CHAPTER 6 : CONCLUSION & RECOMMENDATIONS

This chapter presents an overview of the study and a summary of the major findings. Recommendations for future research is also discussed.

6.1 Overview of the Study

This exploratory study aims to gain an insight into the iDCs in Malaysia. The study was divided into two parts.

In part one, the facilities, services and basic features of a typical iDC were listed down by referring to those of established iDCs in other parts of the world. The short-listed iDCs in Malaysia were interviewed and the services, facilities and features of these local iDCs were compared against those of a typical iDC. The findings were then tabulated to provide an overview of the features, services and facilities possessed by these iDCs.

In part two, a few iDC customers were interviewed to identify the reasons they outsource their IT infrastructure. The study also attempted to find out if these organisations are satisfied with the service quality of the iDCs.

Finally findings from part one and part two were compared to provide an overview whether these iDCs offer services required and expected by their customers.

The data collection technique adopted for this study was personal interview guided by two sets of questionnaires. One of the questionnaires was for the iDCs while the other for their customers. The iDC samples comprised 9 respondents and there are 23 responses from the iDC customers.

The findings of this study are summarised and tabulated in Table 29 against the objectives of this study. The findings will further be interpreted in the following section.

Table 29 : Summary of Objectives and Findings

Item	Objectives	Findings
1	To identify the infrastructure owned and services provided by these iDCs	Infrastructure owned and services provided by iDCs studies are similar to blue-prints of established iDCs overseas.
2	To identify the target markets of these iDCs	Any organisation which requires web or electronic presence
3	To examine these iDCs based on internal factors (security and availability) and external factors (environment, power and telco)	Most iDCs are found to be adequate in terms of security, availability, environmental factors, power and telco services.
4	To identify the requirements of the iDC customers	Availability, security, responsiveness, service support, customisability (in order of importance)
5	To compare these requirements with the services offered by the iDCs	Majority of the iDCs offer what their customers require.
6	To identify any future expectations and requirements by these iDC customers	Remote administration, better customer support and be more responsible, bigger bandwidth, higher availability, stronger technical support and more competitive pricing (in order of importance)

6.2 Interpretation of Major Findings

More than half of the iDCs studied were found to be similar to typical, established foreign iDCs so far as infrastructure owned and services offered are concerned. The study found that most of the iDCs studied are located within the MSC area. A large proportion of these iDCs have a floor space exceeding 5,000 sq. ft.. All of them practise organised racking and structured cabling. Almost all of these iDCs have sufficient security measures in place. All iDCs provide co-location services and claimed to be able to provide any iDC services required by their customers. Most of the iDCs subscribe to one telco but multiple ISP, and have the Internet connection of at least 10Mbps. Many of these iDCs are equipped with an in-house security team and claimed to be able to respond within an hour in the event of disaster. Majority of them also practise certain storage solution and capacity planning to ensure scalability. However not many of these iDCs implement storage area network. Many of the iDCs have the NOC and Call Centre, and are equipped with network monitoring and management tools. Nonetheless many of them do not have a proper customer reporting process.

On the other hand, majority of the iDC customers studied are found to be e-portals. Most of them claimed to have outsourced in order to focus on their core competencies. More than three quarter of them are of the opinion that by outsourcing, they gain access to secured infrastructure while enjoying a lower operating cost. Slightly more than half of the customers interviewed co-locate with their iDCs while about a quarter of them are web hosting customers. The customers on the whole ranked "Availability" as the most important criterion for choosing the iDC. "Security" is the second most important, followed by "Responsiveness", "Service Support" and "Customisability". These customers are satisfied with most of the criteria but are quite neutral about "Customisability" and "Satisfaction on SLA Compliance". Approximately a quarter of the customers indicated "Slow Response and Lack of Customer Support" as the problems faced. Some 40% of them expect their iDCs to provide "Remote Administration" and "Bigger Bandwidth" in time to come.

Comparing both the findings, it could generally be concluded that majority of the iDCs studied are indeed emphasising on the right elements voted by majority of iDC customers interviewed as the important factors they looked for in an iDC.

6.3 Implications of the Study

This study could serve as a reference to the iDCs to help them realise which services, what infrastructure and the pre-requisites they need to offer and be equipped with to better carry out their business.

These iDCs would also recognise the requirements and expectations of iDC customers in general so that they could improve and / or provide infrastructure and services for their existing and potential customers.

Customers of iDCs would become aware of the various services offered by iDCs in Malaysia. This awareness would help them make better outsourcing decisions and choose the right outsourcers that are able to meet their IT outsourcing needs.

These could help improve the iDC – customer relationship and consequently help realise or accelerate the realisation of the benefits for both parties. Eventually this might elevate the standards of the iDC services in Malaysia and allow the customers to reap maximal benefits of IT outsourcing as described in the previous sections.

6.4 Suggestions for Future Research

This study is of exploratory nature and is sufficient only to provide a very general overview of Internet Data Centres and their customers in Malaysia. A more in-depth study could be carried out to address some or all of the aspects, e.g. availability, security and scalability. For instance, the security policies and procedures as well as the effectiveness of the implementations could be researched into.

The sample size of iDCs in Malaysia used in this study is only 9. Nonetheless this number represents about a third of the total iDC population in Malaysia (based on the list from HSPStreet.com), which is still significant and able to provide an overview of this business. However, until such time a regulatory or registration body is set up and the exact number of iDCs operating in Malaysia becomes available for public consumption, more iDCs could be included in the study. Studies of this kind would be able to give a better representation of the actual situation.

Similarly, more iDC customers could be included for analysis when more iDCs participate in the study and each iDC makes known their customers.

Research in the area of IT outsourcing by organisations can also be carried out. For example, the outsourcing decision making process by the management can be explored into. Since one of the reasons for outsourcing is to save cost, one can look into whether cost saving is indeed achievable and the percentage cost savings by organisations which outsource their IT infrastructure and services.

A particular or a few iDCs in Malaysia could also be selected for case studies, which explore into the Return On Investment (ROI) of the chosen iDCs. Internet Data Centre business involves huge initial capital outlays and financial analyses like the ROI and Break-even Period would be very interesting to research irtto.