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Air Asia – Strategic IT Initiative

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Executive Summary

IT is one of the major enablers of AirAsia's successful low cost business model. Based on the environmental scanning performed, the demand for Low Cost Carrier (LCC) is expected to expand rapidly attracting more players to join the market thus increasing the degree of rivalry within the industry. In responding to this condition, it is imperative for AirAsia to continuously identify new sources of cost advantage so that it can provide the lowest possible price to the price sensitive customer and improve its market position. In this project, Advanced Planning and Scheduling (APS) system is recommended as the new source of AirAsia's cost advantages. Using Venkatraman and Henderson's model APS fits smoothly to the Technology Transformation Perspective where business strategy acts as a driver. The functionalities provided by APS system to improve AirAsia's performance include event management technology, supplier portals, inventory planning, demand forecasting, maintenance management, and route profitability analysis. As a result of implementing APS system, AirAsia can obtain both strategic and operational benefits. AirAsia is strongly recommended to outsource the development of APS system. As project management plays critical role in ensuring successful implementation, it is suggested that AirAsia follows the recommendation provided in terms of planning, structure, practices, and post-implementation strategy.

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1.0 Introduction

AirAsia has been a successful low cost carrier (LCC) operating in Asia region for these past few years and IT is one of the major enablers of AirAsia's low cost business model. The role of IT in AirAsia's value chain is vital (See Appendix 1). Every single primary activity is supported by specific information technologies. For example, utilization of Computer Reservation System (CRS) and Yield Management System (YMS) are critical in the aviation industry. Without employing these systems, no airline including AirAsia can operate.

In this project, post-implementation of various information systems in AirAsia such as YMS and CRS will be highlighted and analysed. The main discussion will be centred on the recommendation of advanced planning and scheduling (APS) system implementation. Major question to be answered is on how the implementation of APS system adds significant value in supporting AirAsia's business strategy.

The implementation of APS system is triggered off by current market condition served by AirAsia; saturated market with high degree of rivalry among the existing competitors. As all airlines in LCC industry compete on costs, AirAsia needs to offer the lowest possible fare in order to win the competition in the current markets served as well as new markets. This is enabled by continuously searching for cost advantages along its value chain. APS system is considered to be the feasible response to those challenges as it offers capabilities in optimising operational planning and scheduling which will enable AirAsia to create new source of cost advantages.

This report will be structured into four main sections. Section 2.0 covers the evaluation of AirAsia's focused cost leadership business strategy as well as the

market environment in which AirAsia operates while Section 3.0 mainly discusses the strategic alignment between AirAsia's IT and business strategies. Section 4.0 thoroughly analyses APS system and its strategic as well as operational benefits. Section 5.0 analyses outsourcing as a strategy for AirAsia to pursue. Finally, Section 6.0 outlines project management issues of APS system implementation.

2.0 Business Strategy Analysis

2.1 Company Background

AirAsia is one of the businesses that have successfully adopted cost leadership through operational effectiveness and efficiency. The cost advantages have enabled AirAsia to become the Asia's leading low fare airline. Established on 12 December 2001, AirAsia has been such a big phenomenon in airline industry especially in Asia. By using a simple but strong slogan "Now Everyone Can Fly", AirAsia has successfully positioned itself in customers' mind. Its net profit for the second quarter ending 31 December 2004 was reported RM 44.4 million, a 323% increase over the previous quarter (AirAsia, 2005).

2.2 Mission Statement and Value of AirAsia

AirAsia's mission statement is to be the "Asia's leading low fare no frills airline and first to introduce "ticketless" traveling, AirAsia will be unveiling more incentives in the future to encourage more air travel among Malaysians." (AirAsia, N.D).

"Now Everyone Can Fly" clearly describes AirAsia's value. Cost advantages created by AirAsia through operational effectiveness and efficiency go directly to the customers. The customers now enjoy much more surplus than before as the fare falls dramatically and AirAsia captures some of the 'dead weight losses' by capturing segments of customers that previously cannot afford the airlines' fare.

2.3 Business Strategy

Aligned with its mission statement, AirAsia's business strategy is centred on cost leadership. However, its business strategy targets specific markets; price sensitive customers (including first-time fliers) needing short-haul flights. In Porter's generic strategies, AirAsia's business strategy can be categorised into focused cost leadership; quadrant 3A in figure 1.

		COMPETITIVE ADVANTAGE	
		Lower Cost	Differentiation
COMPETITIVE SCOPE	Broad Target	1. Cost Leadership	2. Differentiation
	Narrow Target	3A. Cost Focus	3B. Differentiation Focus

Figure 1 - Porter's Generic Strategies

Source: Porter, 1985, p.12

AirAsia builds and sustains its competitive advantage by providing services at a price that is simply lower than competitors' price. Operation effectiveness and outstanding efficiency are two main characteristics of low cost businesses including AirAsia. The central objective is to achieve bigger cost advantages than the rivals by continuously searching areas for cost reduction along its value chain. By further analysing AirAsia's value chain, one can actually determine how AirAsia creates cost advantages along its value chain. Appendix 2 summarises the sources of cost advantages contributable to the low cost business model for each activity in AirAsia's value chain. These cost advantages constitute AirAsia's order winner in competing with its rivals as they enable AirAsia to provide the

lowest possible price to the price sensitive customers. In LCC industry, cost is the competitive priority and it determines market position.

2.4 Environmental Scanning

Environmental scanning is performed to assess the attractiveness of LCC industry specifically in Asia. Macro-environmental scanning will be conducted by analysing significant macro factors affecting the LCC industry while Porter's five forces will be utilised to assess the micro-environment surrounding LCC industry.

Macro-Environment

The major macro-environmental factors suggest a very conductive environment for the growth of LCCs in Asia. According to Sachs (1997), "demographic fundamentals of large populations, rising middle classes with increasing leisure time and disposable incomes, combined with the lack of competitive forms of transportation, paint an extremely encouraging demand picture in the long run". Furthermore, air travel market is bound to continue to grow due to a rapidly increasing urbanisation trends (Centre for Asia Pacific Aviation, 2002). Archipelago geographical structure of Asia continent is also contributable to the importance of air transportation. For example, there is no other viable and efficient mode of transportation between East and West Malaysia other than by air (Lawton and Solomko, 2003). While the impact of terrorism and SARS can be negative for the growth of LCCs, the long run forecast continues to be very positive.

Micro-Environment

Porter's five forces is utilised to perform the micro-environmental analysis specific to LCC industry in Asia. The overall power of supplier is high due to limited number of suppliers (only Boeing and Airbus). The power of buyer is

moderately high due to almost no switching cost for customers to switch from one LCC to another. In addition, the access to the internet allows customers to have close to full information on prices charged by the LCCs. Threat of substitutes is moderately low; there are several substitutes such as cruises, rail, bus, and car. However, the archipelago geographical structure of Asia has made air travel the viable, efficient, and convenient mode of transportation. Threat of new entry is moderate; high capital requirement and government barrier such as air service agreement can act as barriers to entry. However, the deregulation of aviation industry in Asia Pacific region has resulted in more competitors entering the market. Furthermore, many full service airlines enter the LCC industry by launching their LCC version. For example, Nok Air set up by Thai Airways is a part of LCC industry in Thailand. Finally, industry rivalry is moderately high due to price as the basis of competition and high exit cost. However, market participants tend to realize that price war is destructive for them thus they avoid direct price competition and they turn into 'friendly' competitors. Appendix 3 summarises Porter's five forces specific to LCC industry.

Based on the environmental scanning performed, the demand for LCC is expanding thus LCC industry will keep growing rapidly. The LCC industry attractiveness and profitability will attract many full service airlines to launch its LCC version adding the degree of rivalry in this industry. As the implication, AirAsia, current market leader of LCC in Malaysia, Thailand, and Indonesia, will face competition from both existing and new players. In order to sustain its competitive advantage, AirAsia needs to leverage its competency in creating cost advantages across multiple value chains.

3.0 Strategic Alignment Analysis

To transform the vision into reality for an organization requires more than a great strategy. It is essential that the organization make the strategy an integral part of its operation (Bradford, 2002). This statement, although made with reference to the business strategy and operations, also holds true for business strategy and IT initiative. When the business strategy and IT are aligned, the IT infrastructure can continuously sense the changing business needs and respond by provisioning or redeploying resources to match the demands of the business. (Pultorak, 2004).

This section of the report will deal with the overall Business Strategy-IT alignment issues by bringing to light the various IT implementations that have been made by AirAsia and its benefits. As discussed previously, AirAsia's business strategy (being a LCC) is that of focused cost leadership which requires continuous cost reductions (to stay ahead of competition) all along the value chain.

3.1 Current IT Implementations

The followings are few system implementations that AirAsia have done in its marketing and sales activities (Yield Management System and Computer Reservation System) as well as operation activity (Enterprise Resource Planning System).

Yield Management System (YMS)

It is also known as Revenue Management System; it understands, anticipates and reacts to the behavior of customer to maximize revenue for the organization. This takes into account the operating costs and aids AirAsia to optimize prices

and allocate capacity to maximize expected revenues. The optimization is done on two levels in AirAsia:

- Seat (Every seat is considered an opportunity to maximize revenue. Seats are available at various prices in different points of time. A reservation done at a later date will be charged more than the one done earlier – for the same seat)
- Route (By adjusting prices for routes/destinations that have a higher demand when compared to others). The effective method however is to combine these two levels for all flights, all routes so that both the seat and the route are effectively priced for all the flights.

AirAsia has realized increased revenue (3-4%) for the same number of aircrafts by taking advantage of the forecast of the high/low demand patterns, effectively shifting the demand from low period to high period and by charging a premium for late bookings. Over the past couple of years, AirAsia have actually lowered prices (essential for LCC) as the YMS has given them the window to increase their revenue by offering higher discounts, more frequently during off-peak times while raising prices only marginally for peak times. (Voneche, n.d).

Computer Reservation System (CRS)

AirAsia's CRS (Open Skies by Navitaire) has helped it to grow at a dramatic pace in the past couple of years

> *"Navitaire's Open Skies technology has truly enabled Airasia's growth from 2 million passengers to 7.7 million passengers in less than two years. Open Skies scaled easily to accommodate our growth."*
>
> **-** Tony Fernandes **-**
>
> CEO - AirAsia

Source: Navitaire (http://www.navitaire.com/res_and_dist/openskies.asp)

It is an integrated web-based reservation and inventory system. It includes Internet, call center, airport departure control and more. It is a direct sales engine that effectively eliminates the middleman (travel agents) and the sales commissions that need to be paid to them. Centralized customer data is also maintained by Open Skies and this helps AirAsia to track booking and schedule flight activities with real-time, on-demand reporting feature. The vast booking information that is provided online to the customers acts as a force that brings more customers to use the website thus reducing the customer support costs. An important feature is that Open Skies seamlessly integrates with the already implemented YMS so that the systems can be used in unison for pricing and revenue maximization (by providing information on bookings, schedules etc) and driving down the costs of operation at the same time. This CRS enabled AirAsia to introduce the first ticket less travel option and also provides features such as advanced boarding passes in addition to online booking that enabled the growth of AirAsia as these features attracted customers that did not have the time for purchasing tickets from counters and coming in 1 hour early for securing a seat on the aircraft. AirAsia have proposed to implement a Wireless Delivery System (WDS) to expand it reach via mobile phones. With this, potential customers will be able to book tickets via their mobile phones. This is a strategic move for growth as the Asia-Pacific region has a larger population of mobile phone users rather than internet users.

Enterprise Resource Planning System (ERP)

AirAsia has recently (May 2005) opted for a full fledged ERP system implemented by Avanade consultants. By implementing this package AirAsia is looking to successfully maintain process integrity, reduce financial month-end closing processing times, and speed up reporting and data retrieval processes. (Microsoft Malaysia)

3.2 IT Implementations and Strategic Alignment

With the above implementations, it is clear that the business strategy and the IT strategy are aligned to for AirAsia to operate on a low-cost model. There are four models to Strategic Alignment Perspective (Henderson and Venkatraman, 1993). Namely: Strategic Execution, Technology Transformation, Competitive Potential and Service Level. All the systems implemented act as enablers in achieving the business strategy of AirAsia by reducing the costs of operation (CRS, ERP) and maximizing revenue (YMS). These cost savings are directly transferred to the customer with reduced prices of traveling, discounts etc. The business strategy acts as the driver in this perspective (Technology Transformation).

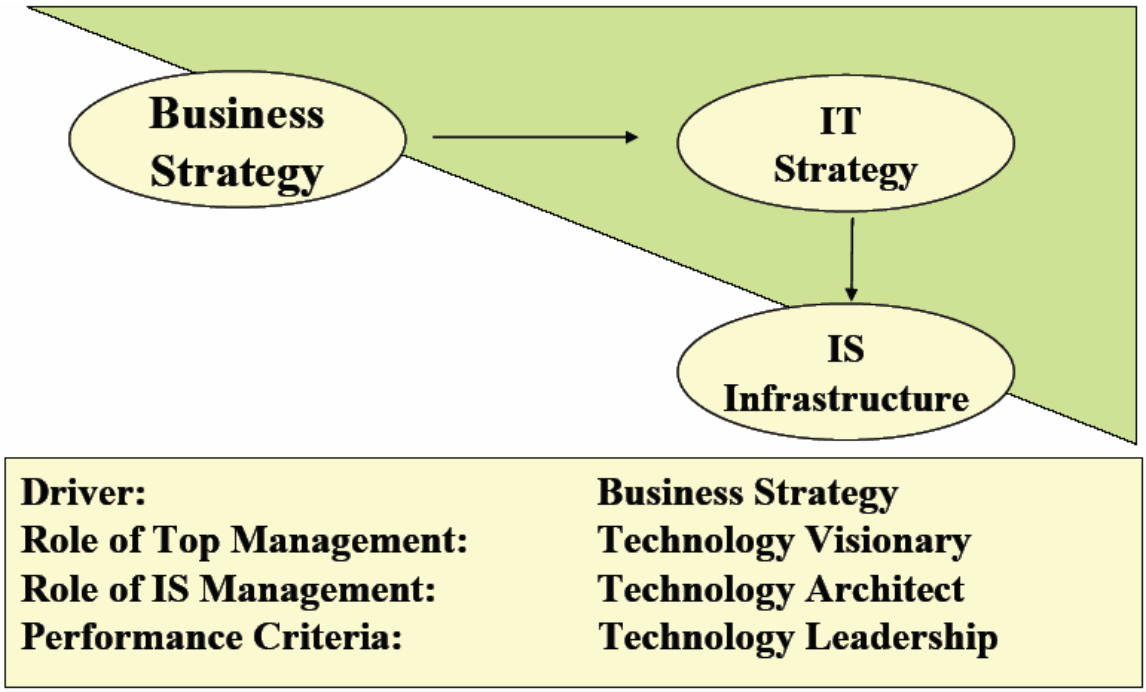

Figure 2 – Technology Transformation

Source: Henderson and Venkatraman, IBM Systems Journal 1993

With expansion as one of the main future direction as well as increased competition, APS system is recommended as a new way to improve processes and therefore achieving cost reductions along the value chain. The main difference of APS system compared to the previous system implementations is that APS system focuses on internal operational processes perspective while the other systems such as YMS and CRS more focus on customer perspective. All systems provide cost advantages in different domains in the value chain. In relation to strategic alignment, APS system like other previous systems fits smoothly in Technology Transformation perspective. Reduced costs in inbound logistics and operation activities will be the direct result of implementing APS (IT strategy) enabling AirAsia in achieving its low cost business strategy.

4.0 Advanced Planning & Scheduling (APS)

4.1 Why APS Matters and Its Role In The Supply Chain Management

The operational environment of an airline industry is complex. Large network in the supply chain, continuous daily operation, and several external uncontrollable variables such as weather condition and government regulations become factors affecting airlines' performance. Given these complexities, operational planning and scheduling across the supply chain are important factors determining the success of any airline.

In order to increase the efficiency of operational performance and manage its supply chain, AirAsia had implemented the ERP system. It is a system focusing on capturing transactions in daily operations and helping AirAsia to save its operational costs as well as to increase the efficiency and integrity in its operation (Microsoft Press Pass, 2005). However, conventional ERP system implemented by AirAsia does not provide flexibility and intelligence required to analyse data for better supply chain management.

APS system optimises AirAsia's supply chain management. It works as the brain of supply chain activities (Ahmed, 2004) by gearing activities in relation with customers and suppliers requirements. APS system clusters and classifies customer orders, forecasts future fulfilment requirements, checks resources availability and sets order priorities. Moreover, APS system helps AirAsia in gaining competitive advantage as it provides visibility across supply chain. APS system will improve AirAsia's strategic and operational performances particularly in the inbound and operational activities (See Appendix 1).

4.2 APS Development

The development of APS system is started as the invention of Operation Production Technology (OPT) in the 1980s due to the limitation of Manufacturing Resource Planning (MRP) and ERP systems in optimisation capabilities (Kruse, 2004, October). Since then, APS system developed and became more complex with the emerging of advances in technology.

APS market is in the growth phase. There are more than 30 APS vendors struggling to find its market share. However, the market has been dominated by 'best of breed' APS vendors such as i2 and Manugistics. On the other hand, the increases of ERP implementation and the needs to have a system with planning and scheduling optimisation capability has forced many ERP vendors including SAP to expand its business by adding optimisation planning module into their existing ERP systems (Kruse, 2004).

Based on Gartner Hype Cycle, it can be concluded that APS software is in the fourth stage: Slope Enlightenment. At this stage, systems introduced are "good-enough" and most customers realize the benefits and risks of the systems implementation (www.gartner.com). This condition matches APS system development. At the moment, each vendor of APS system still tries to develop the most perfect system offering superior capabilities in order to differentiate themselves from competitors. On the other hand, companies wanted to implement APS system are aware about the benefits and risks involved in the APS implementation. According to Ahmed (2004), most companies expected to save their money on the supply chain optimisation by at least 50%. The combination between market demand and push technology by software vendors signifies the possibility of APS to be the next source of AirAsia's cost advantages and given its phase in Gartner Hype Cycle, the risks involved in choosing the wrong vendor is minimum.

4.3 Functions Provided by APS System

Implementation of APS system will provide several new functions to AirAsia. The followings are several APS' functions that can help AirAsia in increasing its performance:

- Event management technology

  APS system will help AirAsia in assessing suppliers' performance and providing the capability to streamline monitoring process (Aberdeen Group, 2004).

- Supplier portals

  Supplier portal will provide information hub for airlines and their suppliers to prevent errors happened during operational activities such as order processing (Aberdeen Group, 2004).

- Inventory planning, demand forecasting, and maintenance management capabilities

  These functions enable airlines and aircraft manufacturers and other suppliers to have collaboration strategy in managing inventory (e.g. spare-parts), maintenance schedule, and design collaboration (www.i2.com, www.manugistics.com, and www.oracle.com).

- Route profitability analysis

  Route profitability analysis tools enable airline companies to conduct analysis for planning efficient routes (www.sap.com)

4.4 Benefits of APS implementation

This section discusses the strategic and operational benefits of APS system which can be captured by AirAsia given successful implementation.

- Strategic benefit
    - Visibility across the whole supply chain (Taneja, 2002)

      This is the main benefit of using APS system. AirAsia will have better connectivity across the supply chain in terms of cross-functional scheduling and planning with suppliers and customers. This system will ensure each party works together in integration.

    - Enabling process-centric strategy

      Competition in the LCC industry has driven most players shift their strategy from product-centric to a process-centric. As an airline focusing in low cost strategy, AirAsia needs to consider about how its process performance will support the strategy. The APS system will further improve AirAsia's process performance.

    - Optimizing profit management

      As an airline competing in the low cost market, price becomes the most influencing factor in AirAsia's strategy. The existing YMS system will maximise AirAsia's revenue by providing trend analysis and optimizing pricing strategy. On the other hand, APS system will minimise AirAsia's operational cost by using the information generated by YMS system to better plan and schedule for the facilities needed. Integration of these systems ensures profit optimisation.

    - Optimal flying route strategy (www.sap.com)

      The APS system will analyse the flying routes offering optimal profits for AirAsia given constraints such as geographical, short haul flights commitment i.e. AirAsia committed to serve flights no longer than four hours thus it only buys or leases small aircraft e.g. Boeing 737 and AirBus 320. Optimal flying route is imperative in deciding new destinations for AirAsia to serve.

- Operational Benefits
  - Visibility across-functional level (Taneja, 2002; www.i2.com)

    APS system provides AirAsia with the capability to integrate processes. Relationships among processes and their activities become visible. Furthermore, this will shorten scheduling cycle, lead time, and maintenance cycle leading to improved efficiency.

  - Flexibility and faster response during operation processes (Taneja, 2002)

    APS system enables airlines to have better understanding and control of the interrelationship between different variables constituting total performance. Complexity in measuring interrelationships can be manipulated by deploying an APS in a proper way. A good example could be the effect of a delay due to airport facilities or other variables such as bad weather condition. APS can help plan in advance for such situations so that proper actions can be planned to contain such situations.

  - Better maintenance management (www.oracle.com)

    Aircraft maintenance quality is critical in airline industry. In AirAsia case, it is even more critical since AirAsia utilizes its aircraft fleet more than standard airlines. The visibility across the value chain given by APS will provide better collaboration between AirAsia and aircraft manufacturers and other suppliers. It will shorten over-haul time thus it will enable AirAsia to improve its fleets utilisation. Using APS system, AirAsia can save large proportion of its maintenance cost. Maintenance cost contributes approximately 9% to the overall cost of an airline (Gloker, 2002)

  - Improve operational scheduling (www.i2.com)

This system will also help AirAsia in scheduling activities related to its facility in advance. For example, scheduling flight in advance will result in higher aircraft utilization.

5.0 Outsourcing

Given the obvious strategic and operational benefits, AirAsia now needs to decide how it will acquire the system. There are two options: in-house building and outsourcing. In this case, AirAsia is much better-off to outsource the APS system to a certain vendor. This decision will be justified based on several criteria:

Cost

The implementation using outsourcing strategy will provide cost benefits to AirAsia as software vendors possess advantages on economies of scale due to aggregation of demand and economies of scope. They tend to be more efficient and innovative as they are subject to market discipline. Apart from system quality issue, in-house strategy will result in more resources consumption (time, financial) as AirAsia does not have appropriate knowledge and expertise of APS system.

Competency

Another factor considered is AirAsia's capability to develop software in-house. AirAsia is an airline providing services to customers. IT is not AirAsia's core competency.

Contracting and dependency

Cost advantages possessed by outsourcing option can be diminished if AirAsia cannot negotiate a good (almost complete) contract beneficial for both parties. There are transaction costs sourcing from opportunism and bounded rationality

of firms and their vendors, the uncertainty and frequency of transactions, and asset specificity in supplier-firm or firm-customer relationships (Williamson, 1975).

The decision to select a software vendor should be based on the software vendor's capabilities and experience in related industry, software vendor's viability and culture, and software vendor's commitment to contract made. Trust plays critical role in ensuring long-time partnership.

Dependency to a certain software vendor might be one of the drawbacks of the outsourcing decision. However, appropriate contract and partnership based on trust can mitigate this risk.

Control

Implementation of "off-the-shelf" software might also create a sense of losing control as the software might not fit to AirAsia's business processes. Customisation and configuration approaches can then be utilised. Customisation leads to minimum changes in AirAsia's business processes. However, it can create risk in the future as software vendors might not understand the customisation done by AirAsia. On the other hand, configuration possesses advantage in the future. Since configuration does not involve software code changes, the future problems i.e. maintenance are less compared to customisation. However, configuration requires changes in business processes to match the software functions.

Outsourcing decision means that AirAsia will have to depend on vendor's capabilities in delivering the system. In order to mitigate the loss of control, AirAsia must develop measurement tools to assess vendor's performance in terms of reliability and responsiveness.

Competitive advantage

IT is not core competency in AirAsia business so that the decision to outsource is right. However, to protect the uniqueness of AirAsia's business processes, trust and contract again play vital role. Furthermore, using an outsourced system means that competitors may likely to deploy the same system as well, thus eliminating the competitive advantage of using this system. Therefore, AirAsia must put emphasis on how to optimise the utilisation of APS.

6.0 Project Management

Companies spent millions dollar to get their enterprise systems up and running. Unfortunately, many have failed to implement the system successfully. A survey indicated that only 46% out of 232 companies successfully implementing the project (Robbins-Gioia, 2002). Evidently, a proper project management plays critical role in ensuring a successful enterprise system implementation such as APS. In this section, three vital aspects of project management consisting of planning, structure and project implementation practices enabling successful APS implementation in AirAsia will be discussed.

6.1 Planning

In terms of planning, there are four recommendations for AirAsia to pursue: (1) to adopt incremental approach (pilot project) in deploying APS implementation, (2) to utilise adaptive method in each project, (3) to run the project in off-peak maintenance season and (4) to have a proper post-implementation planning.

Incremental (Pilot Project) Approach

Todd Little, a senior development manager for Landmark Graphics, stated that a project with high level of complexity and uncertainty is difficult to control, therefore needs to be broken down and more agile steering (Little, 2005). This obviously fits in the project's nature, hence it is recommended for AirAsia to follow incremental approach in deploying APS implementation to reduce risks.

Many benefits can be gained by adopting this approach in the project. Firstly, incremental approach will divide the project into smaller scope thus complexity and conflicts are reduced; the project will then be more likely to succeed. Furthermore, the negative consequences involved if the project fails are less

compared to big bang implementation. Secondly, integration is highly possible as each business unit of AirAsia shares similarity in terms of business processes.

It is recommended for AirAsia to start implementing APS on the Malaysia business unit since it has been well established and it possesses more expertises in dealing with daily operation thus APS can be built more effectively there. As the Malaysia business unit constitutes most of AirAsia's overall operation, it has benefits on testing and comparison purposes due to more historical data served. Finally, this business unit is perceived to have a better chance to withstand the changes.

Adaptive Method

Although the big project has been broken down, the implementation team will still be faced with the dynamic business environment, the ever-increasing information and the employees' lack of understanding of the APS system. To deal with these situations, adaptive method is strongly recommended in each pilot project. The project development will go through several iterations. With these iterations, the team is continuously revising the system until the desired system is delivered.

In performing this adaptive method, AirAsia must realise the importance of retaining information from each of iteration as they will be transferred to next iteration. This is crucial to ensure that the project is actually progressing and not going in circle (Kellen and Stefanczyk, 2002).

Implement in Off-Peak Maintenance Season

As APS system will mainly deal with maintenance activities, running this project in a peak maintenance season is perceived to be not wise. In peak season, there will be conflict of interest among the managers due to resource scarcity in dealing with both maintenance completion and the APS project itself. By

implement the system in off-peak period, employees will have more time to observe the APS system and more willingly to be involved in the project.

6.2 Structure

Having a flexible organisational structure is crucial in a project. A too bureaucratic organisational structure may hinder successful project implementation. Flexible structure enables streamlined communication and knowledge transferring between project team members and users at various levels. Furthermore, relationship among AirAsia, consultants and vendors should be accommodated in the structure. This particular structure will ensure that the team has both sufficient agility to act and sufficient power to drive the project. This means that AirAsia must appoint the best and most seasoned team members, who can understand how to work with agility and cut through complexity, balancing both aspects (Little, 2005).

Figure 3 describes the recommended team structure for AirAsia. The dotted line describes the coordination line. This means that each individual is not only responsible to their supervisor but also must cooperate with the other functions. Also notice that the project manager is directly under the steering committee. This means the steering committee is in full support with the project (as they directly monitor the project). Hence, it gives the indication that the project manager is given a high level power to ensure the project runs properly. It is useful to diminish the power of resistors possessing high managerial positions (Gray and Larson, 2003). Lastly, the coordination line between organisation's employees and the consultants means that this structure will allow the team to work "hand in hand" with them.

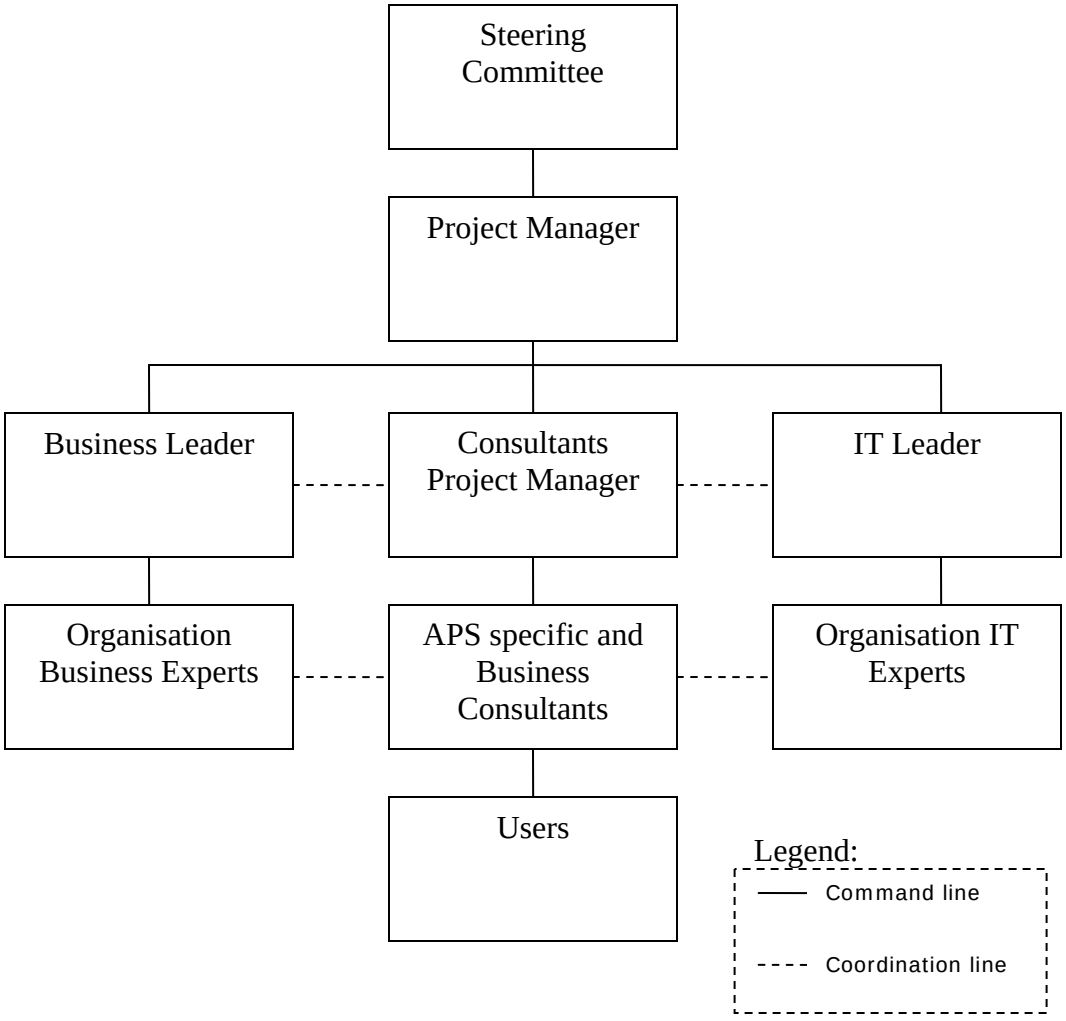

Figure 3 – Project Team Structure

In a longer term, as consultants' involvement is gradually reduced, their roles will be replaced with APS specialists (Figure 4). The APS specialists are either the consultants or the project veterans. As mentioned earlier, it is important for AirAsia to retain the tacit knowledge gained from the project. That is because this knowledge will then be used by the APS specialist in ensuring the system working properly.

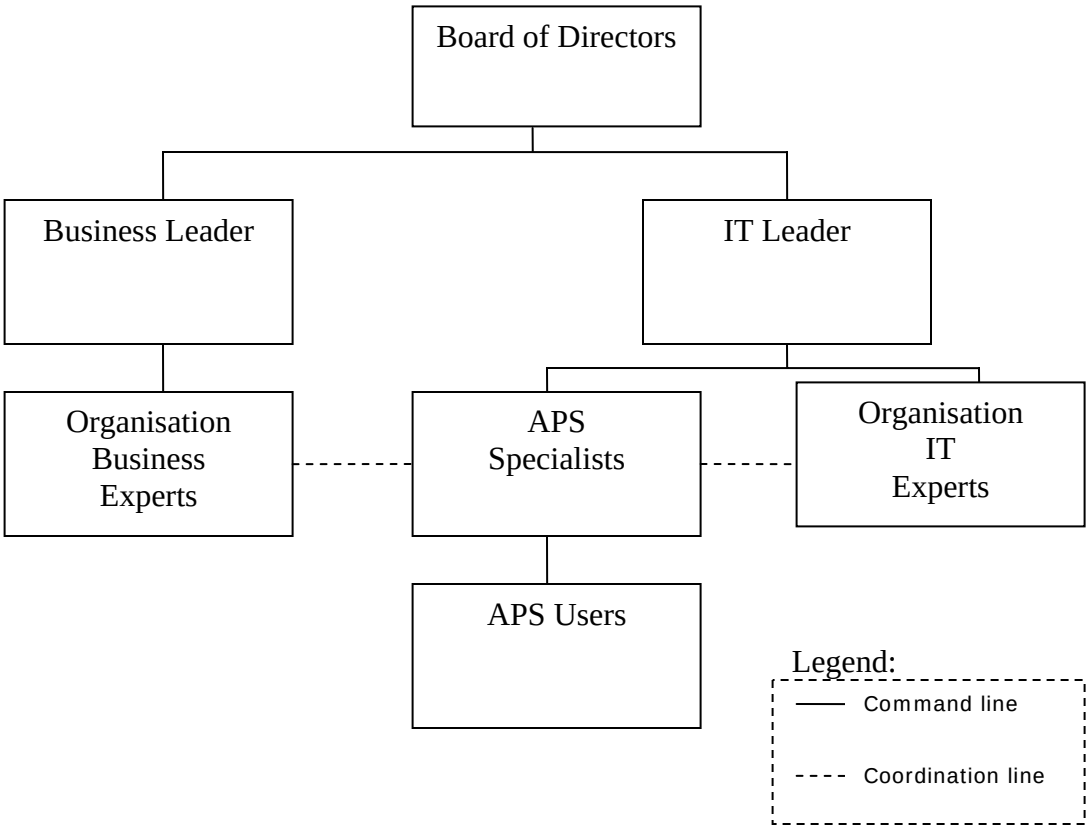

Figure 4 – Long term APS organisation structure

6.3 Project Implementation Practices

Well designed plan and structure themselves are not sufficient without the actual supporting practices. Therefore, three vital recommendations are given to ensure APS implementation done properly, they are: (1) ensure executive support, (2) have realistic expectation and (3) encourage open communication around all elements of the company.

Executive Support

Top management should become the champion/sponsor for the project (Scott et. al, 2002). By leading as an example, this will boost the employees' morale and attract them to be more positive towards the changes. The top management should also be responsible in emphasizing the benefits to their subordinates and producing supporting policy to ensure the success of the.

Realistic Expectation

Changing business processes and activities possess high risks. It is important for AirAsia to remain realistic for the outcome of the project (Trotta, 2003). Whenever the situation become inevitably uncontrollable, reducing scope (means reducing risk) is perceived to be a better decision rather than pumping up more resources (means creating more risk when the risk is already high).

Open Communication

Communication should always be kept open and active. Employees should be encouraged to communicate with the project team and management. Any useful information should be distributed in a timely manner. By this way, the implementation problems can be identified in early stage and corrective actions can be taken promptly (Connell, 2001).

6.4 Post-Implementation Planning Strategy

AirAsia must be ready to embrace post-implementation performance drop as employees are in the learning phase thus skill and expertise in utilising the new system are not optimal yet. During the early stage, it is expected that the performance will drop to an extent. AirAsia should be prepared to face this so

that the effect can be contained (Scott and Vessey, 2002). Also, contingency plans should be prepared if the new system fails to operate.

Tacit knowledge gained from the project must also be retained and shared across the organisation (Jarrar, 2002). This information will be a crucial part in ensuring the system to be successful in the long term. Whenever the project veterans move out from the organisation, AirAsia will lose the expertise as well.

AirAsia must also run a long-term performance evaluation to capture and document any new knowledge, analyse actual benefits and losses, analyse existing problems and alternative solutions so that future projects may avoid similar problems (Newell et al., n.d)

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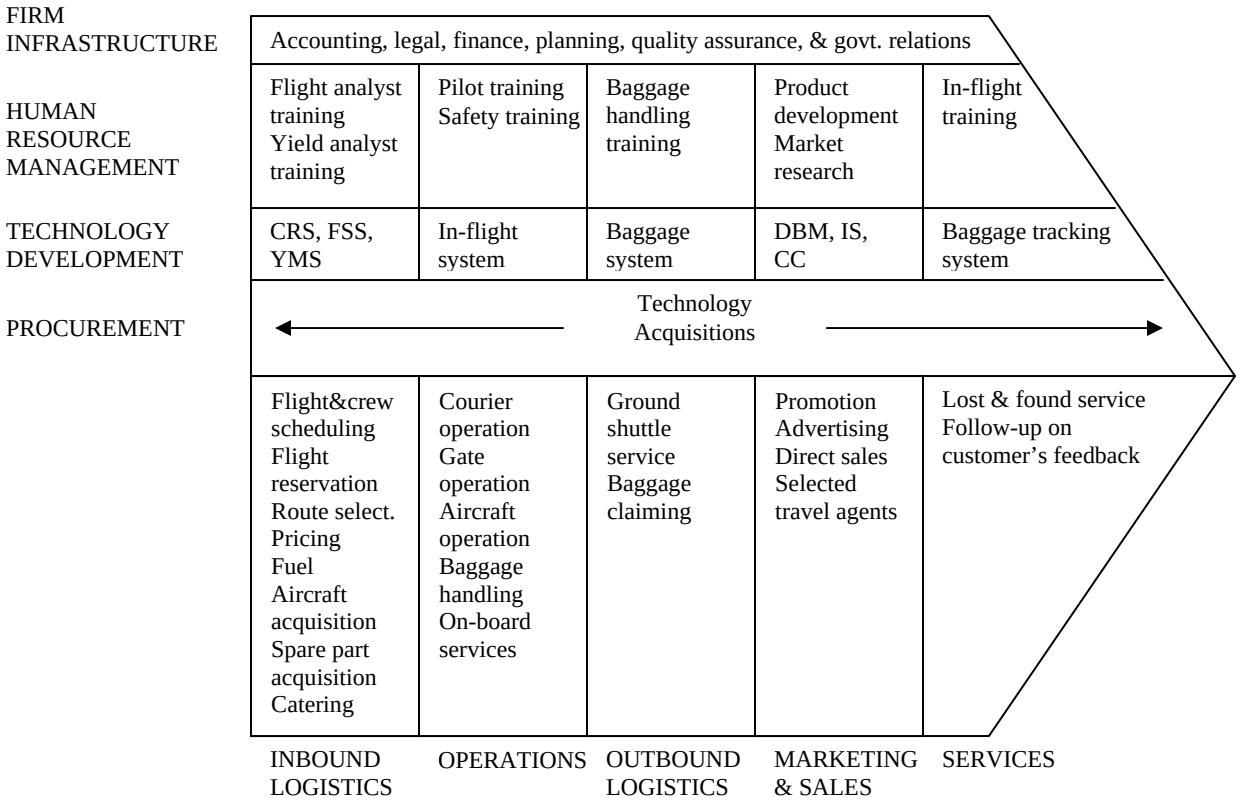
Appendices

Appendix 1 AirAsia's Value Chain



Legends

CRS : Computer Reservation System

FSS : Flight Scheduling System

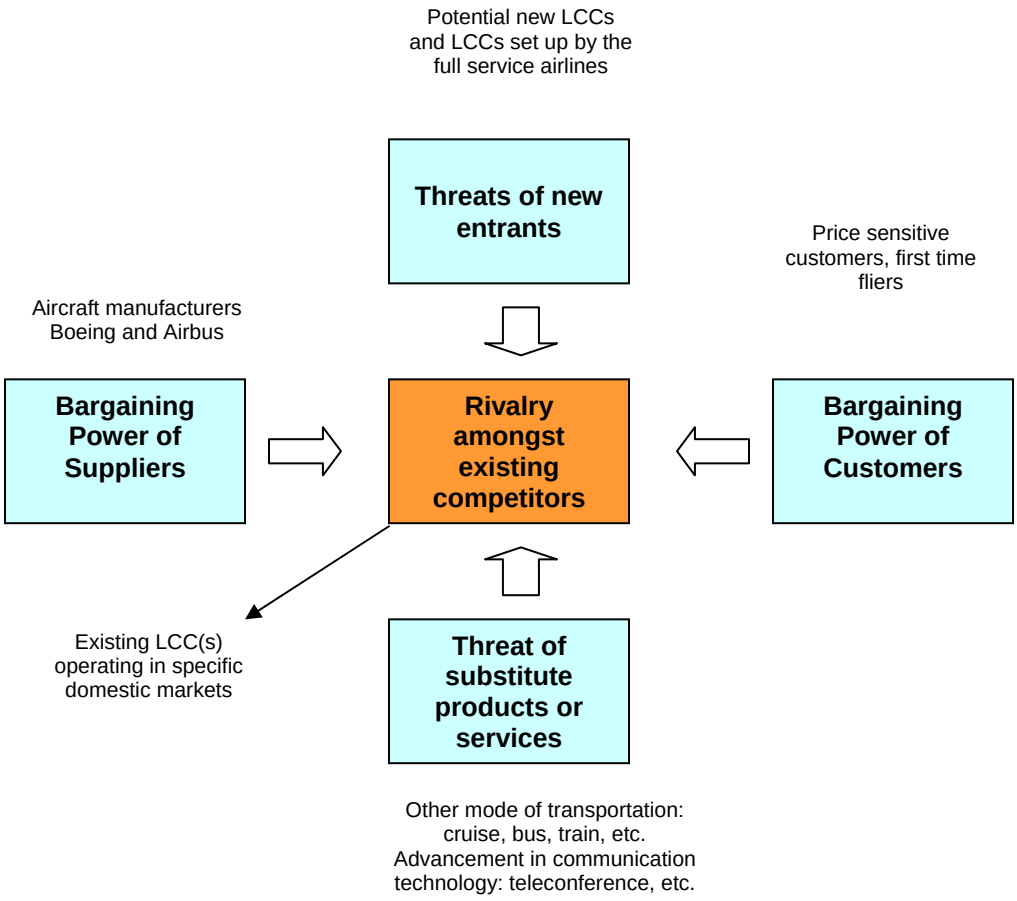
YMS : Yield Management System

DBM : Database Marketing

IS : Internet Sales

CC : Call Centre

Appendix 2 Sources of AirAsia's Cost Advantages along Its Value Chain

Classification	Activity	Sources of cost advantages
Primary	Inbound Logistics	Utilising one type of aircraft (Boeing 737-300 which will be fully replaced with Airbus A320) results in reduction of maintenance cost (one of the major expenses in airline industry), scheduling cost, administrative cost, and inventory of parts.
	Operation and Outbound Logistics	No frills, no assigned seat, one class, and ticket-less policies significantly reduce cost. Understanding of processes results in technical efficiency. For example, 26% saving in fuel cost can be achieved by simple yet effective flying procedure. High utilisation of aircraft and quicker turnaround time are two major operational cost advantages that AirAsia possessed. Its policy of not using the aerobridge also cuts cost while revenue is earned by providing ground shuttle services.
	Marketing and Sales	Creative and low-cost advertising significantly reduces marketing cost. On the other hand, AirAsia direct sales through internet, call centres, walk-in airport sales, and sales offices significantly reduce the commission fee to travel agents as AirAsia only assigned its sales to limited travel agents.
	Customer support	Effective and efficient handling of customer enquiries and complaints
Supporting	Firm Infrastructure	Maintaining simplicity, higher disclosure than industry norms, transparency in decision making
	Human Resources	AirAsia assigned multi-skilled cabin crews (2-3 crews/flight), cost-effective training, performance based reward and incentives systems
	Technology Development	Business requirements related technologies and cost-effective technology supporting AirAsia's core competency.
	Procurement	Effective and efficient technology acquisition (IT and communications)

Appendix 3 Porter's Five Forces – LCC Industry in Asia