

SLH Property Management : Web Based Portals Project

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> ETM 545/645 – Project Management Professor: Dr. Richard Sperry Spring 2015 Portland State University

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Property Management - Web Based Applications

1.0 Purpose

The purpose of the project is to develop a web application for the company. Since our company operates in a mature, competitive industry, customer retention through excellent customer service is a necessity. To improve customer service, company should provide online services to client by creating a new website. The proposed web application would double revenues in three years.

2.0 Objective

The objectives of the project is to create web based tools to aid in property management as follows.

- Establishing improved web based service for tenants and condo owners
- Increasing company revenue by increasing number of units managed
- · Improve operating efficiency by using web based applications

The project duration is 4 months and has a total budget of \$214,600.

3.0 Overview

SLH Property Management Company is a small property management company focusing on west coast condo property management. There is a strong growth trend to premium downtown condo and apartment living. Premium condo and apartment living offers high quality living spaces in highly desireable city districts. These districts typically offer great restaurants, grocery stores, entertainment, transportation and central city living. Freeing up time from maintenance required for a home also adds to the value of condo living. SLH has been in business since 2003 managing properties for condo owners and assisting prospective condo owners in their investment decisions. SLH has offices in San Francisco, Portland and Seattle, with headquarters in Portland OR. SLH has 37 employees with annual revenue of \$4.989M and a ROS of 5%.

SLH has had slow and continuous growth since 2009. Senior management has decided to set a goal to increase ROS from 5 % to 10% through efficiency gains by implementing improved web based applications. The company is functionally structured, and has assigned the facilities manager out of the Portland office to manage the project. The increase in ROS is to be primarily

realized by doubling the number of customers in 3 years and with improved software only need to increase personnel by 50%.

4.0 Scope

The project includes development of the current company home web page and adding 3 new web based portals 1) New Tenant Portal, 2) Existing Tenant Portal 3) Landlord/Commercial Client Portal. and upgrading the homepage. Software development for these deliverables will be created by contract computer software company Veralgo Tech LLC. Requirements of the new portals and home page are to be provided by SLH. No other upgrades to the website are included. This project does not include any new computer hardware or computer hardware improvements.

5.0 Schedule

5.1 Overall - The project planned start is Monday August 3rd, 2015 with a project kick-off meeting. The project duration is 85 business days with completion on Monday November 30th, 2015. There are 4 independent deliverables, SLH homepage upgrades, Tenant Portal, New Tenant Portal, Landlord Portal. The development of the four portal deliverables are independent of each other. If one portal timing slips, the other portals can still be delivered on time. Once the project is approved, there are two review and approval activities to ensure the deliverable are tracking as planned and the deliverables are developing as planned.

5.2 - Duration - Each activity duration estimate (TE) was calculated using the formula TE=(a+4m+b)/6 where m=most likely duration, a= optimistic duration (1% chance of achieving this duration), b=pessimistic duration (99% chance that project will be completed in this duration). The a, m, and b estimates for each activity were sourced from the activity experts. A variance and standard deviation was calculated for each task. This was all rolled-up for a project variance of 40.11 days, and a standard deviation of 6.33 days. There is 90.49 % probability of completing the project with the most likely duration of the critical path 85 day duration. See appendix I for detailed duration calculation with probability.

5.3 - Total, Critical and Slack Time - An AON and gantt chart was created as shown in appendix D and H respectively. The TE duration was entered in the gantt chart to establish the project duration of 80 working days. Both the AON and the gantt chart are effective tools to identify slack time and the critical path. With the four deliverable being independent of each other and

having the same type of activities and activity duration, each of the 4 deliverables are a critical path. The four deliverables, being independent, do not affect each other in terms of timing, and hence if one deliverable slips in duration, the remaining deliverables can still meet the planned schedules. With no slack time there is higher risk that the schedule will slip. Countering this is that for the most part each of the individuals responsible for the activity generally have slack when working on an activity. Per the resource load table in appendix J, there are three exceptions to this, the project manager has a number of weeks with no slack time, the in-house IT have four weeks with no slack time. The weeks with no slack time have been identified in the risk section 10.4, and a mitigation plan established.

6.0 Resources

Project personnel will be drawn from the existing staff except for the software developing activities. The software development activities will be carried out by XYZ software. XYZ has been used by SLH in the past with very successful results. The lack of slack time identified above in the schedule section has been addressed by ensuring additional resources from Veralgo Tech LLC are available if needed, see risk mitigation section 10.4. A total of 856 in-house hours costing \$78,400 and 1816 contract hours costing \$136,200 for a total project cost of \$214,600. No other expenses or capital is required.

7.0 Personnel

The below mentioned personnel are required to complete the project.

- 1. Project Manager Jim Fletcher
- 2. Real Estate Agent Josip Biscan
- 3. IT Admin Eric Raventos
- 4. Sales Agent Dario Daic
- 5. Financial Planner Peter Cooper
- 6. Four Software Developers

Except software developers, others are already part of the organisation. Thus, they know about the company and do not need any special training for doing the project. Four software developers, John Philip, Mike Breen, Derek Haynes and Eric Handerson come from IT staff partner Veralgo Tech LLC. These software developers are trained about the company by Josip Biscan, Eric Raventos and Dario Daic in first two weeks into the project during which they have some slack time.

8.0 Finances

SLH Property Management Company indicated annual revenue \$4,989,600 in 2014. The largest section of the revenue was monthly leasing as seventy percentages. Lease Renewal as the second largest section showed twelve percentages. And there are minor sources of revenue such as Property Renovation, New Property, and Investment Consulting. At the same year, expense was ninety-five percentages of revenue. It means that rate on sales was five percentages. In projected three years, the company will be expected to double revenue and increase return on sales to ten percentage. For the success of this project, project budget will use \$216K and this cost will recover in 1.5 to 2 years.

9.0 Risk Management

We have identified four risks associated with the project. They are listed below along with their mitigation strategies.

9.1 Compatibility Issue - The website creation involves selection of technology, framework, and tools. Thus, there is a possibility of some compatibility issue arising because of different components involved. It can mitigated by carefully selecting technology and other software tools by discussing properly before starting the project. Backup plans should be developed by software developers for any predictable compatibility issues.

9.2 Coding Issue - Software application is prone to contain bugs. Resolving these bugs can delay the project in some cases. Thus, experienced software programmers are hired from staffing partner. Arrangements are made to use additional resources from them in case of any delay caused by software bugs. Also project is planned in such a way that other deliverables would go live even if one of deliverables is getting delayed because of some bugs.

9.3 Quality concerns - Quality of web application developed by software developers may not be upto the expectations. It can be mitigated by checking functionalities, and content etc at approval gates set in the project schedule.

9.4 Personnel risk - Team member in certain weeks have 100% utilization planned for them. For example Project manager in week 1, and software developers in week 8-12 and 13-17. Necessary arrangements should be made within the company, and also agreement should be made with partner to supply resources in case of any difficulty arising from this risk.

Risks	Severity	Probability	Delay
Software			
Compatibility Issue	High	Medium	4
Coding issue	High	High	3
Quality concerns	Medium	Medium	3
Personnel	Medium	Low	2

The above table indicate severity of the project, probability, potential delay due to each risk.

10.0 Evaluation

Project manager will monitor the progress of this project in terms of schedule, cost and scope per week. Earned value analysis is implemented by Appendix K assuming conservative the 50-50 rule for activities. This is a good tool to evaluate the gap between the planned and actual progress of the project. Especially, appendix N is useful for monitoring and controlling of cost and

progress as well as upper and lower limits for the critical ratio, which is (actual progress/ scheduled progress)*(budgeted cost/actual cost) because of visual feature. Also, it is necessary for managers to check the milestones for the progress and on-time completion of project.

As mentioned above, using periodically reasonable criteria (appendix) to monitor and control project progress is an effective mean but sometimes considering expert judgment or facilitation techniques (brainstorming, problem solving, conflict resolution, meeting management) also is helpful as evaluation methods. This project of developing software tools is terminated when final releases including software documentation are completed after all tests since this project has a definitive start and end. Successful completion of establishing network service and better relationships for key customers will lead to increase revenue. Checklist for project termination is recorded in Appendix O. This project is managed independently but the type of project termination could be a termination by integration because this project is able to come into business of information systems.

Appendix

A - Work Breakdown Structure

Deliverable	Task	Duration (days)	Predecessor
· · · · ·	A.1 - Gather Requirements	10	
i monte	A.2 - Develop Homepage Workflow & Layout	5	A.1
A. Homepage -	A.3 - Prepare Content	10	A.2
Homepage.	A.4 - Develop Back-up Strategy	5	A.3
About Us,	A.5 - Working Direction Review & Approval	5	A.4
Contact	A.6 - Write Code	15	A.5
Information,	B-7-A.7 - Develop & Perform Test	10	A.6
MISSION	A.8 - Beta Plan Review & Approval	5	A.7
automont	A.9 - Beta Test	10	A.8
	A.10 - Final Release	10	A.9
	B.1 - Gather Regluirements	10	
	B.2 - Develop Tenant/Landlord Portal Workflow & User Interfac	5	B.1
	B.3 - Develop User Database	10	B.2
S. Service and	B.4 - Develop Back-up Strategy	5	B.3
B. Tenant Porta	B.5 - Working Direction Approval	5	B.4
- For Existing	B.6 - Write Code	15	B.5
Tenunta	B.7 - Develop & Perform Test	10	B.6
	B.8 - Beta Plan Approval	5	B.7
	B.9 - Beta Test	10	B.8
	B.10 - Final Release Including Software Documentation	10	B.9
	C.1 - Gather Regiuirements	10	
	C.2 - Develop New Tenant Portal Workflow & User Interface	5	Ċ.1
	C.3 - Develop User Database	10	C.2
	C.4 - Develop Back-up Strategy	5	C.3
C. Potential	C.5 - Working Direction Approval	5	C.4
Page	C.6 - Write Code	15	Ć.5
, ago	C.7 - Develop & Perform Test	10	C.5
	C.8 - Beta Plan Approval	5	C.7
	C.9 - Beta Test	10	C.8
	C.10 - Final Release Including Software Documentation	10	C.9
	D.1 - Gather Requirements	10	
	D.2 - Develop Landlord/Prop Mgmnt Portal Workflow	5	D.1
	D.3 - Develop User Database	10	D.2
D. Application	D.4 - Develop Back-up Strategy	5	D.3
to manage	D.5 - Working Direction Approval	5	D.4
information for	D.6 - Write Code	15	D.5
landlord	D.7 - Develop & Perform Test	10	D.6
	D.8 - Beta Plan Approval	5	D,7
	D.9 - Beta Test	10	D.8
	D.10 - Final Release Including Software Ducumentation	10	D.9



B - RACI Matrix

	wes	Responsibility													
- References	Tute	Gregory Minnager	Real Estate Agentis	Adress IT	Sales Agent	Figancial	Saffware Developer1	Settleam Developer/2	Software University of S	Settware Developers					
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	A.Z - Deverse Homopage Virghhow & Layout	A			64		16.41		-						
A monthly	A.3 - Pretawa Content		0.4	A	Pis20	2.4	64								
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-karmelajo, Alexa	AS-Warking Directors Weiver & Auconver	1114-23	C-8	IG-6	G-8	11.8	fi d		-						
Us. Contain	A B - Write Code	A		15-20			B-120								
EVOLUTION OF	BY A.7 - Devotes & Pariston Dat	A		15.25			H-80.								
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	A tQ + Fitta Rateman	A.		0-0			840								
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	B.1 - Deverop Line Haladara	N	6-4	1	204			10.20							
10	5.4 - Deverse Back-co Stratigy	-A.		C-8		1		fi.16							
0. Teram Furla	E.S Working Unerfold Approval	9(4-20	供用	6-8	G.E	Rife		9.8							
Terrate	B.G. Write Cede	6		040				#6128							
	B 7 - Devana & Partom Taxt	Ĥ.		C-00				R-#0							
	Bid+Bath Flat Applicati	RiA+12	-D48	L'6	15-8	-R-12		8-12							
	11 Il - Montin Tarul	- 4						H-80							
	5.12 - Frai Reveal Induding Software Documentation	0		6-0		ń.	-	H-BJ							
	C: 1 + Certrer Rag unemore	16-20	6.4	1	54										
	C.2 - Develop New Terrani Portal Wowlide & User Infamilies	A	64	1	54			H-40							
	C 3 - Develop Liter Deludiens	A	64		C-4					PG-20					
	C.4 - Deverup Berry an Shittopy	A.		6.8					19-7E						
C. Potential New	C 5 - Working Direction Approval	RiA-20	6-8	C-8	5.8	4.6			H-8						
Tenand Huge	C.a. Write Colla	ń		10-M					81420						
	C.7 - Devana & Parlotn Text	. A		12/46					8.8						
	C.4 - Bata Plat Agentya	RW-12	CHE	C-8	Cill	- 护理			8-12						
	C18+Bats Tier	A				1			18-80						
	C 10 - Final Reliase trobuling Software Documentation			E-8		*	1	-	16-60						
	D.1. Dotter Requirements	H-20	C-4	1	5.4										
	512 - Develop Lancord/Prod Myrmi Purlar Weiteles-	A	64		5.4		1		8.40						
	D 3 - Deseyup User Genaluses	A	D-4		D-4				8-22						
-	D.4 - Develop Back-up Dryllego	A		6.8		1				Ft-718					
Version.	D.S.+ Working Direction Additional	RDA-30	Cell	E-8	64	9.6				44-LL					
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and roll	D.7 - Essence & Percent Taxi	A		0.25						640					
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C - Position of project relative to the organization



D - Gantt Chart

Task Name 👻	Duration	*	Start 🔶	Finish 🔶	August 1 September 1 October 1 November 1 8/2 8/16 8/30 9/13 9/27 10/11 10/25 11/8 11/2
A. Homepage - Includes Homepage, About Us, Contact Information, Mission statement	85 days?	1	Mon 8/3/15	Fri 11/27/15	
A 1 - Gather Requirements	10 days?		Mon 8/3/15	Fri 8/14/15	
A.2 - Develop Homepage Workflow & Layout	5 days?	1	Mon 8/17/15	Fri 8/21/15	
A.3 - Prepare Content	10 days?	1	Mon 8/24/15	Fri 9/4/15	
A.4 - Develop Back-up Strategy	5 days?	1	Mon 9/7/15	Fri 9/11/15	
A.5 - Working Direction Review & Approval	5 days?		Mon 9/14/15	Fri 9/18/15	1
A.6 - Write Code	15 days?	1	Mon 9/21/15	Fri 10/9/15	
A.7 - Develop & Perform Test	10 days?		Mon 10/12/15	Fri 10/23/15	1
A.8 - Beta Plan Review & Approval	5 days?		Mon 10/26/15	Fri 10/30/15	D
A.9 - Beta Test	10 days?		Mon 11/2/15	Fri 11/13/15	
A.10 - Final Release , Including Software Documentation	10 days?	1	Mon 11/16/15	Fri 11/27/15	
B. Tenant Portal - For Existing Tenants	85 days?	1	Mon 8/3/15	Fri 11/27/15	
B.1 - Gather Requirements	10 days?		Mon 8/3/15	Fri 8/14/15	
B.2 - Develop Tenant/Landlord Portal Workflow & User Interface	5 days?		Mon 8/17/15	Fri 8/21/15	
B.3 - Develop User Database	10 days?	Ĩ.	Mon 8/24/15	Fri 9/4/15	
B.4 - Develop Back-up Strategy	5 days?	1	Mon 9/7/15	Fri 9/11/15	b
B.5 - Working Direction Review & Approval	5 days?		Mon 9/14/15	Fri 9/18/15	
B.6 - Write Code	15 days?	1.1	Mon 9/21/15	Fri 10/9/15	1
B.7 - Develop & Perform Test	10 days?		Mon 10/12/15	Fri 10/23/15	
B.8 - Beta Plan Review & Approval	5 days		Mon 10/26/15	Fri 10/30/15	D
B.9 - Beta Test	10 days?		Mon 11/2/15	Fri 11/13/15	
B.10 - Final Release Including Software Documentation	10 days?	1	Mon 11/16/15	Fri 11/27/15	

Task Name 👻	Duration 👻	Start 🔶	Finish	August 1 8/2 8/16	September 1 8/30 9/13	October 1 9/27 10/11	November 1 De
- C. Potential New Tenant Page	85 days?	Mon 8/3/15	Fri 11/.	ip.		Lot Land Contract Lot of	
C.1 - Gather Regiuirements	10 days?	Mon 8/3/15	Fri 8/14	(C)			
C.2 - Develop New Tenant Portal Workflow & User Interface	5 days?	Mon 8/17/15	Fri 8/2				
C.3 - Develop User Database	10 days?	Mon 8/24/15	Fri 9/4,		3		
C.4 - Develop Back-up Strategy	5 days?	Mon 9/7/15	Fri 9/1		D		
C.5 - Working Direction Review & Approval	5 days	Mon 9/14/15	Fri 9/1		to 1		
C.6 - Write Code	15 days?	Mon 9/21/15	Fri 10/				
C.7 - Develop & Perform Test	10 days?	Mon 10/12/15	Fri 10/2				1
C.8 - Beta Plan Review & Approval	5 days?	Mon 10/26/15	Fri 10/				D 1
C.9 - Beta Test	10 days?	Mon 11/2/15	Fri 11/				T
C 10 - Final Release Including Software Documentation	10 days?	Mon 11/16/15	Fri 11/.				
D. Application to manage information for landlord	85 days?	Mon 8/3/15	Fri 11/.				
D.1 - Gather Requirements	10 days?	Mon 8/3/15	Fri 8/14				
D.2 - Develop Landlord/Prop Mgmnt Portal Workflow	5 days?	Mon 8/17/15	Fri 8/2	Þ			
D.3 - Develop User Database	10 days?	Mon 8/24/15	Fri 9/4,		⊐ <u>h</u>		
D.4 - Develop Back-up Strategy	5 days?	Mon 9/7/15	Fri 9/1		ton 1		
D.5 - Working Direction Review & Approval	5 days?	Mon 9/14/15	Fri 9/1				
D.6 - Write Code	15 days?	Mon 9/21/15	Fri 10/		t	_	
D.7 - Develop & Perform Test	10 days?	Mon 10/12/15	Fri 10/				1
D.8 - Beta Plan Review & Approval	5 days?	Mon 10/26/15	Fri 10/				ία-η
D.9 - Beta Test	10 days?	Mon 11/2/15	Fri 11/				
D.10 - Final Release Including Software Ducumentation	10 days?	Mon 11/16/15	Fri 11/3	2			

E - Bottom Up Budget

	WBS	Time	Estimate	11.5		Monthly	BUDGET	
Subproject	Task	SUM	SUM	1.1	Aug	Sep	Oct	Nov
	Gather Requirements	10	\$3,600	a1	\$3,600	\$0	\$0	\$0
	Develop Homepage Workflow & Layout	5	\$3,800	a2	\$3,800	\$0	\$0	\$0
	Prepare Content	10	\$3,800	a3	\$3,800	\$0	\$0	\$0
A. Homepage -	Develop Back-up Strategy	5	\$1,800	a4	\$0	\$1,800	SO	\$0
omepage, About	Working Direction Approval	5	\$5,600	a5	50	\$5,600	\$0	\$0
Us, Contact	Write Code	15	\$10,500	a6	\$0	\$7,500	\$3,000	\$0
Information,	Develop Test	10	\$7,500	a7	\$0	\$0	\$7,500	\$0
ission statement	Beta Plan Approval	5	\$5,500	a8	\$0	\$0	\$5,500	\$0
	Beta Test	10	\$6,000	a9	\$0	\$0	\$0	\$6,000
	Final Release	10	\$6,600	a10	\$0	\$0	SO	\$6,600
	Gather Regiuirements	10	\$3,600	b1	\$3,600	\$0	SO	\$0
	Develop Tenant/Landlord Portal Workflow & User Interface	5	\$3,800	b2	\$3,800	\$0	SO	\$0
	Develop User Database	10	\$2,300	b3	\$2,300	\$0	\$0	\$0
	Develop Back-up Strategy	5	\$2,100	b4	\$0	\$2,100	SO	\$0
Tenant Portal -	Working Direction Approval	5	\$5,600	b5	\$0	\$5,600	SO	\$0
Tenants	Write Code	15	\$10,500	b6	\$0	\$7,500	\$3,000	\$0
Ton ton to	Develop & Perform Test	10	\$7,500	b7	\$0	\$0	\$7,500	\$0
	Beta Plan Approval	5	\$5,500	b8	\$0	\$0	\$5,500	\$0
	Beta Test	10	\$6,000	69	\$0	\$0	\$0	\$6,000
	Final Release Including Software Documentation	10	\$6,600	b10	\$0	\$0	SO	\$6,600
Subproject	WBS	Time SUM	Estimate SUM	4	Aug	Monthly	BUDGET	Nov
C. M. C. C. C. C.	Out a District state	10	(a.coo		¢2.000	40	F 60	
	Gather Reguirements		55.600	C1	\$3,600	\$0	50	50
12111	Design the second design of the second	6	(2,000	- 0	CO 000		50	
	Develop New Tenant Portal Workflow & User Interface	5	\$3,800	c2	\$3,800	\$0	SO	00
	Develop New Tenant Portal Workflow & User Interface Develop User Database	5 10	\$3,800	c2 c3	\$3,800 \$2,300	\$0	\$0 \$0	\$0 60
	Develop New Tenant Portal Workflow & User Interface Develop User Database Develop Back-up Strategy	5 10 5	\$3,800 \$2,300 \$1,800	c2 c3 c4	\$3,800 \$2,300 \$0	\$0 \$0 \$1,800	50 50 50	\$0 \$0
. Potential New	Develop New Tenant Portal Workflow & User Interface Develop User Database Develop Back-up Strategy Working Direction Approval	5 10 5 5	\$3,800 \$2,300 \$1,800 \$5,600	c2 c3 c4 c5	\$3,800 \$2,300 \$0 \$0	\$0 \$1,800 \$5,600	\$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0
. Potential New Tenant Page	Develop New Tenant Portal Workflow & User Interface Develop User Database Develop Back-up Strategy Working Direction Approval Write Code Develop & Berderen Teni	5 10 5 5 15	\$3,800 \$2,300 \$1,800 \$5,600 \$10,500 \$10,500	c2 c3 c4 c5 c6	\$3,800 \$2,300 \$0 \$0 \$0 \$0	\$0 \$0 \$1,800 \$5,600 \$7,500	\$0 \$0 \$0 \$3,000 \$7,500	\$0 \$0 \$0 \$0 \$0
. Potential New Tenant Page	Develop New Tenant Portal Workflow & User Interface Develop User Database Develop Back-up Strategy Working Direction Aporoval Write Code Develop & Perform Test Develop & Perform Test	5 10 5 5 15 10 5	\$3,800 \$2,300 \$1,800 \$5,600 \$10,500 \$7,500	c2 c3 c4 c5 c6 c7 c7	\$3,800 \$2,300 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$1,800 \$5,600 \$7,500 \$0 \$0	\$0 \$0 \$0 \$3,000 \$7,500 \$5,000	\$0 \$0 \$0 \$0 \$0 \$0
. Potential New Tenant Page	Develop New Tenant Portal Workflow & User Interface Develop User Database Develop Back-up Strategy Working Direction Approval Write Code Develop & Perform Test Beta Plan Approval Beta Plan Approval	5 10 5 5 15 10 5	\$3,800 \$2,300 \$1,800 \$5,600 \$10,500 \$7,500 \$5,900	c2 c3 c4 c5 c6 c7 c8 c8	\$3,800 \$2,300 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$1,800 \$5,600 \$7,500 \$0 \$0 \$0	\$0 \$0 \$0 \$3,000 \$7,500 \$5,900 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0
. Potential New Tenant Page	Develop New Tenant Portal Workflow & User Interface Develop Back-up Strategy Working Direction Approval Write Code Develop & Perform Test Beta Plan Approval Beta Test Fond Relevant Industries Software Descendation	5 10 5 5 15 10 5 10 10	\$3,800 \$2,300 \$1,800 \$5,600 \$10,500 \$7,500 \$5,900 \$6,000 \$6,000	c2 c3 c4 c5 c6 c7 c8 c9	\$3,800 \$2,300 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$1,800 \$5,600 \$7,500 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$3,000 \$7,500 \$5,900 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$6,00 \$6,00
. Potential New Tenant Page	Develop New Tenant Portal Workflow & User Interface Develop User Database Develop Back-up Strategy Working Direction Approval Write Code Develop & Perform Test Beta Plan Approval Beta Test Final Rolease Including Software Documentation Others Developments	5 10 5 5 15 10 5 10 10 10	\$3,800 \$2,300 \$1,800 \$5,600 \$10,500 \$7,500 \$5,900 \$6,000 \$6,600	c2 c3 c4 c5 c6 c7 c8 c9 c10 d1	\$3,800 \$2,300 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$1,800 \$5,600 \$7,500 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$3,000 \$7,500 \$5,900 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$6,00 \$6,60 \$6,60
: Potential New Tenant Page	Develop New Tenant Portal Workflow & User Interface Develop User Database Develop Back-up Strategy Working Direction Aporoval Write Code Develop & Perform Test Beta Test Beta Test Final Release Including Software Documentation Gather Requirements Develop Additation Meent Dedel Medidian	5 10 5 15 15 10 5 10 10 10 10 10	\$3,800 \$2,300 \$1,800 \$5,600 \$7,500 \$5,900 \$6,000 \$6,600 \$3,600 \$3,600	c2 c3 c4 c5 c6 c7 c8 c9 c10 d1 d1	\$3,800 \$2,300 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$3,600 \$3,600	\$0 \$0 \$1,800 \$5,600 \$7,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$3,000 \$7,500 \$5,900 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$6,00 \$6,60 \$0 \$0 \$0
. Potential New Tenant Page	Develop New Tenant Portal Workflow & User Interface Develop User Database Develop Back-up Strategy Working Direction Approval Write Code Develop & Perform Test Beta Plan Approval Beta Test Final Release Including Software Documentation Gather Requirements Develop Landiord/Prop Mgmnt Portal Workflow Develop Landiord/Prop Mgmnt Portal Workflow	5 10 5 5 15 10 5 10 10 10 10 5 5 10	\$3,800 \$2,300 \$5,600 \$10,500 \$5,900 \$6,600 \$6,600 \$3,600 \$3,600 \$3,800 \$3,800 \$3,800	c2 c3 c4 c5 c6 c7 c8 c9 c10 d1 d2 d2	\$3,800 \$2,300 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$1,800 \$5,600 \$7,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$3,000 \$5,500 \$5,900 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$6,00 \$6,60 \$0 \$0 \$0
. Potential New Tenant Page	Develop New Tenant Portal Workflow & User Interface Develop User Database Develop Back-up Strategy Working Direction Approval Write Code Develop & Perform Test Beta Plan Approval Beta Test Final Release Including Software Documentation Gather Requirements Develop Landlord/Prop Mgmnt Portal Workflow Develop User Database	5 10 5 15 10 5 10 5 10 10 10 5 10 10 10 5 10 10 10 5 10 5 10 5 15 10 5 15 10 5 15 10 5 15 10 5 15 10 5 15 10 10 10 10 10 10 10 10 10 10	\$3,800 \$2,300 \$1,800 \$5,600 \$7,500 \$5,900 \$6,000 \$6,600 \$3,600 \$3,800 \$3,800 \$4,600	c2 c3 c4 c5 c6 c7 c8 c9 c10 d1 d2 d3	\$3,800 \$2,300 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$3,600 \$3,600 \$3,800 \$2,300	\$0 \$0 \$1,800 \$5,600 \$7,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$3,000 \$7,500 \$5,900 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$6,00 \$6,60 \$0 \$0 \$0 \$0 \$0
Potential New Tenant Page	Develop New Tenant Portal Workflow & User Interface Develop User Database Develop Back-up Strategy Working Diriction Approval Write Code Develop & Perform Test Beta Plan Approval Beta Test Final Release Including Software Documentation Gather Requirements Develop Landlord/Prop Mgmnt Portal Workflow Develop User Database Develop Back-up Strategy	5 10 5 15 15 10 5 10 10 10 5 10 10 5 10 5 10 5 5 5 5 5 5 5 5 5 5 5 5 5	\$3,800 \$2,300 \$1,800 \$5,600 \$7,500 \$6,000 \$6,000 \$6,600 \$3,600 \$3,800 \$3,800 \$3,800 \$3,800 \$3,800 \$2,300	c2 c3 c4 c5 c6 c7 c8 c9 c10 d1 d2 d3 d4	\$3,800 \$2,300 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$3,600 \$3,800 \$2,300 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$1,800 \$5,600 \$7,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$3,000 \$7,500 \$5,900 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$6,00 \$6,60 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0
Potential New Tenant Page Application to image	Develop New Tenant Portal Workflow & User Interface Develop User Database Develop Back-up Strategy Working Direction Approval Write Code Develop & Perform Test Beta Test Final Release Including Software Documentation Gather Requirements Develop Landlord/Prop Mgmnt Portal Workflow Develop User Database Develop Back-up Strategy Working Direction Approval	5 10 5 15 15 10 5 10 10 10 5 5 10 5 5 5 5	\$3,800 \$2,300 \$5,600 \$5,600 \$5,900 \$6,000 \$6,000 \$3,600 \$3,800 \$2,300 \$2,300 \$1,800 \$5,500	c2 c3 c4 c5 c6 c7 c8 c9 c10 d1 d2 d3 d4 d5	\$3,800 \$2,300 \$0 \$0 \$0 \$0 \$0 \$0 \$3,600 \$3,600 \$3,800 \$2,300 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$1,800 \$5,600 \$7,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$3,000 \$7,500 \$5,900 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$6,00 \$6,60 \$0 \$6,60 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0
. Potential New Tenant Page Application to anage ormation for allord	Develop New Tenant Portal Workflow & User Interface Develop User Database Develop Back-up Strategy Working Direction Approval Write Code Develop & Perform Test Beta Plan Approval Beta Test Final Release Including Software Documentation Gather Requirements Develop Landlord/Prop Mgmnt Portal Workflow Develop Back-up Strategy Working Direction Approval Write Code	5 10 5 15 10 5 10 10 10 5 10 5 10 5 5 5 5	\$3,800 \$2,300 \$5,600 \$10,500 \$5,900 \$6,600 \$6,600 \$3,600 \$3,800 \$2,300 \$1,800 \$1,800 \$5,600 \$1,800 \$1,800 \$10,500	c2 c3 c4 c5 c6 c7 c8 c9 c10 d1 d2 d3 d4 d5 d6	\$3,800 \$2,300 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$3,600 \$3,600 \$3,600 \$3,800 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$1,800 \$5,600 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$3,000 \$7,500 \$5,900 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$3,000	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$6,60 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0
. Potential New Tenant Page Application to anage ormation for idlord	Develop New Tenant Portal Workflow & User Interface Develop User Database Develop Back-up Strategy Working Direction Approval Write Code Develop & Perform Test Beta Plan Approval Beta Test Final Release Including Software Documentation Gather Requirements Develop Landlord/Prop Mgmnt Portal Workflow Develop User Database Develop Back-up Strategy Working Direction Approval Write Code Develop & Perform Test	5 10 5 15 15 10 5 10 10 5 10 10 5 10 5 10 10 5 10 10 5 10 10 10 10 10 10 10 10 10 10	\$3,800 \$2,300 \$1,800 \$5,600 \$7,500 \$6,000 \$6,000 \$3,600 \$3,600 \$3,800 \$3,9000 \$3,9000 \$3,9000\$3,9000\$3,9000\$3,9000\$3,9000\$3,9000\$3,9000\$3,900\$	c2 c3 c4 c5 c6 c7 c8 c9 c10 d1 d2 d3 d4 d5 d6 d7	\$3,800 \$2,300 \$0 \$0 \$0 \$0 \$0 \$0 \$3,600 \$3,800 \$3,800 \$2,300 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0, \$1,800 \$5,600 \$7,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$3,000 \$7,500 \$5,900 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$6,00 \$6,60 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0
. Potential New Tenant Page Application to anage formation for diord	Develop New Tenant Portal Workflow & User Interface Develop User Database Develop Back-up Strategy Working Direction Approval Write Code Develop & Perform Test Beta Test Final Release Including Software Documentation Gather Requirements Develop Landlord/Prop Mgmnt Portal Workflow Develop Back-up Strategy Working Direction Approval Write Code Develop & Perform Test Beta Plan Approval Beta Post	5 10 5 15 15 10 5 10 10 10 10 5 10 5 10 5 10 5 10 5 10 10 5 10 10 5 10 10 5 15 10 10 5 15 10 10 10 10 10 10 10 10 10 10	\$3,800 \$2,300 \$1,800 \$5,600 \$7,500 \$6,000 \$6,000 \$3,600 \$3,600 \$3,800 \$2,300 \$1,800 \$1,800 \$1,500\$1,500 \$1,	c2 c3 c4 c5 c5 c6 c7 c8 c9 c10 d1 d2 d3 d4 d4 d5 d6 d7 d8 d8	\$3,800 \$2,300 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$3,600 \$3,800 \$2,300 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$1,800 \$5,600 \$7,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$3,000 \$7,500 \$5,900 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$3,000 \$7,500 \$3,500	\$0 \$0 \$0 \$0 \$0 \$0 \$6,00 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$
. Potential New Tenant Page Application to inage ormation for idlord	Develop New Tenant Portal Workflow & User Interface Develop User Database Develop Back-up Strategy Working Direction Aporoval Write Code Develop & Perform Test Beta Test Final Release Including Software Documentation Gather Requirements Develop Landlord/Prop Mgmnt Portal Workflow Develop User Database Develop Back-up Strategy Working Direction Approval Write Code Develop & Perform Test Beta Test Beta Test Beta Test Beta Pan Approval Beta Test Beta Test Beta Pan Approval Beta Test Beta Pan Approval Beta Test Beta Test Beta Pan Approval Beta Test Beta Test Beta Pan Approval Beta Test Beta Pan Approval Beta Test Beta Pan Approval Beta Test Beta Test Beta Pan Approval Beta Test Beta Pan Approval Beta Test Beta Test Beta Test Beta Pan Approval Beta Test Beta Te	5 10 5 15 10 5 10 10 10 10 10 5 10 5 10 5 10 5 10 5 10 10 5 10 10 10 10 10 10 10 10 10 10	\$3,800 \$2,300 \$5,600 \$5,600 \$5,900 \$6,000 \$6,000 \$3,600 \$3,800 \$2,300 \$1,800 \$5,500 \$1,800 \$5,500\$\$5,500 \$5	c2 c3 c4 c5 c5 c6 c7 c8 c10 d1 d2 d3 d4 d5 d66 d7 d8 d9	\$3,800 \$2,300 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$3,600 \$3,800 \$3,600 \$3,800 \$2,300 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$1,800 \$5,600 \$7,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$3,000 \$7,500 \$5,900 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$3,000 \$7,500 \$3,000 \$3,500 \$0 \$3,500 \$0 \$3,500 \$0 \$3,500 \$3,500 \$3,500 \$3,500 \$3,000 \$3,000 \$5,900 \$0 \$5,900 \$0 \$5,900 \$0 \$5,900 \$5,900 \$5,900 \$5,900 \$5,900 \$5,900 \$5,900 \$5,900 \$5,900 \$5,900 \$5,900 \$5,900 \$5,900 \$5,900 \$0 \$5,900 \$0 \$5,900 \$0 \$5,900 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$6,00 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$1,600 \$6,000 \$6,000 \$6,000 \$6,000 \$1,600

F - Table of Detail Tasks along with their times

lan	100 March 100 Ma	Optimista	Mornikely.	Pestin	Premesed	1.0		-Standard		
0erverables	Tasa -	Hinter a		Str.	activities.		Vananse	Devention	005	
	A.1 - Gather Requirements	8	10	12		10.000	0.444	0.667	s	3,600
	A.2 - Develop Homepage Workflow & Layout	4	5	7	A.I	5.167	0.250	0.500	\$	3,800
A Homepage	A.3 - Prepare Content	9	10	12	A.Z	10.167	0,250	0.500	\$	3,800
Homepage	A.4 - Develop Back-up Strategy	4	5	7	E.A	5.167	0.250	0.500	\$	1,800
About Us	A.S Working Direction Review & Approval	-4	5	7	A.4	5.167	0.250	0.500	5	5,600
Contact	A.5 - Write Code	13	15	20	A.5	15.500	1.361	3.167	\$	10,500
information.	A.7 - Develop & Perform Test	8	10	15	A.6	10.167	0.694	0.833	5	7,500
Mission	A 8 - Beta Plan Review & Approval	8	5	7	A.7	5.000	0.444	0.667	5	5,500
arecentient	A.B Beta Test	9	10	12	A.8	10.167	0.250	0.500	\$	6,000
	A 10 - Final Release	9	10	12	A.9	10.167	0.250	0.500	\$	6,600
-	B 1 - Gather Requirements	8	10	12		10.000	0.444	0.667	\$	3,600
	E 2 - Develop Tenant/Landlord Portal WorkSow & User Interface	4	5	7	8.1	5.167	0.250	0.500	\$	3,800
	El 3 - Develop User Database	9	10	12	8.2	10.167	0.250	0.500	\$	2,300
B Tenant	B 4 - Develop Back-up Strategy	4	5	7	8.3	5,167	0.250	0.500	\$	2,200
Portal - For	B 5 - Working Direction Approval	4	5	7	B.4	5.167	0.250	0.500	\$	5,600
Existing	B.6 - Write Code	13	15	20	B,5	15.500	1,361	1.167	\$	10,500
Tenants	B.7 - Develop & Perform Test	8	10	13	8,6	10.167	0.694	0.833	s	7,500
	B.8 - Beta Pran Review & Approval	3	5	7	B.7	5,000	0.444	0.667	\$	5,500
Portal - For Existing Tenants	B.9 - Beta Test	9	10	12	B.8	10.167	0.250	0.500	\$	6,000
	E 10 - Final Release Including Software Documentation	9	10	12	8.9	10.167	0.250	0.500	ŝ.	6,600
	C.1 - Gather Requirements	8	10	12		10.000	0.444	0.667	ŝ	3,600
	C.2 - Develop New Tenant Portal Worldlow & User Interface	4	5	7	C.1	5.167	0.250	0.500	\$	3,800
	C 3 - Develop User Database	9	10	12	C.2	10.167	0.250	0.500	e.	2,300
a series	C 4 - Develop Back-up Strategy	4	5	7	6.3	5,167	0.250	0.500	5	1,800
C. Potential	C 5 - Working Direction Review & Approval	4	5	7	C.4	5.167	0.250	0.500	s	5,600
New tenam	C.5 - Write Code	13	15	20	6.5	15.500	1.361	1.167	\$	10,500
r alfa	C 7 - Develop & Perform Test	â	10	13	0.0	10.167	0.694	0.833	\$	7,500
	C.S. Beta Plan Review & Approval	3	5	7	£.7	5,000	0.444	0.667	s	5,900
	C.9 - Beta Test	9	10	12	E.8	10.167	0,250	0.500	5	6,000
	C 10 - Final Release including Software Documentation	9	10	12	C.9	10.167	0.250	0.500	s	6,600
	D.1 - Gather Requirements	8	10	12	5	10.000	0.444	0,667	5	3,600
	D.2 - Develop Landlord/Prop Mgmnt Portal Workdow	1	5	7	0.1	5,167	0.250	0.500	5	3,800
	D.3 - Develop User Database	9	10	12	D.2	10.167	0.250	0.500	\$	2,300
D Application	D 4 - Develop Back-up Strategy	4	5	7	D.3	5.167	0,250	0.500	Ś.	1,800
to manage	D.5 - Warking Direction Review & Approval	4	5	1	D.4	5.167	0.250	0.500	Ś.	5,000
information for	D.5 - Write Code	13	15	20	D.5	15.500	1,361	1.167	5	10,500
Landlord	D 7 - Develop & Perform Test	8	10	13	D.6	10.167	0.694	0,833	5	7,500
	D 6 - Beta Plan Approval	3	5	7	D.7	5.000	0.444	0.667	5	5,100
	D.9 - Beta Test	9	10	12	D.8	10.167	0.250	0.500	5	6,000
	D.10 - Final Release Including Software Documentation	9	10	12	D.9	10.167	0.250	0.500	\$	6,600
	Citical Path Total	7	1 15	10	9	\$6.5666	7 40.111	6.333	15	52,800

G - Gantt Chart - Henry - Same as Appendix D

H - AON

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	0	10	1	0	13.	3	5 2	3.	25	30		N,	35		30	50	1	8	60	-6	0 45	6	5	75		75 85		

I - Probability Chart



	Duration		
Percentile	(Days)		
10%	73.113		
20%	76.812		
30%	80.511		
40%	84.210		
50%	87.908		
60%	91.607		
70%	95.306		
80%	99.005		
90%	102.704		
100%	106.403	-	
Desired dur	ation, D	95	Days
Mean		86.67	Days
Standard De	ν., σ	6.333	Days
Z value		1.32	
Prob. Val		90.49%	
@ 95% Pro	bability	95.17	Days

J - Resources Load Table

	3-Aug	10-Aug	17-Aug	24-Aug	31-Aug	7-Sep	14-Sep	21-Sep	28-Sep	5-Oct	12-Oct	19-Oct	26-Oct	2-Nov	9-Nov	16-Nov	23-No
Project Manager	al al al al bl bl bl bl bl	(45) o1 o1 o1 o1 o1 o1 o1 o1 o1 o1	slack	slack	slack	100 100 100 100 100 100 100 100 100 100	ಡಾ ಬೆಬೆ ಬೆ	slack	slack	slack	slack	slack	A8 A8 A8 B8 B8 B8 C8 C8 C8 C8 C8 C8 C8 C8	De De	slack	slack	slaci
Popl ortato	61 61 61	67 67 61 61	2 2 2 2	2338 238		16 16 16 16 16 16 16 16 16 16 16 16 16 1	5 5 5 6 6						A8 A8 B8 B8				
Agent	slack	slack	slack	slack	slack	slack	slack	slack	slack	slack	slack	slack	C8 06 08	slack	slack	slack	slaci
					3 4 4 5 4	a5 a5 b5 b5	05 05 05 05	10 10 10	66 66 66 66		a7 a7 a7 a7	c7 c7 c7 c7	A8 A8 B8 B8			A10 610 C10 010	A10 510. C10 D10
п	slack	slack	slack	slack	8888	slack	slack	45 56 58 58	18 18 18 18 18 18 18	slack	87 67 67 67	7 8 8 8 7	C8 C8 D8 D8	slack	slack	slack	slack
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	Resource Load (Group 2)																
	3-Aug	10-Aug	17-Aug	24-Aug	31-Aug	7-Sep	14-Sep	21-5ep	28-5ep	5-Oct	12-0ct	19-Oct	26-Oct	2-Nov	9-Nov	16-Nov	23-Nov
	task	task	task	task	task	tank	tesk	task	task	task	task	task	teck	task	tank	tesk	task
			#2	a3	4 4	•5		#5	1 5	a6	a7	a7	24	-0	1 2	a10	#10
			82	45	* 4	•5		#5	#5	a0	a7	a7	85 8	1 ⁴⁰	*S	a10	a10
			#2		•4			#5	1 5	a6	a7	a7	85 28	10	1 2	a10	#10
Software			82		4 4			# 5	1 0	#5	a7	a7		10 1	*2 -	a10	a10
Baudana	sla ck	slack	82				slack	#0		**	# 7	# 7		**	* 2 -	a10	a10
Developer1			82	slack		slack		10	10	-	a7	#7	a ba a ba	-	*2 -	a10	10
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Developer 2	sla ck	slack	2	-	-		slack	be	66	be	87	87		Eg.	69	610	610
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L - Baseline Planned Value



M - Control Measures

This project applies to a low margin property management industry and as such it is cost sensitive. Cost Performance Indicator (CPI) will be the primary metric to measure project performance.

Need to recover cash flow from project expenditures, and the need to grow sales drives the requirement to monitor time. Time Performance Indicator (TPI) will be used to monitor time performance, with this being a second ranking metric.

CPI = EV/AC

EV(\$) = (Estimates time (hrs) for task completed and portion of completed tasks) x labor rate

AC (\$)= (hours incurred on project) x labor rate

TPI = ST/AT

ST (hrs)– From calculated EV, ST is the time from the Earned Value chart corresponding to the EV.

AT (hrs) – Actual time

These metrics are to be monitored on a weekly basis. These metrics are to be reported at the each of the project review periods and whenever they are \leq .85 the report needs to include a corrective action plan.

N - Project Progress

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Critical Ratio

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The critical ratio= (actual progress/ scheduled progress)*(budgeted cost/actual cost)

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O - Termination of project

Type: Project Termination by Integration

Output from project

• The output of the project is integrated into existing function of each department at the company.

• The maintenance of web application and other tools are handed over to IT admin.

Personnel

• The in-house members continue to carry out their respective responsibilities. Every member will receive training to use new functionalities developed through the project.

• Software developers hired on temporary basis from IT staffing partner were relived from their responsibilities.

Equipment

• No additional equipment is required.

Other Duties

· Project accounts were settled and closed by finance department.

• Project history is archived for future reference, which may help any similar future projects.