabia set out a long-term plan to reform and liberalise the country's airport sector. A Public-Private Partnership opportunity arose for the expansion, rehabilitation, modernisation, operation and maintenance of the Madinah Airport, the fourth busiest airport in Saudi Arabia.

The project investment was obtained through the Islamic fund from Arab National Bank, National Commercial Bank and the Saudi British Bank. The US \$1.2 billion expansion plan consists of state-of-the-art facilities built in accordance with the highest international standards. The project comprises a three-level terminal covering 156,940 square metres, with 16 aircraft stands, 20 remote apron stands and 31 passenger boarding bridges. The project included

the widening and extension of the runway, and construction of new taxiways for accommodating A380-size aircraft. Facilities including construction of a mosque that can accommodate 1,000 worshippers, and 20 ancillary buildings that include Hajj facilities, administrative buildings, a VIP terminal, power station and a new aircraft rescue and firefighting building.

Phase one of the airport can handle 8 million passengers per year, with the second and third phases able to handle passengers of 14 million and 27 million respectively.

In October 2011, the Build, Transfer and Operate Agreement (BTO) was signed between the General Authority for Civil Aviation and Tibah Airports Development Co. to become the first airport project in the Middle East to be fully built under a PPP structure. The project was inaugurated in July 2015 and has been awarded several prestigious awards.

The new Madinah Airport is not only a major part of the Holy City's infrastructure, it also plays an eminent role in the socio-economic development of the region by encouraging international commerce and tourism and by generating employment opportunities.

### Output Specifications Development Approach Used

The approach taken with the output specifications was to set out technical requirements for operations and maintenance that were based on international best practices and combined with local regulations which are to be updated periodically during the concession term. These requirements included plans that, once developed, the Private Partner had to comply with during implementation. For example:

- **Operation and Maintenance Manual:** First submission within 360 days of the effective date then updated every three years starting from 2015 ('PMIA Aerodrome Manual' can be found on the official Concessionaire's website);
- **Master Plan:** First submission within 360 days of the effective date then update every five years starting from 2017;
- **Environmental Management Plan:** First submission within 360 days of the effective date then updated every five years starting from 2017;
- **Emergency Plan:** First submission within 360 days of the effective date then updated every five years starting from 2017; and
- **Strategic Marketing Plan:** First submission within 90 days of the effective date then updated annually.

A market sector comparison is provided in the Mactan-Cebu International Airport case study.

Alignment to QI Focus Areas	Mechanisms used to achieve QI alignment	Market Comparison Analysis
<p>Sustainability and longevity of an infrastructure asset.</p> <p>Ability of the asset to address the needs and meet the expectations of end users</p> <p>One of the main project objectives is to provide customers and stakeholders with services and facilities that adhere to the highest standards of quality, ethics and corporate behaviour. The quality standards in safety, environment and operations are achieved through applying best national and international practices based on continuous assessment of satisfaction with passengers and stakeholders.</p> <ul style="list-style-type: none"> <li>The output specifications required the Private Partner to establish an Integrated Management System (IMS) that complies with the <b>ISO 9001, ISO 14001 &amp; ISO 10002</b> standards. This IMS provides a framework for measuring and improving performance towards quality, environment, operations and end user satisfaction.</li> </ul> <p>Customer satisfaction was also a priority of the Owner. The Private Partner developed the following guiding principles to achieve the goal of customer satisfaction through quality services, processes, facilities and business decisions:</p> <ul style="list-style-type: none"> <li>Regular collection and analysis of <b>customer feedback</b>;</li> <li>An efficient customer complaints/suggestion handling procedure;</li> <li>Selection of reliable suppliers and regular review of their performance against set criteria;</li> <li>Training and career development for employees;</li> <li>Regular audit program;</li> <li>Measurable quality objectives which reflect business objectives; and</li> <li>Management reviews of audit results, customer feedback and business performance.</li> </ul> <p>The internal procedures have been developed and integrated into the operations and are held in the IMS Manual which is made available to all employees.</p> <p>In 2018, Madinah Airport has been named as the Best Airport by Size and Region: Middle East (5–15 MPPA) by Airport Council International (ACI). The ASQ award ranks Madinah Airport's customer experience among some of the best airports in the world.</p>	<p><b>Passenger surveys:</b></p> <ul style="list-style-type: none"> <li>The Passenger Satisfaction Surveyor reports are conducted every four months, including once annually in respect of a peak calendar month with respect to Hajj traffic (either arrival or departure) during the concession term.</li> <li>Airport Service Quality (ASQ) Survey is conducted annually during the concession term. The objective is to achieve a ranking among the top five airports in its category (as defined by ASQ<sup>1</sup>).</li> </ul> <p><b>International standards:</b> The Private Partner was required to obtain the (a) ISO 9001 Quality Management System, (b) ISO 10002 Complaints Management System and (c) ISO 14001 Environmental Management System certifications in respect of the airport within two years of the concession term and maintain these certifications throughout the term.</p> <p><b>Owners right to audit:</b> The ability to review actual versus reported performance is a key tool in promoting the Private Partner to fulfil the output specification requirements. The Private Partner shall <i>“permit the [Owner] or its representatives or advisors, during normal business hours, to inspect the books, plans, financial records and other records and documents belonging to or kept by or on behalf of the [Private Partner] with respect to the Project for the purposes of ensuring compliance by the [Private Partner] with this Agreement. At its own cost and responsibility, the [Private Partner] shall also procure and install an electronic information network that will permit the [Owner] continual access to key PMIA financial, operational, maintenance and administrative information”.</i></p>	<p>Most modern greenfield and brownfield airport projects globally are increasingly being required to focus on sustainability. While there is no uniform guidance, the sustainability requirements involve energy efficiency, clean air, noise control and proper handling of environmental hazards including effluents and fuels handling.</p> <p>The Owner's right to audit is a typical requirement across sectors and jurisdictions. Most payment mechanisms rely on the Private Partner self-reporting performance. The Owner's right to audit creates some tension and promotes accurate self-reporting. The Canadian and United Kingdom PPP models also include additional penalties if the Private Partner does not report issues or does not accurately report performance.</p> <p>The ASQ survey is an industry standard survey used by airports across the globe. The standardised approach allows performance to be benchmarked between airports.</p>
<p>Health and safety considerations during both construction and operation of the asset</p> <p>The Private Partner developed and maintains a safety management system manual (SMSM) meeting the standards and requirements defined in the International Civil Aviation Organization (ICAO) Safety Management Manual, and the requirements of the General Authority of Civil Aviation Regulations – Safety Management System.</p> <ul style="list-style-type: none"> <li>The Safety Management Systems (SMS) for the project introduced an evolutionary process in system safety and safety management. SMS is a structured process with the obligation to manage safety with the same level of priority as other core business processes. The SMSM implementation strategies focus on: <ul style="list-style-type: none"> <li>Process safety culture;</li> <li>Compliance with standards, codes, regulations, and laws;</li> <li>Hazard identification and risk analysis;</li> <li>Asset integrity and reliability;</li> <li>Engage management; and</li> <li>Measurement and metrics for safety awareness and as a product.</li> </ul> </li> </ul>	<p><b>Industry standards:</b> The Private Partner is required to develop and operate a facility that complies with international standards. During the design phase, detailed engineering packages shall be submitted to the Independent Engineer for approval.</p>	<p>All modern greenfield airport developments are required to adhere to local and international health and safety regulations applicable to construction. The requirements are typically included in the concession contract.</p> <p>During the operation phase of the project, all modern concession contracts adhere to international health and safety standards published by ICAO and ACI, as well as local regulations that are generally imposed by the local civil aviation authority.</p>

<sup>1</sup> Information available at: <https://aci.aero/customer-experience-asq/asq-awards/asq-awards-categories/>

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<ul style="list-style-type: none"> <li>• Occupational injuries and illnesses can be prevented through continuous improvement and dedication to its Zero Accident Policy. The Private Partner's Occupational Health &amp; Safety Manual to address the following areas:                             <ul style="list-style-type: none"> <li>– Providing appropriate facilities for welfare at work;</li> <li>– Identifying hazards and implementing risk assessments in order to avoid the occurrence of injury;</li> <li>– Consulting with and involving employees in matters relating to their own health and safety;</li> <li>– Ensuring that control measures and emergency procedures are in place;</li> <li>– Providing training to ensure that employees are aware of any work-related hazards, as well as the protection measures;</li> <li>– Providing the necessary organisation, expertise and resources to ensure that there is effective management of health and safety throughout the Airport.</li> </ul> </li> </ul>	<p><b>International standards:</b> By adopting LEED and ISO to promote environmental performance, third parties are involved in assessing compliance.</p> <ul style="list-style-type: none"> <li>• ISO 14001 Environmental Management System certification</li> <li>• LEED Gold certification</li> </ul>	<p>A current airport redevelopment project in North America requires both LEED Silver Certification (for design and construction and the operations and maintenance) and ENVISION Gold certification. The same project also references international standards (ISO14064 and ISO14065) for greenhouse gas quantification, validation and verification.</p>
<p>Environmental impacts</p>	<p>Madinah Airport has been awarded Leadership in Energy and Environmental Design (LEED) Gold Certificate for the recent terminal expansion from the U.S. Green Building Council (USGBC). The award makes Madinah Airport home to the first LEED Gold Certificate for an airport in the Middle East/North Africa region.</p> <p>The output specification requires an Environmental Management System that meets ISO 14001 international standards.</p>	