Time Tracking System (TTS) Case Study #1

Your firm has been hired to conduct the systems analysis and design phase of the project. The project's goals is to implement a time tracking system at Makar Motors.

Makar Motors

Makar Motors is an start up company responsible for creating alternative fuel vehicles. Their main product line include electric vehicles for metropolitan cities. The company has a small IT organization and staffs projects with employees and IT consultants from staffing companies.

Stakeholders

Bob Richardson, IT Director
John Hoover - IT Manager, Finance Systems
Kevin Liken - Financial Controller, Finance
Kathy Jefferson - Resource Manager
Liz Springer - TekSystems

Business Process

You've recently had an introductory call from Bob Richardson, IT Director.

He's been asked to find a way to track time against project and not just track overall staff augmentation costs. Today the staffing company submits a monthly invoice for the time worked and includes an Excel sheet that with each contracted resource and their daily time card submission. The Finance department pays the invoices once they've confirmed the hours are correct from the Makar Motors IT project leads. It usually takes a few weeks to complete the invoice approvals as IT managers may neglect the invoice approval emails. Makar Motors would like to implement a time tracking system to track time and project costs better.

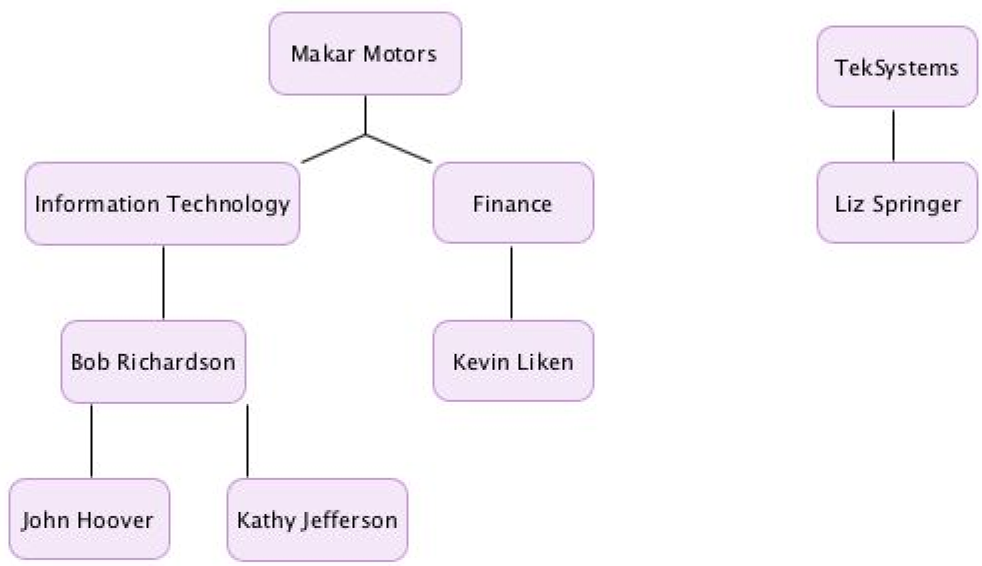
Kevin Liken, the financial controller, also needs a solution so his staff doesn't have to reconcile the time cards with the invoices. He'd much rather generate the accounts payable statement to the staffing provider based on time card data submitted into a timekeeping system. Kevin would also like to know the time billed is accurate so IT managers should be approving time on a weekly basis. If a time card needs to be corrected, it can be modified and approved until it has been send for invoicing at the end of the month. Any incorrect time after the billing file is generated will be modified in accounting.

You've also heard from John Hoover, the IT Manager, and he wants a way to track time and do a mass approval of all the time cards rather than clicking time card by time card. He wants to be as efficient as possible so his team can deliver projects versus administering the data around them. There is also a need to delegate time approval to another manager in case the direct line manager is on vacation. He has an innovative idea to send the vendor their own data file that contains the hours, rates and the total invoice amount. This "Pay Positive" approach would remove any invoice reconciliation at Makar Motors as the data file would contain the total amount due to the vendor each month.

Liz Springer, the account manager at TekSystems, wants the time data to be accurate and easy to enter. She knows her staff will enter the time into a system but wants to ensure their is a mobile application or a mobile view into the time tracking system. Often her consultants are updating their time sheet when they are waiting for their flight at the airport.

Kathy Jefferson, the IT resource manager at Makar Motors also needs reports to determine what resources are working on specific projects and when those resources can be deployed to other projects. She wants to build a profile and skills inventory in the time tracking system so she can track when a project manager, developer or systems analyst is free for another project.

Organization Chart



Time Card Entry and Invoice Processes and Forms

Based on your discussion with the Makar Motors team, you understand the Time card entry process as follows:

<u>Timecard Entry and Invoice Process</u>

1. Contractor prints a time entry form
2. Contractor enters a project name
3. Contractor enters a task for the specific project
4. Contractor enters hours for the specific task
5. Contractor hands paper time entry form to manager
6. Manager signs the time tracking form
7. Manager submits the time tracking forms to Finance
8. Finance manager marks timesheet as billed and records the transaction for Accounts Payable.
9. The Teksystems vendor submits an invoice for each of the contractor resources
10. Finance manager marks timesheet with the appropriate invoice number
11. Accounts Payable issues a check for Teksystems

<u>Timecard Entry Form</u>

Time Tracking Log

Makar Motors

Name: ______________________________

Today	
Date:	9/23/18
HOURS	0

Current Period		
Start:	2/9/15	
End:	2/16/15	(7 days)
HOURS	14.5	

This Week	
9/24	0
9/25	0
9/26	0
9/27	0
9/28	0
9/29	0
9/30	0
TOTAL	0

Date	Project ID	Task ID	Start Time	Breaks (minutes)	End Time	Hours	Current Period	Billed	Invoice #
2/9/15	Other	Holiday	9:00 AM		5:00 PM	8.00	yes	x	
2/10/15	Alpha Project		9:30 AM	45	3:00 PM	4.75	yes		
2/11/15	Delta Project		8:00 AM	15	10:00 AM	1.75	yes		
						0.00	no		
						0.00	no		
						0.00	no		
						0.00	no		
						0.00	no		
						0.00	no		
						0.00	no		

Mass Time Approval Process

In a timekeeping system, the manager often has to approve multiple timesheets. Knowing the manager would like to minimize the amount of time it takes to approve a timesheet, the team has discussed designing a “Mass Time Approval” process.

<u>Mass Time Approval</u>

1. Manager opens approval screen
2. Manager reviews timekeeping data for the week
3. Manager selects all the rows that should be mass approved
4. Manage clicks the approve button
5. Time entry for the selected time period is marked approved in the system.

<u>Mass Time Rejection</u>

After approving time, the manager selects the rows to be rejected.
Manager will click the Reject button and the system should display a text box for each rejected time card allowing the manager to specify a rejection reason. The manager will click on a Next button until all the rejected time is completed.

Assignment Deliverables (75 points)

The project team is required to deliver the following deliverables for the first milestone of the analysis and design phase:

System Vision Document - 15 points
- Develop a System Vision document. Use the example in the text as a guideline

Activity Diagram - 10 points
1. Develop a activity diagram for the Time Entry and Invoice process (step 1 - 8)

User Stories and Acceptance Criteria : 25 points
- Develop 5 user stories based on 5 of the use cases in the use case diagram.
- Include acceptance criteria for each of the 5 user stories.

Product Backlog in Trello : 5 points
- Document the 5 user stories in Trello including a checklist of user acceptance criteria

Develop a Use Case Diagram : 20 points
- Develop a Use Case Diagram in Visio or Visual Paradigm at the system level with 5 use cases identified.