GAP ANALYSIS –HACS

Conducting a Gap Analysis for HACS

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GAP ANALYSIS

INTRODUCTION

Recently, nearly all courier services are striving to deliver quality services to its customers in order to survive the ongoing competitive edge in the global market. This is true in the case of Here Already Courier Service (HACS), a courier company that is growing from a small customer base in Hurstville. Owning to the fact that this company has been noted for its efficient services, moreover, they are currently expanding their services for a more satisfying and valuable service. These current changes necessitate the company to analyze the present and desired state and to determine the difference between where they are and where they would like to be.

In this analysis, the current and desired state of HACS network will be identified by conducting gap analysis. However, I will compare the two states; identify locations of new devices, and suggest those aspects that need to be changed, and those that need to be replaced and those that may be retained.

CURRENT STATE OF HACS NETWORK

Currently, **Here Already Courier Service (HACS)** has up to 4,000 vehicles and delivers over 200,000 parcels a day. Although this goods and services provided by HACS are still giving some logistic faults to Drivers, as orders are confused and drivers, get lost. HACS implemented a mobile communications network solution with a centralized database. Through cellular technology package-delivery, information is transmitted from the company's 4,000 vehicles to the HACS mainframe repository in Hurstville NSW, thus enabling HACS to provide same-day package-tracking information for all air and ground packages. Apart from the fact that they implemented mobile Communication,, HACS uses

scanner to read and transmit parcel information in the database HACS also make use of the barcode system for tracking although this is not very reliable and efficient. In addition, HACS manually orders and manages their supplies.

To rectify all this problems, HACS wishes to advance more in order to solve most of the pressing issues that is currently facing his company

DESIRED STATE OF HACS NETWORK:

HACS wishes to extend their tracking system with **wireless technologies**, **Radio Frequency Identification (RFID)** tags and **Global Positioning System (GPS)** to allow for the following key customer benefits

- Immediate access to delivery and location information on all HACS packages
- Increased robustness of package identification system
- More customer shipments can be given real-time information on delivery status
- A high degree of reliability as a result of the service's redundancies and backup systems
- Flexibility to accept future network technologies

EVALUATION AND COMPARISON BASE ON GAP ANALYSIS

HACS current problem with the barcode serves as an impediment to the intended growth of their company; this implies that HACS should replace the unreliable system that causes this problem with reliable one such as a wireless systems. To this, HACS wishes to incorporate **Global Positioning System (GPS)**, or"**Radio Frequency Identification**" RFID to replace the barcode, which is currently not reliable. **Global Positioning System (GPS)** is a space-based radio-navigation system consisting of 24 satellites and ground

support. GPS provides users with accurate information about their position and velocity, as well as the time, anywhere in the world and in all weather conditions.[1]

GPS determines location by computing the difference between the time that a signal is sent and the time it is received. With this System, HACS ensures customers immediate access to delivery and location information on all HACS packages. This however will increased robustness of package identification system

GPS satellites carry atomic clocks that provide extremely accurate time. The time information is placed in the codes broadcast by the satellite so that a receiver can constantly determine the time the signal was broadcast. The signal contains data that a receiver uses to compute the locations of the satellites and to make other adjustments needed for accurate positioning. The receiver uses the time difference between the time of signal reception and the broadcast time to compute the distance, or range, from the receiver to the satellite. With information about the ranges to three satellites and the location of the satellite when the signal was sent, the receiver can compute its own three-dimensional position.[2] This allows easy location and identification.

For other network and technologies present in HACS office, the mobile communication network solution with a centralized database can still be seen as relevant since after its installation, it quickens the rate of gathering information during delivery, which was previously not available until the day after delivery. The scanner that reads and transmit information to the database can be retained as it still serves its purpose

As the current supplies for the company are manually ordered and managed, HACS would need to incorporate a stores management system into the parcel tracking system. With their new vision of implementing a global position system, this will ensure quality services and more customer shipments can be given real-time information on delivery status

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[1] Leonard R. Kruczynski (2002) Global Positioning System, Microsoft® Encarta® Reference Library 2003. © 1993-2002
[2] Leonard R. Kruczynski (2002) Global Positioning System, Microsoft® Encarta® Reference Library 2003. © 1993-2002

LOCATION OF NEW DEVICES:

GPS comprises three segments: the space, control, and user segments. Since HACS is located in Hurstville in New south Wales, Assumptions are made on where the new technology are to be located. I used Ryde, Rockdale, Sydney for example

The space segment consists of the satellites and the Delta rockets that will launch the satellites from Hurstville or other new locations like in Ryde or Rockdale. According to Leonard R. Kruczynski (2002), "GPS satellites fly in circular orbits at an altitude of 20,100 km (12,500 mi) and with a period of 12 hours. The orbits are tilted to the earth's equator by 55 degrees to ensure coverage of Polar Regions". Powered by solar cells, the satellites continuously orient themselves to point their solar panels toward the sun and their antennas toward the earth. Each satellite contains four atomic clocks.[3]

The control segment comprises of the master control station to be located at Hurstville New south Wales main Office and other stations where they would like to have offices. These stations monitor the GPS satellites. The control segment uses measurements collected by the monitor stations to predict the behavior of each satellite's orbit and clock. The prediction data is up linked, or transmitted, to the satellites for transmission to the users. The control segment also ensures that the GPS satellite orbits and clocks remain within acceptable limits.[4]

GPS Receiver: will be used by the officials appointed to use the signals from orbiting GPS satellites to determine location

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[3] Leonard R. Kruczynski (2002) Global Positioning System, Microsoft® Encarta® Reference Library 2003. © 1993-2002
[4] (n.d) www.en.wikipedia.org, date retrieved: 20/ 02/06

RFID tags- will be attached to different HACS packages

GPS user equipment has been integrated into helicopters, ships, submarines, jeeps, and officials' equipment

In-store management system- ought to be situated at their main office

RFID transceiver – will be situated in the main office or station of HACS

GAP ANALYSIS BASE ON THE TECHNOLOGY HACS ACQUIRED, CHANGED, REPACED, OR WILL RETAINED

Area that requires changes	Some elements to be replaced	Some elements to be retained
Manual ordering and management of supplies	Barcode reader	RFID tags for internal stores Mobile communications network a centralized database. Scanners

CONCLUSION

The idea of Here Already Courier Services (HACS) to upgrade to newer and efficient technologies in order to maintain its competitive edge required is greatly encouraged. However, The Gap analysis need to be conducted to enable the managers of this organization to make effective decision in their planning which must involve, understanding their limitation, the reasons for upgrading, the risks to be encountered , financial and environmental implication

This process is strategically identified using CROUCH model to understand their current position and where they want to be. However, comparison of the two state; draws a clearer picture of what elements are common and what elements can be left unchanged or retained. Decisively, this gap analysis is technological.

REFERENCES

Leonard R. Kruczynski (2002) Global Positioning System, Microsoft® Encarta® Reference Library 2003 © 1993-2002

(n.d) www.en.wikipedia.org, date retrieved: 20/ 02/06

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