

UNIT 22. Airport Operations Management



Colbourne
College

Airport Business Planning And Design

Delivered By:
Samuels & Hunter, 2019



AIM & OBJECTIVES OF LESSONS 4, 5 & 6

LO2 Examine how airport business planning and design relate to strategic decisions and priorities

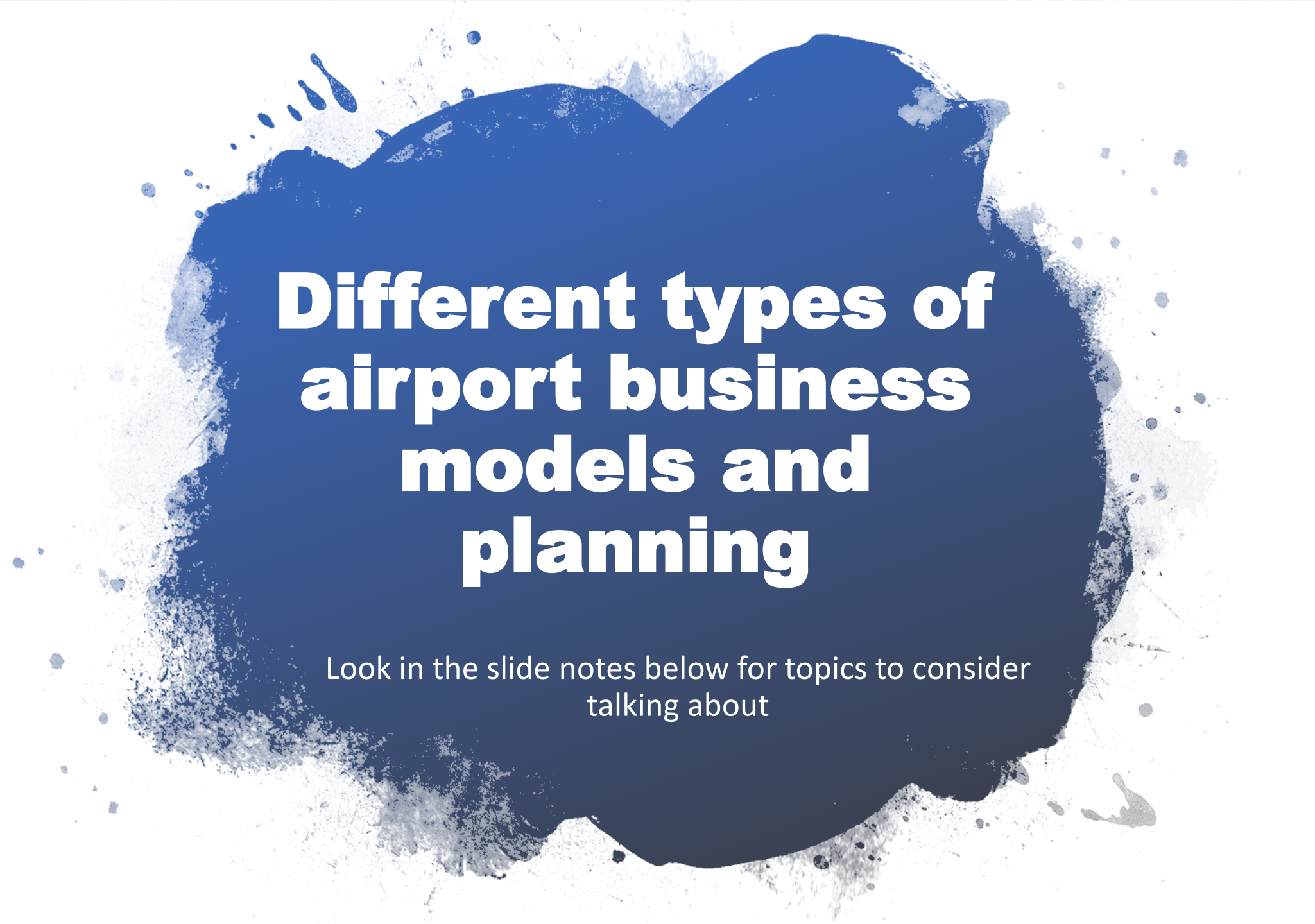
- **P3** Investigate how airport planning and design optimize commercial strategic objectives, using specific examples from commercial and private airports
- **M2** Evaluate how airport planning and design engages all stakeholders to optimise commercial strategic objectives

LO1 & LO2

- **D1** Based on critical reflection, make valid judgements and recommendations for improving airport planning and design to enhance the customer experience and meet overall strategic objectives

Key facts about airports

An airport is an aerodrome with extended facilities, mostly for commercial air transport. Airports often have facilities to store and maintain aircraft, and a control tower. An airport consists of a landing area, which comprises an aerially accessible open space including at least one operationally active surface such as a runway for a plane to take off or a helipad, and often includes adjacent utility buildings such as control towers, hangars and terminals. Larger airports may have airport aprons, taxiway bridges, air traffic control centres, passenger facilities such as restaurants and lounges, and emergency services. In some countries, the US in particular, they also typically have one or more fixed-base operators, serving general aviation.



Different types of airport business models and planning

Look in the slide notes below for topics to consider
talking about



Airport Business Models

- Government Owned and Operated Model
- PPP (Public Private Partnership) Model
- Partial/Full Privatization Model

Government Owned and Operated Model

- This traditional form of business model whereby the airport is entirely owned and operated by the local or national government
- the airport is operated directly by a government department, typically the Civil Aviation Authority (CAA), Ministry of Transport or in a few cases, the military.
- Attitudes towards these governments owned and operated airports are that of a public utility with public service obligations and consequently commercial and financial management practices are not given top priority.
- Private investors are deterred by the capital requirements and the subsequent debt payments would make it difficult to invest in airport maintenance and improvement

(Qin, 2010)

Government Owned and Operated Airports

PROS

- Because it exists as a public utility rather than a commercial operation, the airport might be pursuing myriad of objectives such as political and/or social agendas such as national security and employment creation rather than a profit and customer-centred enterprise.
- The airport will often be subsidized to pursue social objectives.
- The airport might enjoy certain privileges to provide certain services, exclusive rights, and exemptions from certain laws or regulations.
- The airport is more likely to receive these privileges, leading to monopoly power in the area.

(Qin, 2010)

Government Owned and Operated Model

CONS

- The objectives given to the managers of government owned airports are vaguely defined, and tend to change as the political situation and relative strengths of different interest groups change
- The large mismatch between management's incentives and the interest of the owner (government) increases inefficiency
- Never ending call for increasing amounts of investment which will produce the heavy burden on taxpayers - Poorly customer service-oriented

(Qin, 2010)

PPP (Public Private Partnership) Model

PPP is a cooperative venture and partnership between the public and private sector.

- *Ownership*: The land (fixed asset) is most likely to be owned by the government with the private partners taking the necessary risks to finance the project through allocation of capital for building, designing the facility and the covering the operating costs for managing it to meet operational standards. Ownership of the land remains with the public sector.
- *Risk and Reward*: PPP model will seek to use the expertise of each of the partners to best meet clearly defined public needs by way of allocating the appropriate resources, risks and rewards.
- *Responsibility*: Government retains the responsibility for providing the service.

(Qin, 2010)

PPP (Public Private Partnership) Model

PROS OF THE PPP MODEL (Qin, 2010):

- *Cost-effectiveness*: Shared responsibilities for ownership. The bidding process also provides for cost-efficient strategic alternatives to be presented and selected from.
- *Higher Productivity*: when payments are linked to the outcome and profit, people are usually more committed to the project's success and thus performance gains are achieved
- *Accountability And Oversight*: Joint decision-making drawing from a wider pool of expertise and interest groups. Transparency and frequent reporting are critical in joint-ventures.
- *Balanced interest*: public interest and profitability are reflected in the decision-making and actions taken in PPP models thus the community is invested and benefits in the successful PPP model

PPP (Public Private Partnership) Model

PROS OF THE PPP MODEL

- *Accelerated Delivery*: PPP projects usually carry clauses for incentives and penalties thus the completion and execution of the project will have high priority.
- *Clear Customer Focus*: innovation and customer satisfaction will be more defined in this model than in the government-owned model which is more politically and socially oriented

(Qin, 2010)

PPP (Public Private Partnership) Model

CONS OF THE PPP MODEL (Ministry of Finance of the Republic of Lithuania, 2015):

- PPP project agreements are long-term, complicated and comparatively inflexible because of impossibility to envisage and evaluate all particular events that could influence the future activity
- Infrastructure or services delivered could be more expensive
- PPP service procurement procedure is longer and more costly in comparison with traditional public procurement
- Profits of the projects can vary depending on the assumed risk, the level of competition, and the complexity and scope of the project.

(Qin, 2010)

Partial/Full Privatization Model

The term partial privatization intrinsically implies the agreement between a public sponsor and at least a private partner. Therefore, both expect to benefit from the partnership, complementing the public and private interests in the management of strategic infrastructure.

On the side of the public sponsor, partial privatization provides funding for necessary infrastructure easing fiscal budget constraints, avoiding tax increases and expenditure cuts in other government activities.

(Albalate, Bel and Fageda 2014)

Partial/Full Privatization Model

Also, it allows taking advantage of private incentives and specialized expertise to design, finance, build and operation activities so as to gain technical efficiency.

On the side of the private partner, it seeks business opportunities in attractive markets where risks might be controlled under a safe regulatory framework given the association with the public sponsor.

(Albalade, Bel and Fageda 2014)

Partial/Full Privatization Model

A simplistic view of privatization is that it involves only the transfer of ownership whereas in reality it also involves the transfer of control from the government to the private and commercial. Privatization can thus occur through the transfer of not only ownership but also management control from government to private groups.

(Qin, 2010)

Partial/Full Privatization Model

PROS (Qin, 2010):

- Increased ability for the airport to raise additional capital and seek new revenue sources from private markets
- Improve efficiency
- Reduce costs
- Become more customer service oriented and increase competition among airlines to provide choice and cost reduction for passengers.
- The government could enjoy revenues from the sale of its assets and could also collect taxes from the new private entity. The landside services, in particular, are those normally offered by private firms away from airports and their operations can easily be moved out from under government control.

Partial/Full Privatization Model

CONS (Qin, 2010):

- Because many citizens in general see the airport as part of a city's or region's essential infrastructure and also because airports are often regarded as important catalysts for local economic growth, the public at large believe that the government should play an active role in developing and supervising airports.
- Moreover, because airside services are natural monopolies, the public often feel more comfortable and protected by keeping the government involved in airport regulation and supervision.
- Many feel that the governments have to be involved in ensuring safety and quality of service standards because of the inherent nature of air travel.
- Airlines are generally concerned about privatization. They expect that without government involvement, privatization would bring higher landing fees and user charges, which would eventually translate into higher ticket prices for their customers

Airport Business Models And Planning

Where a PPP or privatization model is determined through a robust business case process as the best option to generate the most significant economic benefit, a key determinant of success is in the detailed transaction process and its design, ensuring the deal structure and execution meets the objectives set and is in the public interest. Robust communication and engagement from the outset, with the aviation industry and other stakeholders, is critical to the successful delivery of this process.

(Reece and Robinson, 2018)

Airport Business Models And Planning

When combined with limited or weak economic regulation, all models (public or private) can lead to adverse impacts or outcomes on customers and end consumers. However, airports where greater control rests with the private sector carry a higher risk of adverse outcomes. Strong safeguards are required to prevent market abuse, secure efficiencies that are passed on to users, and ensure service quality expectations are met.

(Reece and Robinson, 2018)

Airport Business Models And Planning

IATA advocates for more robust forms of economic regulation to be applied where full privatization is undertaken. Further, it is also recommended that regulators be: centralized; appropriately funded; independent; and have a clearly-defined mandate, endorsed by government and defined within legislation.

(Reece and Robinson, 2018)

Airport Business Models And Planning

A regulatory system should aim to mimic competition, giving the travelling public a fair price, whilst motivating the airport owner/operator to deliver an appropriate level of service at an appropriate level of charges. The airport owner/ operator should be incentivized to identify and implement incremental efficiencies, both in operations and capacity enhancement.

(Reece and Robinson, 2018)

Airport Congestion



Congestion and Expansion

Congestion in transportation occurs when demand for infrastructure exceeds capacity, causing delays in travel time as one of the main symptoms. Door-to-door travel time in air transport is subdivided in three parts: the time to travel to and from the airport, the time needed in the passenger terminal before and after the flight, and the airside travel time once boarded.

(Roosens, 2008)

Congestion and Expansion

Many congestion problems in the air transport sector are caused by airports, ending up with nearly twice as many delays as caused by en route congestion. Although airport capacity can be increased in the long run by building new infrastructure, short run solutions should be adopted first to optimise the use of existing capacity.

Airport congestion stalls passenger growth and pushes potential passengers into flying to or through a different airport

The possible solutions are based on a differentiated mix of operational actions.

(Roosens, 2008)

Congestion and Expansion

The main congestion problems on most major airports are caused by peak hours, which typically cause delays in the morning, around noon and during the evening. Delays during morning peaks can even cause a cascade impact and additional reactionary (Eurocontrol, 2007, ATFCM) delays for the full day or even more when international connecting flights are involved (Murillo and Carlier, 2006).

Peak related delays should not be solved primarily by expanding airport infrastructure, but by optimising operational practices, which is the responsibility of airport operators, airlines, and air traffic control (Eurocontrol, 2007, ACE, vol. 1).

(Roosens, 2008)

Congestion and Expansion

A common response to congestion, championed by many community leaders, is to expand capacity by constructing new runways and terminals. Airport expansions are costly, complex, and controversial. However, the inefficiencies in passenger handling services are also contributing to the problem.

(Cohen and Jeffrey, 2003)

Congestion and Expansion

London-Heathrow capacity has reached a cap at around 480,000 aircraft movements per year. As a result, many airlines – and their passengers – are flying to somewhere else. “Missing” passengers travelling into the region are choosing non-congested nearby airports, such as Gatwick, Stansted or Luton. In the case of international transit passengers, they travel to their final destination through another intercontinental hub.

Amsterdam, Frankfurt, Paris Charles-de-Gaulle and even Madrid are inevitably reaping the spoils of Heathrow’s inability to convince the region of the urgent need for expansion.

(Padilla, 2016)

Congestion and Expansion

As the airport constraints increase, airlines tend to increase the frequency of flights on existing routes. For example, increasing the number of flights from Rome to Heathrow – rather than offer new destinations. In other words, congestion pushes airlines to offer more flights to fewer destinations.

(Padilla, 2016)

Congestion and Expansion

Investments into new or improved runways, terminal expansions, and entirely new airports are particularly important in the emerging regions, where aviation growth currently outpaces planned infrastructure development. At the same time, it must be remembered that the services provided at airport directly influence its capabilities as well.

(Padilla, 2016)

Congestion and Expansion; Oppositions

- **The regional economy: marginal benefits**
- **Location**
- **Environment & health**

(Stop Bristol Airport Expansion, 2019)

Stakeholder Analysis

Stakeholder Analysis is an important technique for stakeholder identification & analyzing their needs. It is used to identify all key stakeholders who have a vested interest in the issues with which the project is concerned.

The aim of stakeholder analysis process is to develop a strategic view of the human and institutional landscape, and the relationships between the different stakeholders and the issues they care about most

(Project-Management.com, 2018)

Stakeholders in an airport

- ❖ Passengers (Arriving, Originating, Transfer, International and domestic, Charter and low-fare airline, Shuttle/commuter passengers)
- ❖ Business, Commerce, Tourism, Arts, Sports, and Education Organizations
- ❖ Air Carriers
- ❖ General Aviation Users (Air taxi operators, Corporate-executive transportation, Flight instruction, Aircraft rental, Aerial application, Aerial observation, Business, Pleasure)
- ❖ Airport Organization
- ❖ Investors and Bond-Holders
- ❖ Concessionaires

(Sherry, 2010)

Stakeholders in an airport

- ❖ Service Providers (Supply of aviation fuel and oil, Baggage handling and sorting, Loading and unloading of aircraft, Interior cleaning of aircraft, Toilet and water service, etc.)
- ❖ Employees
- ❖ Government
- ❖ Communities Affected by Airport Operations
- ❖ NGOs, such as Environmental Bodies
- ❖ Parking Operators and Ground Transportation Providers
- ❖ Airport Suppliers

(Sherry, 2010)

Stakeholder Analysis; Importance

- Marketing Strategies

Conducting market research is an integral marketing technique you can use to learn about the needs and motives of target customers. Product development and promotions are largely influenced by your research findings if your business gives significant credence to customers in stakeholder analysis.

- Motivating Employees

Analyzing the role of employees in your company helps you optimize satisfaction and production. Key long-term considerations in employee assessment are turnover and morale. Understanding the needs and interests of your employees helps you set up a work environment that motivates them.

(Kokemuller, n.d.)

Stakeholder Analysis; Importance

- Corporate Citizenship

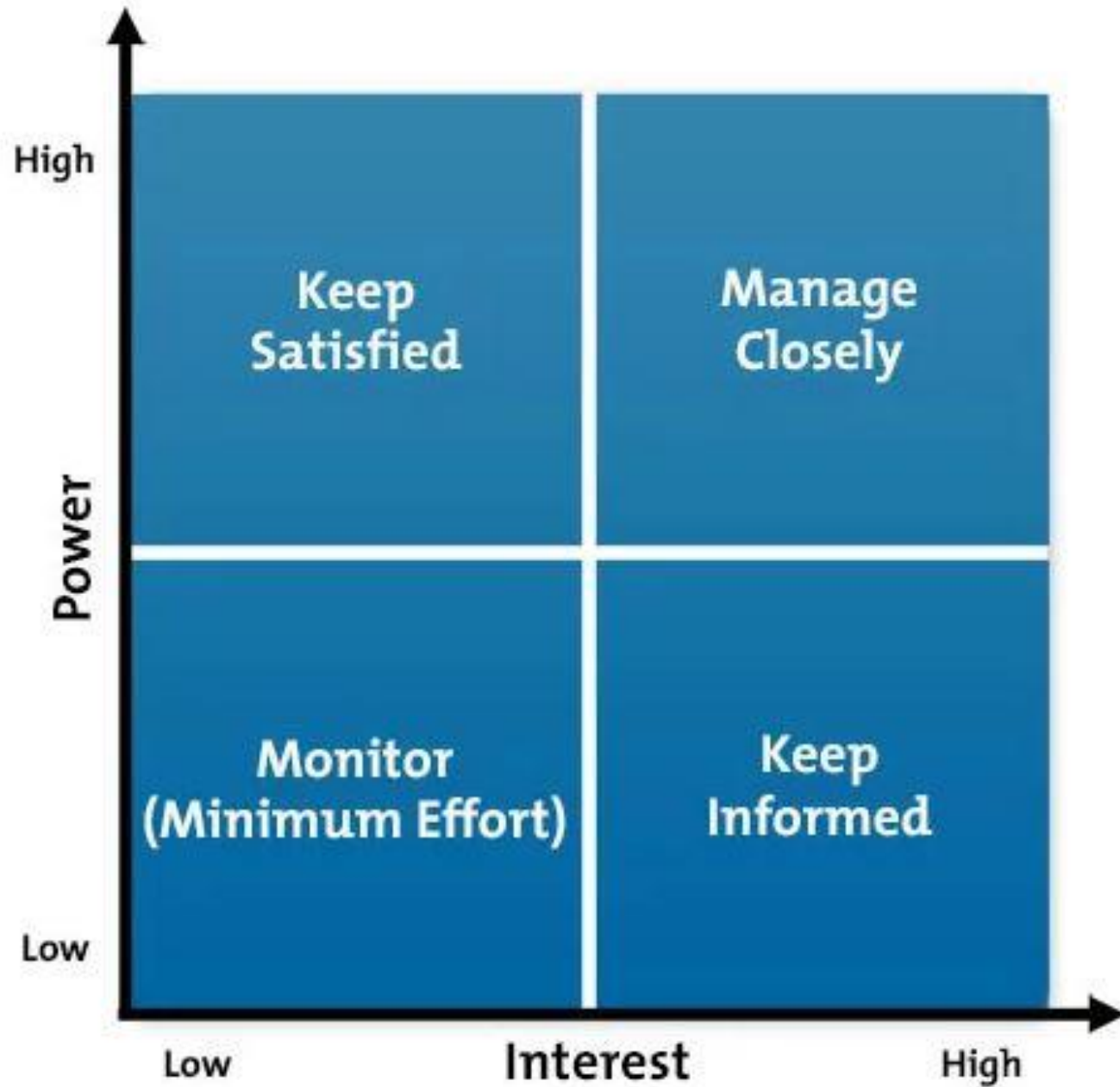
Balancing basic social and community responsibilities with profit is commonly expected in early 21st century companies. Community leaders expect that you operate with honesty and integrity. If you really want to impress your community and maintain a favorable image, philanthropy, including charitable giving to local nonprofits or schools, is important

- Forming Partnerships

Supply chain management has emerged as a significant business component. It is collaboration among manufacturers, distributors and retailers to deliver the best value to end customers. Partners generally expect that you operate with integrity and openness for the benefit of all involved.

(Kokemuller, n.d.)

Stakeholder
Analysis
model



2. Prioritise your stakeholders



Stakeholder Analysis & Airport Development And Design

Each stakeholder involved in the design of airport is seeking specific goal and objectives which put significant pressure on design managers in their attempt to balance between, sometimes, conflicting requirements.

The technical complexity of an Airport project has a significant impact on the design process; Airport projects usually involve numerous and highly developed systems which require multidisciplinary teams' involvement in the production of the final design product

It is argued that there is a need to have a generic framework that facilitate the management of the design process and the different stakeholders involved in this design process during the complex project life cycle

(Wahab, 2011)

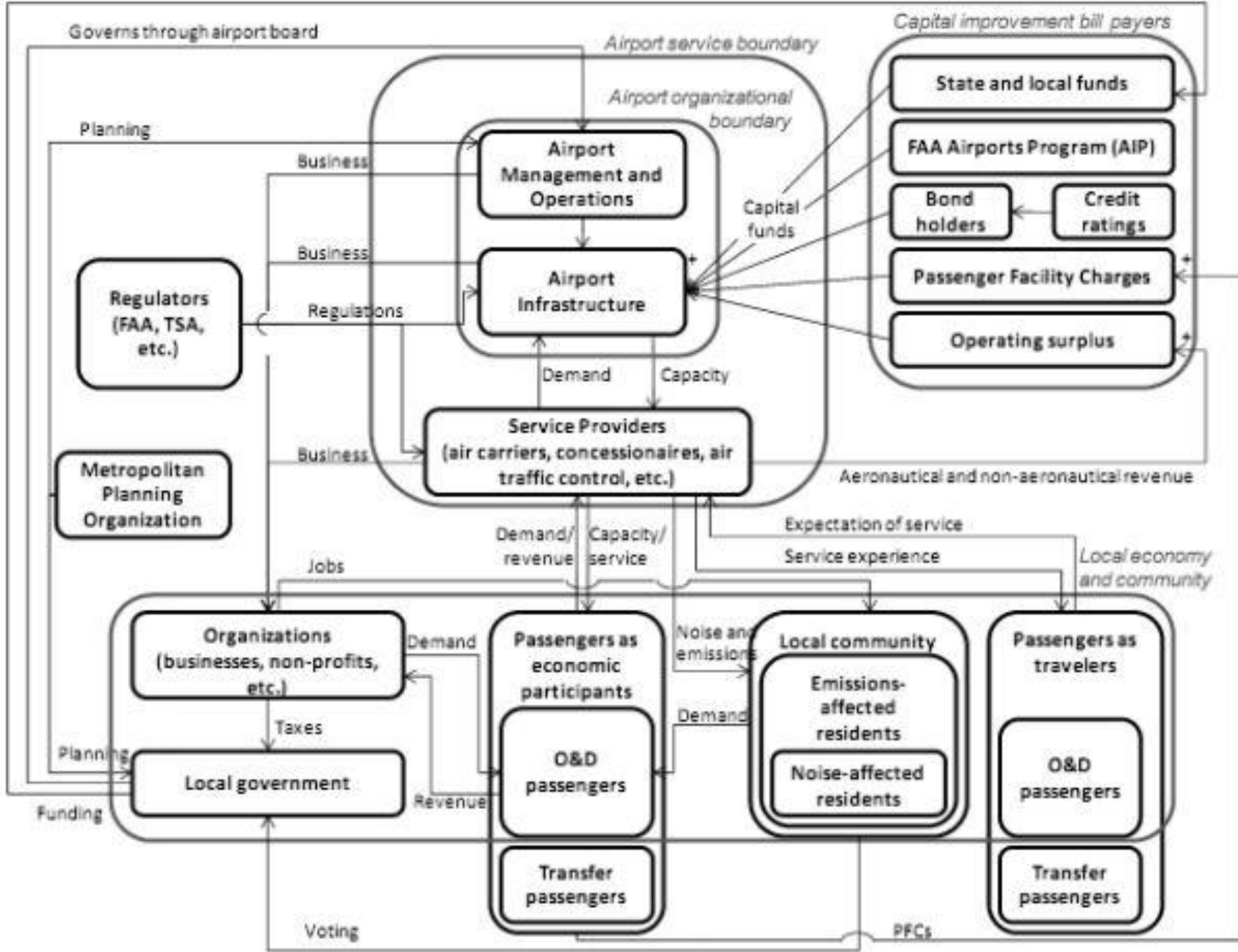
Stakeholder Analysis & Airport Development And Design

For successful management of stakeholders in complex projects Carroll and Buchholtz (2006) suggest the need for clarity on who the stakeholders are, what stake they have in the project, and, the opportunities, challenges or threats do they present, what responsibilities we have towards stakeholders, and finally the strategies or actions to engage our stakeholders.

The nature of airport terminal stakeholders has significant influence on the design process due to the long list of stakeholders and the variety of their requirements.

(Wahab, 2011)

Relationships between Airport Stakeholders



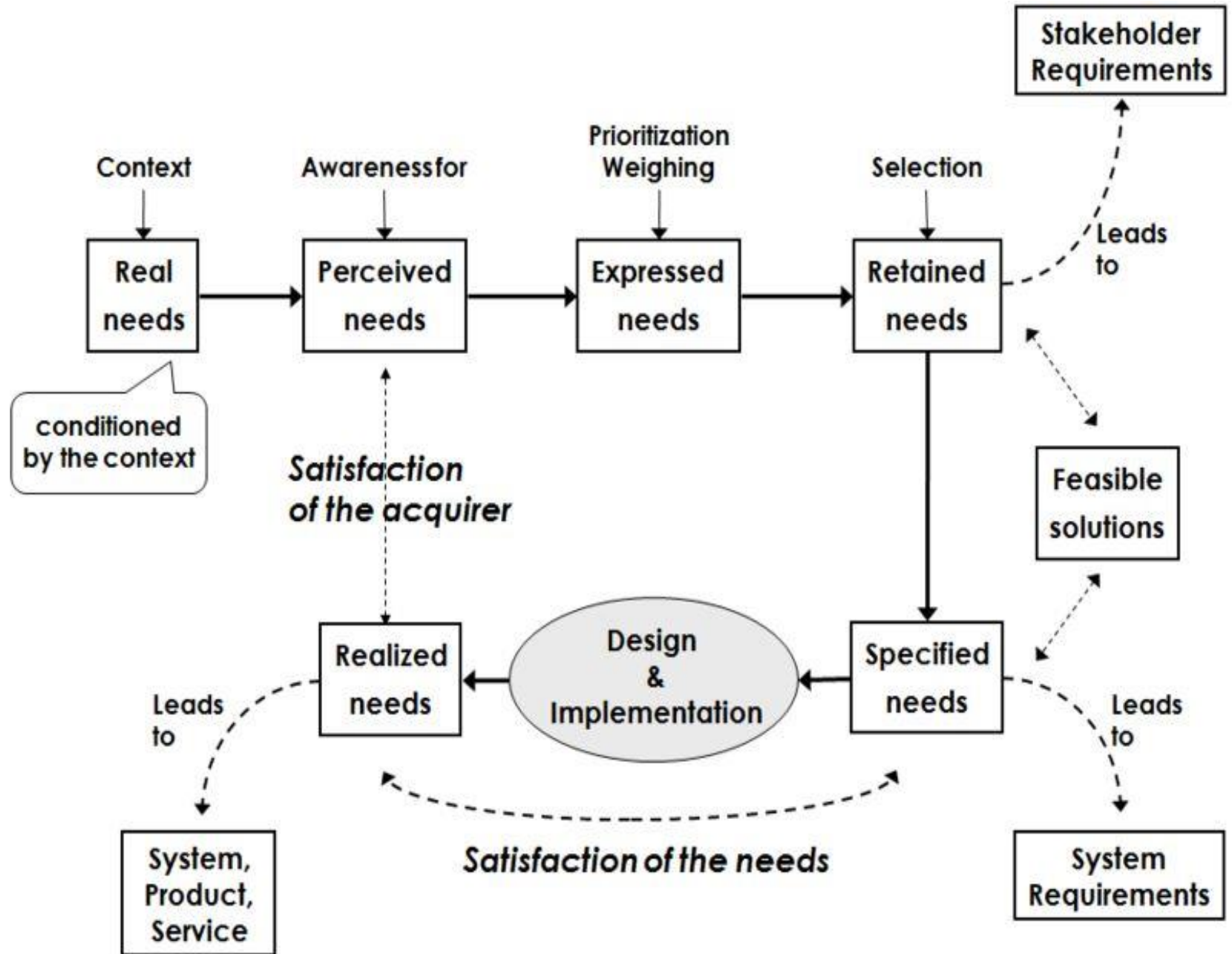
Stakeholder Analysis & Airport Development And Design

The model consists of airport organization which consists of Airport Management and Operations and Airport Infrastructure. The service providers are the main entity that deals and interact with the airport infrastructure while passengers use this infrastructure to interact with service provider.

The model provides two outlines to the airport: Airport organizational boundary and airport service boundary, in addition to that, capital improvement bill payer-'s' boundary, local economy and community boundary; Airport's organizational boundary defines the limit of what is controlled by airport management.

(Wahab, 2011)

Stakeholder Needs And Requirements



Stakeholder Analysis & Airport Development And Design

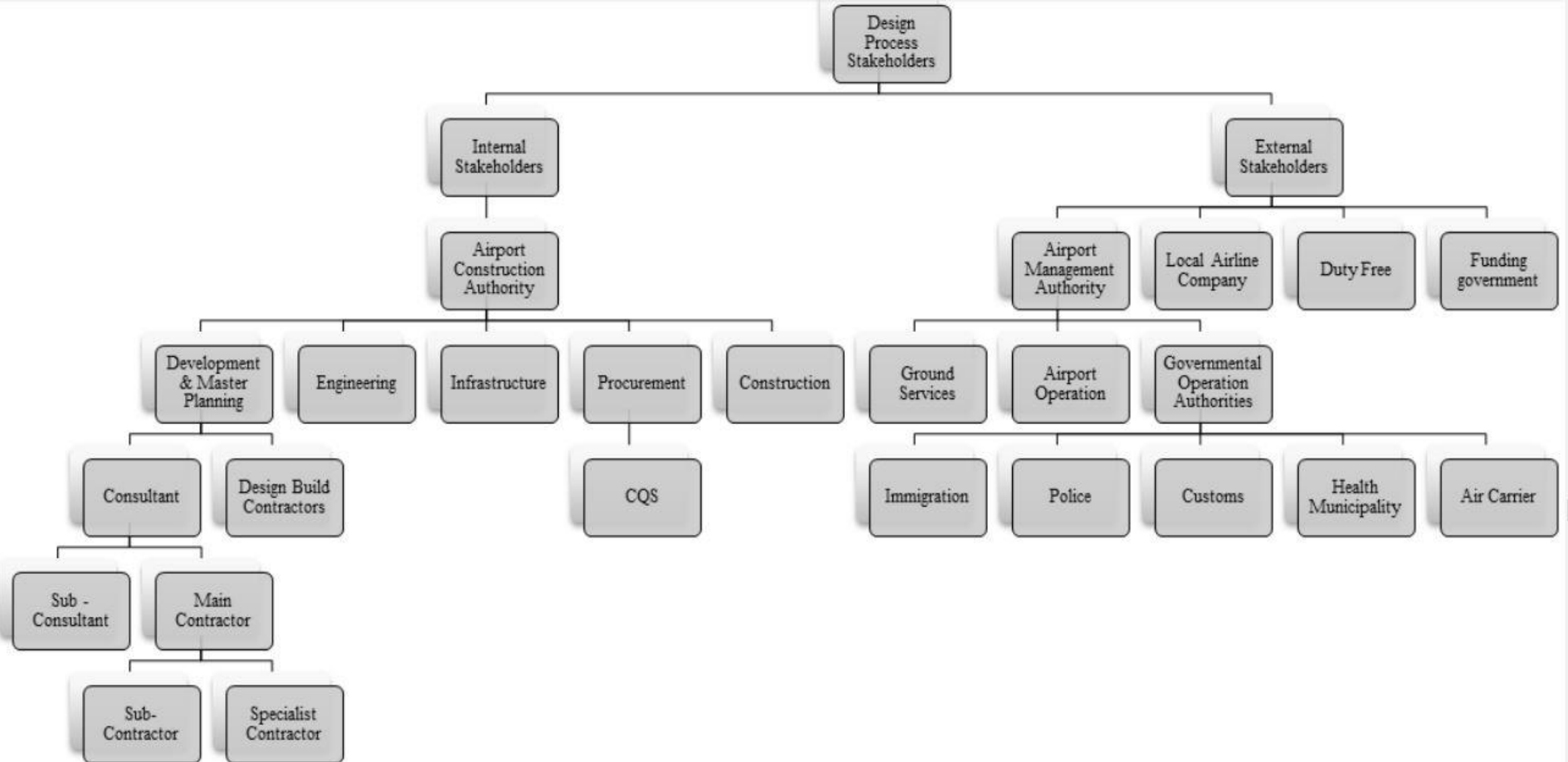
End-user approval of design is essential part in the design process. However the level of end-user involvement in the design process sometimes does not help the smooth running of design process, moreover it is not clarified what the endusers are specifically approving.

Establishing design criteria and end-users requirement is not given adequate attention at design brief and not organized, Airport design standards sometimes are limited in establishing such criteria as the operational requirement might be changed between airports.

Documenting the followed design criteria based on stakeholder decision is essential and is in the favour of all parties.

(Wahab, 2011)

Internal-External Stakeholders to the Design Process



Stakeholder Analysis & Airport Development And Design

The internal stakeholders are the departments who are producing the design and interacting with the external stakeholders to make sure that the design is meeting their requirements according to their power and interests. The power of the involved parties varies according to their needs.

(Wahab, 2011)

Reading Material

- CASE STUDY: Request for Proposal for Financial & Technical Consultancy Services for CIAA Airports Development Project LINK:
<http://www.gov.ky/portal/pls/portal/docs/1/10984080.PDF>
- 2) Design Process and Stakeholders Management in Airport Construction LINK:
<https://www.irbnet.de/daten/iconda/CIBDC27392.pdf>
- 3) Analysis of Airport Stakeholders LINK:
https://catsr.vse.gmu.edu/pubs/ICNS_Schar_AirportStakeholders.pdf

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