

Major Assignment

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Executive Summary

In this report it was found that while analyzing the organization at a whole that the current human interaction system could strongly benefit from an upgrade. While analyzing the marketplace it was clear that a new human activity system will successfully give the hospital growth in a positive manner.

Introduction

1.1 **Benefits of introducing the IS**

The benefits of introducing the new IS is so that the paid car parking system works much more faster and efficiently and could potentially bring in more money towards the company. In doing so there will be a system where when approaching the car park there are no gates therefore the car drives straight through. When the car drives through a camera will take a picture of the number plate upon entrance and exit to record the time. Once the car has exited the car park it then send the bill to the driver's house depending on their time parked.

1.2 **Report Outline**

This report provides an analysis and evaluation of a current IS system and what problems it currently has. Along with this is provided a suggestion for a new IS system which is much more efficient than the current one and is to be believed to have a positive impact on the Gold Coast Private Hospital. Methods of analysis include using; Porters Five Forces, Mintzberg's Classification, Porters Value Chain, Business Process Models, DeLone-McLean Model and Rich Pictures. Results shown in comparing both the current IS and the new suggested IS are shown in the report and it is recommended that the new one outclasses the old one mainly due to efficiency. Although the new IS is not flawless it is still much better than the old system but it is heavily weighed on relying on machinery to complete its task which can easily be fixed by regular servicing.

1.3 **Gold Coast Private Hospital**

The gold coast private hospital is one of the very few private hospitals they have in the gold coast and it is located right next to Griffith University gold coast campus. There is a massive gap between private and public hospitals. On one hand the public health system will fix you up for free but you may have to wait however amount of time before an operation or appointment unless critical. This puts its competitors at a disadvantage and also an advantage due to people with money going to the private hospital for a faster process but also not everyone has the money to afford that, therefore a vast majority of people will look towards the public hospital. (Gmhba.com.au, 2016)

1.4 Definition of key terms

Human Activity System (HAS) – A Human Activity System comprises a logical collection of activities performed by some group of people.

Information System (IS) – Information systems support human activity systems, and can be either manual or automated.

Porters Value Chain – A model that helps analyze specific activities through companies.

Porters Five Forces – This is the best-known framework for analyzing competitiveness.

Business Process Model and Notation (BPMn) – Business Process model and Notation is a graphical representation for specifying a business process in a business process model.

Rich Pictures – Rich pictures display relationships and may include elements of structure, process, issues, concerns or developments.

Stakeholders – Stakeholders are anything inside or outside the organization who has a vested interest.

(Rowlands, 2016)

The Organization

2.1 The existing IS

The current human activity system that will be improved on is the current system that allows the public and staff to drive in and out of the paid parking area. At this current moment in the paid car park there is a system where you drive up to the boom gate to receive a ticket. On the way out from the hospital the person has to walk to the pay station and pay for their parking with their ticket. On the way driving out they use the new ticket they received from the pay station to exit the car park. The stakeholders include patients, visitors, workers and also the people who own the private hospital.

2.2 Organizational type (Mintzberg's classification)

Mintzberg's classification consists of five organizational forms.

1. Simple Structure
 - Little or no techno-structure
 - Small managerial hierarchy
 - Planning, training and liaison devices are minimally used in such structures
2. Machine Structure
 - Highly specialized
 - Set rules, regulations and formalized communication
 - Large units at the operating level
 - Centralized power for decision making
 - Administrative structure
3. Professional Structure
 - Standardization of skills, training and indoctrination
 - Professional bureaucracy type structures contain people who are trained that are hired for the operating core. There is a considerable control over their work that is given to them.
4. Divisional Structure
 - Divisional structures are composed of semi-autonomous units
 - Straight-forward and has a stable environment
 - Large economies of scale need not apply
5. Adhocracy Structure
 - Little formalization of behavior
 - Job based on formal training

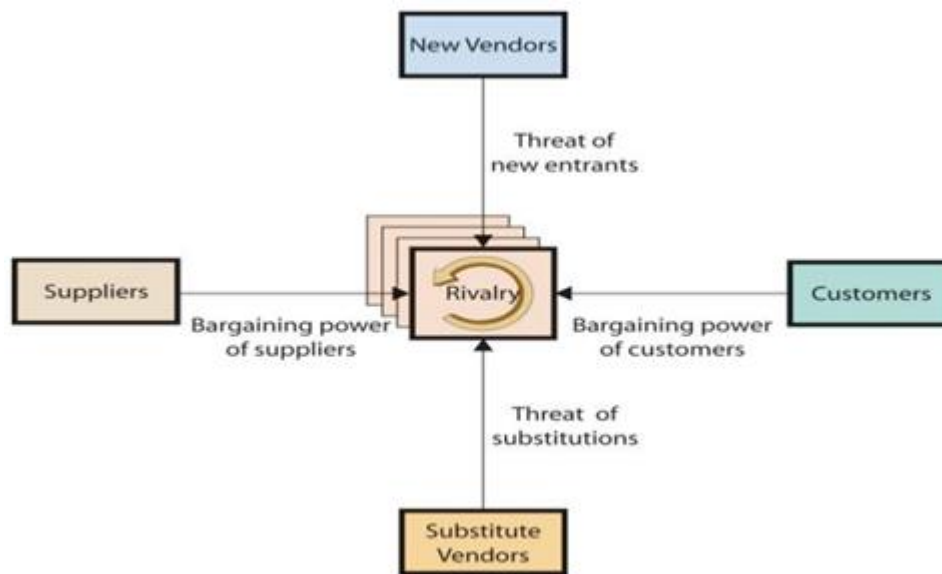
The current organization type is a Professional Bureaucracy. This is because in a professional bureaucracy type structures there are trained specialists and professionals are hired to operate the core and considerable control over their work is given to them.

2.3 Porters Value Chain



This current activity system is a type of support activity. It is a branch of the hospital that supports the business and provides income using the car park as a resource therefore doesn't directly add value to the company.

2.4 Porters five forces



Force	Magnitude
Bargaining power of suppliers	Medium – The bargaining power of suppliers is medium for hospitals. For example if a pharmaceutical has a new drug that they were selling off to the hospitals there would be an even amount of bargaining powers due to if the hospital doesn't want to buy the drug, the pharmaceutical company has no income. If this is the case then it will work the other way, the hospital will not have medicine. Therefore it is an even trade if they both agree.
Threat of substitutions	Medium – Threat of substitution is medium due to there are two types of hospitals you can be in. Public or Private, if it is a serious matter either way you will end up at the private hospital. If it isn't significant then you will end up at a public hospital in exchange for however long it takes to get in.
Bargaining power of suppliers	Low – The bargaining power of customers are low due to there are two options. Public or private hospitals. If a serious injury either way it you will end up in at public hospital.
Threat of new entrants	Low – A hospital is not an easy to enter inside the industry therefore the threat of new entrant's is low.
Rivalry	Medium- The threat of rivalry is medium due to going to a public hospital if not too serious. Otherwise the private hospital is usually looked for services over the public hospital if fatal or in an emergency.

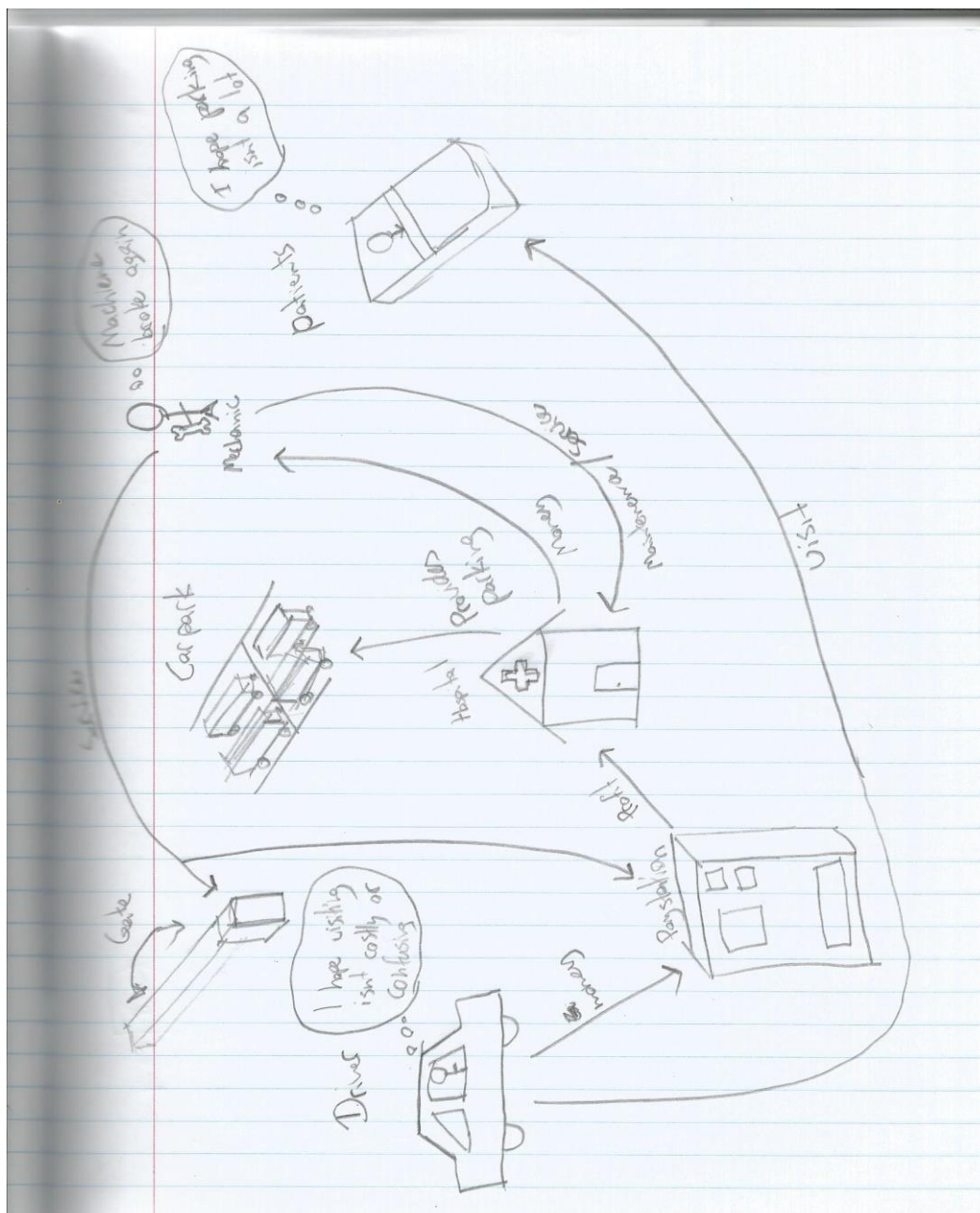
Analyzing the existing IS

3.1 Problems with the current IS

The problems with the current IS is that it is too slow and is easily at fault when someone loses a ticket. If the driver loses his/her ticket they will be forced to pay the full charge of the maximum parking time. This could potentially decrease the people using the car park. Another problem is that when going to the pay station and having to wait until people finish paying due to limited amount of machines. This could even possibly increase the cost due to the time waiting at the machine. Along with this the maintenance of several different machines including the gate and several pay stations is also most costly then just fixing a camera and sensor.

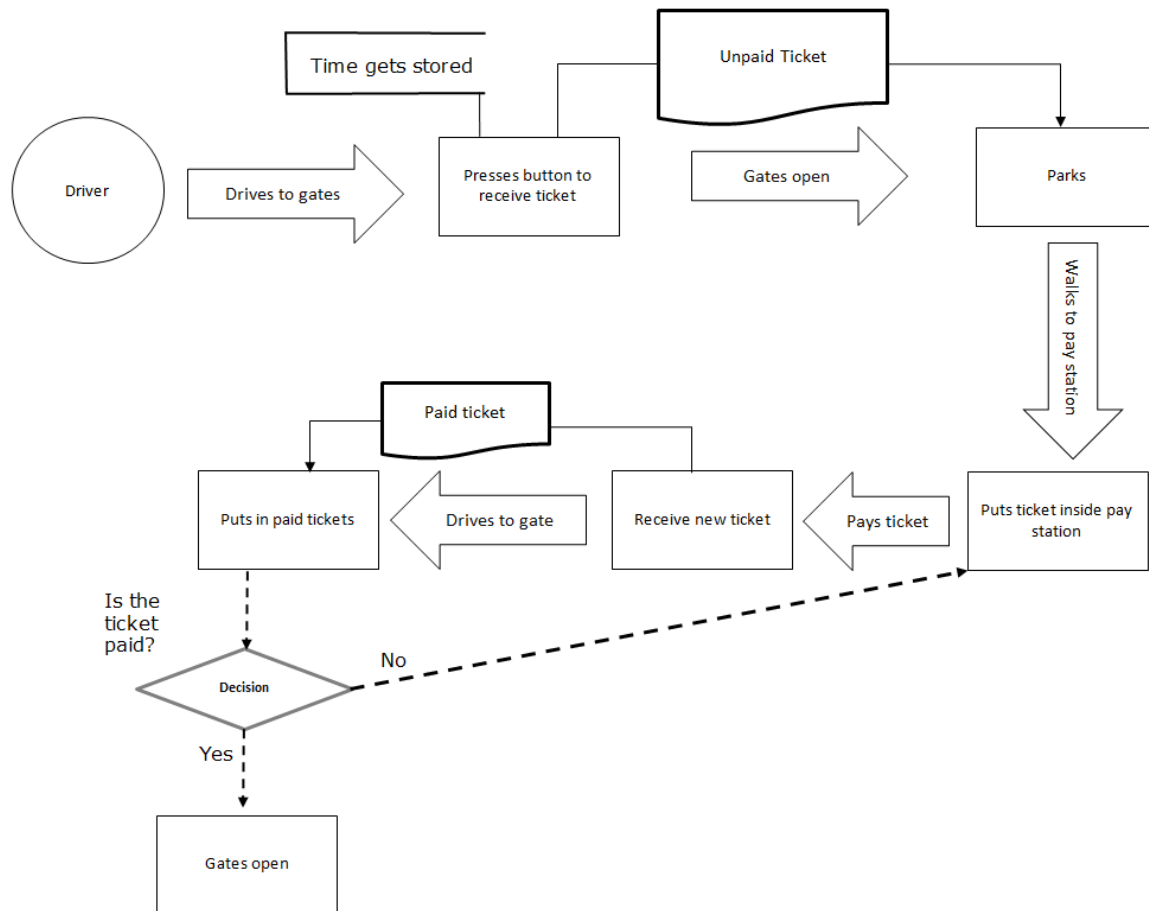
3.2 Rich picture

The following drawing is a rich picture. This shows issues and concerns of stake holders that have been identified.

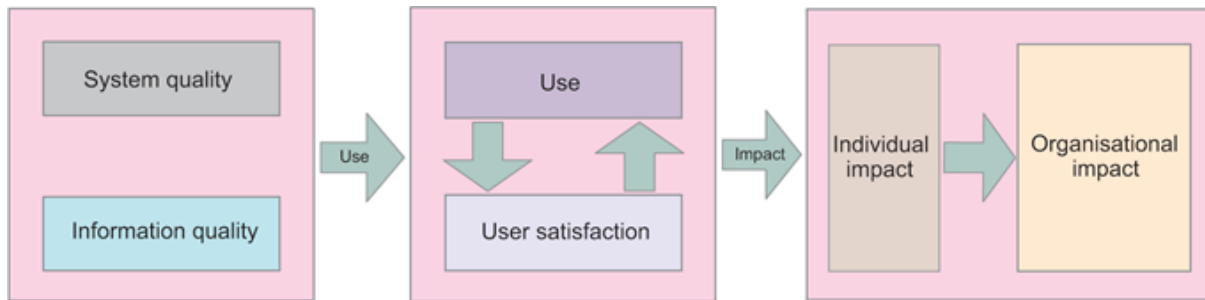


3.3 Current BPMn

The current BPMn starts with the driver driving up to the gate and pressing the button to receive a ticket. In doing this the time gets stored and the gates open so that the driver is able to park inside the car park. Once the driver has finished his visit he then walks up to the pay station which is located somewhere in the car park in order to pay off his ticket according to how long the driver has been parked for. The pay station then gives the driver a new ticket which has been paid off. With this ticket he then drives to the gate heading outside the car park and places his ticket inside the gate to open it. The gate will open if the computer reads that the ticket has been paid off.



3.4 DeLone-McLean Model of Information System Success



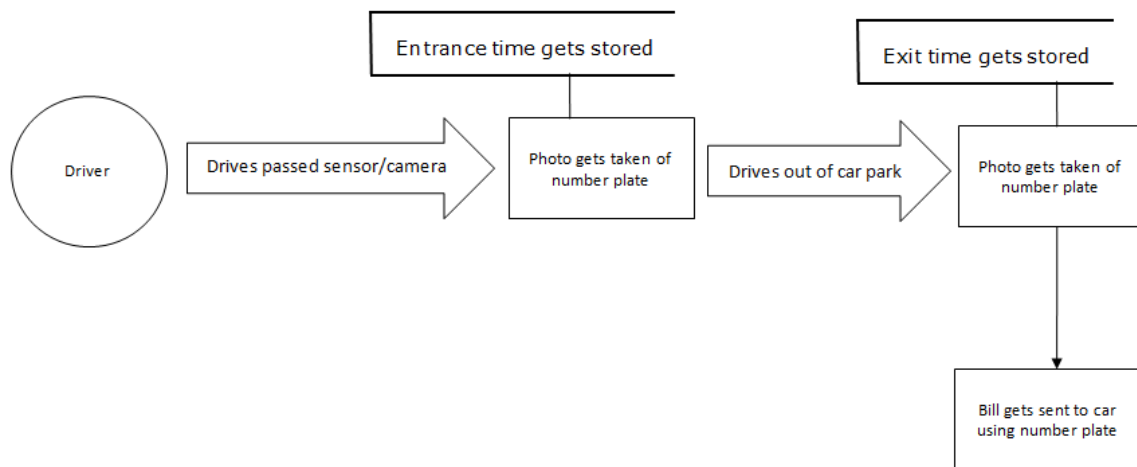
The DeLone-McLean model can be grouped into three main categories; functionality, usability and utility. Its use is to be a systematic review model for assessing IS success which can be seen in the figure above. In the current IS the functionality includes the system quality and information quality. The current system quality is average due to it being simple and the same as other hospitals; however the information quality is poor which results in poor user satisfaction when the IS system is in use which effects the second category which is usability. Due to the user having poor satisfaction this influences the individuals impact which impacts the organization in a negative manner in the utility category.

3.5 Measures of Success

There are three levels that measure success; efficiency, efficacy and effectiveness. The efficacy measures if the output produces the appropriate value. The efficacy in the current IS system is average because it fulfills the purpose at the end of it and it gets there at the level it is supposed to. The efficiency measures how fast the process gets completed and if it required minimal effort to get there. The current IS system's efficiency is not the best due to how long it takes for the process to finish, therefore not being very efficient. Effectiveness is a measure of the extent to which the system contributes to the purpose of a higher level system. The effectiveness of the current system is fairly average because it gets the job done eventually but might not be the most efficient way to do so.

4 The Proposed new IS

4.1 Process of the new IS



4.2 Impact on the IS

The major impacts that this will have is that there would be more people parking inside the paid parking area at the hospital due to its simplicity and how easy it is to pay it off. This is heavily reliant on the hospital to keep their hardware, software and maintenance up to scratch. This gives a way for the public to easily come in and out of the car park without worrying about losing a ticket or forgetting to go to the pay station due to everything is being done by the hospital.

4.3 Measures of Success

As said above in the measurements of success for the current IS that there are three levels that measure success; efficiency, efficacy and effectiveness. The efficacy of the new IS is still the same as the current one because it will get the same output. The efficiency is much better than the current one due to it being a lot faster of a process to come in and out of the paid car park. The effectiveness of the new IS is a lot better than the current one due to it being a faster and much easier process overall making it very effective.

4.4 Avoiding Common failure (Lyytinen & Hirschheim model)

There are four categories of information systems failure:

- **Correspondence failure:** Failure to meet requirements set in advance
- **Process Failure:** System not produced within given budget or time
- **Interaction Failure:** System not used or under-used by target
- **Expectation Failure:** Failure to meet user expectations

Due to the new IS systems organizational form there are things that can be done to avoid common failure. Since the organization is still has a professional structure the two main problems that can possibly arise would be interaction failure and expectation failure.

	<u>Correspondance</u> Failure	Process Failure	Interaction Failure	Expectation Failure
Organisational Form				
Machine	**	*		
Entrepreneurial		*	*	*
Professional			**	**
<u>Adhocratic</u>			**	**
Diversified		**		*

5. Conclusion

As shown the new IS proposed is far better than the current one and the company can strongly benefit in making the new IS happen. It is much faster and easy to use which makes it more efficient for people who are wanting to park inside the paid car parking at the hospital. It makes the whole process of entering and exiting a whole lot easier which will provide good user satisfaction.

6. References

- Gmhba.com.au. (2016). *Private vs Public | GMHBA Private Health Insurance Australia*. [online] Available at: <https://www.gmhba.com.au/help/health-insurance/private-vs-public> [Accessed 30 Sep. 2016].
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