PROJECT MANAGEMENT INFORMATION SYSTEM AT CV. TILOE PUTRA PERKASA

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ABSTRACT

CV. TILOE PUTRA PERKASA is a company engaged in construction services. In the project implementation is sometimes delayed. The cause of the delay caused by several things the ignore of the risks that could have a negative impact on project implementation. Scheduling is done by the project manager does not show specifically the relationship between jobs. Controlling costs and time do they compare between actual costs and plan costs only.

Based on the problems described above, the need for a development system in the planning and supervision of the project. The method used is Probability Impact Matrix (PIM), to analyze the probability of the emergence of risks and their impact on the job. Methods Precedence Diagramming Method (PDM), for planning and scheduling of the project by showing the relationship between activities. Methods Earned Value Management (EVM), for monitoring the project to fit the plan. Method Time Cost Trade Off (TCTO) for the acceleration of project management .

This research resulted in the project management information system that can help project managers manage risk, manage scheduling, assist in the calculation of time and cost of the project and makes for evaluating the progress of the project can then help the project manager to implement control project.

Keywords : project management, probability impact matrix, precedence diagramming method, earned value management, time cost trade off.

1. INTRODUCTION

CV. TILOE PUTRA PERKASA is a company engaged in general trading and construction services include the areas of development, the developer, planning, construction as well as its facilities.

Based on the interview with Mr. Budiman, Director of the company CV. TILOE PUTRA PERKASA, stating that the project is done sometimes experienced workmanship that can not be solved by a predetermined time. Delays in the project caused by several things including the neglect of the risks that could have a negative impact on the implementation of the project and there are no records and there is no solution to handle. The risk of such obstacles in the field are difficult to predict as the weather and soil conditions are unpredictable. Then the material delays, project equipment damage, material price increases and the influence of the surrounding environment, both parties concerned with the project as well as outside the scope of the project on the sustainability of the project as well as other risks. Then the scheduling performed by the project manager does not show specifically the relationship between work, making it difficult to know the impact caused by the delay of a job on the overall project schedule and lead project managers find it difficult to implement control project so that the budget was in excess of that should be spent. Then control the cost and time do they compare between actual costs and plan costs without comparing progress or achievement of the work already done, this causes the work status is not known which one was settled 100% which are not, so the impact of budget spent not Working in accordance with, as well as the processing time will increase. If the addition of a project carried out by the contractor will be liable to fines on each day of delay in execution or completion of the work specified in the project contract. As a result, the contractor will suffer financial losses and affects the credibility of the contractor terhadapa of service users. In addition, the company name to no good in the eyes of the local community, especially the owner of the project, due to the government project is a project that uses funds from the budget (Budget Revenue and Expenditure). Things so that leads to delays in construction projects undertaken by the CV. TILOE PUTRA PERKASA. Based on the problems described above, the required project management that exposes the efforts to further optimize the time and cost of starting from the initial phase until the completion of the project presented in a project management information systems with the application of the concept of a method that can increase effectiveness in controlling the implementation of a project. Here are some of the methods that is able to meet these objectives include Probability Impact Matrix (PIM), the method used to analyze the probability of the emergence of risks and their impact on a job by weighting the risks that

arise[2]. Methods Precedence Diagramming Method (PDM) for the planning and scheduling of the project by showing anar relations activities. PDM technique used graphical representation by means of arrows diagram, boxes as well as the basic rules of logic dependence in the collating sequence of activities in a project [3]. Methods Earned Value Method (EVM) is used to facilitate the supervision of the project, this method can provide information about the position of project progress and can estimate the progress of the project in the next period in both time and costs [4]. Then methods Time Cost Trade Off (TCTO) used for the acceleration of project management. This method is used to analyze the extent or duration of the work schedule can be accelerated economically [5]. Thus it made a "Project Management Information System at CV. TILOE PUTRA PERKASA ". Hopefully with this information system is expected every project undertaken by CV. TILOE PUTRA PERKASA be completed on time.

2. RESEARCH CONTENTS

2.1 Analysis Project Planning

Analysis contains time management project planning and risk management on parking place Pengaspalan Tempat Parkir Project carried out by CV. TILOE PUTRA PERKASA. In this respect to risk management undertaken is divided into two stages: Risk Identification and Risk Analysis. For the identification of risk by means of interviews to the company, then for risk analysis using Probability Impact Matrix (PIM). As for time management method Predence Diagramming Method (PDM).

2.1.1 Risk Management Project

The risk management process has several stages of identifying risks, determining the value of the probability and impact of risk as well as the handling of these risks.

2.1.1.1 Risk Identification

Risk management process begins with the identification of risks that aims to identify and make a list of possible risks. This event identification process carried out by the approach of discussions and interviews with the company.

Table 1. Variable Project Risks

No	Risk	Risk Code
1	Specifications incomplete picture	R1
2	Changes specifications	R2
3	Design flaw	R3
4	Not suitable SOP	R4
5	Deficiency human resources	R5

2.1.1.2 Determining Probability and Impact

Having identified all the risks that might occur in Pengaspalan Tempat Parkir Project, further identification of the probability of risk occurrence and the impact that may be caused if the risk occurs, so it will be the level of importance of each risk. Assessment carried out by the project managers by providing value scale uses a matrix of boston (Boston Square Matrix), can be seen in figure 1.

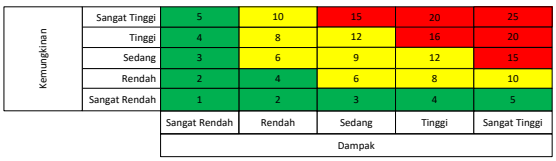


Figure 1. *Boston Square Matrix*

Boston matrix based on the assessment of any risk opportunity and the impact made on the scale is from 1 to 25 as described in Table 2.

Table 2. Risk Level

No	Scale	Risk Level
1	1 – 5	Low
2	6 – 14	Moderate
3	15 – 25	High

Criteria for assessment of the impact (impact factor) and measurement chance (probability) in accordance with Australian / New Zealand Standard Risk Management [1] are shown in Table 3 and 4.

Table 3. Risk Impact Parameter

Rating	Value	Impact
Very Low (*slight*)	1	No significant impact is felt, the financial loss does not mean
Low (*minor*)	2	Need direct handling in place, the financial losses into the cost of additional expenditure (over head)
Moderate (*significant*)	3	Need to be addressed by implementing, significant financial loss
High (*severe*)	4	A delay in the planned schedule.
Very High (*mayor*)	5	Need handling by the director, a huge loss, need special handling

Table 4. Probability Parameter

Rating	Value	Probability
Very Low (*very unlikely*)	1	Rarely, only on certain conditions
Low (*unlikely*)	2	Sometimes occurs in certain conditions
Moderate (*possible)*	3	Can occur in certain circumstances
High (*likely*)	4	Occurs under certain conditions
Very High (*very likely*)	5	Often occurs in certain conditions

The value of the probability and impact of risk resulting in project implementation Pengaspalan

Tempat Parkir by Table 3 and Table 4 can be seen in Table 5.

Table 5. Possible Value and Impact of Risk

Risk	Risk Code	Probability	Impact
Specifications pictures incomplete	R1	2	2
Changes specifications	R2	4	4
Design flaw	R3	2	2
Not suitable SOP	R4	2	3

2.1.1.3 Specifies Interest Rate Risk

After determining the value of probability and risk impact, then calculating the interest rate risk using the Probability and Impact Matrix. The level of interest risk is calculated using the formula Risk Exposure.

*Risk Exposure = probability (outcome) * Loss (outcome)*

a. *Risk Exposure* = Importance Risk
b. *Probability* (*outcome*) = Probability Risk Value
c. *Loss (outcome)* = Value Impact Generated

Here are the results of calculation of interest rate risk can be seen in table 6.

Table 6. Importance Of Risk

Risk Code	Probability	Impact	Level Risk Interests
R1	2	2	4
R2	4	4	16
R3	2	2	4
R4	2	3	6
R5	4	4	16

Based on the results of the calculation of the interest rate risk of the above grouped by risk category Boston Square Matrix in Figure 1 following categories of risk level in table 7.

Table 7. Category Level Risk

Risk	Risk Kode	Importance	Level Risk
specifications pictures incomplete	R1	4	Low
Change specification	R2	16	High
Design flaw	R3	4	Low
Not suitable SOP	R4	6	
Deficiency of SDM	R5	16	

Based on the results of the determination of the risk level in table 7, was found two risk at low levels, namely R1 and R3. Then one risk level was that R4. As well as two high-level risks that R2 and R5. Thus the risk of R2 and R5 should immediately get the attention because it will have a major impact on the project continuity.

2.1.2 Project Time Management

Time management is the management of activities and the work required to complete the Project Pengaspalan Tempat Parkir in the order as well as the specific time frame, where each activity should be carried out so that the project is completed on time.

2.1.2.1 *Precedence Diagramming Method (PDM)*

Precedence Diagramming method (PDM) is one of scheduling techniques are included in the planning or scheduling techniques networking networks plan focused activities PDM node that is also called activity on nonde (AON). Pengaspalan Tempat Parkir project activity data below parking lots can be seen in table 8.

Table 8. Project Activities

Job Description	Activity Code	Introduction	Duration (Day)	Period (Week)
Work Preparation	I	-	7	1
Work. asphalting Parking lot	II	I	28	2 – 5
Work. TPT Pas. River stone	III	I	14	2 – 3
Work. Channel Gravel him. 20	IV	II,III	28	6 – 9
Work. Finishing and Settlement	V	IV	7	10

Based on a series of activities in the project Pengaspalan Tempat Parkir in table 8, depicted in the form of network planning diagram using AON medel generated as figure 2.

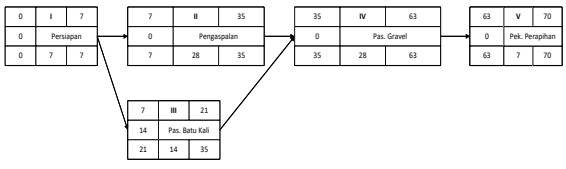


Figure 2. Network Planning PDM

Calculations to determine the time of completion in the PDM method consists of two phases, namely a forward direction (forward pass) and perhitungn backward direction (backward pass). Here's an explanation of the stages :

1. Forward pass on node.

   Activity I.1
   $EF_I = ES_I + d_I$
   $= 0 + 7 = 7$

2. Backward pass on node

   $LSI = LFI - dI$
   $= 7 - 7 = 0$

Based on the above calculation can be seen the value of the ES, EF, SL, LS and LF, the final result of all the work activities on the project Pengaspalan Tempat Parkir can be seen in Table 9.

Table 9. Percapitulation Calculation PDM

Code	Duration	ES	EF	SL	LS	LF
I	7	0	7	0	0	7
II	28	7	35	0	7	35
III	14	7	21	14	21	35
IV	28	35	63	0	35	63
V	7	63	70	0	63	70

According to the table recapitulation of the above, then the conclusion is kegitan III has slack or maximum processing time is 14 days, while the slack for the work I, II, IV, V is 0 (zero), then the fourth work is included in the critical path (Critical Path) which meaning that the job should not be too late. Critical path can be seen in figure 3

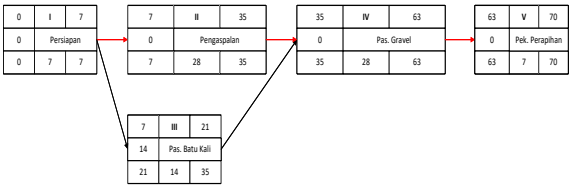


Figure 3. Critical Path PDM

From Figure 3 it can be concluded that the path I, II, IV, V is the critical path, then work through these pathways should not be any delay

2.2 Analysis Project Control

Analysis pengndalian project contains analysis of budget evaluation Pengaspalan Tempat Parkir projects undertaken by the parking place CV. TILOE PUTRA PERKASA. In this case the evaluation analysis project using Earned Value Management (EVM).

2.2.1 Analysis of Project Evaluation

Value method results or Earned Value Method, a method that can provide information about the position of the progress of the project within a certain period and can predict the progress of the project in the next period, namely in terms of costs and project completion time [3]. There are three indicators in the assessment of the results of Nili method is as:

1. BCWS (*Budgeted Cost of Work Schedule*) or *Planned Value* (PV).
2. BCWP (*Budgeted Cost of Work Performed*) or *Earned Value* (EV).
3. ACWP (*Actual Cost of Work Performed*) or *Actual Cost* (AC).

2.2.1.1 Calculation of Planned Value (PV)

PV also called Budgeted Cost of Work Schedule (BCWS) is budgeted cost for the work scheduled in a given period and is set in the budget. Obtained by multiplying the percentage of progress plans with total project budget Budget At Completion (BAC).

Calculation PV in week 1 :

BAC = Rp. 176.590.909,09
Weight PV = 1,78 %
PV = (%PV) * BAC
= 1,78 % * 176.590.909,09
= Rp. 3.140.000,00

Table 10. Calculation Analysis of PV

Week	Weight (%)	PV	
		Weeks (Rp.)	Cumulative (Rp.)
Week 1	1,78	3.140.000,00	3.140.000,00
Week 2	25,17	44.453.011,25	47.593.011,25
Week 3	25,17	44.453.011,25	92.046.022,50
Week 4	22,34	39.444.749,54	131.490.772,04
Week 5	22,34	39.444.749,54	170.935.521,58
Week 6	0,79	1.391.642,27	172.327.163,85
Week 7	0,79	1.391.642,27	173.718.806,13
Week 8	0,79	1.391.642,27	175.110.448,40
Week 9	0,79	1.391.642,27	176.502.090,67
Week 10	0,05	88.818,42	176.590.909,09

2.2.1.2 Calculation of *Earned Value* (EV)

EV also called Budgeted of Work Performed (BCWP) is the sum of the costs incurred in accordance with the work accomplished in the field. EV is derived by multiplying the percentage of progress that has been implemented with a total budget of the project Budget At Completion (BAC).

- Calculation of EV in week 1 :

BAC = Rp. 176.590.909,09
Bobot EV = 1,78 %
EV = (%EV) * BAC
= 1,78 % x 176.590.909,09
= Rp. 3.140.000,00

Table 11. Analisa Perhitungan EV

Week	Weight (%)	EV	
		Weeks (Rp.)	Cumulative (Rp.)
Week 1	1,78	3.140.000,00	3.140.000,00
Week 2	25,17	44.453.011,25	47.593.011,25
Week 3	25,17	44.453.011,25	92.046.022,50
Week 4	22,34	39.444.749,54	131.490.772,04
Week 5	13,40	23.666.849,73	155.157.621,76

2.2.1.3 Calculation Analisys of *Actual Cost* (AC)

Analysis of Actual Cost is the amount of the actual cost of the work that has been carried out. AC value obtained based on the expenses of the work that has been carried out.

Here is the Actual Cost of the project Pengaspalan Tempat Parkir can be seen in Table 12.

Table 12. Calculation Analys of AC

Week	AC	
	Weeks (Rp.)	Cumulative (Rp.)
Week 1	3.140.000,00	3.140.000,00
Week 2	44.100.000,00	47.240.000,00
Week 3	44.300.000,00	91.540.000,00
Week 4	39.400.000,00	130.940.000,00
Week 5	23.000.000,00	153.940.000,00

2.2.1.4 Calculation Analisys of Varian

Variant Analysis is done by finding the value of Cost Variance (CV) and the Schedule Variance (SV). CV calculation derived from EV reduced AC, was obtained from the SV EV reduced PV.

- Calculation of CV in week 1 :

EV = Rp. 3.140.000,00
AC = Rp. 3.140.000,00
CV = EV – AC
= Rp. 3.140.000,00 - Rp. 3.140.000,00
= Rp. 0

Table 13. Calculation Analisys of CV

Week	EV	AC	CV = EV – AC
Week 1	3.140.000,00	3.140.000,00	0,00
Week 2	47.593.011,25	47.240.000,00	353.011,25
Week 3	92.046.022,50	91.540.000,00	506.022,50
Week 4	131.490.772,04	130.940.000,00	550.772,04
Week 5	155.157.621,76	153.940.000,00	1.217.621,76

Based on the above table 13, the obtained value CV = 0 in the period from week 1, it means spending the same as the cost of the plan and the CV> 0 in the period from week 2 to week 5 is positive, it shows that the work completed at a cost lower than planned.

- Calculation of SV in week 1 :

EV = Rp. 3.140.000,00
PV = Rp. 3.140.000,00
SV = EV – PV
= Rp. 3.140.000,00 - Rp. 3.140.000,00
= 0

Tabel 14. Calculation of SV Analisys

Week	EV	PV	SV = EV – PV
Week 1	3.140.000,00	3.140.000,00	0,00
Week 2	47.593.011,25	47.593.011,25	0,00
Week 3	92.046.022,50	92.046.022,50	0,00
Week 4	131.490.772,04	131.490.772,04	0,00
Week 5	155.157.621,76	170.935.521,58	-15.777.899,82

Based on table 14, got value SV = 0 at week 1 through week 4, meaning that the project work in accordance with a predetermined schedule. Then the obtained value SV <0 at week 5 and is negative, indicating that the project work is being done more slowly than planned.

2.2.1.5 Calculation Analisys of Performance Index

Analysis of the performance index is done by finding the value of the Schedule Performance Index (SPI) and the Cost Performance Index (CPI). SPI calculation derived from a comparison between EV with PV, while the CPI is derived from the ratio of the EV to the AC.

- Calculation SPI in week 1 :

EV = Rp. 3.140.000,00
PV = Rp. 3.140.000,00
SV = EV /PV
= Rp. 3.140.000,00 / Rp. 3.140.000,00
= 1,00

For the calculation of the SPI next week can be seen in Table 15.

Table 15. Calculation Analisys of SPI

Week	EV	PV	SPI = EV/PV
Week 1	3.140.000,00	3.140.000,00	1,00
Week 2	47.593.011,25	47.593.011,25	1,00
Week 3	92.046.022,50	92.046.022,50	1,00
Week 4	131.490.772,04	131.490.772,04	1,00
Week 5	155.157.621,76	170.935.521,58	0,91

Based on table 15, the value of SPI on week 5 is the SPI <1.0 and this shows that the project is being carried out slower than planned.

- Calculation CPI in week 1 :

EV = Rp. 3.140.000,00
AC = Rp. 3.140.000,00
CPI = EV/AC
= Rp. 3.140.000,00/ Rp. 3.140.000,00
= 1,00

Table 16. Calculation Analisys of CPI

Week	EV	AC	CPI = EV / AC
Week 1	3.140.000,00	3.140.000,00	1,00
Week 2	47.593.011,25	47.240.000,00	1,01
Week 3	92.046.022,50	91.540.000,00	1,01
Week 4	131.490.772,04	130.940.000,00	1,00
Week 5	155.157.621,76	153.940.000,00	1,01

Based on table 16, the value obtained in the calculation period weekly CPI CPI> 1.00, indicating that the job is done with a smaller cost than planned.

2.2.1.6 Calculation of Cost Estimation and Analysis Completion Time

Analysis of the cost and time estimates done by looking for cost estimation or Estimate At Completion (EAC) and the estimated duration of the project completion or Estimate To Complete (ETC).

- Calculation of EAC in week 1 :

BAC = Rp. 176.590.909,09
CPI = 1.00
EAC = BAC / CPI
= Rp. 176,590,909.09 / 1.00
= Rp 176.590.909,09

For the calculation of the EAC next week can be seen in Table 17.

Table 17. Calculation Analyisys of EAC

Week	BAC	CPI	EAC = BAC / CPI
Week 1	176.590.909,09	1,00	176.590.909,09
Week 2	176.590.909,09	1,01	175.281.082,80
Week 3	176.590.909,09	1,01	175.620.101,55
Week 4	176.590.909,09	1,00	175.851.227,26
Week 5	176.590.909,09	1,01	175.205.086,52

Calculation of ETC in week 1:

OD (*original duration*) = 70 day
SPI = 1
ETC = OD / SPI
=70/1
= 70 day

For the calculation of the ETC next week can be seen in Table 18.

Table 18. Calculation Analisys of ETC

Week	OD	SPI	ETC = OD / SPI
Week 1	70	1,00	70
Week 2	70	1,00	70
Week 3	70	1,00	70
Week 4	70	1,00	70
Week 5	70	0,91	77

Based on the analysis of variance, the performance index, and obtained estimates of the recapitulation of the analysis are shown in Table 19.

Table 19. Recapitulation Analysis Earned Value Method (EVM)

Minggu	Analisis Varian		Analisis Kinerja		Analisis Estimasi	
	Waktu SV (Rp)	Biaya CV (Rp)	Waktu SPI	Biaya CPI (Rp)	Waktu ETC (Hari)	Biaya EAC (Rp)
Minggu ke-1	0,00	0,00	1,00	1,00	70	Rp. 176.590.909,09
Minggu ke-2	0,00	353.011,25	1,00	1,01	70	Rp. 175.281.082,80
Minggu ke-3	0,00	506.022,50	1,00	1,01	70	Rp. 175.620.101,55
Minggu ke-4	0,00	550.772,04	1,00	1,00	70	Rp. 175.851.227,26
Minggu ke-5	-15.777.899,82	1.217.621,76	0,91	1,01	77	Rp. 175.205.086,52

Based on the recapitulation of the project performance using EVM in Table 19 above it was concluded that the project Pengaspalan Tempat Parkir is done behind schedule activities that have been determined. The delay is known as a value estimated completion time Estimate To Completion (ETC) is 77 days, greater than the duration of the project (OD) of 70 days. While the cost estimate is issued Rp. 175,152,611.35 less than the total budget of Budget At Completion (BAC) Rp. 176,590,909.09. So the advantages of the project time is 7 days, and the excess cost of Rp. 1,438,297.74. Then the result is what helps a project manager to make a decision what to do in order to finish the project schedule can be in accordance with a predetermined schedule.

2.2.2 Acceleration Analysis Project

Accelerate completion of the project with the optimization of time and costs in the development of Tourism Commodity Object (Pengaspalan Tempat Parkir) using Time Cost Trade Off. Acceleration time and costs are calculated based on the alternative Extra working hours centered on the work that is on the critical path.

Table 20. Critical Path

Code	Duration	ES	EF	SL	LS	LF
I	7	0	7	0	0	7
II	28	7	35	0	7	35
IV	28	35	63	0	35	63
V	7	63	70	0	63	70

Based on identification of work who are on the critical path, then the next step is the selection of the work to be accelerated. The person who is entitled to accelerate the work that is the project manager. The work to be accelerated is the work activity in the weeks after the job predecessors in the previous week delayed the work, for example in the work activity 5th week late, then that will be accelerated is the work on the 6th week. Jobs that were at week 6 is Plumbing Gravel dia.20 and sub jobs will be accelerated is Pek. Soil excavation. Here is a calculation to speed up the work using Time Cost

Trade Off (TCTO) with the addition of alternative working hours or overtime.

Example calculation of the critical work accelerated namely of work Soil excavation, is :

a. Project Budget = Rp. 176.590.909,09
b. Work Time Project = 70 day
c. Work Volume = 5,40 m3
d. Normal Cost = Rp. 237.707
e. Normal Duration = 28 day
f. Normal Duration (hour)= 28 x 8 hour
= 224 hour
g. Productivity Normal Hours = c/e
= 0,024 m3/hour
h. Maximum Crashing = 25,281 day
= 25 day
i. So, maximum crashing = 28 – 25 = 3
j. Crash Duration = 28 – 3 = 25
k. Crash Duration (hour) = 25 x 8 hour
= 200 hour
l. Hours Accelerated Productivity = 0,027 m2/hour

For additional overtime will be done during the two days, the calculation is :

Additional Overtime = 1 hour/day x 2 day
= 2 hour

Overtime costs per hour (people who do Work Excavation Land) :

a. Mandor = (Rp. 104.200 x 1,5) = Rp. 156.300
b. Pekerja = (Rp. 88.000 x 1,5) = Rp. 132.000

Upah Lembur :

a. Mandor = (1 day x 1 hour x Rp. 156.300)
= Rp. 156.300
b. Pekerja = (2 day x 2 hour x Rp. 132.000)
= Rp. 528.000

Wages Overtime = Rp. 156.300 + Rp. 528.000
= Rp. 684.300

So slope or additional costs for overtime work and the duration of the process is as :

Ri = Slope Biaya = Rp. 228.100

Slope cost after crashing = Slope biaya * Maximum crashing
= Rp. 228.100 x 3
= Rp. 684.300

Normal Cost = Rp. 237.707

Cost Crashing = Normal Cost + Cost Slope After Crashing
= Rp. 237.707 + Rp. 684.300
= Rp. 922.007

Inference :

Recapitulation of project performance using EVM in Table 19 above it was concluded that the project Pengaspalan Tempat Parkir is done behind schedule activities that have been determined. The delay is known as a value estimated completion time Estimate To Completion (ETC) is 77 days, greater than the duration of the project (OD) of 70 days. While the cost estimate is issued Rp. 175,152,611.35 less than the total budget of Budget At Completion (BAC) Rp. 176,590,909.09. So the advantages of the project time is 7 days, and the excess cost of Rp. 1,438,297.74.

After acceleration by calculating one job that is brought forward, the job Pek. Gravel channel sub dia.20 his job Pek. Soil excavation, the obtained Estimate To Complete (ETC) project that is at the age of 67 working days, with a total project cost of :

Project Normal Cost + Cost Crashing =
Rp. 176.590.909,09 + Rp. 922.007 =
Rp. 177.512.916,09

So, excess costs is :

Cost Crashing - BAC = Rp. 177.512.916,09 - Rp.176.590.909,09 = Rp. 922.007

This means that Pengaspalan Tempat Parkir project done by CV. TILOE PUTRA PERKASA suffered losses in terms of cost is the excess of **Rp. 922 007** and a benefit in terms of the time that the project can be done within **67 days**.

3. CLOSING

3.1 Inference

Based on the results obtained in this thesis, it can be concluded as:

1. Information systems project management that can be run in accordance with its objectives, namely to help the project manager in identifying the risks that are likely to negatively affect project implementation..
2. Information systems project management that can assist project managers in scheduling by analyzing critical work on the project to find a job that can be accelerated.
3. Construction project management information system in CV. TILOE PUTRA PERKASA can help project managers in the calculation of time and cost of the project and facilitate project managers in evaluating the progress of the project on time and cost, so the project manager can be anticipated in the event of project delays.
4. The project management information system can help project managers to implement control in the form of project acceleration with the addition of alternative working hours or overtime.

3.2 Suggestion

1. The need for additional calculation of costs for employee wages.
2. Need for system processing resources the human form of attendance.
3. It needs a quantitative risk calculation and the effect on time and cost project.

4. Before the addition of alternative acceleration control project

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