

Managing Business Activities to Achieve Results



American College

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Executive Summary

There intentionally described about the TECH Information Solutions Pvt Ltd's issues related with the information systems and the inventory management systems on their own business activities. Firstly there it is described about the suitable IT processing system for the company with its advantages and then about the inventory control system and MRP & EOQ. Finally it may evaluate about the financial tools of NPV and IRR.

Introduction

TECH Information Solutions Pvt Ltd can be considered as a medium scale organization which is mainly offering to the clients the high quality Computers & Note books as well as IT accessories with an innovate and creative product portfolio & an unparalleled customer care services. So this company has established in year 1997 which is renowned the best quality products with best professional customer service levels to satisfy the customers in order to become one of the leading 'IT' service provider in Sri Lanka IT industry with their sophisticated technology. In today the company is the authorized only distributor of G.SKILL Memory &, EVGA VGA Cards, RAZER Gaming Keyboard, INKTEC Brand Refills. Not only that but also the company is a authorized reseller in Prestigious International Products like INTEL, HP IPG, IBM, EPSON, TOSHIBA, ACER, ASUS, Kingston, DELL etc. The company has 75 employees staff strength on their own.

TECH Information Solutions Pvt Ltd can be considered as a company which has been growth potential & the high capacity in order to attract huge customers as according to the fact which the countries are operated in the industry of ICT is now in a accelerating development as well as the expansion. But the management of the company is now engage with several problems which are mainly related with its current operations. Thus these problems mainly have risen with recording its information as well as controlling its inventories. Thus the organizational management felt that these areas haven't well-functioned according to their expectations as well as the inputs & outputs haven't well-organized. Because of that management has found it is difficult to carry with their strategic plans unless having a proper picture of the company's current position.

Thus in order to overcome from this situation the organizational management has decided to find out an appropriate software systems which will help to the current staff in order to maintain their operational records as well as their inventory information to get useful

information for the process of managerial decision making. Thus there's a study below which is done to recognize the suitable systems which TECH Information Solutions Pvt Ltd can be introduced in its current operations successfully.

Information processing systems of TECH Information Solutions Pvt Ltd

Information Processing System can be defined as a collection of inputs, processor, storage and outputs (Appendix 1) TECH Information Solutions Pvt Ltd is a company which is generated high amount of data daily and these data is required to convert in to information which is meaningful. (Benbasat, Zmud, 2003) Thus the fundamental benefit of any information processing system is the ability of supplying accurate and logical information after categorizing as well as processing the input data. On the other hand these IT processing systems have another advantages too, they are as follows;

- Increase Productivity
- Reduce operating Costs
- Gain Competitive Advantage
- Drive Business Transformation
- Launch Products Faster
- Improve Customer Loyalty
- Eliminate Knowledge Gaps
- Educate the Extended Enterprise
- Re-skill and Retain Employees
- Increase Job Satisfaction

TECH Information Solutions Pvt Ltd is now at its early stage of computer based information recording systems and the first step is managing daily information. Like sales related dealings and imports. So these are mainly operational information which is referred by the operational level staff & management of the organization. Thus that information is required to input daily & then the systems are able to summarize & categorize them with the usage of short term as well as long term. Because of this the company is using a system called point of sales (POS) which is mainly used to report the fundamental selling & money control facilities. This

is only a basic system that the store keepers are able to get the information about the daily sales as well as inventory replenishing. Because of that the operational level IT processing system has already been implemented in the company TECH Information Solutions Pvt Ltd.

The need of the company is the suitable IT processing system which is mainly helped to the top level management as well as middle level management for the process of their decision making. Because of that the DSS (Decision Support System) as well as the ESS (Executive Support System) can be identified as the ideal systems which are mainly concerned with the top and middle level management of the organization. (Benbasat, Zmud, 2003)

There the Decision Support Systems (DSS) can be identified as a specific computerized IT system which is mainly supported in the process of decision-making. When it comes to recognize the basic advantages of this information system, there are so many benefits such as increasing the effectiveness as well as efficiency of the decision making process, speeding up processes can be identified as a fundamental advantage of this system. And also this mainly helps to have a high control of the organization through enhancing the organizational exploration as well as discovery processes through the organizational internal resources as well as external resources. (Benbasat, Zmud, 2003) Not only that but also it may help to speed up problem solving & it may help to promote learning.

When it comes to consider about the ESS it mainly focuses on the user-friendliness and maximum interactivity of the end-user requirements. So this system can be recognized as a friendly and highly customized as well as interactive system which is highly used by the top level managers for the requirement of information as well as knowledge. When it comes to identify the advantages of the ESS there are several benefits such as increasing the efficiency, productivity and the effectiveness of the process of decision making and it is highly capable of data tracking and filtering which can be considered as an extra advantage to the top level management of the organization itself. Although these are useful to an organization, because of the high implementation cost associated with this may be a disadvantage to the medium scale companies especially like TECH Information Solutions Pvt Ltd.

Inventory Control System of TECH Information Solutions Pvt Ltd

TECH Information Solutions Pvt Ltd is now mainly facing the problems of inventory controlling as the basic POS system is not enough to supply the relevant important information to the store keepers of the company itself. Because of that the company has to be introducing a suitable inventory controlling system which is mainly help to have a better balance of the inventories in the stores with the available demand for the products of the company. There are several benefits are available to the company by having a suitable inventory controlling system itself. They are such as it may help to reduce the ordering costs as well as storage cost in the stores. A good inventory system may give a fair clue to the stock keeper about the relevant quantity to be ordered or to be stored according to the supply and the demand for the certain product of the company. It may decrease the liabilities and losses of the overstocking in the inventories of the company. Not only that but also there it can be identified some inventory mgt systems which are developed locally that can be used to the medium scale companies like TECH Information Solutions Pvt Ltd as their inventory control system, **INVcool** can be considered as a one such system that the company is able to use as their inventory control system.

Use of spread sheets in MRP

Material Request Planning) can be considered as a major activity in the company TECH Information Solutions Pvt Ltd. Thus these systems mainly provide end to end resource as well as order planning. There also it can be use spread sheets as a source of maintaining information. So these are mainly help to the line managers to make their daily decisions. Thus there is an example of spread sheet for the TECH Information Solutions Pvt Ltd.

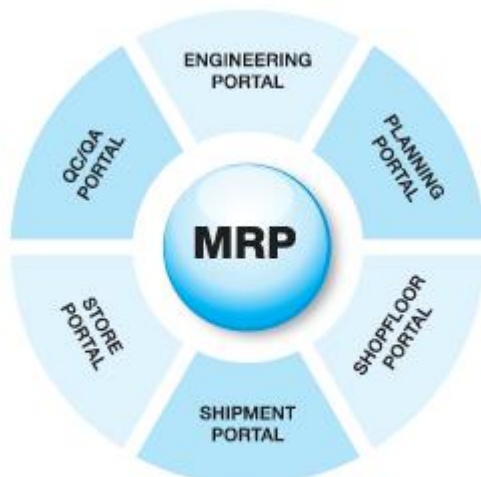


Table 1 - Material order information**TECH Information Solutions Pvt Ltd**

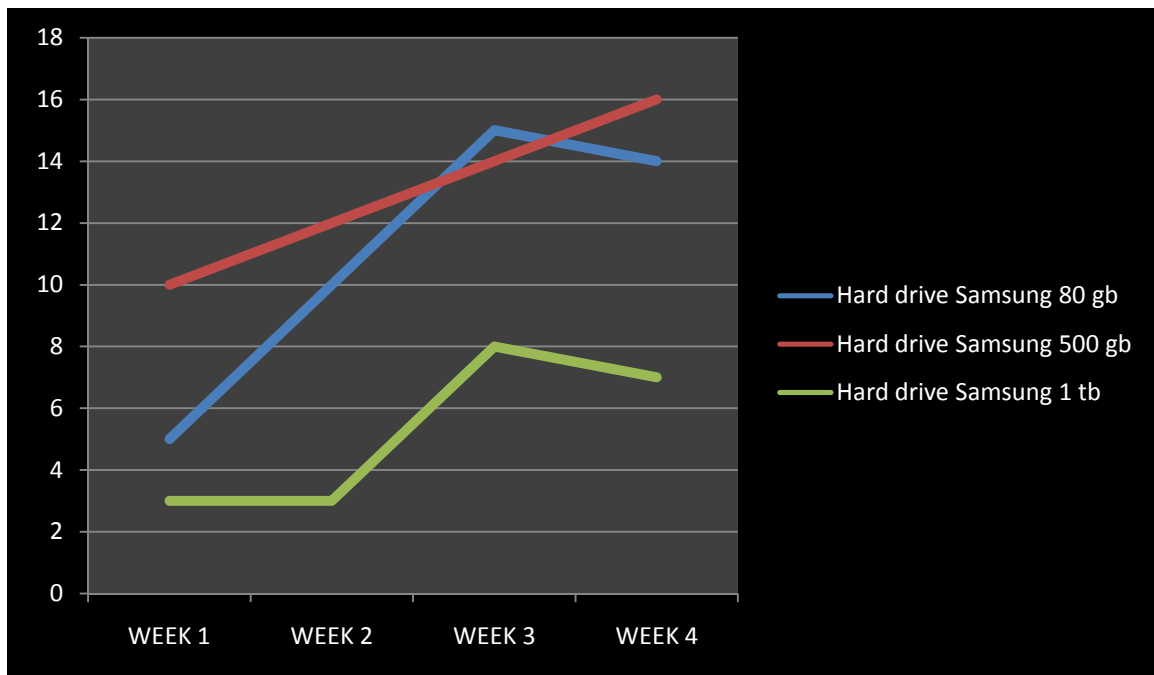
Ref #	Item	Quantity	In stock	Reorder level	Reorder Quantity
LP01	Laptops- HP	1	20	12	20
LP02	Laptops- Samsung	1	30	15	35
LP03	Laptops-Toshiba	1	14	6	20
DT01	Desktop-LG	1	35	25	40
DT02	Desktop-HP				
MBI	Mother board -Intel	1	30	23	20
MBA	Mother board -Asrock	1	20	13	15
PCI3	Processor Intel core i3	1	30	20	20
PCI5	Processor Intel core i5	1	40	25	30
PCI7	Processor Intel core i7	1	20	13	20
PDC	Processor Intel dual core	1	50	38	30
PQC	Processor Intel quad core	1	40	28	25
C01	Intel chipset	1	50	35	30
PS01	Power supply	1	50	35	30
CT1	Sound card c media	1	20	15	20
CT2	Sound card 1945D	1	20	15	20
CT3	Sound card 2435G	1	5	3	4
DR1	DVD Rom - Sony	1	25	18	25
DR2	DVD Rom - Samsung	1	25	18	25
HDS1	Hard drive Samsung 80 GB	1	50	20	22
HDS2	Hard drive Samsung 500 GB	1	35	14	20
HDS3	Hard drive Samsung 1 TB	1	15	8	10
TC01	TV card GSM	1	25	14	20
TC02	TV card KRT	1	25	14	20

TC03	TV card 289L	1	10	6	10
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Table 2 : Intel processor usage information

TECH Information Solutions					
vt Ltd					
Material order information					
Ref #	Item	Quantity	In stock	Reorder level	Reorder Quantity
HDS1	Hard drive Samsung 80 GB	1	50	20	22
HDS2	Hard drive Samsung 500 GB	1	35	14	20
HDS3	Hard drive Samsung 1 TB	1	15	8	10
Usage					
Ref #	Item	Week1	Week2	Week3	Week4
HDS1	Hard drive Samsung 80 GB	5	10	15	14
HDS2	Hard drive Samsung 500 GB	10	12	14	16
HDS3	Hard drive Samsung 1 TB	3	3	8	7

Table 3 : Intel processor usage comparison



Economic Order Quantity

EOQ model can be identified as a better inventory control technique for an organization in order to have a proper inventory system within the organization while minimizing the total holding costs as well as total ordering costs of the company. And also it may give a clue for have an adequate amount of inventory within the stores matching with the demand and the supply for a certain product of the company itself. Thus there is a calculation below for the motherboard- Intel in the company TECH Information Solutions Pvt Ltd which is coped up with the EOQ.(Appendix 02)

Product Item	Demand (D)	Cost of ordering (CO)	Cost of holding (CH)
Mother Board- Intel	60	3250	250

$$EOQ = \frac{\sqrt{2COD}}{CH}$$

$$EOQ = \frac{\sqrt{390000}}{250}$$

EOQ = 39

EOQ for Mother Board-

Intel is 39

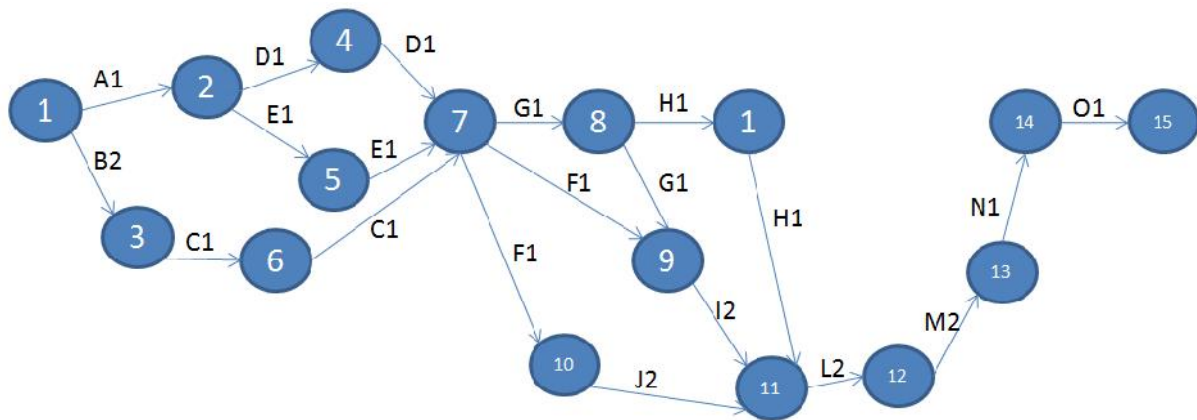
System implementation and critical path analysis

When it comes to implement a suitable stock control system for an organization it should have to be done as a separate project while ensuring the ultimate objective is achieved within the expected time period and the budgets. Thus there is a critical path analysis in below for implementing a new system in TECH Information Solutions Pvt Ltd which helps to determine the highest total duration in order to complete that project.

Table 4 : Action items to implement system

Activity	Action item	Proceeding item	Time duration (In weeks)	
1	A	Documentation of requirement	-	1
2	B	Request for vendors	-	2
3	C	Vendor presentations and screening	B	1
4	D	Operations evaluation	A	1
5	E	Financial evaluation	A	1
6	F	Vendor finalization	C, D, E	1
7	G	Legal agreement finalization	F	2
8	H	Initial payment	G	1
9	I	Requirement gathering	G, F	2
10	J	Scope of work finalization	F	2
11	K	Software installation	H, I, J	1
12	L	Data migration	K	1
13	M	Beta testing	L	3
14	N	Official launch	M	1
15	O	Final payment	N	1

Table 5 : Project Path



By analyzing the project path (above), there are many critical paths that can be identified. Following are few of them.

- | | |
|--------------------|--------------------------|
| 1. A+D+G+H+L+M+N+O | $1+1+1+1+1+2+2+1+1 = 11$ |
| 2. A+E+G+H+L+M+N+O | $1+1+1+1+2+2+1+1+1=11$ |
| 3. B+C+G+H+L+M+N+O | $2+1+1+1+1+2+2+1+1= 12$ |
| 4. B+C+F+J+L+M+N+O | $2+1+1+2+2+2+1+1= 12$ |
| 5. A+E+G+I+L+M+N+O | $1+1+1+2+2+2+1+1=11$ |

Depending on the start point there are two major paths. Out of which the paths which takes 12 weeks to complete are the critical paths. I.e. 3 and 4.

Therefore, it can be concluded that the project will take at least 12 weeks to complete.

Project financial viability

The estimated total cost of launching new stock control system in the company TECH Information Solutions Pvt Ltd is 500000 and to find out the project financial viability via the future estimated inflows of the company it can be done the test of NPV. The company is expected to generate 10% return within the coming 3 years after implementation the system.

Table 6 : NPV calculation

Year	Estimated Expenditure	Estimated revenues	Discount Factor (10%)	Present Values
0	(500000)		1	(500000)
1	0	150000	0.9091	136365
2	0	250000	0.8264	206600
3	0	350000	0.7513	262955
NPV				105920

According to the above NPV study company is able to get a return of Rs.750000 at the end of 3 years period after the investment of Rs500000 which has a positive NPV of Rs.105920. Because of that it can be recommended as a financially viable project to the company to be invested.

Internal Rate of Return

IRR can be used to rank several prospective projects a firm is considering. Assuming all other factors are equal among the various projects, the project with the highest IRR would probably be considered the best and undertaken first.

IRR is sometimes referred to as "economic rate of return (ERR).

Example

If an investment in a new system of the company TECH Information Solutions Pvt Ltd may be given by the sequence of cash flows as below;

Year (n) Cash flow (C_n)

0 -4000

1	1200
2	1410
3	1875
4	1050

Then the IRR r is given by

$$\text{NPV} = -4000 + \frac{1200}{(1+r)^1} + \frac{1410}{(1+r)^2} + \frac{1875}{(1+r)^3} + \frac{1050}{(1+r)^4} = 0.$$

In this case, the answer is 14.3%.because of that it can be concluded that it is suitable for investing in a new project system as IRR is positive.

Conclusion& Recommendation

Ultimately it can be concluded that the TECH Information Solutions Pvt Ltd should have to be practiced the above mentioned systems immediately as there are several advantages are associated with that systems in order to overcome from the requirements of information as well as inventory management of the company itself. And also according to the above calculations it is clear that the recommended systems are financially viable to the company to overcome from the stated issues immediately.

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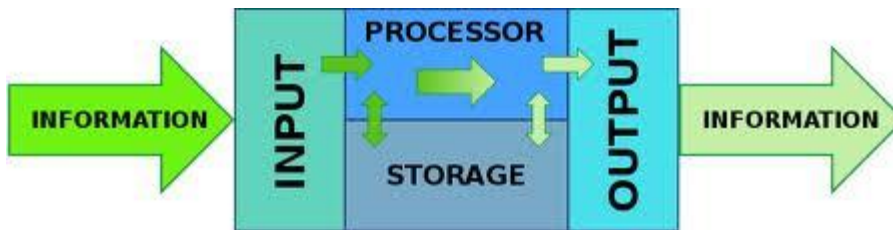
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Appendices

Appendix 01



Appendix 02

