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## Paper \_\_

# Stakeholder engagement and asset management: a case study of the Gold Coast airport, Queensland

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**Abstract** One of the fastest growing industries – aviation – faces serious and compounding challenges in maintaining healthy relationships with community stakeholders. One area in aviation creating community conflict is noise pollution. However, current understandings of the factors that affect noise annoyance of the community are poorly conceptualized. More importantly, the way community needs and expectations could be incorporated in airport governance has been inadequately framed to address the issue of aircraft noise. This paper proposes the utility of adopting an integrated strategic asset management (ISAM) framework [1] to explore the dynamic nature of relationships between and airport and its surrounding area. The case of the Gold Coast Airport (OOL) operator and community stakeholders is used. This paper begins with an overview of the ISAM framework in the context of airport governance and sustainable development – as a way to find a balance between economic opportunities and societal concerns through stakeholder engagement. Next, an exploratory case study is adopted as a method to explore the noise-related complaints, complainants, and possible causes. Following this, the paper reviews three approaches to community stakeholder engagement in Australia, Japan, and UK and discusses their implications in the context of OOL. The paper concludes with a contention that airport governance is likely to be much more effective with the adoption of ISAM framework than without it.

## 1 Introduction

Aviation is one the fastest growing industries in the world. The aviation industry can be broadly categorised into two sectors: airports and airlines [2]. This paper focusses on the airport as an infrastructure asset, particularly in relation to its operation. Aviation is an industry of national strategic importance to Australia [3]. The significance of airports as essential infrastructures for overcoming the tyranny of distance and fostering sustainable development is nowhere more evident than in the vast Australian continent. It is often argued that the changes in the governance structures – from state-owned assets to fully privatized entity – of

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Australian airports since 1998 has encouraged the operators to be fixated on maximization of the profits [4]. This lopsided emphasis on economic growth is argued to be eventually unsustainable because of the actual and potential adverse environmental, economic and social impacts, such as noise pollution and loss of biodiversity, loss of property or land value, and disruption to lifestyle and community activities and functioning. If airports are to be considered vehicles of sustainable development, operators must find a way to maintain healthy relationships with community stakeholders and address societal concerns such as those relating to noise pollution associated with aircraft movements. However, current understandings of the factors that affect noise annoyance of the community and more importantly, the way community needs and expectations should be incorporated in airport governance are inadequate. It is in this context, this paper examines the utility of an integrated strategic asset management (ISAM) framework [1], developed in conjunction with asset management industry associations, to examine the dynamic relationships between Gold Coast Airport (OOL) operator and community stakeholders.

This paper begins with an introductory overview of ISAM framework and relates this framework to airport governance and sustainable development. Next, an exploratory case study is adopted as a method to explore the noise related complaints at OOL, complainants, and possible causes. This paper then reviews three facets of community stakeholder engagement in Australia, Japan, and UK and discusses their implications for OOL. The paper concludes with a contention that the adoption of ISAM framework for OOL operation can improve airport governance.

## **2 Integrated strategic asset management framework and airport governance**

Assets can be either tangible e.g. airport infrastructure or intangible e.g. network knowledge that has a certain value or utility over the period of its lifecycle. Optimum management of assets is a desired objective of airport operation. According to the Australian Asset Management Collaborative Group [AAMCoG], asset management is the process of organising, planning, designing and controlling the acquisition, care, refurbishment, and disposal of infrastructure to support the delivery of services [1]. Recent approaches to asset management advocates the 'life cycle' view of an asset as a systematic and structured process that allows greater improvements in long-term performance, safety, and productivity. The entire life cycle of an asset can be multifaceted and involve several stages e.g. acquisition, operation, maintenance, and disposal. Asset management is therefore a complex task mainly because the asset being managed may have a series of owners during various stages of its life cycle with different objectives, planning horizons, problems, stakeholders, and values [5]. Consequently, unilateral focus on technological aspects of asset and its management has gradually transformed to

recognise the significance of human and social factors in the governance of airports [6]. The ISAM framework [1] is based on the following five principles:

- i. Assets exist to support service delivery. Therefore non-asset solutions should be considered
- ii. Agencies should manage assets consistent with whole-of-government policy frameworks and take into account whole of life costing, future service demands and balance between capital expenditure and maintenance requirements
- iii. Asset management should be integrated with agency strategic and corporate planning
- iv. Asset management decisions should holistically consider sustainability outcomes: environmental, social, economic and governance
- v. Governance arrangements should clearly establish responsibility for functional performance of, and accountability for, the asset and service delivery (pp. 5).

These principles are particularly useful for shaping airport governance mechanisms in order to internalise the needs and expectations of community stakeholders regarding noise annoyance.

The term governance captures a shift from the traditional hierarchical structure towards a horizontal decision-making process in which formal and informal relationships amongst the private sector, government representatives, and community stakeholders are valued [7]. The premise behind airport governance is that external actors e.g. community stakeholders exhibit a range of interests and influence that needs to be addressed during airport operation. Although there is no unanimous definition of what constitutes a genuine community stakeholder, an individual or an organisation with a stake or an interest in various stages of asset lifecycle can be considered one. For the purpose of this paper, community stakeholders represent organisations with a stake – direct or indirect and beneficial or otherwise – in the way airport is governed. The theory of stakeholder engagement embraces the idea of corporate social responsibility [8] and assumes that airport operators have obligations to a broader society than just their shareholders. In other words, airport governance is said to be better, when operators invest in strategic relationships with community stakeholders rather than acting unilaterally. Several case studies in Australia and elsewhere have highlighted the fact that engaging with communities is vital for public image of the airports that have increasingly position themselves as the drivers of sustainable development [9], [10] & [11]. Community stakeholder engagement is therefore central to the idea of airport governance for sustainable development – the notion which advocates community involvement as necessary to ensure not only economic prosperity but also environmental and social well-being [12]. It is in this context, this paper explores the dynamics of stakeholder engagement and asset management around the issue of noise pollution at the Gold Coast Airport.

### 3 Methodology

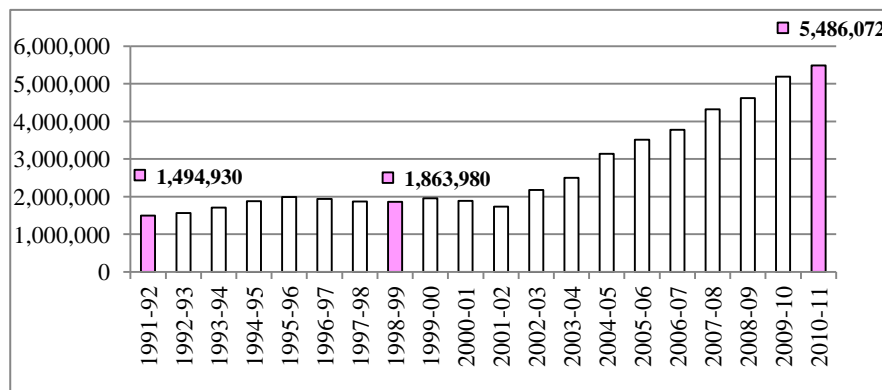
Gold Coast Airport (OOL) was chosen as a subject of case study for the paper because of two of the following reasons. Firstly, OOL a) is one of the fastest growing Australian airports in terms of average annual growth of passenger movements [13], and b) is expected to be one of the primary hubs for the visitors of 2018 Commonwealth Games to be held at Gold Coast [14]. Secondly, gauging by recent coverage in the local media, community stakeholders, a) seem rather unimpressed by the future expansion of the airport, and b) have serious reservations about the ways airport operators are interested in addressing the issue of noise annoyance. An exploratory case study approach was adopted in order to investigate the nature of community stakeholders-OOL relationships using multiple sources of information. Case studies are particularly useful in exploring and comprehending diverse perspectives within the community because the method is open to the use of theory or conceptual categories that guide the research and analysis of data [15]. In order to triangulate the findings of the case study, this paper makes use of:

- Informal conversational interviews in which the researcher relies on the interaction with the interviewees to guide the structure ([16] e.g. with key community representatives during the Airport Noise Abatement Consultative Committee (ANACC) meeting.
- Content analysis as an intellectual process of categorizing textual data into clusters of conceptual categories in order to identify consistent patterns between themes [17] e.g. local media coverage and publicly available minutes of ANACC meetings.
- Document analysis as a way to focus on conduits of meaningful communication of messages between the writer and reader [18] e.g. systematic analysis of current OOL master plan.

### 4 Findings

The Gold Coast is the sixth largest Australian city with a population of about half a million people. The city attracts more than 10 million tourists who collectively spend nearly \$ 5 billion dollars annually [19], making it one of the most popular tourism destinations in Australia. In this regard, the Gold Coast airport – located in Southeast Queensland (QLD) with some portion of the runway within Northern New South Wales (NSW) – is an economically significant infrastructure for the region. The airport was built in 1930s as an emergency landing ground for aircrafts flying between Sydney and Brisbane on the airmail services. The existing terminal building was completed in the 1980s. As a result of the privatization policy in the late 1990s, Queensland Airport Limited (QAL) purchased the ‘Coolanagatta Airport’ in 1998 and renamed it Gold Coast Airport (OOL) as

known today under the management of Gold Coast Airport Private Limited [20]. OOL is Australia's 5<sup>th</sup> busiest international airport and the fastest growing one in terms of annual growth of passenger movements. The total number of passenger movements has nearly tripled from 1.9 million in 1998/1999 to 5.5 million in 2010/2011 since the changes in governance structure [21]. Because of growing interests of several airlines based in Asia and the Pacific e.g. China Southern Airlines, Scoot (a subsidiary of Singapore Airlines) to establish direct connection between various Asian cities and the city of Gold Coast, the recently approved master plan predicts that OOL will service more than 16 million passengers by the year 2031/2032. In order to cope with this predicted increase in passenger and associated aircraft movements, an ambitious new construction plans to extend the runways and improve the terminal facilities have been proposed in the 2011 master plan [19]. This scenario of extensive growth has alarmed community stakeholders in the region already frustrated with existing level and frequency of noise pollution associated with the aircraft movements.



**Fig. 1.** 20 Years Trend of Passenger Movements in Gold Coast Airport (Source: [21])

#### ***4.1 Community stakeholder engagement***

OOL has embraced community stakeholder engagement as a part of the legislative requirement since the change of ownership in the late 1990s. There are two different forums, the *Airport Noise Abatement Consultative Committee* (ANACC) was established in 1999 and the *Community Aviation Consultation Group* (CACG) was established in 2011 [20]. The content analyses of 36 publicly available minutes of ANACC meetings between 1999 and 2012 suggest that there are a total of 18 active community stakeholders - 10 in north of OOL (QLD) and 8 in south of OOL (NSW). On the one hand, ANACC has evolved to become a forum for particularly shaping noise abatement procedures over the years. For in-

stance, minutes of the December 8<sup>th</sup> 2011 ANACC meeting indicates that stakeholders are generally appreciative of OOL and Airservices Australia – government owned corporation responsible for ensuring services of aviation industry are safe and secure – efforts to work with the Department of Infrastructure and Transport in order to engage with the community [22]. On the other hand, recently formulated CAGG aims to be more holistic in its scope and proposes itself as a medium for broader issues related to airport development including that of the noise annoyance. For example, during the CACG meeting held on April 3<sup>rd</sup> 2012 (attended by the lead author), the Airservices Australia representative willingly followed up on technical information related to the noise level and airport expansion requested by the community during February 12<sup>th</sup> meeting [22]. In this regard, the purpose CACG at the moment appears to be ensuring community views are effectively heard by the airport as well as to inform community about broader activities of the airport operation. The CACG membership is open to residents affected by airport operations, local authorities, airport users and other interested parties and the CACG meetings are used to exchange information on issues relating to airport operations and their impacts. Apart from direct community stakeholder engagement through ANACC and CACG, OOL also sponsors various community programs ranging from extending financial support to the local Wildlife Sanctuary Animal Hospital to tourism related campaigns totaling to \$380,000 per annum [20].

#### *4.2 Complaints, complainants, and possible causes*

**Table 1.** Noise complaints, complainants, and aircraft movements in various airports  
(Source: [23], [24])

<i>Airport</i>	<i>State</i>	<i>Complaints (2011 in '000)</i>	<i>Number of Complainants</i>	<i>Aircraft Movements (2011 in '000)</i>
Brisbane	QLD	6.59	322	168.34
Cairns	QLD	0.11	29	42.61
Gold Coast	QLD	38.83	350	37.37
Sydney	NSW	28.778	1236	290.501

A total of 38,813 complaints were received by the Airservices Australia from 350 community stakeholders in 2011 [23]. Analyses of the OOL documents and local media coverage indicated that complaints related to noise annoyance at OOL were the highest not only in QLD but also in Australia. For instance, of the three international airports that operate in QLD, OOL received the highest number of complaints, even higher than the busiest airport – Sydney (Table 1). The number of complaints received by OOL in 2011 surpassed the actual number of aircraft

movements at the airport. A local newspaper recently reported [24] that although the number of flights over the northern and southern areas of the airport was more or less the same, there was a concerted campaign from community stakeholders in NSW (south of the airport) to *make the noise about noise* by lodging thousands of complaints.

Extremely high number of noise annoyance related complaints received by OOL can be attributed to two possible causes; a) Not in My Back Yard (NIMBY) Syndrome, and b) North vs South Divide (NSD) reality. Firstly, NIMBY syndrome generally refers to localized resistance to often external development initiatives such as that of airport based on environmental grounds e.g. noise pollution [25]. While this particular syndrome has been reported by media as being problematic in the context of opposition to airport related development in Brisbane, and the proposed second airport in Sydney, it has also led to cooperation in case of Canberra airport and its community stakeholders [8]. The syndrome and its potential association with the unusually high number of complaints is certainly a subject worthy of further research. Secondly, NSD reality is about differences between communities in northern and southern suburbs of OOL. Informal conversations during a recent CACG meeting, the president representing one of the northern community stakeholders indicated that the people living north of the airport understand that the airport is nearby and the associated noise is part of it. The president further asserted that the airport has been in the same location for nearly 80 years, long before people in the south even built houses. On the other hand, southern community representatives were adamant that they are carrying more than their fair share of noise during take-offs (higher level of noise exposure) on top of southern suburbs because aircrafts mostly land (lower level of noise exposure) through the northern suburbs. An in-depth investigation of the north-south divide and its association with socioeconomic variables is equally worthy of further investigation.

## 5 Discussion

Noise annoyance has been a significant issue for the governance of airports around the world and it is clear from the findings above that OOL is no different. In accordance with the Air Navigation (Coolanagatta Airport Curfew) Regulations of 1999, OOL has adhered to curfew for aircraft movements between 11pm and 6 am since 22<sup>nd</sup> December 1999 in order to minimize the noise annoyance [20]. However, curfew hours have only partially addressed this thorny issue at the most. An attempt is made here to review and summarize three significant approaches to community stakeholder engagement in Australia, Japan, and UK [8], [26] & [27].



**Table 2.** Comparison of approaches to stakeholder engagement in various airports

<i>Airport</i>	<i>Authors: Issue</i>	<i>Main Findings</i>	<i>Implications for OOL</i>
Birmingham, UK	Whitfield (2003): Noise Annoyance	Airport operators need to realize that unlike high level of noise exposure, low exposure affects different communities differently	Address socioeconomic differences between communities in shaping annoyance mitigation initiatives
Canberra, Australia	May & Hill (2006): Noise ramifications of airport expansion	Airport operators need to be aware of stakeholder polarization – an alliance between local developers and community groups vs powerful vested interests seeking to manipulate community perception	Adopt a decision-making process to take the relationships within and between various community stakeholders into account
Narita, Japan	Yamada (2004): Opposition to Airport Construction	Airport operators need to utilise deliberative based forum e.g. regional symposium on Airport Issues, round table Conference in order to gradually reduce community antagonism	Consider organizing a flagship event in which government, community, academics and OOL can participate and exchange ideas or express concerns

Table 2 depicts and examines community concerns in these three airports and points out a possible way forward in the context of OOL. In order to improve airport governance through meaningful engagement with community stakeholders, OOL needs to consider: a) socioeconomic differences within and between stakeholders, b) significance of relationships amongst various stakeholders of OOL or social capital – the idea that social connections or relationships matter [12], and c) a flagship event that can potentially bring variety of stakeholders in one forum.

## 5 Conclusion

This paper began with an introductory overview of ISAM framework, placing it in the context of airport governance and sustainable development – as a way to balance economic prosperity and societal concerns through stakeholder engagement. A case study method was adopted in order to explore noise-related complaints at OOL, complainants, and possible causes of complaint. The findings indicated that complaints related to noise annoyance at OOL were the highest not only in Queensland but also in Australia. The possible associations between extremely high numbers of complaints were made with: a) Not in My Back Yard (NIMBY) syndrome, and b) North vs South Divide (NSD) reality. The syndrome and reality were also identified as two important areas for future investigations. Then the paper concisely reviewed three approaches of community stakeholder engagement at airports in Australia, Japan, and UK and discussed their implica-

tions in the context of OOL governance. For airports, stakeholder engagement needs to evolve from: a) a compliance-enforcement and b) ‘already have the license to operate’ approach towards a model in which the role of community stakeholders is embedded in the decision-making process. As airports play a crucial role in the sustainable development of the regions that they are located in [20], the utility of ISAM framework to manage community needs and expectations as a way to enhance airport governance for sustainable development [28], [29] is significant. It is in this context, the paper contends that that airport governance is likely to be much more effective with the adoption of ISAM framework as it offers the start of a guideline to bring together the different and perhaps competing arenas in airport infrastructure management.

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### **References**

- [1] AAMCoG (2012) Guide to Integrated Strategic Asset Management. Brisbane, QLD: Australian Asset Management Collaborative Group (AAMCoG) and Cooperative Research Centre for Integrated Engineering Asset Management (CIEAM)
- [2] Kaszewski AL & Sheate WR (2004) Enhancing the sustainability of airport developments. *Sustainable Development*, 12, 183-199
- [3] DITRDLG (2009) National Aviation White Paper. Canberra, ACT: Department of Infrastructure, Transport, Regional Development, and Local Government (DITRDLG)
- [4] Forsyth P (2002) Privatization and Regulation of Australian and New Zealand Airports. *Journal of Air Transport Management*, 8, 19-28
- [5] IAM (2011) Asset Management – An Anatomy. Bristol, UK: The Institute of Asset Management (IAM)
- [6] Keast RL, Baker DC and Brown KA (2008) Balancing infrastructure for the airport metropolis. In *Proceedings of International Conference on Infrastructure Systems: Building Networks for a Brighter Future* (pp. 246-250). Rotterdam, Netherlands: Institute of Electrical and Electronics Engineers (IEEE)

- [7] Dhakal SP (2011) Can environmental governance benefit from ICT-social capital nexus in civil society? *Triple C: Cognition Communication Cooperation*, 9(2): 551-565
- [8] Greenwood M (2007) Stakeholder Engagement: Beyond the Myth of Corporate Responsibility. *Journal of Business Ethics*, 74:315–327
- [9] May M & Hill SB (2006) Questioning airport expansion – A Case study of Canberra International Airport. *Journal of Transport Geography*, 14:437-450
- [10] Thomas C & Lever M (2003) Aircraft noise, community relations and stakeholder involvement. In Upham P, Maughan J, Raper D & Thomas C (Eds). *Towards Sustainable Aviation* (pp 97-112). London, UK: Earthscan
- [11] Freestone R & Baker D (2010) Challenges in Land Use Planning around Australian airports. *Journal of Air Transport Management*, 16, 264-271
- [12] Dhakal SP (2012) Regional Sustainable Development and the viability of environmental community organisations: Why inter-organisational social capital matters? *Third Sector Review [Special Issue in Environment]*, 18(1): 7-27
- [13] Airservices Australia (2011) Gold Coast Noise Information Pack December 2011. Canberra, ACT: Airservices Australia
- [14] Willoughby S (2012) Gold Coast Airport plan takes off. *Gold Coast Bulletin* May 16<sup>th</sup> 2012. [http://www.goldcoast.com.au/article/2012/05/16/416101\\_tweed-byron-news.html](http://www.goldcoast.com.au/article/2012/05/16/416101_tweed-byron-news.html)
- [15] Blatter JK (2008) Case Study. In Given LM (Ed.). *The SAGE Encyclopedia of Qualitative research methods* (pp. 68-71). Vol. 2. Thousand Oaks, CA: SAGE Publications, Inc
- [16] Turner DW (2010) Qualitative Interview Design: A Practical Guide for Novice Investigators. *The Qualitative Report*, 15 (3), 754-760
- [17] Julien H (2008) Content Analysis. In Given LM (Ed.). *The SAGE Encyclopedia of Qualitative research methods* (pp. 120-122). Vol. 2. Thousand Oaks, CA: SAGE Publications, Inc
- [18] Prior L F (2008) Document Analysis. In Given L M (Ed.). *The SAGE Encyclopedia of Qualitative research methods* (pp. 230-232). Vol. 2. Thousand Oaks, CA: SAGE Publications, Inc
- [19] Gold Coast Tourism (2010) Gold Coast Hits 10 million tourists mark for first time since 2008. December 2010 Media Release. <http://www.visitgoldcoast.com/media/media-releases/>
- [20] Gold Coast Airport Private Limited (2011) Master Plan 2011. Bilinga, QLD: Gold Coast Airport Pty Ltd (GCAPL)

- [21] BITRE (2012) Airport Traffic Data. Bureau of Infrastructure, Transport & Regional Economics [BITRE]. Canberra, ACT: Australian Government. [http://www.bitre.gov.au/publications/ongoing/airport\\_traffic\\_data.aspx](http://www.bitre.gov.au/publications/ongoing/airport_traffic_data.aspx)
- [22] Gold Coast Airport Private Limited (2011) Aircraft Noise Abatement Consultative Committee (ANACC) MINUTES (8th December, 2011). Bilinga, QLD: Gold Coast Airport Pty Ltd (GCAPL)
- [23] Menon U, Simpkins M & Keenan E (2012) Gold Coast CACG 22 February 2012. <http://goldcoastairport.com.au/community/community-aviation-consultation-committee>
- [24] Ricks B (2012) Coast Airport Noise Worse than Sydney Gold Coast Bulletin 23<sup>rd</sup> February 2012. [http://www.goldcoast.com.au/article/2012/02/23/393485\\_tweed-byron-news.html](http://www.goldcoast.com.au/article/2012/02/23/393485_tweed-byron-news.html)
- [25] Suau-Sanchez P, Pallares-Barbera M & Paul V (2011) Incorporating Annoyance in Airport Environmental Policy: Noise, Societal Response and Community Participation. *Journal of Transport Geography*, 19: 275-284
- [26] Yamada I (2004) Partnership for Noise Management between the Airport and Communities in Japan. Proceedings International Commission for Acoustics (ICA) (pp 2047-2050). Kyoto, Japan: ICA
- [27] Whitfield A (2003) Assessment of Noise Annoyance in Three District Communities Living in Close Proximity to A UK Regional Airport. *International Journal of Environmental Health Research*, 13(4), 361-372
- [28] Boons FA, van Buuren A & Teisman G (2010) Governance of sustainability at airports: moving beyond the debate between growth and noise. *Natural Resources Forum*, 34: 303-313
- [29] Koppenjan J, Mandell M, Keast R & Brown R (2009) Contexts, Hybrids and Network Governance A comparison of Three Case-Studies in Infrastructure Governance. In Brandsen T & Holzer M (Eds.) *The Future of Governance* (pp 301- 325). Washington DC, USA: Fifth Transatlantic Dialogue