PRSM

**Project Resourcing & Schedule**

**Management System**

# Quarterly PRSM Status Report to the Legislature

**March 1, 2012 – May 31, 2012**

**California Department of Transportation**

**Division of Project Management**

**Office of Statewide Project Management Improvement**

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# IPO Report for May 2012

**Project Name:** Caltrans Project Resource Scheduling Management (PRSM) System

**Assessment Date:** May 31, 2012

**Frequency:** Monthly

## Oversight Provider Information

| | | | |
|---|---|---|---|
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## Project Information

| | | | |
|---|---|---|---|
| **Project Number:** | **2660-160** | **Department:** | Transportation (Caltrans) |
| **Criticality:** | High | **Agency:** | Business, Transportation & Housing |
| **Last Approved Document/Date:** | SPR (4/2/2012) | **Total One-time Cost:** | $26,947,129 |
| **Start Date:** | June 7, 2000 | **End Date:** | May 24, 2013 |
| **Project Manager:** | Steve Kawano (acting) | **Organization:** | Caltrans |
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## Summary: Current Status

**Project Phase:** **PRSM Small Pilot Phase**

| | | | |
|---|---|---|---|
| **Planned Start Date:** | December 2, 2011 | **Planned End Date:** | March 28 (per approved SPR) |
| **Actual Start Date:** | December 2, 2011 | **Actual End Date:** | March 23 |

**Project Phase:** **PRSM Large Pilot Phase**

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|---|---|---|---|
| **Planned Start Date:** | December 22, 2011 | **Planned End Date:** | May 24 (per approved SPR) |
| **Actual Start Date:** | December 22, 2011 | **Forecasted End Date:** | August 9 |

### Schedule

Select the statement that most closely applies, measured against the last **Finance approved** document.

**On-Schedule**

**Ahead-of-schedule:**
One or more major tasks or milestones have been completed and approved early (> 5%). All other major tasks and milestones completed and approved according to plan.

**On-schedule:**

All major tasks and milestones have been completed and approved according to plan. (Within 5%)

**Behind Schedule:**
One or more major tasks or milestones are expected to be delayed. (> 5%)

**Comments:**

**The SPR for PRSM was approved on April 2, 2012 which reset the baseline for the project. Pilot conversion tasks have added detail and the project team has added resources for the upcoming small pilot and large pilot tasks. Resources still need to be added for some of the later rollout activities. The current schedule shows completion of the end of the Adaptation Phase on May 16, which was (41) forty-one days later than the SPR baseline completion date of April 5, 2012.**

**The current schedule is forecasting the end of the user activities for the large Pilot Phase for September 6, which is (8) days later than the SPR baseline completion date of August 29, 2012. Rollout is forecasted to start 56 days later than the baseline and finish (4) four days later than the baseline due to some dependency dates changing. Statewide Acceptance is forecasted to start (2) days later than the baseline and complete (1) day later than the baseline. The overall end date is forecasted to complete (3) three days later than the baseline.**

**The project team is doing a commendable job of documenting in notes the reason for delays in all sub-tasks, and a go forward plan of getting the tasks back on track. The project team also provides documentation related to the revision of dependency dates that impact downstream milestones. Both of these activities are excellent schedule management practices.**

**Small pilot activities and UAT concluded on schedule and the small pilot team gave the GO decision to move to large pilot training. Another round of regression testing is being conducted on the 54 defects found and fixed in System Testing.**

In the April reporting period, IPOC started tracking the baseline dates for each phase against the forecasted date in each IPOR and will continue to do so for each new reporting period. This data was based off the last revised schedule dated 05/27/2012. IPOC is aware that this schedule was a draft schedule and a new revised schedule was submitted on 06/05/2012, which will be evaluated for the next reporting period:

| Phase | Baseline Start | Baseline End | Forecast Start | Forecast End | Variance in end dates (in days) | % Complete | Dates between Baseline | Dates between Forecast |
|---|---|---|---|---|---|---|---|---|
| Adaptation | 4/11/2011 | 3/26/2012 | 4/11/2011 | 5/16/2012 | -51 | 99% | 0 | -51 |
| Small Pilot | 12/2/2011 | 3/21/2012 | 12/2/2011 | 3/23/2012 | -2 | 100% | 0 | -2 |
| Large Pilot | 12/22/2011 | 8/29/2012 | 12/22/2011 | 9/6/2012 | -8 | 39% | 0 | -8 |
| Rollout | 4/18/2012 | 5/24/2013 | 6/13/2012 | 5/28/2013 | -60 | 0% | -56 | -4 |
| Statewide Aceptance | 5/8/2013 | 6/19/2013 | 5/10/2013 | 6/20/2013 | -3 | 0% | -2 | -1 |
| Overall | 4/11/2011 | 7/19/2013 | 4/11/2011 | 7/22/2013 | -3 | 63% | 0 | -3 |

**Resources (Level of Effort)** Choose the statement that most closely applies.

**Fewer Resources**
Completion of one or more major tasks and / or acceptable products has required or is expected to require materially (>5%) fewer hours/staff than planned.

**Within Resources**

**Within Resources**
All major tasks have been completed and acceptable products created using the planned number of hours/staff (within 5%).

**More Resources**
Completion of major tasks and / or acceptable products has required or is expected to require materially (>5%) more hours/staff than planned.

**Comments:** From a vendor perspective, SAIC documents the on-board staff in each project position in their monthly status reports; however, these monthly status reports have not been produced for several months. The project appears to have the appropriate vendor staff in place in all the lead positions; however, the project does not appear to have a similar tracking system in place to document State staff.

IPOC has observed that since new resources were added to the testing and data conversion efforts on both the State and Vendor teams, the project appears to be staffed at the appropriate level, which has resulted in tasks starting and completing on time within the schedule milestones. Although the schedule has now been revised and leveled with State resources, without a clear staffing plan, IPOC is unable to discern whether or not this level of increased staffing is enough to complete the anticipated tasks on-time. TMS has not observed evidence of a staffing Plan describing the schedule for arrival and departure of staff over the course of the project. In the absence of a plan, TMS must rely on the resource leveling in the project schedule. An evaluation of the schedule indicates that the majority of the Caltrans resources are leveled, but some SAIC resources remain to be leveled. Upon review of the revised schedule, TMS feels more confident in the project team's ability to complete the remaining project tasks within the current level of resources. The revised schedule shows leveled resources up through the end of the large pilot phase and for most of the production rollout phase. TMS is aware that the project team is working on the continued leveling of resources through rollout.

The PRSM project manager left the PRSM project effective April 6. Since that time, the project has transitioned to two interim project managers. Caltrans has advertised for a permanent State employee to fill the PM position. In addition, there are no plans to extend the current project management support services contract past August 2012. IPOC has opened up a new risk related to these critical resource issues.

**Resources (Budget/Cost)** Choose the statement that most closely applies.

| |
|---|
| Not Able to Assess |

**Less cost**
The project is (>5%) under budget.

**Within cost**
The project is operating within budget.

**Higher cost**
Material budget increases (>5%) are likely.

**Comments:** The funding source for PRSM is the State Transportation Fund. Typically for this section, IPOC reviews the vendor deliverable tracking spreadsheet and the updated cumulative expenditures that the project has reported in the most current CA-PMM report, which based on our current reporting timeline should be the April 2012 PSR. However, no project status report was submitted last month. The dates below remain the same as in the March reporting period.

As per the CA-PMM status report for the March reporting period, the total project approved costs were $36,377,496 and the Cumulative Actual Cost to date is $22,705,313. NOTE: These numbers are based on the latest approved SPR4.

| | SPR 4 Costs | Cumulative Actual Costs |
|---|---|---|
| **Project Costs** | **$36,377,496** | **$22,705,313** |
| One-Time | $26,947,129 | $20,105,509 |
| Continuing | $9,430,367 | $2,599,804.00 |
| Annual M&O | $2,057,000 | $0 |

As per the Vendor Payment Point and Deliverables spreadsheet, SAIC has been paid $5,340,807 (less holdback) of the $13,200,056 contract. Caltrans received one invoice for $62,000 in the Adaptation phase, of which $56,250 was paid out for the Plan for Pilot and Data Conversion Implementation Plan.

| | Budgeted | Invoiced |
|---|---|---|
| Planning | $1,009,739 | $908,765 |
| Adaptation | $4,933,935 | $4,247,042 |
| Pilot | $2,807,271 | $185,000 |
| Rollout | $2,211,424 | $0 |
| Maintenance | $2,128,292 | $0 |
| Unanticipated | $109,995 | $0 |
| **TOTAL** | **$13,200,056** | **$5,340,807** |

In order to properly assess the cost for PRSM, TMS must be able to view the expended and projected monthly tracking expenditures and compare that to the economic analysis worksheet in the last approved SPR. To date, TMS has only been exposed to budgeted and actual costs, but has not observed forecasting of projected costs against SPR EACs. Because of this, TMS has stated that we are Unable to Assess the Resources (Budget/Cost) section.

**Quality (Client Functionality)** Choose the statement that most closely applies.

**Adequately Defined**

**Adequately Defined**
Required client functionality is adequately defined, and is being successfully built into the system, given the current project phase.

**Inadequately Defined**
One or more significant components of required client functionality are inadequately defined, or are not being successfully built into the system, given the current project phase.

**Comments:** TMS has reviewed the requirements and to-be use cases and workflows created for PRSM and found them to be quite thorough and inclusive of the underlying solution flow. In previous months, TMS reviewed the traceability spreadsheets in the project document library and found that there were many to-be use cases that are not traced to any associated test cases. IPOC was concerned that this could be an indication of insufficient testing coverage. TMS provided this data to Caltrans and they have gone through the testing materials to complete the mapping. A review of the approach Caltrans took for this exercise was reviewed by TMS and found to be consistent with our recommended mitigation. There are (12) Unknown mappings that could be out-of-the-box functionality that is not used by Caltrans, or an item that was removed or re-designed. There were (4) items that could not be traced and require some additional investigation. Based on the significant improvement in mapping completed by the PRSM team on filling the gaps of the No Match and Partial Match requirements, IPOC now finds this category Adequately Defined.

During the Small Pilot, the PRSM team conducted daily user activity sessions that focused on utilizing PRSM functionality for specific use case scenarios. These user sessions were a huge success and allowed the PRSM team to adapt some of the PRSM flow and functionality to better fit the way the application will be used in the districts.

**Quality (Architecture/System Performance)** Choose the statement that most closely applies.

**Adequately Defined**
The system technical architecture is adequately defined, and modeling, benchmarking and testing are being conducted (or are planned) appropriate to the current project phase.

**Inadequately Defined**

**Inadequately Defined**
The system technical architecture is not adequately defined, or modeling, benchmarking and testing are not being conducted (or are planned) appropriate to the current project phase.

**Comments:**

TMS is aware that the Implementation Vendor has submitted a Configuration Management Plan, High Level Design, Test Plan and updated Architecture Diagram. The Production environment hardware has been configured and turned over to Caltrans. Performance, volume and scalability testing activities were added to the revised project schedule, but these tasks remain fairly high level and TMS has been told by the Caltrans team that a Performance Plan is being drafted to document the tasks of performance and load testing in more defined detail. As of the end of May, a Performance Plan has not been drafted. IPOC continues to recommend the development of performance requirements and test scripts.

During February, the project implemented a Performance testing tool that will monitor the CPU cycles, memory, etc during the testing phases. The tool will run in the background to collect data that will be analyzed and if issues become apparent, they will be mitigated appropriately. Although this data collection will not aid in load testing or analysis (only 15-20 users will be on the system during the testing phases), the tool will help identify isolated performance issues.

Due to the resource limitations of the test and train environments, no performance testing was done on the hardware as scheduled. However, system monitors have been in place since the beginning of the test and pilot cycle to monitor CPU usage, disk space and memory usage. An issue was discovered with memory usage on test; there is a known issue with that way Clarity's JVM manages memory. A daily bounce of services has been implemented to maintain system performance and there is an open issue in the PRSM issue log on this item. Memory issues continued during the Small Pilot and this remains a significant concern for the Large Pilot and rollout because it has an impact on user response time. The project team has opened issues and risks related to these performance problems and are actively working with SAIC and OTech to determine solutions.

During the small pilot, users reported slow response times in the execution of some reports. The team is hoping that production environment containing more CPU and memory will help alleviate some of the report performance problems. Execution tests for reports in the production environment have been run against all 53 pilot projects. Report rendering time was within acceptable limits. Further testing will occur on statewide reports when production rollout projects are loaded. As a contingency, the PRSM team has expressed the ability to schedule reports to be run during off hours; however, business process analysis to determine whether scheduled reports would be feasible has not yet occurred. The team is also looking at the possibility of using Business Analytics which would provide more flexibility in reporting and potentially improve performance.

## New Risks

IPOC has submitted one new risk this reporting period.

## Risk R-9: Key Critical Resources have left or are leaving the project which may have an impact on decision making, problem solving and/or strategy setting.

**Original Risk Statement:** In the past two months, the initial PRSM project manager has left Caltrans, a new interim PM was assigned in her place who served for one month. That interim PM was replaced with a new interim project manager in May. IPOC was told that a permanent position has been posted for this position, but based on State hiring timelines it could be several months before this position is filled. In addition, the project manager support (Brian Spray) contract terminates in August and there are no plans to keep him on board for a longer period. This poses a significant risk to the PRSM project by not having dedicated, permanent and knowledgeable staff in place for decision making, trouble-shooting and setting direction or escalating issues.

| | | | | | |
|---|---|---|---|---|---|
| **Probability:** | High | **Impact:** | High | **Timeframe:** | Short Term |
| **Severity:** | High | **Opened:** | 05-2012 | **Status:** | New |

**IPOC Recommendations:**

- Caltrans Management needs to appoint a permanent staff member in the position of PRSM project manager immediately – the transition in and out of interim staff is causing disruption to the project team.

  Status:

- Extend the current project manager support staff throughout the remainder of the large pilot and at a minimum, through the first three production district rollouts. There needs to be continuity on the PRSM project and a central team member responsible for risk and issue management, schedule management and scope management.

  Status:

- With significant attrition on the project on both the Caltrans and SAIC teams as we approach Rollout, it may be necessary to revise the roles and responsibilities of the Project Management Plan and the organizational/governance processes.

  Status:

**Progress Toward Addressing Prior Risks**

## Risk R-6: Lack of performance and scalability planning may lead to issues with the Pilot or Rollout if not resolved quickly

**Original Risk Statement:** For performance testing, there is a lack of requirements and goals. There is also a lack of a test plan for scalability and performance, and a lack of performance test scripts created and executed.

| | | | | | |
|---|---|---|---|---|---|
| **Probability:** | Medium | **Impact:** | High | **Timeframe:** | Short Term |
| **Severity:** | Medium | **Opened:** | 09-2011 | **Status:** | Open |

**IPOC Recommendations:**

- Understand performance requirements – how many users will be on the system concurrently, what is the expected performance metrics for submitting data, what is the expected performance for running reports, what are the scalability requirements?

  Status: This has been mitigated, but not to the level needed for the performance problems we are currently encountering. Additional expectations for application versus network performance should be documented and shared

with the SAIC team and the Caltrans IT team.

- Take the current scheduling system and establish baseline for these performance requirements and determine if they are meeting the goals?

  Status: To the best of IPOC's knowledge, this has not yet been done.

- If they are not meeting the goals, develop and execute test cases for performance.

  Status: This is planned for in the project schedule, but has fallen behind schedule due to environment issues.

**Status:**
05-31: In conversations with the PRSM team, there was no initial production performance baseline captured. Although IPOC has requested that performance test scripts be created, the Caltrans IT team believes that "although test scripts help determine valid functionality, they will offer little to help resolve performance response times. Production response comparison to non-production systems is absolutely 'apples to oranges' - test scripts won't help remedy the difference." Regardless of whether or not performance test scripts are developed, the fact remains that minimal performance testing was performed prior to small pilot, there is an absence of a plan to document the minimal requirements or expectations for performance testing, and performance response time continues to be an issue in large pilot.

4-30: During the small pilot, the project continued to see issues regarding performance and scalability. There were sticky session issues in which the user sessions were not being maintained across windows. The team responded to this problem with a workaround involving hardwiring the web server, application server and DB server and eliminating the need for load balancing. This solution was adequate for the small pilot but will not be adequate for large pilot or rollout. The daily bounce of services also continued during the small pilot and the users reported performance problems in running some of the reports. The team is hoping that the change in configuration of the production server will alleviate some of the report performance issues. The contingency will be to schedule reports to run during off hours; however, the business process feasibility of implementing this in the districts has not yet been analyzed. Performance and scalability continue to be one of the highest risks to a successful large pilot implementation and rollout of the remaining districts.

03-31: Due to the resource limitations of the development, test and training environments, no performance testing was done on the hardware as scheduled. However, system monitors have been in place since the beginning of the test and pilot cycle to monitor CPU usage, disk space and memory usage. An issue was discovered with memory usage on test; there is a known issue with that way Clarity's JVM manages memory. A daily bounce of services has been implemented to maintain system performance and there is an open issue in the PRSM issue log on this item. There is some concern over the anticipated report volume and response time in the reporting environment. There are not additional performance or load tests that can be run in the reporting environment and the team is looking at additional tests in the production environment. The team is also looking at the possibility of using CA Business Analytics or another reporting solution, which would provide more flexibility in reporting and potentially improve performance. IPOC will continue to monitor these performance activities.

## Risk R-5: Inadequate planning for data conversion may cause additional schedule delays and impact the quality of integration testing.

**Original Risk Statement:** There have been unexpected problems with the dry-run data conversion process and for several of the Districts' pilot data, there has not been a successful dry-run to date. This may cause additional schedule delays and impact the quality of integration testing. In addition, planning for conversion is behind schedule with the team continuing to document the Implementation Plan and the end-to-end Caltrans Conversion Process document.

| | | | | | |
|---|---|---|---|---|---|
| **Probability:** | Medium | **Impact:** | High | **Timeframe:** | Medium |
| **Severity:** | Medium | **Opened:** | 09-2011 | **Status:** | Open |

**IPOC Recommendations:**

- Reconcile discrete tasks listed in the go-forward plan with high level tasks in the project schedule to ensure that all conversion activities are tracked and assigned.

  Status: This has been mitigated.

- Review of the current conversion metrics showing what has been successfully converted and what remains to be converted.

  Status: IPOC reviewed the informal results that were available from the Small Pilot Conversion. No formal results were captured. IPOC will monitor the method used in capturing conversion results for the large pilot.

- Include districts in conversion validation activities – no one knows their data better than they do.

  Status: Plan for Pilot and Implementation Plan had roles and responsibilities assigned for districts related to validation. IPOC reviewed the completed District readiness checklist and reviewed the small Pilot informal results that were completed by each district involved in the pilot. The checklist does a commendable job of highlighting the tasks that needs to be validated, the owner of the task (both HQ and District) and the follow-up actions. This Checklist was sent to IPOC as confirmation of conversion results being documented after the Small Pilot. However, IPOC is unaware if this checklist was actually used in the conversion process and it does not appear that the checklist was updated to complete many of the fields (target date, LOR and criticality).

- In discussions with the project team, they have indicated that they would like to document, by District, where the source data is coming from, what pre-conversion activities or data cleansing have been done so far, what remains to be done, and results of testing. This will help the State identify which district is in the best position to move forward in Pilot. IPOC agrees and supports this approach.

  Status: To the best of IPOC's knowledge, this type of data has not been captured.

**Status:**

05-31: Interface initialization post conversion for EFIS Project Expenditures completed in mid-May. Deliverable 10 – data Initialization Report for Pilot Data Load – was received by SAIC and is under review by Caltrans. A new series of tasks were added to the large pilot activities that include gathering metric data on data conversion timing and disk utilization, transactional timing, server performance and database performance.

4-30: Data conversion for the small pilot went very well and all activities completed on time. During the small pilot, the extract and transform physically only took a few hours, however the team manually evaluated the extract spreadsheets. There were some adjustments to the ETL scripts and processes. Additionally each activity did not complete in lock step during small pilot. There were lags between activities and in some cases the processes were run more than one time. For large pilot, the activities were more streamlined. The team conducted an informal lessons learned at the completion of the small pilot conversion that included the following:

- Found a few missing resources or contracts that need to be added to the small pilot project after conversion. The team has put a check in place to validate that the table they are using has the same data as PRSM for large pilot conversions.

- Found issues with County/Route/PostMile combinations. The team has put a check in place to validate that the data they receive from PMCS is consistent with the lookups in PRSM for large pilot.

IPOC continues to recommend that metrics be maintained for all conversion activities. For the pilot, there were no metrics maintained that tracked how many tasks each schedule contained, how many tasks loaded successfully, how many were transformed successfully, how many were validated successfully, the time it took for each activity, etc. This type of data will be extremely helpful as additional districts roll out. The project should be striving to improve the conversion results for each rollout; however if the metrics are not captured, the PRSM team will be unable to perform trend analysis to help with future rollouts.

03-31: The project has documented a standard template for what a converted project needs to look like to successfully carry over into PRSM. The project has also published guidelines to the districts defining the ideal state of the project before it can move to PRSM. For the past year, PRSM has been getting data output files from each of the districts and running them through the conversion process. As a result of the output process, they have been producing data Anomaly Reports that include the parts of projects that errored out of the conversion and are expecting each district to go through their conversion reports, correct the issues and re-run the data through the system. The testing is not just a sub-set of their data and appears to be very comprehensive. The district readiness checklist contains a checklist for conversion that each district can use – a list of the activities to be ready for conversion, what they need to do to get their data clean and get it converted. Although the checklist is robust, there are only a few validation steps planned to ensure that the activities are completed as scheduled, and most of these are focused on the project data from each district. IPOC would like to see more validation steps included for the deployment and conversion as a whole, ensuring that all of the responsibilities we expect the districts to perform are indeed completed according to the schedule. In addition, the timeline for reviewing this checklist with the districts is T-10 days, which is not sufficient enough time to mitigate any corrective actions. IPOC recommended in their One-Time assessment report on the District checklist that this timeframe be extended to 30-45 days to allow more time for the districts to react to corrective action. IPOC will review the conversion statistics available and plans to close out this risk in the next reporting period based on the progress made over the last several months.

# Risk R-1: Lack of Effective Organizational Change Management or District Buy-in for Pilot could lead to lack of acceptance of PRSM or to new PRSM processes

Original Risk Statement: One of the most significant challenges to the PRSM Project could be engaging and obtaining buy-in from District executives, management and staff. It is very important that District executives and management are knowledgeable about PRSM and the changes to their business processes and benefits of using PRSM. District staff, in addition to training, should be knowledgeable of the decisions and consequences of changing / standardizing business processes. Lack of engagement of District personnel at all levels could have a negative impact on overall PRSM system acceptance and usage.

| | | | | | |
|---|---|---|---|---|---|
| **Probability:** | Medium | **Impact:** | Medium | **Timeframe:** | Medium |
| **Severity:** | Medium | **Opened:** | Unknown | **Status:** | Open |

**IPOC Recommendations:**

- Assess the changes to the training program/plan proposed in the most recent implementation vendor change request in order to understand the impact on Organizational Change Management. Work with the Districts to help them understand the changes to the training program in order to gain organizational buy-in and confirm that the program is adequate to enable a successful Roll Out.

  Status: This has been mitigated.

- Consider hiring / extending additional consulting resources to assist with refining the Organizational Change Management Plan and to execute the plan.

  Status: IPOC is not aware that any additional staffing has taken place to help with OCM development and activities.

- Involve the end users in a more direct way and allow them to participate in the risk management process. This will allow the project team to obtain early buy-in and a stake in the project. Hold a risk identification session to identify the district concerns of the pilot activities and help define appropriate mitigation strategies to address the risks identified.

  Status: This has been mitigated. A series of four "roadshows" were completed prior to small pilot to present how PRSM would address key business processes at the district. Additionally, there have been two daily small pilot user sessions and a daily pilot review call.

- Analyze current methods of communication to determine if additional processes need put in place to get the districts to open up the channels for communicating risks and issues associated with pre-pilot, pilot and post pilot activities.

  Status: This is being mitigated. There was a daily small pilot review and they are also conducting daily large pilot reviews

- Engage the districts in reviewing business functionality and business processes.

  Status: For the past 6 months, TMS reported this recommendation as mitigated due to the districts participation in training for the six key functional areas and the business processes associated with them. However, based upon the results of the pilot and the user feedback from the training courses, TMS recommended in April that the training team incorporate more focused examples of how the districts will use PRSM to perform their daily job. The feedback received from the small pilot indicates that the training material deals more at a generic product level rather than specifically demonstrating how PRSM will be used day to day. For the May reporting period, IPOC observed that the training team did a commendable job of tracking user feedback and survey feedback and made the necessary modifications to the training material and associated handouts and FAQs. The proof that this was an effective exercise will be in the results of the user training surveys from future training efforts. In addition, as per Caltrans feedback, districts 1, 2 and 3 have been thoroughly engaged during pilot; and district 4 is scheduled for the second production rollout. Members of the training and implementation teams have started pre-rollout sessions and SME training in D4.

**Status:**
05-31: For the month of May, TMS focused on the PRSM Training Assessment and review of the PRSM Training Plan and associated training material and sessions as their One-Time Assessment review. SME, T4T and Sys Admin Training is due to be completed for large pilot over the next few months, as well as Advanced Implementation Team Training and updates to the existing PRSM Training Plan.

4-30: During the small pilot, user activity session took place on a daily basis that allowed the users to focus on a particular PRSM functionality and the use case scenarios associated with it. These user sessions proved very helpful and the PRSM team will continue this practice during large pilot and rollout. The training evaluations for the small pilot revealed that additional business process preparedness is needed to streamline the implementation of PRSM. It was suggested that the training materials be updated to contain more concrete examples of how PRSM will be used on a daily basis. Additionally, although the district readiness checklist was utilized for the small pilot, there did not appear to be much oversight or active involvement from the PRSM team to ensure that all tasks were completed prior to the start of the implementation. Several columns, including the status column, were not completed and it was unclear what state some of the activities were in at the end of the pilot. TMS continues to recommend actively reviewing this checklist during a weekly cadence call with the district to ensure that all tasks are completed.

03-31: The PRSM conversion lead has met with the conversion managers on a monthly basis to go through the checklist and talk to them about their data conversion reports; however, there are no validation activities to ensure that the districts complete all the items on the checklist. Without this validation, the PRSM team may not be able to answer the question "Are the districts 100% ready to have their projects roll?" IPOC will be reviewing the completed checklist for the small Pilot along with the business process materials outlined in section A.1 #8 of the District Readiness Checklist.

## Closed Risks

There were no risks closed for this reporting period.

## General Comments

This report reflects the time period of March 1 – March 31, 2012. The PRSM project remains in Rolling Wave 3: Adaptation Phase part B, which includes development, data conversion and interfaces, production build-out, testing, Adaptation phase training and Adaptation Acceptance. The project is scheduled to move into Rolling Wave 4: Pilot in Spring 2012.

This General Comments section focuses on the project management processes. TMS has included the following project management process chart documenting TMS's assessment of each major area of project management on the PRSM project by a color code in the table below. Three month's worth of status is displayed.

RED = Unsatisfactory project management practices that present significant risk to the project.
YELLOW = Corrections to project management practices needed to reduce risks.
GREEN = Satisfactory project management practices are being followed.
BLUE = Assessment in progress.
GRAY = Closed – not applicable to the project in this phase

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for Improvement |
|---|---|---|---|---|
| General Project Management | G | G | 05/31: The project has suffered from the loss of a key critical position in the past two months, and may suffer the loss of another position in the coming months. In April, the permanent PRSM PM left the department and was replaced with an interim PM. This PM was in place for only one month and was replaced with a second interim PM. Although this is not a permanent position, IPOC is aware that the State has posted the | • ew: Appoint a permanent PRSM project manager.<br>• ew: Extend the current PM Support Staff through Large Pilot and at least through the first few district rollouts. |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for Improvement |
|---|---|---|---|---|
| | | | vacant position and is beginning the hiring process. In addition, IPOC has learned that the current project management support staff contract is not being extended and will terminate before the end of the large pilot. The project has just gotten back on track with consistently applying risk, issue, schedule and scope management processes and these resource transitions could put this structure in jeopardy. As a result of the resource flux, IPOC will continue to monitor this area to ensure that project management practices do not slip as a result of resource transition. IPOC has also opened up a new risk, Risk 9.<br><br>4/30: In April, Bill Saunders replaced Kari Gutierrez as the acting Project Manager. Risk and Issue meetings started back up on a bi-weekly basis and the project continues to actively track the schedule and address issues as they arise.<br><br>03/31: Weekly internal project meetings re occurring, but IPOC has not observed meeting minutes or other evidence that this project status is occurring. The new project schedule has more of a strategic focus than a tactical focus, and increased communication with the districts and functional project teams are occurring. Status remains in green. | |
| **Planning and Tracking (Work Plan)** | G | Y | 05-31: Although the project schedule continues to be updated on a regular basis and notes are added for significant changes or delays, the issues with over-allocation of resources and missing resources is still present in the project schedule. As a result, IPOC is turning this from Green to Yellow.<br><br>4/30: The project schedule continues to be tracked weekly. The large pilot has several over-allocated resources on the SAIC side and the rollout is missing resources on many of the tasks. The team is working on closing these gaps. If they remain open issues next month, this status item will turn yellow.<br><br>03/31: The project schedule is being tracked weekly for updates and when delays in start or completion dates occur, the project team is doing a commendable job of adding a project note to explain the variance. Resource assignments still need completed for the entire Rollout phase and leveled across all resources. | • SCH Finding 5: TMS recommends that the project level the current workplan such that all resources listed in the schedule are allocated at a reasonable level. Status: SAIC resources still need to be leveled and resources need to be added to the activities in the Rollout phase. |
| **Quality Management** | G | G | 05-31: IPOC will continue to work with the PRSM team to encourage them to gather more formal conversion and training metrics in the large pilot and the rollout phase.<br><br>04/30: Additional regression is being run on some development fixes implemented during System Testing. In general, quality seems adequate; however, IPOC continues to recommend the | • PM Finding 2: The quality management metrics collected, tracked and analyzed on a regular basis should be expanded to include more process areas and detail that would allow trends and potential issues and risks to be identified. TMS recommends concentrating |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for improvement |
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| | | | tracking of metrics in areas such as conversion so that trends and improvements can be acknowledged and leveraged for each future rollout.<br><br>03/31: TMS provided this data to Caltrans and they have gone through the testing materials to complete the mapping. A review of the approach Caltrans took for this exercise was reviewed by TMS and found to be consistent with our recommended mitigation. There are (12) Unknown mappings that could be out-of-the-box functionality that is not used by Caltrans, or an item that was removed or re-designed. There were (4) items that could not be traced and require some additional investigation. UAT Testing for Phase 5 started on time and is almost completed. Small pilot activities and UAT concluded on schedule and the small pilot team gave the GO decision to move to large pilot training. Testing will continue through large pilot preparation and production build out. | on testing and requirements metrics first. Status: No update on this recommendation.<br><br>• TMS recommends that testing and conversion statistics be provided to the oversight teams on a regular basis for reporting progress against milestones. Status: Testing statistics are provided, but formal conversion metrics are not provided. |
| **Requirements Management** | G | G | 05-31: No status change. IPOC will work with the PRSM Team to determine their level of acceptance for remediating the traceability if the 12 unknown mapping areas. If the project team agrees to accept the risk, IPOC will close out the recommendation.<br><br>04/30: No status change.<br><br>03/31: TMS provided traceability data to Caltrans and they have gone through the testing materials to complete the mapping. A review of the approach Caltrans took for this exercise was reviewed by TMS and found to be consistent with our recommended mitigation. There are (12) Unknown mappings that could be out-of-the-box functionality that is not used by Caltrans, or an item that was removed or re-designed. There were (4) items that could not be traced and require some additional investigation. Based on the significant improvement in mapping completed by the PRSM team on filling the gaps of the No Match and Partial Match requirements, IPOC now finds this category to be Green. | • raceability through the project life cycle should be an on-going activity that is performed with some level of regularity to ensure that all changes are incorporated into the project consistently. The RTM should be updated as a result of the exit-phase sessions for Phases 1-4. Status: SAIC is scheduled to complete an updated traceability. As of the end of May, this has not been completed.<br><br>• MS would recommend a review of the gaps in the traceability matrix to ensure proper testing coverage, weekly review of testing metrics to understand the current progress being made and clearly defined exit criteria as the project enters the pilot phase. If there are no plans to directly terrace requirements to Test Cases, then the traceability matrix should state the approach for traceability and clearly define how the mapping of test cases to FEATS is satisfactory to the customer. Status: There are (12) Unknown mappings that could be out-of-the-box functionality that is not used by Caltrans, or an item that was removed or re-designed. There were (4) items that could not be traced and require some additional investigation. As per Caltrans, an SAIC resource |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for Improvement |
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| | | | | familiar with requirements has re-joined the team and may be able to help in this review. |
| **Risk Management** | G | G | 05-31: The risk management process is working as documented.<br><br>04/30: Risk and Issue Meetings have resumed as biweekly oversight meetings. Risks are being addressed according to best practices with discussions around impact and probability changes and updated mitigation and contingency plans.<br><br>03/31: Weekly internal project meetings are occurring, but IPOC has not observed meeting minutes or other evidence that this project status is occurring. IPOC is aware that the project team has sorted through the existing risk log and culled risks out that are no longer current, as well as providing action steps to each open risk. IPOC was sent a current risk log for review that contains new risks and updates to existing risks. For the next reporting period, IPOC will review this risk log and the risk management process and assess it against the deficiencies we noted in the One-Time Assessment in December 2011. Status has been moved from Yellow to Green. | • ll previous recommendations have been mitigated. |
| **Issue Management** | G | G | 05-31: The issue management process is working as documented.<br><br>04/30: Risk and Issue Meetings have resumed as biweekly oversight meetings. Issues are being addressed according to best practices with discussions around action items<br><br>03/31: Weekly internal project meetings re occurring, but IPOC has not observed meeting minutes or other evidence that this project status is occurring. IPOC is aware that the project team has sorted through the existing issue log and culled issues out that are no longer current, as well as providing action steps to each open issue. However, IPOC has not been sent a new issue log and is unable to make an assessment. The last issue log that was available for review was November 2011. (NOTE: A new risk log was delivered, but not an issue log). Status remains in Yellow. | • ll previous issue recommendations have been mitigated. |
| **Communica-tion Management** | G | G | 05/31: IPOC is not aware of a PRSM Nuggets of Information being generated for the last two months, nor was their evidence of a Project Status report (PSR) being submitted for either the February or April reporting periods to CTA. IPOC wants to ensure that the districts are as actively involved in the large pilot activities as they were for the small pilot and that continued communication is distributed to the right audiences. | • |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for Improvement |
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| | | | 04/30: PRSM was very actively involved with District 3 in the small pilot.<br><br>03/31: Daily meetings continue with the leads from each group and there has been increased communication with the districts during small pilot and preparation for large pilot. Status remains in Green. | |
| **End-User Training** | Y | G | 05/31: To date, the PRSM team has conducted the following training sessions: Adaptation Implementation Phase Training (November 2011), Small Pilot Training (February 2012), Deliverable 13 part 1 - training materials have been completed, and Large Pilot Training Sessions (March/April 2012). PRSM Training sessions yet to be completed include:<br>• District rollout training materials<br>• District rollout training sessions<br>• Custom reporting training<br>• System admin training<br>• Train the trainer sessions<br>• Remaining SME sessions learned.<br><br>04/30: End user training was conducted for the small pilot (Project Manager course and Task Manager course). Based on the questions asked at course completion, there is an indication that the users trained did not completely understand and/or absorb the materials taught. Of the 22 questions asked for the Project Management course, 40% of the questions had less than 75% of the users responding correctly. IPOC recommends adjusting the training material to incorporate the feedback received.<br><br>03/31: Small pilot user PM & TM training completed successfully, large pilot training is underway. Training facilities have all be reserved, trainee invitations sent, materials produced and trainers scheduled. Additional sessions for T4T and custom reporting are scheduled. Large pilot go/no-go meeting conducted with a go for large pilot training decision received. Status remains in Green. | • pdate the training materials to include more realistic examples of how PRSM would be used in the daily activities in the district. The team has reported that changes are being made to the materials based on small pilot feedback. This has been mitigated.<br>• raining Plan: Roles and Responsibilities do not include a definition of needed skills and knowledge for each staff member.<br>• raining Plan: Staff and/or end-user pre-requisites are not defined.<br>• raining Plan: Post Implementation Training and Knowledge Transfer activities are not defined.<br>• xecution: Advanced Implementation Team Training<br>• tudent counts for preparation of training materials are over two years old and may require verification prior to production rollout training.<br>• verlapping the first two district training sessions may pose a risk to the project without any slack in between to make adjustments. |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for Improvement |
|---|---|---|---|---|
| **Data Conversion and Load** | G | G | 05/31: Additional validation activities were added for conversion in the large pilot schedule tasks, as well as documentation of actual results.<br><br>04/30: Conversion activities for the small pilot were successful. Several issues were caught and immediately mitigated. Overall, the activities were conducted on time and with very little fallout. IPOC continues to recommend that metrics be maintained, especially as the project begins consistently rolling out to each district so that trends can be detected and leveraged for the next rollout.<br><br>03/31: The project has documented a standard template for what a converted project needs to look like to successfully carry over into PRSM. The project has also published guidelines on what the state the project needs to be in before it can move to PRSM. For the past year, PRSM has been getting data output files from each of the districts and running them through the conversion process. As a result of the output process, they have been producing data Anomaly Reports that include the parts of projects that bounced out of the conversion and are expecting each district to go through their conversion reports, correct the issues and re-run the data through the system. The testing is not just a sub-set of their data and appears to be very comprehensive. The district readiness checklist contains a checklist for conversion that each district can use – a list of the activities to be ready for conversion, what they need to do to get their data clean and get it converted. Although the checklist is robust, there are no validation activities planned to ensure that the activities are completed as scheduled. In addition, the timeline for reviewing this checklist with the districts is T-10 days, which is not sufficient enough time to mitigate any corrective actions. Status remains in Green. | • rovide test measurements and metrics to oversight for review. Status: IPOC has asked the project team to provide these performance measures. |
| **Maintenance and Operations** | B | B | 05/31: The PRSM team is planning for transition activities and has asked SAIC to begin the knowledge transfer training and transition effort. Classes and staff have been identified. There appears to be an assumption that SAIC is not contractually obligated to provide support for defects after the completion of the Adaptation phase – IPOC is requesting a copy of the SAIC contract and will investigate this as part of a One-Time Assessment report in June.<br><br>04/30: This category is new. As the project completes the development phase and enters into production level rollouts, M&O needs to be defined. As part of the M&O plan, the process for how changes (defects as well as enhancements) will be handled should be defined. | • POC will work with the project to determine if any M&O documentation exists and will review what the team has prepared. |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for Improvement |
|---|---|---|---|---|
| **Large Pilot Readiness** | B | G | 05/31: Large pilot preparation activities have completed and all conversion activities have started. SME and system admin training is in progress. Additional validation activities were added for the large pilot schedule tasks, as well as documentation of actual results. This category is now assessed Green.<br><br>04/30: Large pilot preparation and conversion activities have started and will last for 6 weeks. There will be far more concurrent users in the large pilot and the environment will change to the production environment. As a result, the team is hoping to be able to assess and mitigate all the open performance issues. IPOC continues to recommend active use of the checklist prior to the start of the Large pilot implementation. | • LT Finding 1: An Entry Criteria Pilot Readiness Checklist should be developed from the District Perspective. Status: This was used for the small pilot but three of the columns were not filled out. IPOC continues to recommend actively working with the district and reviewing this checklist on weekly basis leading up to implementation.<br><br>• LT Finding 3: Tactical processes and procedures for extracting lessons learned and assessing common problems mitigated during level one support should be included in any pilot documentation. Status: IPOC was pleased to see the Lessons Learned activity included in the schedule table; however, there needs to be an associated methodology to accompany the task. The process for defining the metrics to collect, determine who, how and when the data will be collected, and how the data will be analyzed needs to be defined. |
| **Performance** | B | Y | 05/31: Status remains as below. There was no initial performance production baseline captured. Minimal performance testing was performed prior to small pilot, there is an absence of a plan to document the minimal requirements or expectations for performance testing, and performance response time continues to be an issue in large pilot. Based on this assessment, IPOC has assessed this category as Yellow. Caltrans has requested that IPOC present the project team with minimum expectations for performance metrics. IPOC is aware that the response issue they are experiencing are the result of network issues at OTECH. Application performance has been tested acceptable by bypassing the OTECH firewall and loading the application via VPN. The resolution of this issue is out of Caltrans' hands and with OTECH. The issue has been escalated to the CT CIO and OTECH director level. No application load testing can be performed until network issue is resolved.<br><br>04/30: Performance and scalability issues continue to be a significant risk for production readiness. PRSM is experiencing problems with network connectivity, sticky sessions and the performance of user reports. Each of these areas will need to be mitigated prior to rollout. | • apture performance expectations and/or requirements for performance testing.<br><br>• ubmit a CR for SAIC to perform adequate performance testing or procure a tool for Caltrans IT to perform the performance testing – prior to the start of rollout.<br><br>• apture an initial production performance baseline. |

# CALTRANS - PRSM Project Oversight Review Checklist (May 2012)

TECHNOLOGY MANAGEMENT SOLUTIONS

**Project Oversight Review Checklist: High Criticality Project**

This checklist is an assessment for the Adaptation Phase, Small Pilot Phase and Large Pilot Phase.

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
|---|---|---|---|
| **Planning and Tracking** | | | |
| Have the business case, project goals, objectives, expected outcomes, key stakeholders, and sponsor(s) identified and documented? | X | | TMS has reviewed the last approved SPR dated April 2012. TMS has validated that the dates in the project schedule correspond to the new baselined dates as a result of the SPR approval for cost and schedule. |
| Has a detailed project plan with all activities (tasks), milestones, dates, and estimated hours by task loaded into project management (PM) software? Are the lowest level tasks of a short duration with measurable outcomes? | X | | The project does use a MS Project schedule to track the work. Tasks, milestones dates and estimated hours are documented within the schedule and the tasks, for the most part, are represented as manageable, trackable items with durations less than 80 hours. |
| Is completion of planned tasks recorded within the PM software? | X | | Changed from Deficient to Adequate in February 2012.<br>Caltrans has revised the project schedule to include the new approach to system and UAT testing, pilot and rollout. TMS has reviewed this schedule and found that almost all of the recommendations made in our one-time assessment report were mitigated in the new revision. |
| Are actual hours expended by task recorded at least monthly within PM software? | | X | As per the project team, PRSM budget information for each contract is accessed by using the PMO and CA-PMM monthly reports and the SPR. Each month, the project rolls each of the contract expenditures into the CA-PMM report for total project costs. Actual costs are reported, as are actual percent complete. However, hours by task are not tracked at either the State or the vendor level, so this category is Deficient as per the checklist requirements.<br>As per Caltrans, this will be addressed with additional resource loading and reporting of actual start and finish data. |
| Are estimated hours to complete by task recorded at least monthly within PM software? | X | | Status changed from Deficient to Adequate in March 2012.<br>TMS reviews all updates to the project schedule when available. The last project schedule reviewed was dated May 27 and has been baselined to include all SPR dates. IPOC no longer participates in the meetings to gather project status as this is now conducted internally without oversight; however, IPOC has received updates to the schedule several times in this reporting period and is kept up to date with changes as they occur. Actual costs are reported, but estimated hours, or projected hours, are not tracked in the documents that have been provided to TMS. |

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
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| Is there a formal staffing plan, including a current organization chart, written roles and responsibilities, plans for staff acquisition, schedule for arrival and departure of specific staff, and staff training plans | | X | TMS has not been exposed to a formal staffing plan. We have reviewed the Project Organization Chart that documents the overall structure and high-level roles; however, a breakdown of specific staff on the vendor side and State side is not clear. Roles and responsibilities are defined within each project process plan (i.e. change management roles and responsibilities are defined within the Change Management Plan), however, TMS has not seen an overall description of the general roles and responsibilities for the project team (vendor and State).<br><br>With the attrition that is natural in the system integrator team as we start to get closer to rollout, and with the significant resource transitions that have occurred at the State level on the project, a Staffing Plan and strategy for transition becomes more critical to success. |
| Have project cost estimates, with supporting data for each cost category, been maintained? | | X | **As per the project team, PRSM budget information for each contract is accessed by using the PMO and CA-PMM monthly reports and the SPR. Each month, the project rolls each of the contract expenditures into the CA-PMM report for total project costs. TMS has reviewed the cost tracking that the project includes within the CA-PMM and observes that the actual expenditures are summarized as total amount "to-date"; however, not estimated future costs or projections are included. TMS has also reviewed the PRSM Payment Milestone and Deliverables spreadsheet for SAIC vendor costs, including the updated costs for the April reporting period.** |
| Are software size estimates developed and tracked? | N/A | N/A | This item is not applicable. |
| Are two or more estimation approaches used to refine estimates? | N/A | N/A | This item is not applicable. |
| Are independent reviews of estimates conducted? | N/A | N/A | This item is not applicable. |
| Are actual costs recorded and regularly compared to budgeted costs? | | X | Status changed from Adequate to Deficient in May 2012.<br>Typically, the CA-PMM status report cost tracking summary shows various project categories, last approved SPR3 cost and cumulative actual costs for the total project, but not by month or fiscal year. The PRSM Payment Milestone and Deliverables spreadsheet shows actual costs incurred for vendor deliverables. However, for February and April reporting periods the CA-PMM status report was not submitted by the project team. |
| Is supporting data maintained for actual costs? | | X | Status changed from Adequate to Deficient in May 2012.<br>Typically, the Microsoft Excel version of the CA-PMM status report shows comments notes for each new data entry for the cumulative actual costs and registers the amount of invoices paid to the various vendors and subtotals on Total of One-Time IT Project Costs, Total of Continuing Project Costs and Total Project Costs. However, for February and April reporting periods the CA-PMM status report was |

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
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| | | | not submitted by the project team. |
| Is completion status of work plan activities, deliverables, and milestones recorded, compared to schedule and included in a written status reporting process? | X | | The bi-weekly status meeting has been cancelled and the weekly oversight meetings that replaced it have not revised the schedule as a regular agenda item. A new version of the schedule was delivered to reflect the new re-planning tasks and has been reviewed by TMS and found to be adequate. TMS has also reviewed the most current CA-PMM report submitted by the project which tracks work plan activities, major milestones and compares planned to actual. |
| Are key specification documents (e.g. contracts, requirement specifications and/or contract deliverables) and software products under formal configuration control, with items to be controlled and specific staff roles and responsibilities for configuration management identified in a configuration management plan? | | X | TMS has reviewed the Configuration Management Plan at a high level and found that there are some gaps in terms of the promotion process, specific roles and responsibilities for some of the configuration management tasks and a lack of configuration control for some of the project management process documentation. TMS is more concerned with the execution of configuration management and the concern that the project is not following the drafted procedures defined in the plan. |
| Are issues/problems and their resolution (including assignment of specific staff responsibility for issue resolution and specific deadlines for completion of resolution activities), formally tracked? | X | | Status changed from Deficient to Adequate in April 2012.<br>TMS has reviewed the Issue Management Plan. Formal risk and issue management processes were executed on the project from the time IPOC started in July 2011 through November 2011. At that time the risk and issue meetings were cancelled. The meetings resumed again in April and are being conducted in a very thorough manner according to best practices. Current issues and risks are reviewed and the team has added several new risks and issues to the log in the past month. |
| Is user satisfaction assessed at key project milestones? | X | | Through documentation review, it appears that users have been engaged in product reviews and training reviews and have participated in regular meetings to discuss organizational change management and pilot preparations. TMS reviewed the Communication Management Plan and observed that the plan does not address communication methods to and from the districts. TMS is ware that district 3 was actively engaged in the small pilot and that district 4 is planned to be engaged at the same level for the large pilot. |
| Is planning in compliance with formal standards or a system development life-cycle (SDLC) methodology? | | X | Compliance with PMBOK standards is not adequate for this phase of the project. Although this project does not contain a typical design and development cycle, there are requirements, configuration and testing that need to be tracked and managed in a similar way to that of a typical development project.<br>TMS believes that a modified SDLC should have been adopted for the project that clearly identifies how validation of expected behavior will occur (i.e. description of the requirements management, configuration management and test management areas of the SDLC).<br>Although the project is not in compliance with a formal standards or SDLC methodology, at this phase in the project IPOC does see value in creating a document describing the methodology. However, TMS has observed that the project schedule and the approved strategy for realigning testing, pilot and conversion adopts a more tactical approach to validation of the product prior to the pilot phase. This alleviates many of the concerns of a non-standard SDLC. PRSM has reviewed the gaps in the traceability matrix to ensure proper testing coverage and has also held weekly review of testing metrics to understand the current progress being made and clearly defined entry and exit criteria. All of these are |

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
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| | | | improvements to the previous process. |
| Is there formal enterprise architecture in place? | X | | The RFQI describes the target Caltrans enterprise environment. |
| Are project closeout activities performed, including a PIER, collection and archiving up-to-date project records and identification of lessons learned? | N/A | N/A | Project is in the Pilot Phase – this is not applicable in this phase. |
| **Procurement** | | | |
| Are appropriate procurement vehicles selected (e.g. CMAS, MSA, "alternative procurement") and their required processes followed? | X | | The final contract was signed by the Implementation Vendor on February 26, 2009. Caltrans received, reviewed and signed the contract on February 27, 2009. DGS Legal reviewed and signed the contract on March 5th, 2009. |
| Is a detailed written scope of work for all services included in solicitation documents? | X | | Detailed written scope of work is contained in the RFP. |
| Are detailed requirement specifications included in solicitation documents? | X | | Detailed requirement specifications are contained in the RFP. Requirements are also described in the RFQI and Value Analysis documents. |
| Is there material participation of outside expertise (e.g. DGS, Departmental specialists, consultants) in procurement planning and execution? | X | | Outside expertise and counsel has been sought from DOF, DGS, and consultants when appropriate. |
| For large-scale outsourcing, is qualified legal counsel obtained? | N/A | N/A | The project does not involve outsourcing as currently defined. |
| **Risk Management** | | | |
| Is formal continuous risk management performed, including development of a written risk management plan, identification, analysis, mitigation and escalation of risks in accordance with DOF/TOSU Guidelines, and regular management team review of risks and mitigation progress performed? | X | | **Status changed from Deficient to Adequate in April 2012**<br><br>**TMS has reviewed the Risk Management Plan and it contains well documented processes and procedures that include Risk Identification, Risk Analysis, Risk Response Planning, Risk Monitoring and Control and Risk Communication. The plan does not address any formalized approach to risk identification (such as periodic brainstorming sessions, SEI risk identification checklists or the use of software tools). TMS has also observed risk management metrics are not included in this part of the risk planning or execution.**<br><br>Formal risk and issue management processes were executed on the project from the time IPOC started in July 2011 through November 2011. At that time the risk and issue meetings were cancelled. The meetings resumed again in April and are being conducted in a very thorough manner according to best practices. Current issues and risks are reviewed and the team has added several new risks and issues to the log in the last few reporting periods. |
| Does the management team review risks and mitigation progress at least monthly? | X | | Status changed from Deficient to Adequate in April 2012<br>Formal risk and issue management processes were executed on the project from the time IPOC started in July 2011 through November 2011. At that time the risk and issue meetings were cancelled. The meetings resumed again in April and are being |

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
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| | | | conducted in a very thorough manner according to best practices. Current issues and risks are reviewed and the team has added several new risks and issues to the log in the past month. |
| Are externally developed risk identification aids used, such as the SEI Taxonomy Based Questionnaire? | X | | Status changed from Deficient to Adequate in April 2012<br>The PRSM Risk Identification process describes how any stakeholder can submit a risk, defines the process for completing the "PRSM Risk Identification and Response Plan" and addresses how the initial risk is validated and assigned. An initial formal SEI-based assessment was conducted several years ago, and in April when the risk meetings resumed, another brainstorming session took place to identify new risks. |
| **Communication** | | | |
| Is there a written project communications plan? | X | | The latest version of the finalized and approved Communications Plan is dated 6/22/2009. TMS has reviewed the Communication Management Plan, which has a very thorough list of Roles and Responsibilities defined and contains an organization chart showing the relationships of the major stakeholders on the project. However, TMS has observed that this organization chart is out of date and that the Roles and Responsibilities tend to focus mostly on the immediate project team, with very little reference to district communication. |
| Are regular written status reports prepared and provided to the project manager, department CIO (if applicable) and other key stakeholders? | | X | Status changed from Adequate to Deficient in May 2012.<br>TMS is aware that the project does formally report to CTA on a monthly basis and TMS has reviewed the most current CTA status report from March 2012, submitted on April 10. Although a March report was submitted, there was no report submitted in either February or April. TMS is unaware of any other internal status report being developed. |
| Are there written escalation policies for issues and risks? | X | | Both the Risk Management Plan and the Issue Management Plan contain a risk escalation process. |
| Is there regular stakeholder involvement in major project decisions, issue resolution and risk mitigation? | X | | TMS is aware that monthly Implementation Meetings are held with select district stakeholders for the purpose of keeping the District project managers regularly updated on the status of the project and to receive their input. At the recommendation of the PRSM Project manager, TMS is not attending these meetings but is available to review status documentation or meeting minutes to determine the value-add in meeting stakeholder expectations about involvement in the deployment process.<br>A series of four "roadshows" were completed prior to small pilot to present how PRSM would address key business processes at the district. Additionally, there have been two daily small pilot user sessions and a daily pilot review call.<br>Small pilot user PM & TM training completed successfully, large pilot training is underway. Training facilities have all be reserved, trainee invitations sent, materials produced and trainers scheduled. Additional session for T4T and custom reporting are scheduled. Large pilot go/no-go meeting conducted with a go for large pilot training decision received. |

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
|---|---|---|---|
| **System Engineering** | | | |
| Are users involved throughout the project, especially in requirements specification and testing? | X | | The PRSM team reached out to districts for more involvement during the month of November. Specifically, additional districts have been added to the monthly Implementation Manager's meetings, districts have stronger participation in validating the converted data and for discussing risks and issues on the project. |
| Do users formally approve/sign-off on written specifications? | X | | Configuration requirements baseline, customizations and deleted requirement agreements were reviewed by Caltrans at regularly scheduled Checkpoint meetings and feedback was provided to the Implementation Vendor. Through documentation review, it appears that users have been engaged in product reviews and training reviews and have participated in regular meetings to discuss organizational change management and pilot preparations. |
| Is a formal SDLC methodology followed? | X | | The project schedule is categorized into high level summary tasks: program Milestones, Project Management, PRSM Adaptation Phase, Testing Phase, PRSM Pilot phase, PRSM Rollout, Statewide Rollout Acceptance and state Closeout. |
| Is a software product used to assist in managing requirements? Is there tracking of requirements traceability through all life-cycle phases? | X | | Changed from Inadequate to Adequate in March 2012.<br>TMS has reviewed spreadsheets of requirements but is unaware of any other tool that is currently being used to manage requirements. Traceability matrices do exist and have been reviewed at a high level by TMS. These traceability matrices are significantly out of date.<br>TMS has also reviewed the traceability spreadsheets in the project document library and found that there are many to-be use cases that are not traced to any associated test cases. This could be an indication of insufficient testing coverage. TMS provided this data to Caltrans and they have gone through the testing materials to complete the mapping. A review of the approach Caltrans took for this exercise was reviewed by TMS and found to be consistent with our recommended mitigation. There are (12) Unknown mappings that could be out-of-the-box functionality that is not used by Caltrans, or an item that was removed or re-designed. There were (4) items that could not be traced and require some additional investigation. Based on the significant improvement in mapping completed by the PRSM team on filling the gaps of the No Match and Partial Match requirements, IPOC now finds this category Adequately Defined. |
| Do software engineering standards exist and are they followed? | X | | Engineering standards exist and are documented in the PRSM Configuration Management Plan. TMS has reviewed the Configuration Management Plan at a high-level and will complete a more in-depth assessment in the future. |
| Does product defect tracking begin no later than requirements specifications? | X | | As per the Adaptation Test Plan dated July 1, 2001, Test Team members document defects in iCenter's Test Tracker as they find them, starting at the Testing Phase. A process is defined for the Test Leads to review open iCenter Test track issues with PRSM team members and also identifies a process to identify, classify and resolve test anomalies. In addition, a document titled PRSM Anomaly Identification and Resolution Process Utilizing Test Tracker provides detailed instructions for how to use the defect tracker. |
| Are formal code reviews conducted? | X | | TMS is aware that the PRSM Project Team has performed formal configuration reviews to occur during checkpoints throughout the Adaptation Phase. TMS has not |

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
|---|---|---|---|
| | | | been exposed to any code review documentation or Checkpoint 4 review documentation. |
| Are formal quality assurance procedures followed consistently? | | X | TMS reviewed the Quality Management Plan and observed that it contains a high-level of detail for the review, analysis and approval of formal deliverable documentation from the vendor. However, TMS did find the overall process and procedure for non-deliverable quality management to be lacking. The Quality Management Plan contains a single-line reference to the Configuration Management, Change Control, Issue Management and Risk Management plans but does not discuss what activities are performed by the quality team to ensure these process areas are functioning efficiently, correctly and in accordance to the documented processes and procedures. There are some quality activities defined for requirements management, however, the frequency for when those activities take place, the tools used to perform the activities and the reporting vehicle for those activities are not defined. |
| Do users sign-off on acceptance test results before a new system or changes are put into production? | N/A | N/A | Project is in the Pilot Phase – this item is not applicable. |
| Is the enterprise architecture plan adhered to? | N/A | N/A | TMS is aware that Caltrans is in the process of creating a formal enterprise architecture plan. The PRSM technology solution was requested to be submitted as part of the study. However, TMS has not been exposed to the enterprise architecture plan and will need to work with the project team to gain access for this document. |
| Are formal deliverable inspections performed, beginning with requirements specifications? | X | | The PRSM Quality Management Plan contains a high-level of detail for the review, analysis and approval of formal deliverable documentation from the vendor. Upon review of the PRSM project schedule, it appears that formal deliverable inspections are conducted for critical milestones of the project. |
| Are IV&V services obtained and used? | X | | **The IV&V Contract was approved and the IV&V Vendor began work in April 2008.** |

# IPO Report for April 2012

**Project Name:** Caltrans Project Resource Scheduling Management (PRSM) System

**Assessment Date:** April 30, 2012

**Frequency:** Monthly

## Oversight Provider Information

| | | | |
|---|---|---|---|
| **Oversight Leader:** | Cindy Blehm | **Organization:** | Technology Management Solutions, Inc. |
| **Phone Number:** | 916-591-1746 | **Email:** | cindyblehm@aol.com |

## Project Information

| | | | |
|---|---|---|---|
| **Project Number:** | **2660-160** | **Department:** | Transportation (Caltrans) |
| **Criticality:** | High | **Agency:** | Business, Transportation & Housing |
| **Last Approved Document/Date:** | SPR (4/2/2012) | **Total One-time Cost:** | $26,947,129 |
| **Start Date:** | June 7, 2000 | **End Date:** | May 24, 2013 |
| **Project Manager:** | Bill Saunders (acting) | **Organization:** | Caltrans |
| **Phone Number:** | 916-749-5675 | **Email:** | Bill_saunders@dot.ca.gov |

## Summary: Current Status

**Project Phase:** Adaptation Phase

| | | | |
|---|---|---|---|
| **Planned Start Date:** | April 11, 2011 | **Planned End Date:** | April 5, 2012 (per approved SPR) |
| **Actual Start Date:** | April 11, 2011 | **Forecasted End Date:** | April 27, 2012 |

**Project Phase:** PRSM Small Pilot Phase

| | | | |
|---|---|---|---|
| **Planned Start Date:** | December 2, 2011 | **Planned End Date:** | March 28 (per approved SPR) |
| **Actual Start Date:** | December 2, 2011 | **Actual End Date:** | **March 23** |

**Project Phase:** PRSM Large Pilot Phase

| | | | |
|---|---|---|---|
| **Planned Start Date:** | December 22, 2011 | **Planned End Date:** | May 24 (per approved SPR) |
| **Actual Start Date:** | December 22, 2011 | **Forecasted End Date:** | **August 9** |

## Schedule

Select the statement that most closely applies, measured against the last **Finance approved** document.

**Ahead-of-schedule:**
One or more major tasks or milestones have been completed and approved early (> 5%). All other major tasks and milestones completed and approved according to plan.

**On-Schedule**

**On-schedule:**
All major tasks and milestones have been completed and approved according to plan. (Within 5%)

**Behind Schedule:**
One or more major tasks or milestones are expected to be delayed. (> 5%)

**Comments:**

The SPR for PRSM was approved on April 2, 2012 which reset the baseline for the project. Pilot conversion tasks have added detail and the project team has added resources for the upcoming small pilot and large pilot tasks. Resources still need to be added for some rollout activities. The current schedule is forecasting the end of the Adaptation Phase for April 27, which is (16) sixteen days later than the SPR baseline completion date of April 5, 2012. The current schedule is forecasting the end of the user activities for the large Pilot Phase for June 6, which is almost 2 weeks later than the SPR baseline completion date of May 24, 2012. The project team is doing a commendable job of documenting in notes the reason for delays in all sub-tasks, and a go forward plan of getting the tasks back on track.

Small pilot activities and UAT concluded on schedule and the small pilot team gave the GO decision to move to large pilot training. Another round of regression testing is being conducted on the 54 defects found and fixed in System Testing.

IPOC will begin tracking the baseline dates for each phase against the forecasted date in each IPOR. This data was based off the last revised schedule dated 04/24/2012:

| Phase | Baseline Start | Baseline End | Forecast Start | Forecast End | Variance in End Dates (in days) | % Complete |
|---|---|---|---|---|---|---|
| Adaptation | 4/11/2011 | 4/5/2012 | 4/11/2011 | 4/27/2012 | -16 | 99% |
| Small Pilot | 12/2/2011 | 3/28/2012 | 12/2/2011 | 3/23/2012 | 3 | 100% |
| Large Pilot | 12/22/2011 | 5/24/2012 | 12/22/2011 | 6/6/2012 | -9 | 34% |
| Rollout Phase I | 04/18/12 | 11/20/2012 | 6/21/2012 | 1/11/2013 | -38 | 0% |
| Rollout Phase 2 | 5/8/2013 | 5/24/2013 | 12/21/2012 | 5/24/2013 | 0 | 0% |
| Overall | 4/11/2011 | 5/24/2013 | 4/11/2011 | 6/19/2013 | -19 | 61% |

**Resources (Level of Effort)** Choose the statement that most closely applies.

**Fewer Resources**
Completion of one or more major tasks and / or acceptable products has required or is expected to require materially (>5%) fewer hours/staff than planned.

**Within Resources**

**Within Resources**
All major tasks have been completed and acceptable products created using the planned number of hours/staff (within 5%).

**More Resources**
Completion of major tasks and / or acceptable products has required or is expected to require materially (>5%) more hours/staff than planned.

**Comments:** From a vendor perspective, SAIC documents the on-board staff in each project position in their monthly status reports. The project appears to have the appropriate vendor staff in place in all the lead positions; however, the project does not appear to have a similar tracking system in place to document State staff.

IPOC has observed that since new resources were added to the testing and data conversion efforts on both the State and Vendor teams, the project appears to be staffed at the appropriate level, which has resulted in tasks starting and completing on time within the schedule milestones. Although the schedule has now been revised and leveled with State resources, without a clear staffing plan, IPOC is unable to discern whether or not this level of increased staffing is enough to complete the anticipated tasks on-time. TMS has not observed evidence of a staffing Plan describing the schedule for arrival and departure of staff over the course of the project. In the absence of a plan, TMS must rely on the resource leveling in the project schedule. An evaluation of the schedule indicates that the majority of the Caltrans resources are leveled, but some SAIC resources remain to be leveled.

The project manager left the PRSM project effective April 6. Bill Saunders has taken on the role of PRSM Project Manager in an acting position. A long-term replacement has not been announced.

Upon review of the revised schedule, TMS feels more confident in the project team's ability to complete the remaining project tasks within the current level of resources. The revised schedule shows leveled resources up through the end of the large pilot phase and for most of the production rollout phase. TMS is aware that the project team is working on the continued leveling of resources through rollout.

Additionally, during the month of April, Caltrans added several new resources to the support help desk for the PRSM Small Pilot and has reported significant benefit in the added staff.

**Resources (Budget/Cost)** Choose the statement that most closely applies.

Not Able to Assess

**Less cost**
The project is (>5%) under budget.

**Within cost**
The project is operating within budget.

**Higher cost**
Material budget increases (>5%) are likely.

**Comments:** The funding source for PRSM is the State Transportation Fund. TMS has reviewed the vendor deliverable tracking spreadsheet and the updated cumulative expenditures that the project has reported in the most current CA-PMM report for March 2012. As per the CA-PMM status report for the February reporting period, the total project approved costs were $36,377,496 and the Cumulative Actual Cost to date is $22,705,313. NOTE: These numbers are based on the latest approved SPR4.

| | SPR 4 Costs | Cumulative Actual Costs |
|---|---|---|
| **Project Costs** | **$36,377,496** | **$22,705,313** |
| One-Time | $26,947,129 | $20,105,509 |
| Continuing | $9,430,367 | $2,599,804.00 |
| Annual M&O | $2,057,000 | $0 |

As per the Vendor Payment Point and Deliverables spreadsheet, SAIC has been paid $5,340,807

(less holdback) of the $13,200,056 contract. Caltrans received one invoice for $62,000 in the Adaptation phase, of which $56,250 was paid out for the Plan for Pilot and Data Conversion Implementation Plan.

| | Budgeted | Invoiced |
|---|---|---|
| Planning | $1,009,739 | $908,765 |
| Adaptation | $4,933,935 | $4,247,042 |
| Pilot | $2,807,271 | $185,000 |
| Rollout | $2,211,424 | $0 |
| Maintenance | $2,128,292 | $0 |
| Unanticipated | $109,995 | $0 |
| **TOTAL** | **$13,200,056** | **$5,340,807** |

In order to properly assess the cost for PRSM, TMS must be able to view the expended and projected monthly tracking expenditures and compare that to the economic analysis worksheet in the last approved SPR. To date, TMS has only been exposed to budgeted and actual costs, but has not observed forecasting of projected costs against SPR EACs. Because of this, TMS has stated that we are Unable to Assess the Resources (Budget/Cost) section.

**Quality (Client Functionality)** Choose the statement that most closely applies.

**Adequately Defined**

**Adequately Defined**
Required client functionality is adequately defined, and is being successfully built into the system, given the current project phase.

**Inadequately Defined**
One or more significant components of required client functionality are inadequately defined, or are not being successfully built into the system, given the current project phase.

**Comments:** TMS has reviewed the requirements and to-be use cases and workflows created for PRSM and found them to be quite thorough and inclusive of the underlying solution flow. In previous months, TMS reviewed the traceability spreadsheets in the project document library and found that there were many to-be use cases that are not traced to any associated test cases. IPOC was concerned that this could be an indication of insufficient testing coverage. TMS provided this data to Caltrans and they have gone through the testing materials to complete the mapping. A review of the approach Caltrans took for this exercise was reviewed by TMS and found to be consistent with our recommended mitigation. There are (12) Unknown mappings that could be out-of-the-box functionality that is not used by Caltrans, or an item that was removed or re-designed. There were (4) items that could not be traced and require some additional investigation. Based on the significant improvement in mapping completed by the PRSM team on filling the gaps of the No Match and Partial Match requirements, IPOC now finds this category Adequately Defined.

The project has also completed additional ad-hoc testing of business processes that aren't necessarily tied to requirements but require testing to ensure the overall experience of the user works as expected.

During the Small Pilot, the PRSM team conducted daily user activity sessions that focused on utilizing PRSM functionality for specific use case scenarios. These user sessions were a huge success and allowed the PRSM team to adapt some of the PRSM flow and functionality to better fit the way the application will be used in the districts.

**Quality (Architecture/System Performance)** Choose the statement that most closely applies.

**Adequately Defined**
The system technical architecture is adequately defined, and modeling, benchmarking and testing are being conducted (or are planned) appropriate to the current project phase.

**Inadequately Defined**

**Inadequately Defined**
The system technical architecture is not adequately defined, or modeling, benchmarking and testing are not being conducted (or are planned) appropriate to the current project phase.

**Comments:**

TMS is aware that the Implementation Vendor has submitted a Configuration Management Plan, High Level Design, Test Plan and updated Architecture Diagram. The Production environment hardware has been configured and turned over to Caltrans. Performance, volume and scalability testing activities have been added to the revised project schedule as part of Phase 5 System Testing Part B. These tasks remain fairly high level and TMS has been told by the Caltrans team that a Performance Plan is being drafted to document the tasks of performance and load testing in more defined detail. As of the end of April, a Performance Plan has not been drafted. IPOC continues to recommend the development of performance requirements and test scripts.

During February, the project implemented a Performance testing tool that will monitor the CPU cycles, memory, etc during the testing phases. The tool will run in the background to collect data that will be analyzed and if issues become apparent, they will be mitigated appropriately. Although this data collection will not aid in load testing or analysis (only 15-20 users will be on the system during the testing phases), the tool will help identify isolated performance issues.

Due to the resource limitations of the test and train environments, no performance testing was done on the hardware as scheduled. However, system monitors have been in place since the beginning of the test and pilot cycle to monitor CPU usage, disk space and memory usage. An issue was discovered with memory usage on test; there is a known issue with that way Clarity's JVM manages memory. A daily bounce of services has been implemented to maintain system performance and there is an open issue in the PRSM issue log on this item. Memory issues continued during the Small Pilot and this remains a significant concern for the Large Pilot and rollout. The project team has opened issues and risks related to these performance problems and are actively working with SAIC and OTech to determine solutions.

During the small pilot, users reported slow response times in the execution of some reports. The team is hoping that production environment containing more CPU and memory will help alleviate some of the report performance problems. As a contingency, the PRSM team has expressed the ability to schedule reports to be run during off hours; however, business process analysis to determine whether scheduled reports would be feasible has not yet occurred. The team is also looking at the possibility of using Business Analytics which would provide more flexibility in reporting and potentially improve performance.

## New Risks

IPOC has submitted no new risks this reporting period.

**Progress Toward Addressing Prior Risks**

## Risk R-6: Lack of performance and scalability planning may lead to issues with the Pilot or Rollout if not resolved quickly

Risk Statement: For performance testing, there is a lack of requirements and goals. There is also a lack of a test plan for scalability and performance, a lack of performance test scripts created and executed, when Pilot activities are a month away.

| | | | | | |
|---|---|---|---|---|---|
| **Probability:** | Medium | **Impact:** | High | **Timeframe:** | Short Term |
| **Severity:** | Medium | **Opened:** | 09-2011 | **Status:** | Open |

**IPOC Recommendations:**

- Understand performance requirements – how many users will be on the system concurrently, what is the expected performance metrics for submitting data, what is the expected performance for running reports, what are the scalability requirements?

  Status: This has been mitigated.

- Take the current scheduling system and establish baseline for these performance requirements and determine if they are meeting the goals?

  Status: To the best of IPOC's knowledge, this has not yet been done.

- If they are not meeting the goals, develop and execute test cases for performance.

  Status: This is planned for in the project schedule, but has fallen behind schedule due to environment issues.

**Status:**

4-30: During the small pilot, the project continued to see issues regarding performance and scalability. There were sticky session issues in which the user sessions were not being maintained across windows. The team responded to this problem with a workaround involving hardwiring the web server, application server and DB server and eliminating the need for load balancing. This solution was adequate for the small pilot but will not be adequate for large pilot or rollout. The daily bounce of services also continued during the small pilot and the users reported performance problems in running some of the reports. The team is hoping that the change in configuration of the production server will alleviate some of the report performance issues. The contingency will be to schedule reports to run during off hours; however, the business process feasibility of implementing this in the districts has not yet been analyzed. Performance and scalability continue to be one of the highest risks to a successful large pilot implementation and rollout of the remaining districts.

03-31: Due to the resource limitations of the development, test and training environments, no performance testing was done on the hardware as scheduled. However, system monitors have been in place since the beginning of the test and pilot cycle to monitor CPU usage, disk space and memory usage. An issue was discovered with memory usage on test; there is a known issue with that way Clarity's JVM manages memory. A daily bounce of services has been implemented to maintain system performance and there is an open issue in the PRSM issue log on this item. There is some concern over the anticipated report volume and response time in the reporting environment. There are not additional performance or load tests that can be run in the reporting environment and the team is looking at additional tests in the production environment. The team is also looking at the possibility of using CA Business Analytics or another reporting solution, which would provide more flexibility in reporting and potentially improve performance. IPOC will continue to monitor these performance activities.

02/29: During February, the project team implemented a tool for performance monitoring that will be used to try and isolate any functional performance issues. The tool will run in the background, collect data and that data will be analyzed to determine if there are any issues that need mitigated. The tool and the data collected will not address load testing issues as the load will be minimal compared to production level loads, however, it represents a good start toward understanding if there are specific, isolated performance issues that need addressed. In addition, performance and load activities were added to the revised project schedule and the Caltrans team is preparing for conducting the performance monitoring activities as part of Phase 5

System Testing Part B. Based on these activities, TMS has reduced the Probability from High to Medium and the Severity to Medium and continuing to track the activities of performance and load testing.

## Risk R-5: Inadequate planning for data conversion may cause additional schedule delays and impact the quality of integration testing.

**Risk Statement:** There have been unexpected problems with the dry-run data conversion process and for several of the Districts' pilot data, there has not been a successful dry-run to date. This may cause additional schedule delays and impact the quality of integration testing. In addition, planning for conversion is behind schedule with the team continuing to document the Implementation Plan and the end-to-end Caltrans Conversion Process document.

| | | | | | |
|---|---|---|---|---|---|
| **Probability:** | Medium | **Impact:** | High | **Timeframe:** | Medium |
| **Severity:** | Medium | **Opened:** | 09-2011 | **Status:** | Open |

**IPOC Recommendations:**

- Reconcile discrete tasks listed in the go-forward plan with high level tasks in the project schedule to ensure that all conversion activities are tracked and assigned.

  Status: This has been mitigated.

- Review of the current conversion metrics showing what has been successfully converted and what remains to be converted.

  Status: IPOC reviewed the informal results that were available from the Small Pilot Conversion. No formal results were captured.

- Include districts in conversion validation activities – no one knows their data better than they do.

  Status: Plan for Pilot and Implementation Plan had roles and responsibilities assigned for districts related to validation. IPOC reviewed the completed District readiness checklist and reviewed the small Pilot informal results that were completed by each district involved in the pilot. The checklist does a commendable job of highlighting the tasks that needs to be validated, the owner of the task (both HQ and District) and the follow-up actions. This Checklist was sent to IPOC as confirmation of conversion results being documented after the Small Pilot. However, IPOC is unaware if this checklist was actually used in the conversion process and it does not appear that the checklist was updated to complete many of the fields (target date, LOR and criticality).

- In discussions with the project team, they have indicated that they would like to document, by District, where the source data is coming from, what pre-conversion activities or data cleansing have been done so far, what remains to be done, and results of testing. This will help the State identify which district is in the best position to move forward in Pilot. IPOC agrees and supports this approach.

  Status: To the best of IPOC's knowledge, this type of data has not been captured.

**Status:**

4-30: Data conversion for the small pilot went very well and all activities completed on time. During the small pilot, the extract and transform physically only took a few hours, however the team manually evaluated the extract spreadsheets. There were some adjustments to the ETL scripts and processes. Additionally each activity did not complete in lock step during small pilot. There were lags between activities and in some cases the processes were run more than one time. For large pilot, the activities were more streamlined. The team conducted an informal lessons learned at the completion of the small pilot conversion that included the following:

- Found a few missing resources or contracts that need to be added to the small pilot project after conversion. The team has put a check in place to validate that the table they are using has the same data as PRSM for large pilot conversions.

- Found issues with County/Route/PostMile combinations. The team has put a check in place to validate that the data they receive from PMCS is consistent with the lookups in PRSM for large pilot.

IPOC continues to recommend that metrics be maintained for all conversion activities. For the pilot, there were no metrics maintained that tracked how many tasks each schedule contained, how many tasks loaded successfully, how many were transformed successfully, how many were validated successfully, the time it took for each activity, etc. This type of data will be extremely helpful as additional districts roll out. The project should be striving to improve the conversion results for each rollout; however if the metrics are not captured, the PRSM team will be unable to perform trend analysis to help with future rollouts.

03-31: The project has documented a standard template for what a converted project needs to look like to successfully carry over into PRSM. The project has also published guidelines to the districts defining the ideal state of the project before it can move to PRSM. For the past year, PRSM has been getting data output files from each of the districts and running them through the conversion process. As a result of the output process, they have been producing data Anomaly Reports that include the parts of projects that errored out of the conversion and are expecting each district to go through their conversion reports, correct the issues and re-run the data through the system. The testing is not just a sub-set of their data and appears to be very comprehensive. The district readiness checklist contains a checklist for conversion that each district can use – a list of the activities to be ready for conversion, what they need to do to get their data clean and get it converted. Although the checklist is robust, there are only a few validation steps planned to ensure that the activities are completed as scheduled, and most of these are focused on the project data from each district. IPOC would like to see more validation steps included for the deployment and conversion as a whole, ensuring that all of the responsibilities we expect the districts to perform are indeed completed according to the schedule. In addition, the timeline for reviewing this checklist with the districts is T-10 days, which is not sufficient enough time to mitigate any corrective actions. IPOC recommended in their One-Time assessment report on the District checklist that this timeframe be extended to 30-45 days to allow more time for the districts to react to corrective action. IPOC will review the conversion statistics available and plans to close out this risk in the next reporting period based on the progress made over the last several months.

02-29: TMS has reviewed the Implementation Plan (and will review the checklist during March). System Testing for Phase 5 Part A has completed and UAT Testing for Phase 5 Part B has started. TMS is aware that Caltrans has been in weekly communication with the districts in discussing conversion and validation activities but is unaware if any of the remaining recommendations made above have been implemented. TMS will schedule time with IV&V to discuss data conversion and understand the processes that have been developed.

## Risk R-1: Lack of Effective Organizational Change Management or District Buy-in for Pilot could lead to lack of acceptance of PRSM or to new PRSM processes

**Risk Statement:** One of the most significant challenges to the PRSM Project could be engaging and obtaining buy-in from District executives, management and staff. It is very important that District executives and management are knowledgeable about PRSM and the changes to their business processes and benefits of using PRSM. District staff, in addition to training, should be knowledgeable of the decisions and consequences of changing / standardizing business processes. Lack of engagement of District personnel at all levels could have a negative impact on overall PRSM system acceptance and usage.

| | | | | | |
|---|---|---|---|---|---|
| **Probability:** | Medium | **Impact:** | Medium | **Timeframe:** | Medium |
| **Severity:** | Medium | **Opened:** | Unknown | **Status:** | Open |

**IPOC Recommendations:**

- Assess the changes to the training program/plan proposed in the most recent implementation vendor change request in order to understand the impact on Organizational Change Management. Work with the Districts to help them understand the changes to the training program in order to gain organizational buy-in and confirm that the program is adequate to enable a successful Roll Out.

  Status: This has been mitigated.

- Consider hiring / extending additional consulting resources to assist with refining the Organizational Change Management Plan and to execute the plan.

  Status: IPOC is not aware that any additional staffing has taken place to help with OCM development and activities.

- Involve the end users in a more direct way and allow them to participate in the risk management process. This will allow the project team to obtain early buy-in and a stake in the project. Hold a risk identification session to identify the district concerns of the pilot activities and help define appropriate mitigation strategies to address the risks identified.

  Status: This has been mitigated. A series of four "roadshows" were completed prior to small pilot to present how PRSM would address key business processes at the district. Additionally, there have been two daily small pilot user sessions and a daily pilot review call.

- Analyze current methods of communication to determine if additional processes need put in place to get the districts to open up the channels for communicating risks and issues associated with pre-pilot, pilot and post pilot activities.

  Status: This is being mitigated. There was a daily small pilot review and they are also conducting daily large pilot reviews

- Engage the districts in reviewing business functionality and business processes.

  Status: Previously, TMS reported this recommendation as mitigated due to the districts participation in training for the six key functional areas and the business processes associated with them. However, based upon the results of the pilot and the user feedback from the training courses, TMS recommends incorporating more focused examples of how the districts will use PRSM to perform their daily job. The feedback received from the small pilot indicates that the training material deals more at a generic product level rather than specifically demonstrating how PRSM will be used day to day.

**Status:**

4-30: During the small pilot, user activity session took place on a daily basis that allowed the users to focus on a particular PRSM functionality and the use case scenarios associated with it. These user sessions proved very helpful and the PRSM team will continue this practice during large pilot and rollout. The training evaluations for the small pilot revealed that additional business process preparedness is needed to streamline the implementation of PRSM. It was suggested that the training materials be updated to contain more concrete examples of how PRSM will be used on a daily basis. Additionally, although the district readiness checklist was utilized for the small pilot, there did not appear to be much oversight or active involvement from the PRSM team to ensure that all tasks were completed prior to the start of the implementation. Several columns, including the status column, were not completed and it was unclear what state some of the activities were in at the end of the pilot. TMS continues to recommend actively reviewing this checklist during a weekly cadence call with the district to ensure that all tasks are completed.

03-31: The PRSM conversion lead has met with the conversion managers on a monthly basis to go through the checklist and talk to them about their data conversion reports; however, there are no validation activities to ensure that the districts complete all the items on the checklist. Without this validation, the PRSM team may not be able to answer the question "Are the districts 100% ready to have their projects roll?" IPOC will be reviewing the completed checklist for the small Pilot along with the business process materials outlined in section A.1 #8 of the District Readiness Checklist.

2/29: An Implementation Plan was submitted during February which TMS reviewed at a high-level. The plan did not contain the substance expected; however, during our initial review the checklist referred to in the document was not available. TMS has received this checklist and will review it during March and will provide comments to the project. In conversations with the Caltrans team, TMS is aware that the districts do not have sufficient resources to perform formal OCM, nor does Caltrans have a formal OCM team that is skilled in training on business processes. Caltrans is trying to train a business analyst team that can work with the districts and understand their business processes, but they are not up and running at full strength yet. However, there are still activities in place that are geared towards OCM awareness. TMS has observed that through the small pilot, the data conversion team is providing daily sessions with the district to demonstrate how the data moves through the functional processes of the business and engage the small pilot stakeholders. This becomes even more important as we move onto larger districts who all have different tools and different data needs. TMS believes we need to be able to find a way to incorporate the business process awareness into the district training. The Caltrans PM says there are plans in place to visit the large districts and perform training with the functional business processes, and TMS sees this as a positive step.

**Closed Risks**

## Risk R-8: Availability and skill set of PRSM resources may not be sufficient for the revised project approach and schedule for testing, conversion and pilot

**Risk Statement**: TMS has reviewed the new PRSM approach and strategy for testing, conversion and pilot activities which assume a higher percentage of parallel tasks in order to compress the schedule and meet key milestone dates. Although TMS is in agreement with the new parallel project activities that are designed to compress the overall project schedule as much as possible, TMS also believes there is a significant risk of not having enough qualified and available resources to perform he necessary work in the shortened timeframes. The majority of resources for both Caltrans and SAIC's are currently focused on Phase 1-4 testing and the necessary planning and execution of activities in the upcoming parallel activities are already falling behind schedule.

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| **Probability:** | Low | **Impact:** | Medium | **Timeframe:** | Long Term |
| **Severity:** | Medium | **Opened:** | 01-2012 | **Status:** | Closed |

**IPOC Recommendations:**

1. TMS believes each of the functional area leads (Testing, Conversion, Pilot, and Training) needs to continue to take an active role in the day-to-day management of their functional activities and allow the State PM more time to strategically manage the project.

   Status: This has been mitigated.

2. Based on the new approach for testing, pilot and conversion, TMS is also concerned about resource allocation for these parallel activities and will be looking to the revised project schedule to determine if the allocations are realistic given the new workload.

   Status: This has been mitigated.

3. TMS recommends adding additional time for UAT regression testing, bug remediation, adjustment cycles or lessons learned cycles, and district review to ensure that all issues are resolved, anomalies identified and bugs fixed before moving to the next phase of the schedule. Although adding these additional these tasks into the schedule may push out the overall completion date, TMS believes that appropriate time for planning, execution and validation must take place if the new approach is going to be successful. The lack of regression testing during Phases 1-4 creates the risk that new and previously unidentified defects will surface during the Phase 5 System and User Acceptance Tests.

   Status: Some lag time was implemented into the new schedule but the schedule remains aggressive with minimal lag between phases. However, the project team appears to be meeting most targeted start and end dates.

**Status:**

4-30: The resources on PRSM appear to be adequate for large pilot and rollout. Three new Caltrans members joined the help desk support team and greatly contributed to the success of the small pilot. At this time, IPOC considers this risk mitigated.

03-31: Phase 5 regression testing started on time and completed on time. In addition, UAT Testing for Phase 5 started on time and is also now complete. Summary metrics are currently being drafted by the PRSM team. Small pilot activities and UAT concluded on schedule and the small pilot team gave the GO decision to move to large pilot training. Testing continued past the planned 03/19 end date in parallel with the large pilot preparation and production build out. All indication points to completion for Adaption Phase approximately 10 days later than planned due to the late acceptance of Deliverable 13 – Acceptance of the Application Installation Report and Platform Acceptance Letter. Testing was not a factor in the schedule slip. Some lag time was implemented into the revised project schedule but the schedule remains aggressive with minimal lag between phases. However, the project team appears to be meeting most targeted start and end dates. The probability has been reduced to Low. IPOC will continue to monitor the activities for the next reporting period and if the trend continues, IPOC will close out this risk for the next reporting period.

02-29: The PRSM project has made significant efforts towards mitigating this risk during the month of February. The revised schedule was reviewed by TMS and found to address many of the issues TMS raised in our one-time schedule assessment in

September. Specifically, the revised schedule includes improved resource leveling and resource allocation for the parallel activities taking place. Additionally, the project has started daily meetings with the leads in each area to tactically address daily issues, action items and priorities. The Impact has been reduced to Medium, which has also reduced the severity to Medium. The project has not yet addressed the third recommendation TMS has made for this risk (increasing the time for UAT regression testing, bug remediation and lessons learned).

## General Comments

This report reflects the time period of March 1 – March 31, 2012. The PRSM project remains in Rolling Wave 3: Adaptation Phase part B, which includes development, data conversion and interfaces, production build-out, testing, Adaptation phase training and Adaptation Acceptance. The project is scheduled to move into Rolling Wave 4: Pilot in Spring 2012.

This General Comments section focuses on the project management processes. TMS has included the following project management process chart documenting TMS's assessment of each major area of project management on the PRSM project by a color code in the table below. Three month's worth of status is displayed.

RED = Unsatisfactory project management practices that present significant risk to the project.
YELLOW = Corrections to project management practices needed to reduce risks.
GREEN = Satisfactory project management practices are being followed.
BLUE = Assessment in progress.
GRAY = Closed – not applicable to the project in this phase

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for Improvement |
|---|---|---|---|---|
| **General Project Management** | G | G | 4/30: In April, Bill Saunders replaced Kari Gutierrez as the acting Project Manager. Risk and Issue meetings started back up on a bi-weekly basis and the project continues to actively track the schedule and address issues as they arise.<br><br>03/31: Weekly internal project meetings re occurring, but IPOC has not observed meeting minutes or other evidence that this project status is occurring. The new project schedule has more of a strategic focus than a tactical focus, and increased communication with the districts and functional project teams are occurring. Status remains in green.<br><br>2/29: During the month of February, significant progress was made by the project team both in execution and in project management activities. Daily meetings are now being held to improve communication and to expedite the acknowledgment and mitigation of issues, risk and issue monitor has recommenced during the weekly internal team meetings and the project has committed to providing IPOC with a full spreadsheet of risk and issue activity each month and the schedule has been revised (but not yet approved) taking into consideration most of the deficiencies raised in the one-time schedule assessment report TMS submitted in September. Given these improvements, the status has changed to green to reflect the overall project management improvements. Note: some of the | • Il previous recommendations have been addressed. |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for Improvement |
|---|---|---|---|---|
| | | | individual status ratings will remain the same as last month so that we can monitor and assess the plans that have been put into place to ensure they occur as planned. | |
| **Planning and Tracking (Work Plan)** | G | G | 4/30: The project schedule continues to be tracked weekly. The large pilot has several over-allocated resources on the SAIC side and the rollout is missing resources on many of the tasks. The team is working on closing these gaps. If they remain open issues next month, this status item will turn yellow.<br><br>03/31: The project schedule is being tracked weekly for updates and when delays in start or completion dates occur, the project team is doing a commendable job of adding a project note to explain the variance. Resource assignments still need completed for the entire Rollout phase and leveled across all resources.<br><br>2/29: TMS has changed the status of this item to green based upon the newly revised project schedule. The revised draft schedule now includes individual assignments rather than group assignments, baselines, fixed work/effort tasks, loading of resources and a readjustment of strategy in terms of some of the activities being performed during the pilot. Based on the new approach, IPOC believes the work plan is now manageable and accurate. However, resource assignments still need to be made for all activities starting with the Roll Out phase, and some SAIC resources still need to be leveled. TMS will monitor the updating of the schedule to ensure it is being worked in a timely manner. | • SCH Finding 5: TMS recommends that the project level the current workplan such that all resources listed in the schedule are allocated at a reasonable level. Status: SAIC resources still need to be leveled and resources need to be added to the activities in the Rollout phase. |
| **Quality Management** | G | G | 4/30: Additional regression is being run on some development fixes implemented during System Testing. In general, quality seems adequate; however, IPOC continues to recommend the tracking of metrics in areas such as conversion so that trends and improvements can be acknowledged and leveraged for each future rollout.<br><br>03/31: TMS provided this data to Caltrans and they have gone through the testing materials to complete the mapping. A review of the approach Caltrans took for this exercise was reviewed by TMS and found to be consistent with our recommended mitigation. There are (12) Unknown mappings that could be out-of-the-box functionality that is not used by Caltrans, or an item that was removed or re-designed. There were (4) items that could not be traced and require some additional investigation. UAT Testing for Phase 5 started on time and is almost completed. Small pilot activities and UAT concluded on schedule and the small pilot team | • PM Finding 2: The quality management metrics collected, tracked and analyzed on a regular basis should be expanded to include more process areas and detail that would allow trends and potential issues and risks to be identified. TMS recommends concentrating on testing and requirements metrics first. Status: No update on this recommendation.<br><br>• TMS recommends that testing and conversion statistics be provided to the oversight teams on a regular basis for reporting progress against milestones. Status: Testing statistics are provided, but formal conversion metrics are not provided. |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for improvement |
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| | | | gave the GO decision to move to large pilot training. Testing will continue through large pilot preparation and production build out.<br><br>2/29: The project team has completed regression testing and is performing some additional ad-hoc testing of business processes and functions that are not associated with requirements, yet will affect the overall experience of the user. UAT has also started along with the small pilot. IPOC is still concerned with the subset of requirements that do not map to test cases; however, a list was provided to the project for investigation and they are trying to determine if there is any impact related to these missing mappings. | |
| **Requirements Management** | G | G | 4/30: No status change.<br><br>03/31: TMS provided traceability data to Caltrans and they have gone through the testing materials to complete the mapping. A review of the approach Caltrans took for this exercise was reviewed by TMS and found to be consistent with our recommended mitigation. There are (12) Unknown mappings that could be out-of-the-box functionality that is not used by Caltrans, or an item that was removed or re-designed. There were (4) items that could not be traced and require some additional investigation. Based on the significant improvement in mapping completed by the PRSM team on filling the gaps of the No Match and Partial Match requirements, IPOC now finds this category to be Green.<br><br>2/29: The lack of traceability is a tremendously large project concern, and is specifically why IPOC has rated this category RED last month. Since then, the project has begun completing the remaining mappings that had no test cases associated with the requirements. Caltrans has shared their approach to this exercise with TMS and TMS concurs with the approach. This item has been turned to yellow as a result of the progress and will be green upon completion of the activity. | • raceability through the project life cycle should be an on-going activity that is performed with some level of regularity to ensure that all changes are incorporated into the project consistently. The RTM should be updated as a result of the exit-phase sessions for Phases 1-4. Status: SAIC is scheduled to complete an updated traceability. As of the end of April, this has not been completed.<br><br>• MS would recommend a review of the gaps in the traceability matrix to ensure proper testing coverage, weekly review of testing metrics to understand the current progress being made and clearly defined exit criteria as the project enters the pilot phase. If there are no plans to directly terrace requirements to Test Cases, then the traceability matrix should state the approach for traceability and clearly define how the mapping of test cases to FEATS is satisfactory to the customer. Status: There are (12) Unknown mappings that could be out-of-the-box functionality that is not used by Caltrans, or an item that was removed or re-designed. There were (4) items that could not be traced and require some additional investigation. |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for Improvement |
|---|---|---|---|---|
| **Development Change Management** | G | C | 4/30: Now that the project has entered production implementations, the current change management process (which was development/integration centric) needs to be replaced with an M&O change management plan. This item is being closed out and a new tracking item has been added.<br><br>03/31: There have been no change in status for Change Management (nor have there been any new change requests).<br><br>2/29: No change requests in February. | |
| **Risk Management** | G | G | 4/30: Risk and Issue Meetings have resumed as biweekly oversight meetings. Risks are being addressed according to best practices with discussions around impact and probability changes and updated mitigation and contingency plans.<br><br>03/31: Weekly internal project meetings are occurring, but IPOC has not observed meeting minutes or other evidence that this project status is occurring. IPOC is aware that the project team has sorted through the existing risk log and culled risks out that are no longer current, as well as providing action steps to each open risk. IPOC was sent a current risk log for review that contains new risks and updates to existing risks. For the next reporting period, IPOC will review this risk log and the risk management process and assess it against the deficiencies we noted in the One-Time Assessment in December 2011. Status has been moved from Yellow to Green.<br><br>2/29: The team has started to resume the risk and issue discussions as part of their internal team meeting which IPOC is not a part of. The project has suggested sending a monthly spreadsheet of all risk and issue activity to IPOC each month for review and assessment. This solution is acceptable to TMS, and once we have received the first month of updates, we will reassess this status to determine if it can be changed to green. | • ll previous recommendations have been mitigated. |
| **Issue Management** | Y | G | 4/30: Risk and Issue Meetings have resumed as biweekly oversight meetings. Issues are being addressed according to best practices with discussions around action items<br><br>03/31: Weekly internal project meetings re occurring, but IPOC has not observed meeting minutes or other evidence that this project status is occurring. IPOC is aware that the project team has sorted through the existing issue log and culled issues out that are no longer current, as well as providing action steps to each open issue. However, IPOC has not been sent a new issue log and is unable to make an assessment. The last issue log that was available for review was November 2011. (NOTE: A new risk log was | • ll previous issue recommendations have been mitigated. |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for Improvement |
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| | | | delivered, but not an issue log). Status remains in Yellow.<br><br>2/29: The team has started to resume the risk and issue discussions as part of their internal team meeting which IPOC is not a part of. The project has suggested sending a monthly spreadsheet of all risk and issue activity to IPOC each month for review and assessment. This solution is acceptable to TMS, and once we have received the first month of updates, we will reassess this status to determine if it can be changed to green. | |
| **Communication Management** | G | G | 4/30: PRSM was very actively involved with District 3 in the small pilot.<br><br>03/31: Daily meetings continue with the leads from each group and there has been increased communication with the districts during small pilot and preparation for large pilot. Status remains in Green.<br><br>2/29: Daily meetings have started with the leads from each group. During periods of high activity such as UAT testing and validation of the small pilot, this practice of a daily meeting will help the project keep focused and prioritized on the most important issues that need resolution. | • ll previous communication recommendations have been mitigated. |
| **Small Pilot Readiness** | G | C | 4/30: The small pilot has finished. This tracking item will be closed. A new tracking item for large pilot has been added and the applicable recommendations that still apply to the large pilot have been moved to that category.<br><br>03/31: A series of four "roadshows" were completed prior to small pilot to present how PRSM would address key business processes at the district. Additionally, there have been two daily small pilot user sessions and a daily pilot review call. CT and SAIC both had implementation managers on-site during small pilot. A HEAT help desk line was established and CT PMSU resources provided level 1 support in the district during pilot. Level 2 and 3 support was provided by HQ and project team resources. The model will be replicated through large pilot districts. Small pilot user PM & TM training completed successfully, large pilot training is underway. PRSM training environments are online and populated with 'gold' training data. Based on activities over the last several months, this category has moved from Yellow to Green.<br><br>2/29: IPOC did review the revised pilot readiness plan and found that there was very little substantive change in the document. The new document did not coincide with the newly revised schedule, nor did it take into account the deficiencies and recommendations proposed by TMS in our one-time assessment from October 2011. The project | |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for improvement |
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| | | | did release an implementation plan during February 2012 that was a high-level approach to implementation. A checklist was referenced multiple times in that document that IPOC did not received until the end of the month. We will review that checklist in March to determine if it meets the needs for pilot readiness. | |
| **Testing** | G | C | 4/30: Additional regression testing is being conducted on development changes made during System Testing. Performance testing continues to challenge the project in both planning, execution and resolution of the problems. Since the formal System Testing has completed, this item will be closed out. Performance execution issues will be tracked in a new category entitled "Production Readiness".<br><br>03/31: Phase 5 regression testing started on time and completed on time. In addition, Phase 5 UAT also started on time and according to the project schedule, is targeted to complete about 10 days late due to execution of test cases and performance loading tasks not completing on time. Very few defects remain from the testing phases (0 critical, 0 serious, 43 moderates and 15 cosmetic). The project team appears to be meeting most targeted start and end dates. Status remains in Green.<br><br>2/29: Regression testing completed. UAT testing started. A performance monitoring tool has been put in place and activities on the small pilot have begun. Enhanced system test activities were added to the schedule for regression and UAT. | • ST Finding 1: Understand performance requirements - how many users will be on the system concurrently, what is the expected performance metrics for submitting data, what is the expected performance for running reports, what are the scalability requirements? Status: Planning is underway to develop a plan for conducting performance testing and the criteria/requirements. High Level activities have been added to the schedule. As of the end of April, no performance plan has been created. |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for improvement |
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| **End-User Training** | G | Y | 4/30: End user training was conducted for the small pilot (Project Manager course and Task Manager course). Based on the questions asked at course completion, there is an indication that the users trained did not completely understand and/or absorb the materials taught. Of the 22 questions asked for the Project Management course, 40% of the questions had less than 75% of the users responding correctly. IPOC recommends adjusting the training material to incorporate the feedback received.<br><br>03/31: Small pilot user PM & TM training completed successfully, large pilot training is underway. Training facilities have all be reserved, trainee invitations sent, materials produced and trainers scheduled. Additional sessions for T4T and custom reporting are scheduled. Large pilot go/no-go meeting conducted with a go for large pilot training decision received. Status remains in Green.<br><br>2/29: The train the trainer is no longer happening at each district. There will be two sessions, one in phase 1 rollout and one in phase 2 rollout. At this point in time there does not appear to be an impact with this change. | • pdate the training materials to include more realistic examples of how PRSM would be used in the daily activities in the district.<br>The team has reported that changes are being made to the materials based on small pilot feedback. IPOC will be performing a one-time assessment on training in May and will re-evaluate the rating at that time. |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for Improvement |
|---|---|---|---|---|
| **Data Conversion and Load** | G | G | 4/30: Conversion activities for the small pilot were successful. Several issues were caught and immediately mitigated. Overall, the activities were conducted on time and with very little fallout. IPOC continues to recommend that metrics be maintained, especially as the project begins consistently rolling out to each district so that trends can be detected and leveraged for the next rollout.<br><br>03/31: The project has documented a standard template for what a converted project needs to look like to successfully carry over into PRSM. The project has also published guidelines on what the state the project needs to be in before it can move to PRSM. For the past year, PRSM has been getting data output files from each of the districts and running them through the conversion process. As a result of the output process, they have been producing data Anomaly Reports that include the parts of projects that bounced out of the conversion and are expecting each district to go through their conversion reports, correct the issues and re-run the data through the system. The testing is not just a sub-set of their data and appears to be very comprehensive. The district readiness checklist contains a checklist for conversion that each district can use – a list of the activities to be ready for conversion, what they need to do to get their data clean and get it converted. Although the checklist is robust, there are no validation activities planned to ensure that the activities are completed as scheduled. In addition, the timeline for reviewing this checklist with the districts is T-10 days, which is not sufficient enough time to mitigate any corrective actions. Status remains in Green.<br><br>2/29: All regression testing has completed. Scripted testing has started as well as ad-hoc testing. TMS is unaware of the status of the load and conversion activities status, but will schedule time with the IV&V team to better understand the progress made towards establishing and executing conversion plans and processes for the next reporting period. | • rovide test measurements and metrics to oversight for review. Status: IPOC has asked the project team to provide these performance measures. |
| **M & O** | | B | 4/30: This category is new. As the project completes the development phase and enters into production level rollouts, M&O needs to be defined. As part of the M&O plan, the process for how changes (defects as well as enhancements) will be handled should be defined. | • POC will work with the project to determine if any M&O documentation exists and will review what the team has prepared. |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for improvement |
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| **Large Pilot Readiness** | |  | 4/30: Large pilot preparation and conversion activities have started and will last for 6 weeks. There will be far more concurrent users in the large pilot and the environment will change to the production environment. As a result, the team is hoping to be able to assess and mitigate all the open performance issues. IPOC continues to recommend active use of the checklist prior to the start of the Large pilot implementation. | • LT Finding 1: An Entry Criteria Pilot Readiness Checklist should be developed from the District Perspective. Status: This was used for the small pilot but three of the columns were not filled out. IPOC continues to recommend actively working with the district and reviewing this checklist on weekly basis leading up to implementation.<br>• LT Finding 3: Tactical processes and procedures for extracting lessons learned and assessing common problems mitigated during level one support should be included in any pilot documentation. Status: IPOC was pleased to see the Lessons Learned activity included in the schedule table; however, there needs to be an associated methodology to accompany the task. The process for defining the metrics to collect, determine who, how and when the data will be collected, and how the data will be analyzed needs to be defined. |
| **Production Readiness** | |  | 4/30: Performance and scalability issues continue to be a significant risk for production readiness. PRSM is experiencing problems with network connectivity, sticky sessions and the performance of user reports. Each of these areas will need to be mitigated prior to rollout. | • |

# CALTRANS - PRSM Project Oversight Review Checklist (April 2012)

**Project Oversight Review Checklist: High Criticality Project**

This checklist is an assessment for the Adaptation Phase and Small Pilot Phase.

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
|---|---|---|---|
| **Planning and Tracking** | | | |
| Have the business case, project goals, objectives, expected outcomes, key stakeholders, and sponsor(s) identified and documented? | X | | TMS has reviewed the last approved SPR dated April 2012. |
| Has a detailed project plan with all activities (tasks), milestones, dates, and estimated hours by task loaded into project management (PM) software? Are the lowest level tasks of a short duration with measurable outcomes? | X | | The project does use a MS Project schedule to track the work. Tasks, milestones dates and estimated hours are documented within the schedule and the tasks, for the most part, are represented as manageable, trackable items with durations less than 80 hours. A new project schedule has been developed to include the new approach for testing, pilot and conversion. |
| Is completion of planned tasks recorded within the PM software? | X | | Changed from Deficient to Adequate in February 2012.<br>Caltrans has revised the project schedule to include the new approach to system and UAT testing, pilot and rollout. TMS has reviewed this schedule and found that almost all of the recommendations made in our one-time assessment report were mitigated in the new revision. |
| Are actual hours expended by task recorded at least monthly within PM software? | | X | As per the project team, PRSM budget information for each contract is accessed by using the PMO and CA-PMM monthly reports and the SPR. Each month, the project rolls each of the contract expenditures into the CA-PMM report for total project costs. Actual costs are reported, as are actual percent complete. However, hours by task are not tracked at either the State or the vendor level. |
| Are estimated hours to complete by task recorded at least monthly within PM software? | X | | Status changed from Deficient to Adequate in March 2012.<br>TMS reviews all updates to the project schedule when available. The last project schedule reviewed was dated April 24 and has been baselined to include all SPR dates. IPOC no longer participates in the meetings to gather project status as this is now conducted internally without oversight; however, IPOC has received updates to the schedule several times in April and is kept up to date with changes as they occur. Actual costs are reported, but estimated hours, or projected hours, are not tracked in the documents that have been provided to TMS. |
| Is there a formal staffing plan, including a current organization chart, written roles and responsibilities, plans for staff acquisition, schedule for arrival | | X | TMS has not been exposed to a formal staffing plan. We have reviewed the Project Organization Chart that documents the overall structure and high-level roles; |

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
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| and departure of specific staff, and staff training plans | | | however, a breakdown of specific staff on the vendor side and State side is not clear. Roles and responsibilities are defined within each project process plan (i.e. change management roles and responsibilities are defined within the Change Management Plan), however, TMS has not seen an overall description of the general roles and responsibilities for the project team (vendor and State). |
| Have project cost estimates, with supporting data for each cost category, been maintained? | | X | As per the project team, PRSM budget information for each contract is accessed by using the PMO and CA-PMM monthly reports and the SPR. Each month, the project rolls each of the contract expenditures into the CA-PMM report for total project costs. TMS has reviewed the cost tracking that the project includes within the CA-PMM and observes that the actual expenditures are summarized as total amount "to-date"; however, not estimated future costs or projections are included. TMS has also reviewed the PRSM Payment Milestone and Deliverables spreadsheet for SAIC vendor costs, including the updated costs for the April reporting period. |
| Are software size estimates developed and tracked? | N/A | N/A | This item is not applicable. |
| Are two or more estimation approaches used to refine estimates? | N/A | N/A | This item is not applicable. |
| Are independent reviews of estimates conducted? | N/A | N/A | This item is not applicable. |
| Are actual costs recorded and regularly compared to budgeted costs? | X | | The CA-PMM status report cost tracking summary shows various project categories, last approved SPR3 cost and cumulative actual costs for the total project, but not by month or fiscal year. The PRSM Payment Milestone and Deliverables spreadsheet shows actual costs incurred for vendor deliverables. |
| Is supporting data maintained for actual costs? | X | | The Microsoft Excel version of the CA-PMM status report shows comments notes for each new data entry for the cumulative actual costs and registers the amount of invoices paid to the various vendors and subtotals on Total of One-Time IT Project Costs, Total of Continuing Project Costs and Total Project Costs. |
| Is completion status of work plan activities, deliverables, and milestones recorded, compared to schedule and included in a written status reporting process? | X | | The bi-weekly status meeting has been cancelled and the weekly oversight meetings that replaced it have not revised the schedule as a regular agenda item. A new version of the schedule was delivered to reflect the new re-planning tasks and has been reviewed by TMS and found to be adequate. TMS has also reviewed the CA-PMM reports submitted by the project which tracks work plan activities, major milestones and compares planned to actual. |
| Are key specification documents (e.g. contracts, requirement specifications and/or contract deliverables) and software products under formal configuration control, with items to be controlled and specific staff roles and responsibilities for configuration management identified in a configuration management plan? | | X | TMS has reviewed the Configuration Management Plan at a high level and found that there are some gaps in terms of the promotion process, specific roles and responsibilities for some of the configuration management tasks and a lack of configuration control for some of the project management process documentation. TMS is more concerned with the execution of configuration management and the |

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
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| | | | concern that the project is not following the drafted procedures defined in the plan. |
| Are issues/problems and their resolution (including assignment of specific staff responsibility for issue resolution and specific deadlines for completion of resolution activities), formally tracked? | X | | Status changed from Deficient to Adequate in April 2012.<br>TMS has reviewed the Issue Management Plan. Formal risk and issue management processes were executed on the project from the time IPOC started in July 2011 through November 2011. At that time the risk and issue meetings were cancelled. The meetings resumed again in April and are being conducted in a very thorough manner according to best practices. Current issues and risks are reviewed and the team has added several new risks and issues to the log in the past month. |
| Is user satisfaction assessed at key project milestones? | X | | Through documentation review, it appears that users have been engaged in product reviews and training reviews and have participated in regular meetings to discuss organizational change management and pilot preparations. TMS reviewed the Communication Management Plan and observed that the plan does not address communication methods to and from the districts.<br>TMS performed a one-time assessment of the Pilot Readiness in October and found limited District involvement in Pilot Preparation activities and validation of converted projects. TMS has reviewed the updates and revisions made by SAIC to the initial Implementation Plan for Data submitted in February 2012. The revised PRSM Implementation Plan for Data is much improved from the initial draft reviewed. The plan now contains more detailed information regarding the Data Conversion Process including Backup and Recovery, Rollout Strategy and Conversion planning. The Data Implementation Schedule developed by SAIC contains more tactical and actionable activities along with the anticipated duration and time dependency regarding when the activity should take place in relation to the date of Implementation. The District Readiness Checklist contains a very comprehensive list of preparation activities to ensure the Districts are ready for Implementation. In general, the deliverables reviewed provide a great foundation for a successful implementation with the districts. |
| Is planning in compliance with formal standards or a system development life-cycle (SDLC) methodology? | | X | Compliance with PMBOK standards is not adequate for this phase of the project. Although this project does not contain a typical design and development cycle, there are requirements, configuration and testing that need to be tracked and managed in a similar way to that of a typical development project.<br>TMS believes that a modified SDLC should have been adopted for the project that clearly identifies how validation of expected behavior will occur (i.e. description of the requirements management, configuration management and test management areas of the SDLC).<br>Although the project is not in compliance with a formal standards or SDLC methodology, at this phase in the project IPOC does see value in creating a document describing the methodology. However, TMS has observed that the project schedule and the approved strategy for realigning testing, pilot and conversion adopts a more tactical approach to validation of the product prior to the |

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
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| | | | pilot phase. This alleviates many of the concerns of a non-standard SDLC. PRSM has reviewed the gaps in the traceability matrix to ensure proper testing coverage and has also held weekly review of testing metrics to understand the current progress being made and clearly defined entry and exit criteria. All of these are improvements to the previous process. |
| Is there formal enterprise architecture in place? | X | | The RFQI describes the target Caltrans enterprise environment. |
| Are project closeout activities performed, including a PIER, collection and archiving up-to-date project records and identification of lessons learned? | N/A | N/A | Project is in the Adaptation Phase – this is not applicable in this phase. |
| **Procurement** | | | |
| Are appropriate procurement vehicles selected (e.g. CMAS, MSA, "alternative procurement") and their required processes followed? | X | | The final contract was signed by the Implementation Vendor on February 26, 2009. Caltrans received, reviewed and signed the contract on February 27, 2009. DGS Legal reviewed and signed the contract on March 5th, 2009. |
| Is a detailed written scope of work for all services included in solicitation documents? | X | | Detailed written scope of work is contained in the RFP. |
| Are detailed requirement specifications included in solicitation documents? | X | | Detailed requirement specifications are contained in the RFP. Requirements are also described in the RFQI and Value Analysis documents. |
| Is there material participation of outside expertise (e.g. DGS, Departmental specialists, consultants) in procurement planning and execution? | X | | Outside expertise and counsel has been sought from DOF, DGS, and consultants when appropriate. |
| For large-scale outsourcing, is qualified legal counsel obtained? | N/A | N/A | The project does not involve outsourcing as currently defined. |
| **Risk Management** | | | |
| Is formal continuous risk management performed, including development of a written risk management plan, identification, analysis, mitigation and escalation of risks in accordance with DOF/TOSU Guidelines, and regular management team review of risks and mitigation progress performed? | X | | Status changed from Deficient to Adequate in April 2012<br><br>TMS has reviewed the Risk Management Plan and it contains well documented processes and procedures that include Risk Identification, Risk Analysis, Risk Response Planning, Risk Monitoring and Control and Risk Communication. The plan does not address any formalized approach to risk identification (such as periodic brainstorming sessions, SEI risk identification checklists or the use of software tools). TMS has also observed risk management metrics are not included in this part of the risk planning or execution.<br><br>TMS submitted a One-Time Assessment on Risk and Issue Management and Execution in December 2011 and made some |

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
|---|---|---|---|
| | | | recommendations for improvement to the issue management process.<br>Formal risk and issue management processes were executed on the project from the time IPOC started in July 2011 through November 2011. At that time the risk and issue meetings were cancelled. The meetings resumed again in April and are being conducted in a very thorough manner according to best practices. Current issues and risks are reviewed and the team has added several new risks and issues to the log in the past month. |
| Does the management team review risks and mitigation progress at least monthly? | X | | Status changed from Deficient to Adequate in April 2012<br>Formal risk and issue management processes were executed on the project from the time IPOC started in July 2011 through November 2011. At that time the risk and issue meetings were cancelled. The meetings resumed again in April and are being conducted in a very thorough manner according to best practices. Current issues and risks are reviewed and the team has added several new risks and issues to the log in the past month. |
| Are externally developed risk identification aids used, such as the SEI Taxonomy Based Questionnaire? | X | | Status changed from Deficient to Adequate in April 2012<br>The PRSM Risk Identification process describes how any stakeholder can submit a risk, defines the process for completing the "PRSM Risk Identification and Response Plan" and addresses how the initial risk is validated and assigned. An initial formal SEI-based assessment was conducted several years ago, and in April when the risk meetings resumed, another brainstorming session took place to identify new risks. . |
| **Communication** | | | |
| Is there a written project communications plan? | X | | The latest version of the finalized and approved Communications Plan is dated 6/22/2009. TMS has reviewed the Communication Management Plan, which has a very thorough list of Roles and Responsibilities defined and contains an organization chart showing the relationships of the major stakeholders on the project. However, TMS has observed that this organization chart is out of date and that the Roles and Responsibilities tend to focus mostly on the immediate project team, with very little reference to district communication. |
| Are regular written status reports prepared and provided to the project manager, department CIO (if applicable) and other key stakeholders? | X | | TMS is aware that the project does formally report to CTA on a monthly basis and TMS has reviewed the most current CTA status report from March 2012, submitted on April 10. |
| Are there written escalation policies for issues and risks? | X | | Both the Risk Management Plan and the Issue Management Plan contain a risk escalation process. |
| Is there regular stakeholder involvement in major project decisions, issue | X | | TMS is aware that monthly Implementation Meetings are held with select district |

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
|---|---|---|---|
| resolution and risk mitigation? | | | stakeholders for the purpose of keeping the District project managers regularly updated on the status of the project and to receive their input. At the recommendation of the PRSM Project manager, TMS is not attending these meetings but is available to review status documentation or meeting minutes to determine the value-add in meeting stakeholder expectations about involvement in the deployment process.<br>A series of four "roadshows" were completed prior to small pilot to present how PRSM would address key business processes at the district. Additionally, there have been two daily small pilot user sessions and a daily pilot review call.<br>Small pilot user PM & TM training completed successfully, large pilot training is underway. Training facilities have all be reserved, trainee invitations sent, materials produced and trainers scheduled. Additional session for T4T and custom reporting are scheduled. Large pilot go/no-go meeting conducted with a go for large pilot training decision received. |
| **System Engineering** | | | |
| Are users involved throughout the project, especially in requirements specification and testing? | X | | The PRSM team reached out to districts for more involvement during the month of November. Specifically, additional districts have been added to the monthly Implementation Manager's meetings, districts have stronger participation in validating the converted data and for discussing risks and issues on the project. |
| Do users formally approve/sign-off on written specifications? | X | | Configuration requirements baseline, customizations and deleted requirement agreements were reviewed by Caltrans at regularly scheduled Checkpoint meetings and feedback was provided to the Implementation Vendor. Through documentation review, it appears that users have been engaged in product reviews and training reviews and have participated in regular meetings to discuss organizational change management and pilot preparations. |
| Is a formal SDLC methodology followed? | X | | The project schedule is categorized into high level summary tasks: program Milestones, Project Management, PRSM Adaptation Phase, Testing Phase, PRSM Pilot phase, PRSM Rollout, Statewide Rollout Acceptance and state Closeout. |
| Is a software product used to assist in managing requirements? Is there tracking of requirements traceability through all life-cycle phases? | X | | Changed from Inadequate to Adequate in March 2012.<br>TMS has reviewed spreadsheets of requirements but is unaware of any other tool that is currently being used to manage requirements. Traceability matrices do exist and have been reviewed at a high level by TMS. These traceability matrices are significantly out of date.<br>TMS has also reviewed the traceability spreadsheets in the project document library and found that there are many to-be use cases that are not traced to any associated test cases. This could be an indication of insufficient testing coverage. TMS provided this data to Caltrans and they have gone through the testing materials to complete the mapping. A review of the approach Caltrans took for this exercise was reviewed by TMS and found to be consistent with our recommended mitigation. There are (12) Unknown mappings that could be out-of-the-box functionality that is |

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
|---|---|---|---|
| | | | not used by Caltrans, or an item that was removed or re-designed. There were (4) items that could not be traced and require some additional investigation. Based on the significant improvement in mapping completed by the PRSM team on filling the gaps of the No Match and Partial Match requirements, IPOC now finds this category Adequately Defined. |
| Do software engineering standards exist and are they followed? | X | | Engineering standards exist and are documented in the PRSM Configuration Management Plan. TMS has reviewed the Configuration Management Plan at a high-level and will complete a more in-depth assessment in the future. |
| Does product defect tracking begin no later than requirements specifications? | X | | As per the Adaptation Test Plan dated July 1, 2001, Test Team members document defects in iCenter's Test Tracker as they find them, starting at the Testing Phase. A process is defined for the Test Leads to review open iCenter Test track issues with PRSM team members and also identifies a process to identify, classify and resolve test anomalies. In addition, a document titled PRSM Anomaly Identification and Resolution Process Utilizing Test Tracker provides detailed instructions for how to use the defect tracker.<br>In the quarterly review of the testing plans and execution, TMS did find that the test cases do not identify anomalies for each failed test step. TMS does not have access to the defect management tool to validate whether or not defects have been created, however, according to the test management plan and template, the anomalies are supposed to be documented within the test case which does not seem to be the case. |
| Are formal code reviews conducted? | X | | TMS is aware that the PRSM Project Team has performed formal configuration reviews to occur during checkpoints throughout the Adaptation Phase. TMS has not been exposed to any code review documentation or Checkpoint 4 review documentation. |
| Are formal quality assurance procedures followed consistently? | | X | TMS reviewed the Quality Management Plan and observed that it contains a high-level of detail for the review, analysis and approval of formal deliverable documentation from the vendor. However, TMS did find the overall process and procedure for non-deliverable quality management to be lacking. The Quality Management Plan contains a single-line reference to the Configuration Management, Change Control, Issue Management and Risk Management plans but does not discuss what activities are performed by the quality team to ensure these process areas are functioning efficiently, correctly and in accordance to the documented processes and procedures. There are some quality activities defined for requirements management, however, the frequency for when those activities take place, the tools used to perform the activities and the reporting vehicle for those activities are not defined. |
| Do users sign-off on acceptance test results before a new system or changes are put into production? | N/A | N/A | Project is in the Adaptation Phase – this item is not applicable. |

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
|---|---|---|---|
| Is the enterprise architecture plan adhered to? | N/A | N/A | TMS is aware that Caltrans is in the process of creating a formal enterprise architecture plan. The PRSM technology solution was requested to be submitted as part of the study. However, TMS has not been exposed to the enterprise architecture plan and will need to work with the project team to gain access for this document. |
| Are formal deliverable inspections performed, beginning with requirements specifications? | X | | The PRSM Quality Management Plan contains a high-level of detail for the review, analysis and approval of formal deliverable documentation from the vendor. Upon review of the PRSM project schedule, it appears that formal deliverable inspections are conducted for critical milestones of the project. |
| Are IV&V services obtained and used? | X | | The IV&V Contract was approved and the IV&V Vendor began work in April 2008. |

# IPO Report for March 2012

**Project Name:** Caltrans Project Resource Scheduling Management (PRSM) System

**Assessment Date:** March 31, 2012

**Frequency:** Monthly

## Oversight Provider Information

| | | | |
|---|---|---|---|
| **Oversight Leader:** | Cindy Blehm | **Organization:** | Technology Management Solutions, Inc. |
| **Phone Number:** | 916-591-1746 | **Email:** | cindyblehm@aol.com |

## Project Information

| | | | |
|---|---|---|---|
| **Project Number:** | **2660-160** | **Department:** | Transportation (Caltrans) |
| **Criticality:** | High | **Agency:** | Business, Transportation & Housing |
| **Last Approved Document/Date:** | SPR (02/2012) (in approval) | **Total One-time Cost:** | $26,078,375 |
| **Start Date:** | June 7, 2000 | **End Date:** | July 2, 2013 |
| **Project Manager:** | Kari Gutierrez | **Organization:** | Caltrans |
| **Phone Number:** | (916) 654-7255 | **Email:** | kari_gutierrez@dot.ca.gov |

## Summary: Current Status

**Project Phase:** **Adaptation Phase**

| | | | |
|---|---|---|---|
| **Planned Start Date:** | April 11, 2011 | **Planned End Date:** | March 28, 2012 |
| **Actual Start Date:** | April 11, 2011 | **Forecasted End Date:** | April 5, 2012 |

**Project Phase:** **PRSM Pilot Phase**

| | | | |
|---|---|---|---|
| **Planned Start Date:** | December 2, 2011 | **Planned End Date:** | August 29, 2012 |
| **Actual Start Date:** | December 2, 2011 | **Forecasted End Date:** | August 28, 2012 |

### Schedule

Select the statement that most closely applies, measured against the last **Finance approved** document.

On Schedule

**Ahead-of-schedule:**
One or more major tasks or milestones have been completed and approved early (> 5%). All other major tasks and milestones completed and approved according to plan.

**On-schedule:**
All major tasks and milestones have been completed and approved according to plan. (Within 5%)

**Behind Schedule:**

One or more major tasks or milestones are expected to be delayed. (> 5%)

**Comments:**

As per the direction of the California Technology Agency, TMS has used the revised schedule as the governing schedule starting in the February reporting period when the SPR was delivered to CTA. Caltrans has submitted SPR revision February 2012 to CTA and is waiting for approval. This schedule is now the baseline for the PRSM project. On the Gantt view, tasks are shaded in blue that have been updated in the past week. Pilot conversion tasks have added detail and the project team has added resources for the upcoming small pilot and large pilot tasks. Resources still need to be added for some rollout activities. The current schedule is forecasting the end of the Adaptation Phase for April 5, which is (10) ten days later than the planned completion date of March 26, 2012. The current schedule is forecasting the end of the Pilot Phase for August 28, which is (1) one day earlier than the planned completion date of August 29, 2012.The project team is doing a commendable job of documenting in notes the reason for delays in all sub-tasks, and a go forward plan of getting the tasks back on track.

System Testing Phase 5 – Regression Part A completed on schedule. System Testing Phase 5 – UAT Part B is in progress. Although test case execution and performance testing are running slightly behind schedule, the PRSM team does not anticipate a delay in the start of the large pilot. The PRSM team extended the test period of executing the test cases to run in parallel with large pilot preparation and production build out. Small pilot activities and UAT concluded on schedule and the small pilot team gave the GO decision to move to large pilot training. IPOC has not yet received the documented results of the small pilot.

Training prep and Week 1 / Week 2 training sessions started and completed on time. Data conversion started on schedule and notifications were sent out to the districts. All activities are tracking to schedule. The PRSM team is doing a commendable job of starting the tasks associated with System Testing Phase 5, Pilot and Conversion activities on time and completed them within the estimated timeframes.

The table below represents the current milestones as represented in the project schedule dated 03/27/2012.

| Document | End of Adaptation Phase | End of Project |
|---|---|---|
| SPR 3 (dated 12/08/09) | 02/01/2010 | 06/13/2011 |
| Executive Steering Committee Approved Schedule (dated 09/01/2010) | 11/23/2010 | 02/14/2012 |
| SPR4 Current Schedule (dated 02/01/2012) | 03/26/2012 | 07/02/2013 (Statewide Rollout Acceptance) |

IPOC will begin tracking the baseline dates for each phase against the forecasted date in each IPOR. This data was based off the last revised schedule dated 03/27/2012:

| Phase | Baseline Start | Baseline End | Forecast Start | Forecast End | Variance in End Dates (in days) | % Complete |
|---|---|---|---|---|---|---|
| Adaptation | 4/11/2011 | 3/26/2012 | 4/11/2011 | 4/5/2012 | -10 | 94% |
| Small Pilot | 12/2/2011 | 3/21/2012 | 12/2/2011 | 3/23/2012 | -2 | 100% |
| Large Pilot | 12/22/2011 | 8/29/2012 | 12/22/2011 | 8/28/2012 | 1 | 32% |
| Rollout | 4/18/2012 | 5/24/2013 | 4/30/2012 | 6/6/2013 | -13 | 0% |
| Statewide Aceptance | 5/8/2013 | 6/19/2013 | 5/21/2013 | 7/2/2013 | -13 | 0% |
| Overall | 4/11/2011 | 7/19/2013 | 4/11/2011 | 8/1/2013 | -13 | 63% |

**Resources (Level of Effort)** Choose the statement that most closely applies.

**Fewer Resources**
Completion of one or more major tasks and / or acceptable products has required or is expected to require materially (>5%) fewer hours/staff than planned.

**Within Resources**

**Within Resources**
All major tasks have been completed and acceptable products created using the planned number of hours/staff (within 5%).

**More Resources**
Completion of major tasks and / or acceptable products has required or is expected to require materially (>5%) more hours/staff than planned.

**Comments:** From a vendor perspective, SAIC documents the on-board staff in each project position in their monthly status reports. The project appears to have the appropriate vendor staff in place in all the lead positions; however, the project does not appear to have a similar tracking system in place to document State staff.

IPOC has observed that since new resources were added to the testing and data conversion efforts on both the State and Vendor teams, the project appears to be staffed at the appropriate level, which has resulted in tasks starting and completing on time within the schedule milestones. Although the schedule has now been revised and leveled with State resources, without a clear staffing plan, IPOC is unable to discern whether or not this level of increased staffing is enough to complete the anticipated tasks on-time. TMS has not observed evidence of a staffing Plan describing the schedule for arrival and departure of staff over the course of the project. In the absence of a plan, TMS must rely on the resource leveling in the project schedule. An evaluation of the schedule indicates that the majority of the Caltrans resources are leveled, but some SAIC resources remain to be leveled. In addition, tasks in the Small Pilot and Large Pilot phase now have assigned resources. Some resources have been added to the Project Rollout phase but there remain some tasks without assigned resources.

The project manager has announced that she is leaving the PRSM project effective April 6. No replacement has been announced yet.

Upon review of the revised schedule, TMS feels more confident in the project team's ability to complete the remaining project tasks within the current level of resources. The revised schedule shows leveled resources up through the end of the large pilot phase and for most of the production rollout phase. TMS is aware that the project team is working on the continued leveling of resources through rollout.

**Resources (Budget/Cost)** Choose the statement that most closely applies.

**Less cost**
The project is (>5%) under budget.

**Not Able to Assess**

**Within cost**
The project is operating within budget.

**Higher cost**
Material budget increases (>5%) are likely.

**Comments:** The funding source for PRSM is the State Transportation Fund. TMS has reviewed the vendor deliverable tracking spreadsheet and the updated cumulative expenditures that the project has reported in the most current CA-PMM report for February 2012. As per the CA-PMM status report for the January reporting period, the total project approved costs were $30,685,793 and the Cumulative Actual Cost to date is $22,242,887.

| | SPR 3 Costs | Cumulative Actual Costs |
|---|---|---|
| **Project Costs** | **$30,685,793** | **$22,242,887** |
| One-Time | $26,078,375 | $19,924,857 |
| Continuing | $4,607,418 | $2,318,030 |
| Annual M&O | $2,057,000 | $0 |

As per the Vendor Payment Point and Deliverables spreadsheet, SAIC has been paid $5,155,807 (less holdback) of the $13,200,056 contract. Caltrans received one invoice for $62,000 in the Adaptation phase, of which $56,250 was paid out for the Plan for Pilot and Data Conversion Implementation Plan.

| | Budgeted | Invoiced |
|---|---|---|
| Planning | $1,009,739 | $908,765 |
| Adaptation | $4,933,935 | $4,247,042 |
| Pilot | $2,807,271 | $0 |
| Rollout | $2,211,424 | $0 |
| Maintenance | $2,128,292 | $0 |
| Unanticipated | $109,995 | $0 |
| **TOTAL** | **$13,200,056** | **$5,155,807** |

In order to properly assess the cost for PRSM, TMS must be able to view the expended and projected monthly tracking expenditures and compare that to the economic analysis worksheet in the last approved SPR. To date, TMS has only been exposed to budgeted and actual costs, but has not observed forecasting of projected costs against SPR EACs. Because of this, TMS has stated that we are Unable to Assess the Resources (Budget/Cost) section.

**Quality (Client Functionality)** Choose the statement that most closely applies.

**Adequately Defined**
Required client functionality is adequately defined, and is being successfully built into the system, given the current project phase.

**Adequately Defined**

**Inadequately Defined**
One or more significant components of required client functionality are inadequately defined, or are not being successfully built into the system, given the current project phase.

**Comments:** TMS has reviewed the requirements and to-be use cases and workflows created for PRSM and found them to be quite thorough and inclusive of the underlying solution flow. In previous months, TMS reviewed the traceability spreadsheets in the project document library and found that there were many to-be use cases that are not traced to any associated test cases. IPOC was concerned that this could be an indication of insufficient testing coverage. TMS provided this

data to Caltrans and they have gone through the testing materials to complete the mapping. A review of the approach Caltrans took for this exercise was reviewed by TMS and found to be consistent with our recommended mitigation. There are (12) Unknown mappings that could be out-of-the-box functionality that is not used by Caltrans, or an item that was removed or re-designed. There were (4) items that could not be traced and require some additional investigation. Based on the significant improvement in mapping completed by the PRSM team on filling the gaps of the No Match and Partial Match requirements, IPOC now finds this category Adequately Defined.

Regression testing for Phase 5 Part A started on time and is now complete. Testing progressed faster than expected due to the addition of test resources; new and converted projects have been tested. No defects were reported; two moderate anomalies reported. No bug fixes were required.

UAT Testing for Phase 5 started on time and is also now complete. Summary metrics are currently being drafted by the PRSM team. Small pilot activities and UAT concluded on schedule and the small pilot team gave the GO decision to move to large pilot training. Testing continued past the planned 03/19 end date in parallel with the large pilot preparation and production build out. All indication points to completion for Adaption Phase approximately 10 days later than planned due to the late acceptance of Deliverable 13 – Acceptance of the Application Installation Report and Platform Acceptance Letter. Testing was not a factor in the schedule slip.

The project has also completed additional ad-hoc testing of business processes that aren't necessarily tied to requirements but require testing to ensure the overall experience of the user works as expected.

**Quality (Architecture/System Performance)** Choose the statement that most closely applies.

**Adequately Defined**
The system technical architecture is adequately defined, and modeling, benchmarking and testing are being conducted (or are planned) appropriate to the current project phase.

**Inadequately Defined**

**Inadequately Defined**
The system technical architecture is not adequately defined, or modeling, benchmarking and testing are not being conducted (or are planned) appropriate to the current project phase.

**Comments:** TMS is aware that the Implementation Vendor has submitted a Configuration Management Plan, High Level Design, Test Plan and updated Architecture Diagram. The Production environment hardware has been configured and turned over to Caltrans. Performance, volume and scalability testing activities have been added to the revised project schedule as part of Phase 5 System Testing Part B. These tasks remain fairly high level and TMS has been told by the Caltrans team that a Performance Plan is being drafted to document the tasks of performance and load testing in more defined detail.

During February, the project implemented a Performance testing tool that will monitor the CPU cycles, memory, etc during the testing phases. The tool will run in the background to collect data that will be analyzed and if issues become apparent, they will be mitigated appropriately. Although this data collection will not aid in load testing or analysis (only 15-20 users will be on the system during the testing phases), the tool will help identify isolated performance issues.

Due to the resource limitations of the test and train environments, no performance testing was done on the hardware as scheduled. However, system monitors have been in place since the beginning of the test and pilot cycle to monitor CPU usage, disk space and memory usage. An issue was discovered with memory usage on test; there is a known issue with that way Clarity's JVM manages memory. A daily

bounce of services has been implemented to maintain system performance and there is an open issue in the PRSM issue log on this item.

There is some concern over the anticipated report volume and response time in the reporting environment. There are not additional performance or load tests that can be run in the reporting environment and the team is looking at additional tests in the production environment. The team is also looking at the possibility of using Business Analytics which would provide more flexibility in reporting and potentially improve performance.

## New Risks

IPOC has submitted no new risks this reporting period.

## Progress Toward Addressing Prior Risks

### Risk R-8: Availability and skill set of PRSM resources may not be sufficient for the revised project approach and schedule for testing, conversion and pilot

**Risk Statement**: TMS has reviewed the new PRSM approach and strategy for testing, conversion and pilot activities which assume a higher percentage of parallel tasks in order to compress the schedule and meet key milestone dates. Although TMS is in agreement with the new parallel project activities that are designed to compress the overall project schedule as much as possible, TMS also believes there is a significant risk of not having enough qualified and available resources to perform he necessary work in the shortened timeframes. The majority of resources for both Caltrans and SAIC's are currently focused on Phase 1-4 testing and the necessary planning and execution of activities in the upcoming parallel activities are already falling behind schedule.

| | | | | | |
|---|---|---|---|---|---|
| **Probability:** | Low | **Impact:** | Medium | **Timeframe:** | Long Term |
| **Severity:** | Medium | **Opened:** | 01-2012 | **Status:** | Open |

**IPOC Recommendations:**

4. TMS believes each of the functional area leads (Testing, Conversion, Pilot, and Training) needs to continue to take an active role in the day-to-day management of their functional activities and allow the State PM more time to strategically manage the project.

   Status: This has been mitigated.

5. Based on the new approach for testing, pilot and conversion, TMS is also concerned about resource allocation for these parallel activities and will be looking to the revised project schedule to determine if the allocations are realistic given the new workload.

   Status: This has been mitigated.

6. TMS recommends adding additional time for UAT regression testing, bug remediation, adjustment cycles or lessons learned cycles, and district review to ensure that all issues are resolved, anomalies identified and bugs fixed before moving to the next phase of the schedule. Although adding these additional these tasks into the schedule may push out the overall completion date, TMS believes that appropriate time for planning, execution and validation must take place if the new approach is going to be successful. The lack of regression testing during Phases 1-4 creates the risk that new and previously unidentified defects will surface during the Phase 5 System

and User Acceptance Tests.

Status: Some lag time was implemented into the new schedule but the schedule remains aggressive with minimal lag between phases. However, the project team appears to be meeting most targeted start and end dates.

**Status:**

03-31: Phase 5 regression testing started on time and completed on time. In addition, UAT Testing for Phase 5 started on time and is also now complete. Summary metrics are currently being drafted by the PRSM team. Small pilot activities and UAT concluded on schedule and the small pilot team gave the GO decision to move to large pilot training. Testing continued past the planned 03/19 end date in parallel with the large pilot preparation and production build out. All indication points to completion for Adaption Phase approximately 10 days later than planned due to the late acceptance of Deliverable 13 – Acceptance of the Application Installation Report and Platform Acceptance Letter. Testing was not a factor in the schedule slip. Some lag time was implemented into the revised project schedule but the schedule remains aggressive with minimal lag between phases. However, the project team appears to be meeting most targeted start and end dates. The probability has been reduced to Low. IPOC will continue to monitor the activities for the next reporting period and if the trend continues, IPOC will close out this risk for the next reporting period.

02-29: The PRSM project has made significant efforts towards mitigating this risk during the month of February. The revised schedule was reviewed by TMS and found to address many of the issues TMS raised in our one-time schedule assessment in September. Specifically, the revised schedule includes improved resource leveling and resource allocation for the parallel activities taking place. Additionally, the project has started daily meetings with the leads in each area to tactically address daily issues, action items and priorities. The Impact has been reduced to Medium, which has also reduced the severity to Medium. The project has not yet addressed the third recommendation TMS has made for this risk (increasing the time for UAT regression testing, bug remediation and lessons learned).

01-31: The new project schedule was not received until 02/02/2012. TMS will focus its efforts on the review and analysis of the new schedule and provide input to Caltrans to determine if the appropriate staffing is in place for the parallel approach. However, in discussions with Caltrans staff, TMS is aware Test, Conversion and Pilot Leads have been participating in daily war room style status call to review progress on in-flight tasks and look forward to the week's upcoming tasks. Action items are displayed in the war room on a large white board. Action items are not removed until they are completed or otherwise resolved. Although TMS has not yet had an opportunity to review the revised schedule in detail, Caltrans has stated that while pilot and test activities are scheduled in parallel, there are different resources participating and that focused attention was taken in the schedule to ensure conversion efforts were single threaded and there was minimal resource overlap with testing. Caltrans has also noted that regression test has completed without issue and project data conversions have been thoroughly exercised and the team is confident in the implementation. Functionality in Clarity is well isolated within each functional object, reducing the risk that a new defect will have a high impact is discovered during system test and UAT. With properly converted project data, and isolated defect fixes, Caltrans feels the impact should be reduced. TMS is pleased to see that the schedule has a resource assignment view that now displays responsible party (SAIC/CT), team (Dev/Test/Train/etc.) and resource (a named individual). The resource column no longer has SAIC or CT assignment. Resource allocation is relatively level for most resources; additional review of assignments will be conducted to minimize resource conflict.

## Risk R-6: Lack of performance and scalability planning may lead to issues with the Pilot or Rollout if not resolved quickly

**Risk Statement:** For performance testing, there is a lack of requirements and goals. There is also a lack of a test plan for scalability and performance, a lack of performance test scripts created and executed, when Pilot activities are a month away.

| | | | | | |
|---|---|---|---|---|---|
| **Probability:** | Medium | **Impact:** | High | **Timeframe:** | Short Term |
| **Severity:** | Medium | **Opened:** | 09-2011 | **Status:** | Open |

**IPOC Recommendations:**

- Understand performance requirements – how many users will be on the system concurrently, what is the expected performance metrics for submitting data, what is the expected performance for running reports, what are the

scalability requirements?

Status: This has been mitigated.

- Take the current scheduling system and establish baseline for these performance requirements and determine if they are meeting the goals?

  Status: To the best of IPOC's knowledge, this has not yet been done.

- If they are not meeting the goals, develop and execute test cases for performance.

  Status: This is planned for in the project schedule, but has fallen behind schedule due to environment issues.

**Status:**
03-31: Due to the resource limitations of the development, test and training environments, no performance testing was done on the hardware as scheduled. However, system monitors have been in place since the beginning of the test and pilot cycle to monitor CPU usage, disk space and memory usage. An issue was discovered with memory usage on test; there is a known issue with that way Clarity's JVM manages memory. A daily bounce of services has been implemented to maintain system performance and there is an open issue in the PRSM issue log on this item. There is some concern over the anticipated report volume and response time in the reporting environment. There are not additional performance or load tests that can be run in the reporting environment and the team is looking at additional tests in the production environment. The team is also looking at the possibility of using CA Business Analytics or another reporting solution, which would provide more flexibility in reporting and potentially improve performance. IPOC will continue to monitor these performance activities.

02/29: During February, the project team implemented a tool for performance monitoring that will be used to try and isolate any functional performance issues. The tool will run in the background, collect data and that data will be analyzed to determine if there are any issues that need mitigated. The tool and the data collected will not address load testing issues as the load will be minimal compared to production level loads, however, it represents a good start toward understanding if there are specific, isolated performance issues that need addressed. In addition, performance and load activities were added to the revised project schedule and the Caltrans team is preparing for conducting the performance monitoring activities as part of Phase 5 System Testing Part B. Based on these activities, TMS has reduced the Probability from High to Medium and the Severity to Medium and continuing to track the activities of performance and load testing.

01/31: The project has lacked a comprehensive approach and defined tools for performance testing for the last six months. SAIC is not contractually obligated to conduct performance testing and Caltrans has not yet developed a Performance Plan. In addition, Caltrans has indicated that it lacks automated tools for simulating the production environment to conduct load and performance tests and would need to schedule execution of manual test scripts by multiple users to adequately assess if performance or load testing objectives are being met. Both IPOC and IV&V have identified that the risk remains that Caltrans will be able to effectively simulate the product environment with this approach, given the number of users who could be using the production system statewide. There is a significant risk that the performance test will not be effective. In the new schedule received on 02/01, TMS observes that there are some high level tasks added to Phase 5 System testing that include performance and load testing; however, TMS in unaware of a high level plan that addresses the requirements to be tested or the plans for conducting this testing. TMS will work with the PRSM PM to get a better understanding of the strategy moving forward and any supporting documentation.

## Risk R-5: Inadequate planning for data conversion may cause additional schedule delays and impact the quality of integration testing.

**Risk Statement:** There have been unexpected problems with the dry-run data conversion process and for several of the Districts' pilot data, there has not been a successful dry-run to date. This may cause additional schedule delays and impact the quality of integration testing. In addition, planning for conversion is behind schedule with the team continuing to document the Implementation Plan and the end-to-end Caltrans Conversion Process document.

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| **Probability:** | Medium | **Impact:** | High | **Timeframe:** | Medium |
| **Severity:** | Medium | **Opened:** | 09-2011 | **Status:** | Open |

**IPOC Recommendations:**

- Reconcile discrete tasks listed in the go-forward plan with high level tasks in the project schedule to ensure that all conversion activities are tracked and assigned.

  Status: This has been mitigated.

- Review of the current conversion metrics showing what has been successfully converted and what remains to be converted.

  Status: IPOC is unaware of any conversion metrics that are available for review.

- Include districts in conversion validation activities – no one knows their data better than they do.

  Status: Plan for Pilot and Implementation Plan had roles and responsibilities assigned for districts related to validation. IPOC has not yet seen a completed District readiness checklist or reviewed the small Pilot results to assess how involved the districts were..

- In discussions with the project team, they have indicated that they would like to document, by District, where the source data is coming from, what pre-conversion activities or data cleansing have been done so far, what remains to be done, and results of testing. This will help the State identify which district is in the best position to move forward in Pilot. IPOC agrees and supports this approach.

  Status: To the best of IPOC's knowledge, this checklist has not yet been developed.

**Status:**

03-31: The project has documented a standard template for what a converted project needs to look like to successfully carry over into PRSM. The project has also published guidelines to the districts defining the ideal state of the project before it can move to PRSM. For the past year, PRSM has been getting data output files from each of the districts and running them through the conversion process. As a result of the output process, they have been producing data Anomaly Reports that include the parts of projects that errored out of the conversion and are expecting each district to go through their conversion reports, correct the issues and re-run the data through the system. The testing is not just a sub-set of their data and appears to be very comprehensive. The district readiness checklist contains a checklist for conversion that each district can use – a list of the activities to be ready for conversion, what they need to do to get their data clean and get it converted. Although the checklist is robust, there are only a few validation steps planned to ensure that the activities are completed as scheduled, and most of these are focused on the project data from each district. IPOC would like to see more validation steps included for the deployment and conversion as a whole, ensuring that all of the responsibilities we expect the districts to perform are indeed completed according to the schedule. In addition, the timeline for reviewing this checklist with the districts is T-10 days, which is not sufficient enough time to mitigate any corrective actions. IPOC recommended in their One-Time assessment report on the District checklist that this timeframe be extended to 30-45 days to allow more time for the districts to react to corrective action. IPOC will review the conversion statistics available and plans to close out this risk in the next reporting period based on the progress made over the last several months.

02-29: TMS has reviewed the Implementation Plan (and will review the checklist during March). System Testing for Phase 5 Part A has completed and UAT Testing for Phase 5 Part B has started. TMS is aware that Caltrans has been in weekly communication with the districts in discussing conversion and validation activities but is unaware if any of the remaining recommendations made above have been implemented. TMS will schedule time with IV&V to discuss data conversion and understand the processes that have been developed.

01-31: The vendor continues to finalize the implementation plan, which is running significantly behind schedule, now targeted for mid-February. Once a draft plan is received by the State, TMS plans to form an in-depth assessment of the Implementation Plan. With respect to data load and conversion, data load activities have started in advance of schedule. Four projects have been converted and loaded. 19 of 22 test cases are now complete. Two packages of test cases have been delivered to IV&V for comment. One review meeting with IV&V has been completed. All indicators for early start of scripted testing are positive. Ad-hoc testing investigations have been defined and are expected to begin 2/6/12.

## Risk R-1: Lack of Effective Organizational Change Management or District Buy-in for Pilot could lead to lack of acceptance of PRSM or to new PRSM processes

**Risk Statement**: One of the most significant challenges to the PRSM Project could be engaging and obtaining buy-in from District executives, management and staff. It is very important that District executives and management are knowledgeable about PRSM and the changes to their business processes and benefits of using PRSM. District staff, in addition to training, should be knowledgeable of the decisions and consequences of changing / standardizing business processes. Lack of engagement of District personnel at all levels could have a negative impact on overall PRSM system acceptance and usage.

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| **Probability:** | Medium | **Impact:** | Medium | **Timeframe:** | Medium |
| **Severity:** | Medium | **Opened:** | Unknown | **Status:** | Open |

**IPOC Recommendations:**

- Assess the changes to the training program/plan proposed in the most recent implementation vendor change request in order to understand the impact on Organizational Change Management. Work with the Districts to help them understand the changes to the training program in order to gain organizational buy-in and confirm that the program is adequate to enable a successful Roll Out.

  Status: This has been mitigated.

- Consider hiring / extending additional consulting resources to assist with refining the Organizational Change Management Plan and to execute the plan.

  Status: IPOC is not aware that any additional staffing has taken place to help with OCM development and activities.

- Involve the end users in a more direct way and allow them to participate in the risk management process. This will allow the project team to obtain early buy-in and a stake in the project. Hold a risk identification session to identify the district concerns of the pilot activities and help define appropriate mitigation strategies to address the risks identified.

  Status: This has been mitigated. A series of four "roadshows" were completed prior to small pilot to present how PRSM would address key business processes at the district. Additionally, there have been two daily small pilot user sessions and a daily pilot review call.

- Analyze current methods of communication to determine if additional processes need put in place to get the districts to open up the channels for communicating risks and issues associated with pre-pilot, pilot and post pilot activities.

  Status: This is being mitigated. There is a daily pilot review.

- Engage the districts in reviewing business functionality and business processes.

  Status: This has been mitigated. TMS is aware that all of the districts have been engaged in training for the six key functional areas and the business processes associated with them.

**Status:**

03-31: The PRSM conversion lead has met with the conversion managers on a monthly basis to go through the checklist and talk to them about their data conversion reports; however, there are no validation activities to ensure that the districts complete all the items on the checklist. Without this validation, the PRSM team may not be able to answer the question "Are the districts 100% ready to have their projects roll?" IPOC will be reviewing the completed checklist for the small Pilot along with the business process materials outlined in section A.1 #8 of the District Readiness Checklist.

2/29: An Implementation Plan was submitted during February which TMS reviewed at a high-level. The plan did not contain the substance expected; however, during our initial review the checklist referred to in the document was not available. TMS has received this checklist and will review it during March and will provide comments to the project. In conversations with the Caltrans team, TMS is aware that the districts do not have sufficient resources to perform formal OCM, nor does Caltrans have a formal OCM team that is skilled in training on business processes. Caltrans is trying to train a business analyst team that can work with the districts and understand their business processes, but they are not up and running at full strength yet. However, there are still activities in place that are geared towards OCM awareness. TMS

has observed that through the small pilot, the data conversion team is providing daily sessions with the district to demonstrate how the data moves through the functional processes of the business and engage the small pilot stakeholders. This becomes even more important as we move onto larger districts who all have different tools and different data needs. TMS believes we need to be able to find a way to incorporate the business process awareness into the district training. The Caltrans PM says there are plans in place to visit the large districts and perform training with the functional business processes, and TMS sees this as a positive step.

01/31: Implementation manager training is scheduled to resume at the start of the small pilot and is scheduled out in the new revised schedule. Training activities have been reorganized in the schedule. The Implementation Manager training (AKA SME Sessions) are now scheduled to occur during rollout training in mid-September. There have been sessions at two districts with a third planned, to present key business impacts to the district management and future PRSM users. IPOC is reducing the Probability to Medium and Impact to Medium as a result of progress.

**Closed Risks**

## Risk R-7: Inability to document checklist readiness for districts may delay pilot and rollout activities

**Risk Statement**: TMS has reviewed the PRSM Adaptation Project Schedule as well as the two Pilot Readiness deliverables and has found there to be a gap in definition of the activities, tasks and expectations of the Districts for preparation to start the pilot. Although it may be the responsibility of the District Implementation Manager to ensure that certain tasks are completed prior to the start of the pilot, the project should have visibility into the progress the District has made in regards to those items that are needed to be completed prior to the pilot start date.

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| **Probability:** | High | **Impact:** | High | **Timeframe:** | Short Term |
| **Severity:** | High | **Opened:** | 10-2011 | **Status:** | Closed |

**IPOC Recommendations:**
TMS recommends that the project team work with the pilot district to determine the appropriate checklist of items that needs to be completed prior to pilot start. Items may include things such as: confirmation of availability of staff for training, availability of hardware and software necessary for training, implementation and any additional resources need for the HQ or SAIC staff that may be on-site during initial implementation, availability of facilities for training, verification that pre-requisite documentation has been reviewed, verification of any organizational change management tasks that should be completed, verification that all district pilot readiness tasks have been completed, etc. Caltrans needs to be able to answer:

- Are district staff ready for pilot activities?

  Status 03/31: A series of four "roadshows" were completed prior to small pilot to present how PRSM would address key business processes at the district. Additionally, there have been two daily small pilot user sessions and a daily pilot review call.

- Who will be on-site to assist with support?

  Status 03/31: CT and SAIC both had implementation managers on-site during small pilot. A HEAT help desk line was established and CT PMSU resources provided level 1 support in the district during pilot. Level 2 and 3 support was provided by HQ and project team resources. The model will be replicated through large pilot districts.

- What activities need to take place to prepare for training?

  Status 03/31: Small pilot user PM & TM training completed successfully, large pilot training is underway. Training facilities have all be reserved, trainee invitations sent, materials produced and trainers scheduled. Additional sessions for T4T and custom reporting are scheduled. Large pilot go/no-go meeting conducted with a go for large pilot training decision received.

- Are all hardware and software pre-requisites available and configured to support the PRSM solution?

Status 03/31: PRSM training environments are online and populated with 'gold' training data.

**Status:**
03-31: SAIC made the required changes in the Implementation Plan and addressed a large majority of the deficiencies that were raised by IPOC and IV&V. In addition, TMS has reviewed the District Implementation checklist as part of our March One-Time Assessment. Caltrans has provided status updates to all the open recommendations. At this time, IPOC is in agreement with Caltrans that they have successfully mitigated this risk and IPOC is recommending that this risk be closed.

02-29: SAIC submitted an updated Implementation plan in February that TMS assessed at a high-level. The plan itself did not contain the expected detail that TMS was looking for; however, a checklist was referred to several times in the report that TMS just received at the end of this reporting period. TMS will review this checklist in March and provide comments to the project team. IV&V will also review the PRSM Support Plan in this effort. Through discussions with the Caltrans team, TMS is aware that Caltrans and the SAIC Implementation Team have developed a project schedule with activities and resources dedicated to the Implementation phase. Key milestones and activities from this mater plan are included in the Caltrans revised schedule. Every district will have an implementation manager designated in this plan with assigned tasks and resources. The PRSM PM will send this plan to both oversight entities for review.

01-31: The Plan for Pilot deliverable was updated by SAIC and reviewed by IPOC for this reporting period. The revised version of the document contained very few changes as detailed in the next section and did not incorporate any elaboration on how the new alternative approach would be implemented. The proposed alternative approach includes a revised timeline that adjusts the focus of activities to ensure an early validation and verification of one project as well as verification and validation of the general processes, help desk support, etc. Once validated, the remaining 49 projects will be converted and tested by the end users. IPOC concurs with this approach, however, in order to achieve success with the first project in the proposed four-week timeframe, it is critical to have a well-defined plan outlining roles and responsibilities, precise execution of how defects are documented, reported, mitigated and analyzed for lessons learned and adjustment of strategy. It is also critical to have exit criteria defined for the first project so that it is clear when the remaining 49 projects can commence. The exit criteria may be different for the first project than the final pilot exit criteria. The Plan for Pilot needs to be updated to include all the relevant details as described above for the new approach.

## General Comments

This report reflects the time period of March 1 – March 31, 2012. The PRSM project remains in Rolling Wave 3: Adaptation Phase part B, which includes development, data conversion and interfaces, production build-out, testing, Adaptation phase training and Adaptation Acceptance. The project is scheduled to move into Rolling Wave 4: Pilot in Spring 2012.

This General Comments section focuses on the project management processes. TMS has included the following project management process chart documenting TMS's assessment of each major area of project management on the PRSM project by a color code in the table below. Three month's worth of status is displayed.

RED = Unsatisfactory project management practices that present significant risk to the project.
YELLOW = Corrections to project management practices needed to reduce risks.
GREEN = Satisfactory project management practices are being followed.
BLUE = Assessment in progress.

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for Improvement |
|---|---|---|---|---|
| General Project Management | G | G | 03/31: Weekly internal project meetings re occurring, but IPOC has not observed meeting minutes or other evidence that this project status is occurring. The new project schedule has more of a strategic focus than a tactical focus, and increased communication with the districts and functional project teams are occurring. Status remains in green.<br>2/29: During the month of February, significant | • MS observed that formal risk identification activities have not occurred since the beginning of the project and recommended tha as the project gear up for the pilo implementation, that a brainstorming session takes plac that includes the core project tea as well as the pilot district. |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for Improvement |
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| | | | progress was made by the project team both in execution and in project management activities. Daily meetings are now being held to improve communication and to expedite the acknowledgment and mitigation of issues, risk and issue monitor has recommenced during the weekly internal team meetings and the project has committed to providing IPOC with a full spreadsheet of risk and issue activity each month and the schedule has been revised (but not yet approved) taking into consideration most of the deficiencies raised in the one-time schedule assessment report TMS submitted in September. Given these improvements, the status has changed to green to reflect the overall project management improvements. Note: some of the individual status ratings will remain the same as last month so that we can monitor and assess the plans that have been put into place to ensure they occur as planned.<br><br>01/31: The revised schedule was delivered to oversight for review on 02/01 and contains all of the tasks discussed in the revised approach for pilot and testing. Risk and Issue meetings have not yet been re-scheduled. Status remains Yellow. | Status: Risk identification remains at an informal level. A new risk identification session was held with critical team members to re-instate the PRSM active risk log.<br><br>• MS needs to review evidence that internal status meetings continue to be held and that risks, issues, changes and other project performance measures continue to be assessed. Status: IPOC has been forwarded the most current risk log for review. |
| **Planning and Tracking (Work Plan)** | G | G | 03/31: The project schedule is being tracked weekly for updates and when delays in start or completion dates occur, the project team is doing a commendable job of adding a project note to explain the variance. Resource assignments still need completed for the entire Rollout phase and leveled across all resources.<br><br>2/29: TMS has changed the status of this item to green based upon the newly revised project schedule. The revised draft schedule now includes individual assignments rather than group assignments, baselines, fixed work/effort tasks, loading of resources and a readjustment of strategy in terms of some of the activities being performed during the pilot. Based on the new approach, IPOC believes the work plan is now manageable and accurate. However, resource assignments still need to be made for all activities starting with the Roll Out phase, and some SAIC resources still need to be leveled. TMS will monitor the updating of the schedule to ensure it is being worked in a timely manner.<br><br>01/31: The revised schedule was delivered to oversight for review on 02/01 and contains all of the tasks discussed in the revised approach for pilot and testing. IPOC will conduct a formal review of the schedule for the February reporting period. Status remains Yellow until the assessment is conducted. | • SCH Finding 4: TMS observed that promotion activities, test cases reviews, performance testing, stress testing, load testing and scalability testing seem to be missing from the plan. TMS recommends adding activities and milestones for the above activities. Status: The schedule now contains test script reviews. Performance test activities are included but only at a high-level.<br><br>• SCH Finding 5: TMS recommends that the project level the current workplan such that all resources listed in the schedule are allocated at a reasonable level. Status: SAIC resources still need to be leveled and resources need to be added to the activities in the Rollout phase. |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for Improvement |
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| **Quality Management** | G | G | 03/31: TMS provided this data to Caltrans and they have gone through the testing materials to complete the mapping. A review of the approach Caltrans took for this exercise was reviewed by TMS and found to be consistent with our recommended mitigation. There are (12) Unknown mappings that could be out-of-the-box functionality that is not used by Caltrans, or an item that was removed or re-designed. There were (4) items that could not be traced and require some additional investigation. UAT Testing for Phase 5 started on time and is almost completed. Small pilot activities and UAT concluded on schedule and the small pilot team gave the GO decision to move to large pilot training. Testing will continue through large pilot preparation and production build out.<br><br>2/29: The project team has completed regression testing and is performing some additional ad-hoc testing of business processes and functions that are not associated with requirements, yet will affect the overall experience of the user. UAT has also started along with the small pilot. IPOC is still concerned with the subset of requirements that do not map to test cases; however, a list was provided to the project for investigation and they are trying to determine if there is any impact related to these missing mappings.<br><br>01/31: Testing for Phases 1-4 is now closed. The revised schedule was delivered to oversight for review on 02/01 and contains all of the tasks discussed in the revised approach for pilot and testing. Defects for phases 1-4 have been resolved to within allowances of the adaptation acceptance criteria. All critical defects have been addressed; remaining defects are moderate or cosmetic. Regression test started on time and is now complete. Testing progresses faster than expected due to the addition of resources; new and converted projects tested. No defects reported; two moderate anomalies reported. No bug fixes required. Data load activities have started in advance of schedule. Four projects have been converted and loaded. 19 of 22 test cases are now complete. Two packages of test cases have been delivered to IV&V for comment. One review meeting with IV&V has been completed. All indicators for early start of scripted testing are positive. Ad-hoc testing investigations have been defined and are expected to begin 2/6/12. Although IPOC would like to see more trending metrics, it is obvious from the results of the testing over the past two months that quality has improved. Status moved from Yellow to Green. | • PM Finding 2: The quality management metrics collected, tracked and analyzed on a regular basis should be expanded to include more process areas and detail that would allow trends and potential issues and risks to be identified. TMS recommends concentrating on testing and requirements metrics first. Status: No update on this recommendation.<br><br>• TMS recommends that testing statistics be provided to the oversight teams on a regular basis for reporting progress against milestones. |
| **Requirements Management** | Y | G | 03/31: TMS provided traceability data to Caltrans and they have gone through the testing materials to complete the mapping. A review of the | • raceability through the project life |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for Improvement |
|---|---|---|---|---|
| | | | approach Caltrans took for this exercise was reviewed by TMS and found to be consistent with our recommended mitigation. There are (12) Unknown mappings that could be out-of-the-box functionality that is not used by Caltrans, or an item that was removed or re-designed. There were (4) items that could not be traced and require some additional investigation. Based on the significant improvement in mapping completed by the PRSM team on filling the gaps of the No Match and Partial Match requirements, IPOC now finds this category to be Green.<br><br>2/29:The lack of traceability is a tremendously large project concern, and is specifically why IPOC has rated this category RED last month. Since then, the project has begun completing the remaining mappings that had no test cases associated with the requirements. Caltrans has shared their approach to this exercise with TMS and TMS concurs with the approach. This item has been turned to yellow as a result of the progress and will be green upon completion of the activity.<br><br>01/31: The last updated Requirements Traceability Matrix of November 12, 2010 is out of date and does not contain updated data from the past testing phases. Requirements / FEATS have been revised throughout the testing process, the scope and functionality of some focus customizations have changed during the test process, and some requirements have been eliminated because they were not considered technically feasible or functionally necessary. The project team has not conducted a comprehensive review of these changes with stakeholders to validate that the system as a whole continues to meet Caltrans' business requirements. Moreover, the changes have not yet been processed through the project change control process for approval. There is a risk that certain functions of the system may not meet user's needs or expectations as a result of these changes. SAIC has confirmed that they will submit a revised traceability matrix that reflects the results of the current testing efforts and traceability to requirements within the next month. Status remains Red. | cycle should be an on-going activity that is performed with some level of regularity to ensure that all changes are incorporated into the project consistently. The RTM should be updated as a result of the exit-phase sessions for Phases 1-4. Status: SAIC is scheduled to complete an updatec traceability.<br><br>• MS would recommend a review of the gaps in the traceability matrix to ensure proper testing coverage weekly review of testing metrics tc understand the current progress being made and clearly defined exit criteria as the project enters the pilot phase. If there are no plans to directly terrace requirements to Test Cases, then the traceability matrix should state the approach for traceability and clearly define how the mapping of test cases to FEATS is satisfactor to the customer. Status: There ar (12) Unknown mappings that coul be out-of-the-box functionality tha is not used by Caltrans, or an iten that was removed or re-designed. There were (4) items that could not be traced and require some additional investigation. |
| **Change Management** | G | G | 03/31: There have been no change in status for Change Management (nor have there been any new change requests).<br><br>2/29: No change requests in February.<br><br>01/31: There have been no change in status for Change Management (nor have there been any new change requests). Status remains Green. | • MS recommends that predictive analysis be used on the project schedule to show how scope increase or schedule changes wi affect all downstream tasks.<br><br>• MS recommends that all cost increases be documented within the change request. |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for Improvement |
|---|---|---|---|---|
| | | | | • MS also recommends that the type of resources be identified and the impact assessed to determine if external constraints may impact the schedule. |
| **Risk Management** | Y | G | 03/31: Weekly internal project meetings are occurring, but IPOC has not observed meeting minutes or other evidence that this project status is occurring. IPOC is aware that the project team has sorted through the existing risk log and culled risks out that are no longer current, as well as providing action steps to each open risk. IPOC was sent a current risk log for review that contains new risks and updates to existing risks. For the next reporting period, IPOC will review this risk log and the risk management process and assess it against the deficiencies we noted in the One-Time Assessment in December 2011. Status has been moved from Yellow to Green.<br><br>2/29: The team has started to resume the risk and issue discussions as part of their internal team meeting which IPOC is not a part of. The project has suggested sending a monthly spreadsheet of all risk and issue activity to IPOC each month for review and assessment. This solution is acceptable to TMS, and once we have received the first month of updates, we will reassess this status to determine if it can be changed to green.<br><br>01/31: All Risk and Issue Meetings have been cancelled and have not been re-scheduled. TMS has discussed the results of the One-Time Assessment on risk and issue execution with the PRSM project team and anticipates that some of the recommendations will be incorporated into the revised meeting structure. IPOC will reassess this area once the risk management process begins again. Status remains Yellow. | • SK Finding 1: TMS recommends that the project hold one or more brainstorming sessions involving all stakeholders in the project to re-assess new Risks and Issues for the upcoming project phases. Status: IPOC is aware that the PRSM team has been involved in informal risk identification activities and has published a new risk log.<br><br>• SK Finding 2: TMS recommends creating detailed, actionable mitigation and contingency plans for each risk. TMS also recommends referencing the mitigation plan during each risk status report and prompting the owner of the risk to report progress against the plan and to add new actions for the plan or remove irrelevant out-of-date items from the plan. The mitigation plans should always reflect the current strategy and approach for lowering the probability and impact for the risks Status: All risks contain a mitigation plan with a status of the action item. Some risks contain a contingency plan.<br><br>• SK Finding 3: TMS recommends reviewing all open risks for potential triggers and referencing the defined triggers during risk management status updates to determine if the trigger has been detected. This will allow the project to quickly respond with either heightened mitigation effort or to start implementing the contingency plan. Status: Most of the risks on the risk log contain a trigger description. IPOC will assess if these triggers are discussed at the first risk meeting to be held on April 9. |
| **Issue Management** | Y | Y | 03/31: Weekly internal project meetings re occurring, but IPOC has not observed meeting | • SK Observation 1: Action Plans |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for Improvement |
|---|---|---|---|---|
| | | | minutes or other evidence that this project status is occurring. IPOC is aware that the project team has sorted through the existing issue log and culled issues out that are no longer current, as well as providing action steps to each open issue. However, IPOC has not been sent a new issue log and is unable to make an assessment. The last issue log that was available for review was November 2011. (NOTE: A new risk log was delivered, but not an issue log). Status remains in Yellow.<br><br>2/29: The team has started to resume the risk and issue discussions as part of their internal team meeting which IPOC is not a part of. The project has suggested sending a monthly spreadsheet of all risk and issue activity to IPOC each month for review and assessment. This solution is acceptable to TMS, and once we have received the first month of updates, we will reassess this status to determine if it can be changed to green.<br><br>01/31: All Risk and Issue Meetings have been cancelled and have not been re-scheduled. TMS has discussed the results of the One-Time Assessment on risk and issue execution with the PRSM project team and anticipates that some of the recommendations will be incorporated into the revised meeting structure. IPOC will reassess this area once the risk management process begins again. Status remains Yellow. | are created but not tracked.<br><br>• SK Observation 2: No assessment of relation to critical path. Most issues have an impact to the project cost, schedule, quality and/or scope. As a result, it is important to address any additional impacts the lack of resolution may have on the critical path for the project. |
| **Communication Management** | G | G | 03/31: Daily meetings continue with the leads from each group and there has been increased communication with the districts during small pilot and preparation for large pilot. Status remains in Green.<br><br>2/29: Daily meetings have started with the leads from each group. During periods of high activity such as UAT testing and validation of the small pilot, this practice of a daily meeting will help the project keep focused and prioritized on the most important issues that need resolution.<br><br>01/31: Additional communication between the districts has been occurring. The focus of the PRSM team in January remained on completion of the Phase 1-4 testing efforts and re-planning for the new testing and pilot approach. Risk and issue meetings have not yet started back up and the regular status meetings for oversight are now held weekly. Status remains in Green. | • MS recommends analyzing the current methods of communicatior to determine if additional processes should be put in place to facilitate change management preparation and discussions withir the districts and to open up the channels for any risks or issues the districts are concerned with during the pre-pilot phase, pilot phase and post pilot/rollout phase Status: This has been occurring o a regular basis over the last several months.<br><br>• PM Finding 1: TMS recommends including more tactical communication planning with the districts and strategic communication planning for change management activities at the district level, pilot and rollout communication (including how risks, issues, changes and initial rollout support issues will be communicated). Status: A series of four "roadshows" were completed prior to small pilot to |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for Improvement |
|---|---|---|---|---|
| | | | | present how PRSM would address key business processes at the district. Additionally, there have been two daily small pilot user sessions and a daily pilot review call.<br><br>• MS recommends restructuring the Risk and Issue meeting to include oversight and incorporate some of the recommendations made in the December Risk and Issue Management assessment. |
| **Pilot Readiness** | Y | G | 03/31: A series of four "roadshows" were completed prior to small pilot to present how PRSM would address key business processes at the district. Additionally, there have been two daily small pilot user sessions and a daily pilot review call. CT and SAIC both had implementation managers on-site during small pilot. A HEAT help desk line was established and CT PMSU resources provided level 1 support in the district during pilot. Level 2 and 3 support was provided by HQ and project team resources. The model will be replicated through large pilot districts. Small pilot user PM & TM training completed successfully, large pilot training is underway. PRSM training environments are online and populated with 'gold' training data. Based on activities over the last several months, this category has moved from Yellow to Green.<br><br>2/29: IPOC did review the revised pilot readiness plan and found that there was very little substantive change in the document. The new document did not coincide with the newly revised schedule, nor did it take into account the deficiencies and recommendations proposed by TMS in our one-time assessment from October 2011. The project did release an implementation plan during February 2012 that was a high-level approach to implementation. A checklist was referenced multiple times in that document that IPOC did not received until the end of the month. We will review that checklist in March to determine if it meets the needs for pilot readiness.<br><br>01/31: The Plan for Pilot was updated by SAIC and is now in review by Caltrans. IPOC reviewed the document and did not observe much improvement in resolving the initial deficiencies noted in the October 2011 review. The Implementation Plan is over 2 months late and is not expected until mid-February. The revised approach for pilot was added into the project schedule but has not yet been reviewed by IPOC. With the start of Pilot targeted for March 2012, this status remains Yellow until further analysis can be conducted. | • LT Finding 1: An Entry Criteria Pilot Readiness Checklist should be developed from the District Perspective. Status: This was reviewed by IPOC in March and IPOC observed that additional time was needed for the districts to respond and act upon the district checklist for implementation and conversion.<br><br>• LT Finding 2: Include specific district involvement in the pilot verification process to reduce schedule delays. Status: IPOC has asked that additional validation activities be included in the schedule to ensure that the districts are completing their checklist items according to the schedule.<br><br>• LT Finding 3: Tactical processes and procedures for extracting lessons learned and assessing common problems mitigated during level one support should be included in any pilot documentation. Status: IPOC was pleased to see the Lessons Learned activity included in the schedule table; however, there needs to be an associated methodology to accompany the task. The process for defining the metrics to collect, determine who, how and when the data will be collected, and how the data will be analyzed needs to be defined. |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for improvement |
|---|---|---|---|---|
| **Testing** | G | G | 03/31: Phase 5 regression testing started on time and completed on time. In addition, Phase 5 UAT also started on time and according to the project schedule, is targeted to complete about 10 days late due to execution of test cases and performance loading tasks not completing on time. Very few defects remain from the testing phases (0 critical, 0 serious, 43 moderates and 15 cosmetic). The project team appears to be meeting most targeted start and end dates. Status remains in Green.<br><br>2/29: Regression testing completed. UAT testing started. A performance monitoring tool has been put in place and activities on the small pilot have begun. Enhanced system test activities were added to the schedule for regression and UAT.<br><br>01/31: Phases 1-4 Testing are now closed and Phase 5 System Testing, Conduct Regression Testing Part A started on time and is now complete. Testing progressed faster than expected due to the addition of resources; new and converted projects tested. No defects reported; two moderate anomalies reported. No bug fixes required. All test activities are now accounted for in the project schedule and more effective tracking mechanisms have been put in place for monitor the progress for Phase 5 UAT. With respect to performance and load testing, one of the 22 test cases addresses performance. Additionally the architecture team will be monitoring data load performance. Status moved from Yellow to Green. | • ST Finding 1: Understand performance requirements - how many users will be on the system concurrently, what is the expected performance metrics for submitting data, what is the expected performance for running reports, what are the scalability requirements? Status: Planning is underway to develop a plan for conducting performance testing and the criteria/requirements. High Level activities have been added to the schedule. |
| **End-User Training** | G | G | 03/31: Small pilot user PM & TM training completed successfully, large pilot training is underway. Training facilities have all be reserved, trainee invitations sent, materials produced and trainers scheduled. Additional sessions for T4T and custom reporting are scheduled. Large pilot go/no-go meeting conducted with a go for large pilot training decision received. Status remains in Green.<br><br>2/29: The train the trainer is no longer happening at each district. There will be two sessions, one in phase 1 rollout and one in phase 2 rollout. At this point in time there does not appear to be an impact with this change.<br><br>01/31: Training activities have been reorganized in the revised schedule. The Implementation Manager training (AKA SME Sessions) are now schedule to occur during rollout training in mid-September. Status moved from Yellow to Green. | • one |

| Process Area | Last Month Rating | This Month Rating | SUMMARY OF ASSESSMENT | Recommendations for Improvement |
|---|---|---|---|---|
| **Data Conversion and Load** | G | G | 03/31: The project has documented a standard template for what a converted project needs to look like to successfully carry over into PRSM. The project has also published guidelines on what the state the project needs to be in before it can move to PRSM. For the past year, PRSM has been getting data output files from each of the districts and running them through the conversion process. As a result of the output process, they have been producing data Anomaly Reports that include the parts of projects that bounced out of the conversion and are expecting each district to go through their conversion reports, correct the issues and re-run the data through the system. The testing is not just a sub-set of their data and appears to be very comprehensive. The district readiness checklist contains a checklist for conversion that each district can use – a list of the activities to be ready for conversion, what they need to do to get their data clean and get it converted. Although the checklist is robust, there are no validation activities planned to ensure that the activities are completed as scheduled. In addition, the timeline for reviewing this checklist with the districts is T-10 days, which is not sufficient enough time to mitigate any corrective actions. Status remains in Green.<br><br>2/29: All regression testing has completed. Scripted testing has started as well as ad-hoc testing. TMS is unaware of the status of the load and conversion activities status, but will schedule time with the IV&V team to better understand the progress made towards establishing and executing conversion plans and processes for the next reporting period.<br><br>01/31: Data load activities have started in advance of schedule. Four projects have been converted and loaded. 19 of 22 test cases are now complete. Two packages of test cases have been delivered to IV&V for comment. One review meeting with IV&V has been completed. All indicators for early start of scripted testing are positive. Ad-hoc testing investigations have been defined and are expected to begin 2/6/12. | • rovide test measurements and metrics to oversight for review. Status: IPOC has asked the project team to provide these performance measures. |

# CALTRANS - PRSM Project Oversight Review Checklist (March 2011)

**Project Oversight Review Checklist: High Criticality Project**

This checklist is an assessment for the Adaptation Phase. The end date of this phase is 03/26/2012 (per the most recent revised project schedule).

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
|---|---|---|---|
| **Planning and Tracking** | | | |
| Have the business case, project goals, objectives, expected outcomes, key stakeholders, and sponsor(s) identified and documented? | X | | TMS has reviewed the last approved SPR dated December 2009, and will review the new SPR request for the schedule delay once available. |
| Has a detailed project plan with all activities (tasks), milestones, dates, and estimated hours by task loaded into project management (PM) software? Are the lowest level tasks of a short duration with measurable outcomes? | X | | The project does use a MS Project schedule to track the work. Tasks, milestones dates and estimated hours are documented within the schedule and the tasks, for the most part, are represented as manageable, trackable items with durations less than 80 hours. A new project schedule has been developed to include the new approach for testing, pilot and conversion. |
| Is completion of planned tasks recorded within the PM software? | X | | Changed from Deficient to Adequate in February 2012.<br>Caltrans has revised the project schedule to include the new approach to system and UAT testing, pilot and rollout. TMS has reviewed this schedule and found that almost all of the recommendations made in our one-time assessment report were mitigated in the new revision. |
| Are actual hours expended by task recorded at least monthly within PM software? | | X | As per the project team, PRSM budget information for each contract is accessed by using the PMO and CA-PMM monthly reports and the SPR. Each month, the project rolls each of the contract expenditures into the CA-PMM report for total project costs. Actual costs are reported, as are actual percent complete. However, hours by task are not tracked at either the State or the vendor level. |
| Are estimated hours to complete by task recorded at least monthly within PM software? | X | | Status changed from Deficient to Adequate in March 2012.<br>TMS reviews all updates to the project schedule when available. The last project schedule reviewed was dated March 27 and has been baselined to include all SPR dates. IPOC no longer participates in the meetings to gather project status as this is now conducted internally without oversight; however, IPOC has received updates to the schedule several times in March and is kept up to date with changes as they occur. Actual costs are reported, but estimated hours, or projected hours, are not tracked in the documents that have been provided to TMS. |
| Is there a formal staffing plan, including a current organization chart, written roles and responsibilities, plans for staff acquisition, schedule for arrival and departure of specific staff, and staff training plans | | X | TMS has not been exposed to a formal staffing plan. We have reviewed the Project Organization Chart that documents the overall structure and high-level roles; however, a breakdown of specific staff on the vendor side and State side is not clear. |

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
|---|---|---|---|
| | | | Roles and responsibilities are defined within each project process plan (i.e. change management roles and responsibilities are defined within the Change Management Plan), however, TMS has not seen an overall description of the general roles and responsibilities for the project team (vendor and State). |
| Have project cost estimates, with supporting data for each cost category, been maintained? | | X | As per the project team, PRSM budget information for each contract is accessed by using the PMO and CA-PMM monthly reports and the SPR. Each month, the project rolls each of the contract expenditures into the CA-PMM report for total project costs. TMS has reviewed the cost tracking that the project includes within the CA-PMM and observes that the actual expenditures are summarized as total amount "to-date"; however, not estimated future costs or projections are included. TMS has also reviewed the PRSM Payment Milestone and Deliverables spreadsheet for SAIC vendor costs, including the updated costs for the March reporting period. |
| Are software size estimates developed and tracked? | N/A | N/A | This item is not applicable. |
| Are two or more estimation approaches used to refine estimates? | N/A | N/A | This item is not applicable. |
| Are independent reviews of estimates conducted? | N/A | N/A | This item is not applicable. |
| Are actual costs recorded and regularly compared to budgeted costs? | X | | The CA-PMM status report cost tracking summary shows various project categories, last approved SPR3 cost and cumulative actual costs for the total project, but not by month or fiscal year. The PRSM Payment Milestone and Deliverables spreadsheet shows actual costs incurred for vendor deliverables. |
| Is supporting data maintained for actual costs? | X | | The Microsoft Excel version of the CA-PMM status report shows comments notes for each new data entry for the cumulative actual costs and registers the amount of invoices paid to the various vendors and subtotals on Total of One-Time IT Project Costs, Total of Continuing Project Costs and Total Project Costs. |
| Is completion status of work plan activities, deliverables, and milestones recorded, compared to schedule and included in a written status reporting process? | X | | The bi-weekly status meeting has been cancelled and the weekly oversight meetings that replaced it have not revised the schedule as a regular agenda item. A new version of the schedule was delivered to reflect the new re-planning tasks and has been reviewed by TMS and found to be adequate. TMS has also reviewed the CA-PMM reports submitted by the project which tracks work plan activities, major milestones and compares planned to actual. |
| Are key specification documents (e.g. contracts, requirement specifications and/or contract deliverables) and software products under formal configuration control, with items to be controlled and specific staff roles and responsibilities for configuration management identified in a configuration management plan? | | X | TMS has reviewed the Configuration Management Plan at a high level and found that there are some gaps in terms of the promotion process, specific roles and responsibilities for some of the configuration management tasks and a lack of configuration control for some of the project management process documentation. TMS is more concerned with the execution of configuration management and the concern that the project is not following the drafted procedures defined in the plan. |
| Are issues/problems and their resolution (including assignment of specific | | X | TMS has reviewed the Issue Management Plan. Formal risk and issue management |

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
|---|---|---|---|
| staff responsibility for issue resolution and specific deadlines for completion of resolution activities), formally tracked? | | | processes were executed on the project from the time IPOC started in July 2011 through November 2011. AT that time the risk and issue meetings were cancelled.<br>The PRSM team has scheduled bi-weekly Risk and Issue Review meetings starting early April. An informal risk identification was held to identify which risks from the old November risk log were still valid and to identify new risks. IPOC was sent a copy of the risk log for review and has been invited to the risk meetings. TMS submitted a One-Time Assessment on Risk and Issue Management and Execution in December 2011 and made some recommendations for improvement to the issue management process. For the next reporting period, IPIOC will assess if these recommendations were included in the new risk process.<br>The status remains Deficient until IPOC can observe the execution of risk and issue management with the new process starting in April. |
| Is user satisfaction assessed at key project milestones? | X | | Through documentation review, it appears that users have been engaged in product reviews and training reviews and have participated in regular meetings to discuss organizational change management and pilot preparations. TMS reviewed the Communication Management Plan and observed that the plan does not address communication methods to and from the districts.<br>TMS performed a one-time assessment of the Pilot Readiness in October and found limited District involvement in Pilot Preparation activities and validation of converted projects. TMS has reviewed the updates and revisions made by SAIC to the initial Implementation Plan for Data submitted in February 2012. The revised PRSM Implementation Plan for Data is much improved from the initial draft reviewed. The plan now contains more detailed information regarding the Data Conversion Process including Backup and Recovery, Rollout Strategy and Conversion planning. The Data Implementation Schedule developed by SAIC contains more tactical and actionable activities along with the anticipated duration and time dependency regarding when the activity should take place in relation to the date of Implementation. The District Readiness Checklist contains a very comprehensive list of preparation activities to ensure the Districts are ready for Implementation. In general, the deliverables reviewed provide a great foundation for a successful implementation with the districts. |
| Is planning in compliance with formal standards or a system development life-cycle (SDLC) methodology? | | X | Compliance with PMBOK standards is not adequate for this phase of the project. Although this project does not contain a typical design and development cycle, there are requirements, configuration and testing that need to be tracked and managed in a similar way to that of a typical development project.<br>TMS believes that a modified SDLC should have been adopted for the project that clearly identifies how validation of expected behavior will occur (i.e. description of the requirements management, configuration management and test management areas of the SDLC).<br>Although the project is not in compliance with a formal standards or SDLC methodology, at this phase in the project IPOC does see value in creating a document describing the methodology. However, TMS has observed that the |

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
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| | | | project schedule and the approved strategy for realigning testing, pilot and conversion adopts a more tactical approach to validation of the product prior to the pilot phase. This alleviates many of the concerns of a non-standard SDLC. PRSM has reviewed the gaps in the traceability matrix to ensure proper testing coverage and has also held weekly review of testing metrics to understand the current progress being made and clearly defined entry and exit criteria. All of these are improvements to the previous process. |
| Is there formal enterprise architecture in place? | X | | The RFQI describes the target Caltrans enterprise environment. |
| Are project closeout activities performed, including a PIER, collection and archiving up-to-date project records and identification of lessons learned? | N/A | N/A | Project is in the Adaptation Phase – this is not applicable in this phase. |
| **Procurement** | | | |
| Are appropriate procurement vehicles selected (e.g. CMAS, MSA, "alternative procurement") and their required processes followed? | X | | The final contract was signed by the Implementation Vendor on February 26, 2009. Caltrans received, reviewed and signed the contract on February 27, 2009. DGS Legal reviewed and signed the contract on March 5th, 2009. |
| Is a detailed written scope of work for all services included in solicitation documents? | X | | Detailed written scope of work is contained in the RFP. |
| Are detailed requirement specifications included in solicitation documents? | X | | Detailed requirement specifications are contained in the RFP. Requirements are also described in the RFQI and Value Analysis documents. |
| Is there material participation of outside expertise (e.g. DGS, Departmental specialists, consultants) in procurement planning and execution? | X | | Outside expertise and counsel has been sought from DOF, DGS, and consultants when appropriate. |
| For large-scale outsourcing, is qualified legal counsel obtained? | N/A | N/A | The project does not involve outsourcing as currently defined. |
| **Risk Management** | | | |
| Is formal continuous risk management performed, including development of a written risk management plan, identification, analysis, mitigation and escalation of risks in accordance with DOF/TOSU Guidelines, and regular management team review of risks and mitigation progress performed? | | X | TMS has reviewed the Risk Management Plan and it contains well documented processes and procedures that include Risk Identification, Risk Analysis, Risk Response Planning, Risk Monitoring and Control and Risk Communication. The plan does not address any formalized approach to risk identification (such as periodic brainstorming sessions, SEI risk identification checklists or the use of software tools). TMS has also observed that has observed that risk management metrics are not included in this part of the risk planning or execution.<br><br>The bi-weekly Risk and Issue meeting has been cancelled for the past several months with no formal tracking of risks and issues during that time. At the end of February, the project informed TMS |

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
|---|---|---|---|
| | | | that the formal review of risks and issues will be reinstated as part of the weekly internal team meeting (which IPOC is not a part of). The project will provide IPOC with an updated spreadsheet of all risk and issue activity taking place at the end of each month for our review. TMS has accepted this approach and once the process has become institutionalized and repeatable, we will consider changing this item to adequate. To date, this has not occurred.<br><br>TMS submitted a One-Time Assessment on Risk and Issue Management and Execution in December 2011 and made some recommendations for improvement to the issue management process. |
| Does the management team review risks and mitigation progress at least monthly? | | X | The bi-weekly Risk and Issue meeting has been cancelled. The team will be reviewing risks and issues during their internal weekly team meeting and providing IPOC an updated matrix containing all monthly activity at the end of the month. TMS is aware that the project team has begun an assessment of the current risk logs and issues logs and has begun to update them and identify new risks. TMS has accepted this approach and once the process has become institutionalized and repeatable, we will consider changing this item to adequate. |
| Are externally developed risk identification aids used, such as the SEI Taxonomy Based Questionnaire? | | X | The PRSM Risk Identification process describes how any stakeholder can submit a risk, defines the process for completing the "PRSM Risk Identification and Response Plan" and addresses how the initial risk is validated and assigned. Although an initial formal SEI-based assessment was conducted several years ago. There has not been a follow-up brain storming session or formal risk assessment since that time. |
| **Communication** | | | |
| Is there a written project communications plan? | X | | The latest version of the finalized and approved Communications Plan is dated 6/22/2009. TMS has reviewed the Communication Management Plan, which has a very thorough list of Roles and Responsibilities defined and contains an organization chart showing the relationships of the major stakeholders on the project. However, TMS has observed that this organization chart is out of date and that the Roles and Responsibilities tend to focus mostly on the immediate project team, with very little reference to district communication. |
| Are regular written status reports prepared and provided to the project manager, department CIO (if applicable) and other key stakeholders? | X | | TMS is aware that the project does formally report to CTA on a monthly basis and TMS has reviewed the most current CTA status report from February 2012. |
| Are there written escalation policies for issues and risks? | X | | Both the Risk Management Plan and the Issue Management Plan contain a risk escalation process. |
| Is there regular stakeholder involvement in major project decisions, issue | X | | TMS is aware that monthly Implementation Meetings are held with select district |

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
|---|---|---|---|
| resolution and risk mitigation? | | | stakeholders for the purpose of keeping the District project managers regularly updated on the status of the project and to receive their input. At the recommendation of the PRSM Project manager, TMS is not attending these meetings but is available to review status documentation or meeting minutes to determine the value-add in meeting stakeholder expectations about involvement in the deployment process.<br>A series of four "roadshows" were completed prior to small pilot to present how PRSM would address key business processes at the district. Additionally, there have been two daily small pilot user sessions and a daily pilot review call.<br>Small pilot user PM & TM training completed successfully, large pilot training is underway. Training facilities have all be reserved, trainee invitations sent, materials produced and trainers scheduled. Additional session for T4T and custom reporting are scheduled. Large pilot go/no-go meeting conducted with a go for large pilot training decision received. |
| **System Engineering** | | | |
| Are users involved throughout the project, especially in requirements specification and testing? | X | | The PRSM team reached out to districts for more involvement during the month of November. Specifically, additional districts have been added to the monthly Implementation Manager's meetings, districts have stronger participation in validating the converted data and for discussing risks and issues on the project. |
| Do users formally approve/sign-off on written specifications? | X | | Configuration requirements baseline, customizations and deleted requirement agreements were reviewed by Caltrans at regularly scheduled Checkpoint meetings and feedback was provided to the Implementation Vendor. Through documentation review, it appears that users have been engaged in product reviews and training reviews and have participated in regular meetings to discuss organizational change management and pilot preparations. |
| Is a formal SDLC methodology followed? | X | | The project schedule is categorized into high level summary tasks: program Milestones, Project Management, PRSM Adaptation Phase, Testing Phase, PRSM Pilot phase, PRSM Rollout, Statewide Rollout Acceptance and state Closeout. |
| Is a software product used to assist in managing requirements? Is there tracking of requirements traceability through all life-cycle phases? | X | | Changed from Inadequate to Adequate in March 2012.<br>TMS has reviewed spreadsheets of requirements but is unaware of any other tool that is currently being used to manage requirements. Traceability matrices do exist and have been reviewed at a high level by TMS. These traceability matrices are significantly out of date.<br>TMS has also reviewed the traceability spreadsheets in the project document library and found that there are many to-be use cases that are not traced to any associated test cases. This could be an indication of insufficient testing coverage. TMS provided this data to Caltrans and they have gone through the testing materials to complete the mapping. A review of the approach Caltrans took for this exercise was reviewed by TMS and found to be consistent with our recommended mitigation. There are (12) Unknown mappings that could be out-of-the-box functionality that is not used by Caltrans, or an item that was removed or re-designed. There were (4) |

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
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| | | | items that could not be traced and require some additional investigation. Based on the significant improvement in mapping completed by the PRSM team on filling the gaps of the No Match and Partial Match requirements, IPOC now finds this category Adequately Defined. |
| Do software engineering standards exist and are they followed? | X | | Engineering standards exist and are documented in the PRSM Configuration Management Plan. TMS has reviewed the Configuration Management Plan at a high-level and will complete a more in-depth assessment in the future. |
| Does product defect tracking begin no later than requirements specifications? | X | | As per the Adaptation Test Plan dated July 1, 2001, Test Team members document defects in iCenter's Test Tracker as they find them, starting at the Testing Phase. A process is defined for the Test Leads to review open iCenter Test track issues with PRSM team members and also identifies a process to identify, classify and resolve test anomalies. In addition, a document titled PRSM Anomaly Identification and Resolution Process Utilizing Test Tracker provides detailed instructions for how to use the defect tracker.<br>In the quarterly review of the testing plans and execution, TMS did find that the test cases do not identify anomalies for each failed test step. TMS does not have access to the defect management tool to validate whether or not defects have been created, however, according to the test management plan and template, the anomalies are supposed to be documented within the test case which does not seem to be the case. |
| Are formal code reviews conducted? | X | | TMS is aware that the PRSM Project Team has performed formal configuration reviews to occur during checkpoints throughout the Adaptation Phase. TMS has not been exposed to any code review documentation or Checkpoint 4 review documentation. |
| Are formal quality assurance procedures followed consistently? | | X | TMS reviewed the Quality Management Plan and observed that it contains a high-level of detail for the review, analysis and approval of formal deliverable documentation from the vendor. However, TMS did find the overall process and procedure for non-deliverable quality management to be lacking. The Quality Management Plan contains a single-line reference to the Configuration Management, Change Control, Issue Management and Risk Management plans but does not discuss what activities are performed by the quality team to ensure these process areas are functioning efficiently, correctly and in accordance to the documented processes and procedures. There are some quality activities defined for requirements management, however, the frequency for when those activities take place, the tools used to perform the activities and the reporting vehicle for those activities are not defined. |
| Do users sign-off on acceptance test results before a new system or changes are put into production? | N/A | N/A | Project is in the Adaptation Phase – this item is not applicable. |
| Is the enterprise architecture plan adhered to? | N/A | N/A | TMS is aware that Caltrans is in the process of creating a formal enterprise architecture plan. The PRSM technology solution was requested to be submitted as part of the study. However, TMS has not been exposed to the enterprise architecture plan and will need to work with the project team to gain access for this document. |
| Are formal deliverable inspections performed, beginning with requirements | X | | The PRSM Quality Management Plan contains a high-level of detail for the review, |

| Practices and Products | Adequate | Deficient | Notes: Items Reviewed; Interviews Conducted; Demonstration |
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| specifications? | | | analysis and approval of formal deliverable documentation from the vendor. Upon review of the PRSM project schedule, it appears that formal deliverable inspections are conducted for critical milestones of the project. |
| Are IV&V services obtained and used? | X | | The IV&V Contract was approved and the IV&V Vendor began work in April 2008. |

**ATTACHMENT A**

| | Risk Title | Risk Mitigation Summary | Page |
|---|---|---|---|
| 1 | Risk R-9: Key Critical Resources have left or are leaving the project which may have an impact on decision making, problem solving and/or strategy setting. | Caltrans is currently seeking a permanent backfill for the Project Manager position. The position has been advertised and the scheduling of interviews is pending. | 6 of 78 |
| 2 | Risk R-6: Lack of performance and scalability planning may lead to issues with the Pilot or Rollout if not resolved quickly | Caltrans has incorporated performance validation into the project workplan as it is not a contract requirement on the part of the Vendor. System performance during Pilot is being measured. | 6 of 78 |
| 3 | Risk R-5: Inadequate planning for data conversion may cause additional schedule delays and impact the quality of integration testing. | Caltrans & the Vendor have demonstrated successful conversion of project data and financial data from legacy systems and continue to revise the processes as necessary as minor adjustments are made to the system as part of the normal development process. | 7 of 78 |
| 4 | Risk R-1: Lack of Effective Organizational Change Management or District Buy-in | Business Process Change has been addressed in two ways: First, a reworking of certain processes in existing information systems that PRSM will interface with, specifically Staff Central and E-FIS; second, ongoing daily user sessions are conducted locally by district. Additionally, PRSM team members are working with districts to adapt business processes to PRSM. | 9 of 78 |

**Additional Response to May 2012 PRSM IPOR**

In addition to the risk responses noted on page 1 of this attachment, the reference to "approved SPR" under the PRSM Small Pilot Phase section is incorrect. There were no dates for the Small Pilot in the SPR. The small project pilot concept was added within the Large Pilot phase after approval of the latest SPR 4, which was approved on April 2, 2012.

Additionally, in the May 2012 Independent Project Oversight Report (IPOR), some dates in the table of Phase milestones shown on page 2 are incorrect. The dates presented in the table were based on the DRAFT version of the project schedule dated 5/29/12. This schedule included dependency changes that were not fully vetted, which resulted in the incorrect dates. These dates will be corrected in the June 2012 report