

Report on brief overview of the organization

[Business](#), [Company](#)



Introduction

West Park Services is a ranching organization that has about 30, 000 animals and about 500 employees. The employees are in different categories and they enjoy different privileges depending on their level of employment in the organization. The employees' categories range from farm attendants, Support staff, Administrators, Managers and the Chief Executive officer. For a very long period of time, operations in the firm have been manual. This has led to low level of production as the firm cannot compete effectively with other competitors who have their operations computerized.

One of the major challenges facing the firm is security. Farm animals have been disappearing and the management has failed to give an account for the loss. Office equipments also have not been spared. The firm has been losing hundreds of dollars every day due to this vice. A well integrated system is therefore necessary in order to curb this vice. The system that can effectively control this vice is the use of RFID (Radio Frequency Identification) Technology. The tags are to be put on all the animals in the firm which will keep track of their movements within the firm. Doors in the firm's offices are to be equipped with bio readers. Every employee in the firm is to be given an identification tag which will be used for gaining access to different parts of the office. Depending on the privileges one has in the firm, entry can be granted or denied.

Structure of the organization

The numbers next to the arrows indicate the different levels of employees in the firm. Each level is identified with a unique code. As one move lower the

hierarchy, access is denied. An employee at a lower level cannot access offices higher in the firm. This will control entry and exit at different points in the organization. This is made possible by the biometric readers that are placed on every door in the company. Visitors are also given temporary tags whenever they come into the firm.

Radio-frequency Identification (RFID)

Definition

Radio-frequency Identification (RFID) is a type of technology that employs the use of communication through radio waves. The radio waves are used for data exchange between a reader and some form of electronic tag which is attached to an object (Simon, 2006). This is usually done for tracking and identification purposes. There are some tags which can be read meters away and beyond the line of sight of the reader. It enables an almost parallel reading of tags.

This process of RFID involves the use of interrogators which are also known as readers and tags also known as labels.

The RFID tags which are used usually contain at least two parts (IC - Integrated Circuit and the antenna). The IC is used for storing and processing information, modulating and demodulating a radio frequency. The antennae is used for receiving and transmitting the signal.(Manish 2005)

Types of RFID tags:

Passive RFID tags – they have no power source and hence require an external electromagnetic field to initiate a signal transmission.

Active RFID tags – they contain battery and can transmit signals once the interrogator has been identified

Battery Assisted Passive (BAP) RFID tags – they require an external source to wake up but have a significant higher forward link capability providing greater range. (Bill 2010)

Plan of the report:

There are 5 Steps to be followed:

1. Identify the different levels of employees in the firm
2. Identify the animal species in the farm
3. Determine the naming/numbering procedures to be used in naming and giving the animals numbers
4. Once the identification is complete, there is need to establish the places that the receivers are to be placed.
5. The final step is to educate the employees on how the system works so that they don't get themselves on the wrong side of technology.

Applications of RFID

The RFID can be used in different areas especially for the purposes of tracking. Some of the most common application of RFID include:

1. i. Asset tracking: They can be used to track assets in a firm. Some of the sectors that have employed the use of this technology include: Hospitals and pharmacies which have been able to track their equipments, libraries for ease in managing the entry and exit of books

within their premises. They have also been used in sports and entertainments for ticketing. (Klaus 2003)

2. ii. Automotive industry: The use of RFID in motor vehicles have controlled theft to a larger extent. There are anti-theft immobilizers and the passive entry systems which control auto theft and have made it very convenient for people to manage their vehicles.
3. iii. Contactless payments: Companies have employed the use of RFID to facilitate payments which has proved to be very efficient. (Klaus 2003)
4. iv. Supply chain: RFID has been used by retailers to keep inventories at the optimal level and also help in reducing out-of-stock losses, they also help in reducing cases of shoplifting.
5. v. Animal tracking: Animal tracking can be done by ranchers to meet export regulations and also keep track of their animals. Pets with tags can also be identified and returned to their owners.
6. vi. Automated toll collection system: This was one of the first consumer applications of the RFID technology. It helped consumers spend less time waiting on lines to pay the toll fee.
7. vii. Smart Washing Machine: This machine washes clothes based on the instructions that are in the tags attached to the clothes.
(<http://www.rfidjournal.com>)
8. viii. Product recalls: Companies can recall bad goods and trace them all the way to the store in case it has not recovered all the bad goods through the use of RFID technology.

Approaches in deploying RFID

The process of deploying RFID is not an easy task and should be done by professionals after a thorough research has been carried out.

There are several procedures that need to be followed and measures that should be put in place to ensure a smooth transition from a non RFID environment to a fully equipped RFID environment. The users of the RFID equipments need to be trained appropriately so as to ensure that they understand how to optimize the use of RFID. (Manish 2005)

The following steps need to be followed to when deploying the use of RFID

i. Define Potential Use Cases:

Some of the potential use cases include reduction in stocks running out especially for fast moving items. During this stage the goals need to be laid down appropriately and analysis conducted to prove that the implementation will have a positive change. There need to be resources so that training of personnel is done and budgets adjusted to ensure that the trained personnel do not leave due to unfavorable working conditions.

ii. Analyze the current business Processes involved in each use case

This one will help keep track of the different stages of business process and also ensure that the handlers are known. This will make it easier to determine where a problem might have occurred in case any did.

iii. Determine the magnitude of the benefit:

It is necessary to estimate the benefit that might come with the implementation of the RFID. This will help in evaluating whether the implementation is viable or not. The potential benefit that come with this system is a 6% increase in sales. This need to be analyzed if it matches with the cost incurred in implementing the system.

iv. Prioritize your field trials:

The trials should be prioritized appropriately to ensure that only the most important activities are taken into consideration during the first phase of implementation. The rest can then follow later depending on the success of the first trials.

v. Define the scope of field trial:

Factors that contribute to a problem in the firm need to be identified. A lot of information needs to be got from the same project and the viability proved before starting the implementation phase.

vi. Determine what products to tag and where to place the interrogators:

The products to be tagged during the first stage need to be determined appropriately. The interrogators also need to be placed in areas that will be convenient for the staff and effective on their use.

vii. Determine how to measure the results of the field trial:

There is need to measure both the outcome of the field trial and the processes involved in each. Once this has been done, the company can then

determine whether the implementation improved the operations of the company or otherwise.

Opportunities

Reasons and benefits of using RFID

1. i. RFID impact positively on the environment as it reduces wastes. This is due to the fact that RFID can be used to manage stocks which will ensure that goods are at the appropriate place at an appropriate time. This will ensure that fewer goods are thrown away due to expiry because a wrong decision was made during their acquisition. They also help in improving the environment by identifying hazardous materials that should not be dumped at the regular dumping sites. (Simon 2006)
2. ii. The RFID tags are robust making it possible to be used in harsh environments without wearing out.
3. iii. The information written on the RFID tags cannot be easily duplicated. This makes the tags better than the use of the bar codes and hence more secure.
4. iv. Errors occurring from humans like misinterpretation can be easily eliminated by the use of the RFID tags.
5. v. The RFID tags have a larger storage capacity compared to that of the barcode. It gives more information about a product than the ones given by the bar code.
6. vi. The RFID tags are highly reliable and error free due to their uniqueness. They also help in reducing labor cost of the company as the system is always automated.
7. vii. The RFID are durable

8. viii. The RFID tags can be placed anywhere and do not require a line of sight for their operations.
9. ix. They facilitate operations by enhancing product visibility.
10. x. The information on RFID can be easily updated depending on the change in the situation.
11. xi. They have a long read range. They can therefore be used even if the sensors are some distance away from the tags.

Impacts on RFID Adoption

The RFID adoption has positive impacts in the general operation of the business enterprise. The only negative impact that can be witnessed is the increase in costs as the RFID tags are quite expensive. However, this should not be an issue as the overall benefits highly outweigh the cost.

Some of the impacts of the RFID adoption include:

1. i. Better stock maintenance
2. ii. Reduction in theft cases
3. iii. Reduction in labor costs
4. iv. Ease of identification
5. v. Reduction in human errors
6. vi. Ease of managing assets
7. vii. Increased accountability
8. viii. Improved services
9. ix. Faster services

Challenges and Risks

1. i. Forced Business Process Changes: The business process has to be changed in order to fit into the system. Some of the things that need to be adjusted are the budget due to the high costs to be incurred. Another change that is likely to affect the organization is the fate of the organization's manual personnel as not all of them are to be incorporated into the system.
2. ii. Data Volumes of a new scale: With the implementation of the RFID, large data volumes are to be generated which cannot be easily handled using the traditional database management systems in place. A complete overhaul is therefore necessary.
3. iii. Costs: The costs are generally too high for a small business enterprise to adopt.
4. iv. Standardization: There are several standards in the market and they keep on improving. The current standards being used may need to be rolled out in the near future in case some improvements are found.
5. v. Tag placement: The positioning of the tags is also an issue as tag signals do not easily penetrate liquids and metals.
6. vi. Privacy: Consumers have the fear of Spy like agents or assets which may keep track of their movements thus infringing their privacy.
7. vii. Interoperability: Some of the tags are not interoperable and can only function within the firm that they are designed for.

Risks

In as much as the use of RFID has many benefits, there are also risks that come with it and should never be ignored. Some of the risks include:

1. i. Security risks: There are several risks that come along side with the use of RFID. Companies implementing the use of RFID should ensure that the implementation is in line with their corporate security policies.
2. ii. Health risks: There are possible cases of health risks due to the prolonged exposure to the electromagnetic waves used in the implementation of the RFID technology.
3. iii. Privacy risks: Some one can obtain information about someone having the chip. This will infringe the privacy policy of an individual or a company.

Business Challenges in the organization

1. i. Theft: This included the theft of animals and in the organization's offices
2. ii. Out-stock issues: Some of the requirements in the farm went out of stock as there was no one able to handle their flow appropriately.
3. iii. Goods going stale due to over ordering: There was no elaborate system to manage the goods thus some were brought in excess and thus went stale.
4. iv. Competition: There is stiff competition from similar organizations which have already automated their systems.

Conclusion

The process of implementing the use of RFID is a bright idea and many benefits are likely to come with it. Despite the many challenges and risks involved, the pros highly outweigh the cons in implementing the technology. There is need for creative vision and a careful execution in order to realize its success in the organization. The process of implementation can be hard

but care has to be taken to ensure that all is well in the implementation of the RFID. With all the employees identified, theft cases can be easily minimized as most of them were insider jobs. It is easy to know who accessed where and when thus bringing the violators to justice without compromise. Once all the animals have been identified, it is easy to track their movements and hence control their exit from the firm.

References

Bill G. (2010) RFID Essentials: Theory in Practice. Springer Publishing Company: New York USA

Klaus. F. (2003) RFID Handbook: Fundamentals and Applications in contactless Smart Cards and Identification. John Wiley and Sons Publishers: New York, USA

Manish B. (2005) RFID Field Guide: Deploying Radio Frequency Identifications Systems. John Wiley and Sons Publishers: New York, USA

Patrick J. (2009) RFID for Dummies. Phoenix City of Atlanta

Simon G. (2006) RFID: Applications, Security and Privacy. New York City

Steven S. (2006) RFID: Radio Frequency Identifications. Published by WSEAS. New York City, USA