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TRANSPORT CASE STUDY: THE PHILIPPINES

Mactan-Cebu International Airport (MCIA)

Location

Cebu, Philippines

Owner

Mactan-Cebu International Airport Authority (MCIAA) and Department of Transport (DOTr)

Private Partner

GMR-Megawide Cebu Airport Corporation (GMCAC) (GMR Infrastructure Ltd, Megawide Construction Corporation)

PPP Model

Design-Build-Finance-Operate-Maintain (DBFOM)

Operating Term

25 years

Contract Value

USD 390 million

Asset Class

Transport (Airport)

Awards

- Best Transport Deal for Asia Pacific in the 2015 Partnership Finance International (PFI) Awards
- CAPA's 2016 Best Regional Airport in Asia Pacific award

Mactan-Cebu International Airport Authority (MCIAA) and Department of Transport (DOTr) proposed the construction of a new world-class international passenger terminal, including all related facilities, to efficiently handle the increasing air traffic demand, ensure convenience of passengers, and promote aircraft operational efficiency.

The project aimed to increase the level of convenience and service to passengers in the existing passenger terminal and decongest the terminal facility to allow future growth.

This airport was tendered to the private sector in a PPP arrangement based on the Philippines Build-Operate-Transfer (BOT) Law. The scope of the project included operation of the apron¹, existing terminal and the landside/commercial facilities, as well as the design, construction and operation of a new international passenger terminal. The current airport operator MCIAA continued to operate the remaining airport facilities (such as the runway and taxiways) and also acts as the joint grantor of the project together with DOTr (formally the Department of Transport and Communications).

In 2014, a Filipino-Indian consortium, consisting of Megawide Construction Corporation and GMR Infrastructure Limited forming the Special Purpose Vehicle (SPV) (called GMR-Megawide Cebu Airport

¹ Aprons are the areas at the airport which permit the parking of aircraft for the purpose of on- and off-loading passengers, cargo or mail, as well as the servicing of aircraft without interfering with the airport traffic.

Corporation (GMCAC)), was awarded the concession and this project reached financial close in January 2015 with Banco de Oro (BDO) as the lead arranger. The lender group included other Filipino banks, as well as the Asian Development Bank (ADB).

Shortly after the handover of the project assets in 2015, GMCAC commenced the renovation of the existing mixed use (domestic and international)

terminal to provide enhanced facilities and increased service standards. The first phase of the new international terminal was opened in July 2018. The design of the new terminal features timber structures and striking arches in reference to local Filipino buildings in response to the requirement to "capture the aesthetics and spirit of traditional architecture of the Philippines"².

Output Specifications Development Approach Used

The output specifications are mainly contained in the contract schedule relating to the Minimum Performance Specifications and Standards (MPSS). There is one schedule of 24 pages that covers the operation and maintenance standards of the assets. The MPSS includes both objective (asset availability, queue times and customer service) and subjective (passenger surveys) performance parameters, both of which can lead to financial deductions if not achieved.

A different schedule to the contract covers the design requirements for the new terminal, airside and landside facilities. The requirements refer to an international standard to specify the level of service. The International Air Transport Association (IATA) publishes the Airport Development Reference Manual (ADRM), which includes detailed guidelines around the design and operation of key airport facilities including passenger terminals. IATA Level of Service C is specified in the contract, which relates to guidelines on space per passenger for each process and acceptable waiting times at these processes. The Owner considered Level of Service C to provide a balance between providing economical facilities and a comfortable service level for the majority of passengers. It should be noted that Level of Service C was changed to Level of Service Optimum in the updated versions of the ADRM and the number of service levels was reduced from six (A-F) to three (Over-Design, Optimum and Sub-Optimum). Additional specifications are provided for the apron, terminal and landside facilities.

Since the Private Partner will only operate and expand the assets linked to the passenger terminal, there is a key interface with the current airport operator (MCIAA) who continues to operate the remaining airport facilities. MCIAA are required to operate the facilities under its control according to the required standards to mitigate negative impacts to the Private Partner (e.g. the runway is not properly maintained, which results in flight cancellations, which have commercial impacts for the Private Partner). To respond to this, the contract also contains MPSS related to the Owner's performance, such as the requirement to provide air traffic control services or undertake frequent inspections of runway pavements. The Private Partner

would be eligible for compensation where the Owner does not meet the performance requirements.

Market comparison

The MCIA project has been compared to Japanese airport transactions for the purpose of highlighting differences and similarities. Starting in 2014 with the Sendai and Kansai Airports transactions, Japan has brought 10 airport deals to market and more are to follow. This is driven by the Japanese Government and the "Act on Operation of National Airports Utilising Skills of the Private Sector", which was passed in 2013 to respond to the need to increase the efficiency of national airport management due to population decline and minimal growth in domestic passengers. The format and structure of each transaction is very similar as in most cases the Operating Right Holder (Private Partner) will operate the terminal, airfield and some ancillary facilities and is able to expand facilities based on demand.

There are considerable differences between the overall framework and contracting structure of the MCIA project and the Japanese transactions, from the scope of the projects to the level of prescriptiveness in the specifications.

For example, most Japanese airport transactions resemble operations and maintenance contracts that focus on efficiency improvements, with no significant new development (either new terminals or runways). In contrast the MCIA project required the construction of a new terminal at the start of the concession, prior to an ongoing O&M term.

In the context of output specifications, the Owner in the Philippines specified a very prescriptive, detailed and extensive list of performance indicators and targets which are linked to non-performance penalties during the operations period. Whereas for the Japanese transactions, the Owner puts less emphasis on including specific performance targets and penalties into the project agreements. The different approaches typically stem from the level of PPP maturity and the culture of contract administration – a trend also observed on 'built environment' projects (refer to the Mersin Integrated Health Campus project).

² ANNEX TP-5: Conceptual Architectural Design for the Project in Instruction to Bidders, 29 May 2013.

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>As the Private Partner operates the facility over 25 years, there is an inherent incentive to minimise maintenance costs. The availability targets act as a driver to ensure appropriate quality of systems and equipment to avoid financial penalty. Once the contract period is over the assets will transfer back to the Owner, or an extension of up to 25 years can be negotiated.</p> <p>Asset availability targets promote proactive maintenance</p> <p>The KPIs in the MPSS include availability targets defined in percentage terms for key airport facilities. Availability targets have been set for passenger boarding bridges, flight information display systems, lifts/escalators, automated services (including the baggage handling system), internet and Wi-Fi services. The target is set at 95% availability for these facilities. The target considers any planned maintenance that may have to take place by specifying the calculation method which consists of actual operational hours and planned operational hours excluding scheduled downtimes. While not specified in the contract, to measure this target accurately, appropriate systems should be in place that automatically record and log the actual hours of operation.</p> <p>Performance reflects end user priorities and is linked to demand and capacity</p> <p>Airport terminals are usually designed to accommodate the demand that is slightly below the absolute peak to balance an acceptable service level to the majority of passengers and project costs. Since there are instances where the facility is expected to be under capacity for the passenger numbers, the KPIs related to waiting times are not applicable to 100% of passengers but to 90% or 95% of passengers (depending on the process). As a result, a low proportion of passengers may experience waiting times that exceed the specified waiting time standards, but the intention of these KPIs is to ensure that this proportion remains low and does not increase as the airport traffic grows. The following examples demonstrate how the KPIs relate to the Owner (and end user) priorities:</p> <ul style="list-style-type: none"> • Wait times: There are specific wait time targets applicable to passenger processes (e.g. check-in, security, immigration). The maximum waiting time in the queue is specified for each of these processes and varies between five to 15 minutes depending on the type of process. • Baggage delivery: The time that the first bag should be delivered to the reclaim belt, as well as the maximum time the last bag should have been delivered to the reclaim belt are specified. Different targets are defined depending on the type of flight (domestic or international) and type of aircraft (narrow or wide-body). • Customer service: Targets include availability of customer information desks, availability of services for handicapped and special needs passengers, as well as maximum response time for any complaints that the Private Partner receives from users. <p>Industry standard surveys to measure end user satisfaction</p> <p>The Private Partner is required to undertake a passenger satisfaction survey every quarter. The industry benchmark for customer satisfaction surveys is the Airport Service Quality (ASQ) survey which has been developed by Airports Council International (ACI). It is a standardised survey which is completed by passengers at the airport once they have completed their journey through the terminal. According to the ACI website, the ASQ survey is currently undertaken at 388 airports worldwide³. The contract specifies a requirement to participate in the ASQ survey but on the condition that the Private Partner is not admitted as an ACI member, the Independent Consultant is required to develop a similar questionnaire to measure customer satisfaction. According to the ACI website⁴, the full survey consists of 34 key service areas and includes eight major categories, such as access, check-in, security, airport facilities, food and beverage providers and more that align the customer experience.</p>	<p>Owner audits: Both the Owner and the Independent Consultant appointed by the Owner can undertake audits of project assets to inspect and test any facility or process. The Owner has to give reasonable notice to the Private Partner in advance of such audits.</p> <p>Performance indicators are linked to financial deductions: The performance indicators are part of the MPSS sections in the contract. The MPSS specifies subjective performance parameters for end user surveys and 24 objective performance parameters which have been split into two categories: primary and secondary, which have different deductions (primary parameters carry double the deductions of secondary). The deduction regime consists of two broad categories:</p> <ul style="list-style-type: none"> • passenger survey rating (calculated quarterly); and • waiting times and facility availability (calculated monthly). <p>The majority of KPIs are in the primary category. These KPIs cover a range of aspects such as waiting times at particular passenger processes, availability targets of key airport equipment, terminal ambiance and customer service. The KPIs are prescriptive and detailed but involve performing measurements in fluent and dynamic environments, such as a queue at a passenger process. The Private Partner is required to submit a measurement plan for the KPIs which is subject to Owner's approval. An Independent Consultant is appointed to measure the KPIs and monitor performance.</p> <p>A minimum satisfaction score must be obtained in the survey. The contract specifies a slightly lower minimum rating for the existing domestic terminal compared to the new international terminal. This is in recognition of the domestic terminal being an existing facility with some inherent inefficiencies.</p>	<p>Typical concession terms in the Japanese airport industry range between 20 to 30 years. The concession period for Japanese Airport Concessions is typically 30 years, but longer or shorter terms have also been implemented. The shortest is 15 years (Takamatsu Airport) and the longest 44 years (Kansai Airports). The difference in concession terms is driven by a number of factors, such as the assumed return of investment and required time to implement the proposed efficiency measures.</p> <p>Requirements are specified in the form of Required Standards (RS). There are standards for environment, building facilities, airfield, security, etc. Examples of standards include for the Operating Right Holder (ORH) to follow particular security regulations in order to prevent mixing of screened and unscreened passengers and ensure the screening of passengers and their bags.</p> <p>The RS do not tend to contain numerical KPIs. Instead, the RS prescribe the way in which the operation and maintenance should be undertaken, such as daily inspections of key equipment to ensure they are safe to use and fully functional. These inspections should be undertaken following the guidelines provided by the State. The RS are formulated by the Owner, who in the case of the national airports, is the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), or in the case of regional airports is either the prefectural or city government.</p> <p>The Owner undertakes their own compliance monitoring to ensure that the ORH adheres to the requirements. The Civil Aeronautics Act and Airport Act are the principle acts to be complied, with but also include a large number of other legislation including environmental laws (on noise regulation, vibration, soil contamination, etc.) and general standards for the airport's civil engineering facilities.</p> <p>In addition, the ORH is required to propose service quality performance indicators for airport users. In one particular concession agreement, short (five years) and long-term (end of concession period) targets had to be set by the ORH. These targets do not constitute an obligation on the ORH, i.e. they are not linked to penalties or events of default. However, in order to encourage the setting of efficient targets, the proposed targets were evaluated as part of the overall bid evaluation process by the Owner. Self-reporting of performance is required in periodic intervals. In addition, the Owner will monitor if the ORH complies with the RS and all applicable regulations and standards.</p> <p>If the Owner determines that the project is not implemented in line with the requirements, the ORH needs to submit an improvement plan. If the ORH does not provide this plan or improves its performance in the case that it is found it does not comply with the RS, the Owner may cancel the concession contract. RS specify that a customer satisfaction survey must be undertaken once a year, but no specific guidance is given on the categories or a minimum score. The results should be published on the airport's website. There is no specific instruction as to the format of the survey or the its content and no requirement to adopt the industry standard ASQ survey.</p>

³ Information available at: <https://aci.aero/customer-experience-asq/asq-participants/>

⁴ Information available at: <https://aci.aero/customer-experience-asq/services/asq-departure-survey/methodology/>

Alignment to QI Focus Areas	Mechanisms used to achieve QI alignment	Market Comparison Analysis
<p>Health and safety (H&S) considerations during both construction and operation of the asset</p> <p>The contract states that all works must be undertaken in compliance with all relevant health and safety (H&S) legislation. Regular construction reports by the Private Partner include reporting on H&S performance. The output specification cited national legislation, however since the Asian Development Bank (ADB) was a one of the lender's, the Private Partner also had to comply with the ADB's safeguarding policy which includes occupations and community health and safety provisions.</p> <p>In addition to health and safety, security is also a key consideration on aviation projects. The contract specifies a large number of aviation specific regulations, as well as national regulations (including security regulations) that the design needs to comply with, as well as any required licences and permits, particularly in relation to the construction of the new terminal. The operations and maintenance of the airport shall also be carried out in line with these regulations.</p>	<p>Contract termination/default: Failure to meet the operation and maintenance obligations which result in a material risk to the health of passengers is considered a reason for Private Partner default.</p> <p>The contract mentions the Private Partner shall direct special attention to the safety of passengers. Any action or inaction of the Private Partner that affects the safety of the facilities may constitute a breach of the agreement.</p> <p>Review and audit: During construction, the Independent Consultant reviewed the construction and operational plans and completed site visits to monitor compliance. The Owner also has the ability to undertake audits during operations.</p>	<p>In Japan, at the bid stage, the Private Partner is expected to provide its proposals for implementing safety and security, as well as measures on dealing with emergencies. Compliance is, in principle, based on self-reporting but audits may also be undertaken by the Owner.</p>
<p>Social impacts and inclusiveness</p> <p>The Private Partner is required to undertake an Environmental and Social Impact Assessment as part of the new terminal development.</p> <p>The output specification specifies that the design shall take into account the needs of mobility impaired end users. There is a KPI addressing the availability of assistance for passengers with special needs/requirements.</p>	<p>Performance indicator: There is a KPI for the percentage of time assistance for Passenger with Disabilities is available. The KPI requires the Private Partner to provide assistance to all disabled passengers within a specified timeframe (measured in minutes).</p>	<p>In Japan, the RS mandates that facilities for the handicapped, elderly or mobility impaired users should be carefully considered when undertaking modification or expansion works.</p> <p>The ORH is required to collaborate with stakeholders and local communities throughout the concession period and participate in local community meetings, etc.</p>
<p>Environmental impacts</p> <p>The design requirements state that the new terminal should aim to be carbon neutral. It should be noted that such a requirement is not realistically achievable as noted on the Airport Carbon Accreditation website⁵, which states that offsetting would be required for an airport to become carbon neutral. In terms of terminal design, it is recommended that a particular building certification standard such as Leadership in Energy and Environmental Design (LEED) is used instead. Potential alternatives to LEED are EDGE (Excellence in Design for Greater Efficiencies)⁶, an online platform developed by the International Finance Corporation (IFC) and Building Research Establishment Environmental Assessment Method (BREEAM) developed by the Building Research Establishment (BRE)⁷.</p>	<p>There is a design requirement for the new terminal to aim to be carbon neutral and minimise water and energy consumption, as well as carbon emissions through the use of efficient technologies.</p>	<p>In Japan, there is a set of RS on environmental impacts. One key aspect is noise, where the Private Partner is typically expected to fund or contribute to the sound proofing of residential properties or other mitigation measures. In one example, the total amount that the ORH has to contribute to support noise mitigation measures over the concession period is explicitly stated in the contract.</p>
<p>Alignment of the project with economic and development strategies. (SDGs, national policy, etc)</p> <p>Ability of the asset to respond to changes in resource availability, population levels, demographics and disruptive technology</p> <p>The design specifications state that the development should be modular and scalable to provide flexibility to accommodate future changes in the demand profile. It is further stated that the facilities should be efficient to handle fluctuations in passenger demand. It should be noted that this requirement is not easily achieved with regard to some facilities and equipment such as the baggage handling system or other centralised systems. These systems are not modular and would need to be reconfigured to be expanded.</p>	<p>Independent design review: The Preliminary and Detailed Design was reviewed by an Independent Consultant. The scope of this review was to determine whether the designs substantially follow the tender design developed in line with the output specification requirements, and whether the agreed changes have been incorporated following discussion with stakeholders.</p>	<p>The requirement for innovation does not tend to be directly stated, but it is expected that the Private Partner will employ its experience and 'know-how' to improve the existing facilities and operate the assets more efficiently through employing the latest technologies, etc.</p>

5 Information available at: <https://www.airportcarbonaccreditation.org/airport/4-levels-of-accreditation/neutrality.html>
 6 EDGE is a green building standard and a certification system which helps to determine the most cost-effective options for designing a 'green' facility within a local climate context: <https://www.edgebuildings.com>
 7 BREEAM is an international scheme that provides independent third-party certification of the assessment of the sustainability performance of individual buildings, communities and infrastructure projects: <https://www.breeam.com>