Project Closeout Report
Presented to the IT Committee March 24, 2010

Project Name: FRAME (CFS Front End)

Agency: Department of Human Services (DHS)

Business Unit/Program Area: Children and Family Services (CFS)

Project Sponsors: Tara Muhlhauser and Pam Anderson

Project Manager: Sarah Lee

Objectives		
	Measurements	
Project Objectives	Met/ Not Met	Description
Transparent navigation and reduction of duplicate entry between multiple applications and databases	Results TBD	**Measurement:** Survey a key group to ask for the time required for current duplicate processes. Six months after implementation, perform a follow-up survey to verify time savings. Perform three more follow-up surveys, occurring every six months for the following two years to track the time savings as user become more comfortable with the process and system. **Results:** Michelle Watne performed a readiness survey that included multiple questions on the time it took to enter information into both CCWIPS and SPOC. The results of this survey are saved to the project's Work Management System (WMS) Notes area.
Single comprehensive case plan for children and families	Met	**Measurement:** After implementation, qualified CFS staff members will compare the Children and Family Services Review (CFSR) tools with the system to determine if the system supports the CFSR process. **Results:** The team found that of the 122 elements reviewed, only five of them did not contain at least high-level or preliminary information in FRAME. Those five elements consisted of items that were based on the judgment of the reviewers, or were information about the CFSR itself (i.e., persons interviewed by the reviewers). The team found that of the 117 elements found in FRAME, only one of them was difficult to access (the Placement Address). Please see below for the description of this item and the enhancement request. A document was created noting the location(s) in FRAME where the various elements could be found. This document was saved to WMS' Notes area.

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Abbreviated case plan	Met	**Measurement:** The case worker can control the length and the content of the documentation entered into the care plan and can select the elements of the care plan that will be printed for the family. **Results:** The FRAME design allows the worker to print all or only portions of the care plan. **Measurement:** Track how often the abbreviated report was run during the first two weeks, three months, six months, and one year to verify an increase in use. **Results:** During the first two weeks, 106 out of 475 care plans were abbreviated (22%) During the first three months 1195 out of 3015 care plans were abbreviated (40%)
Comprehensive historical view of a child and family across current multiple applications and databases	Met	**Measurement:** The new system will allow appropriate users to access information on a child and/or family that displays demographics, history of placement, services offered, received or refused, and Child Abuse and Neglect history. **Results:** The FRAME design allows access to this information based on the users' security. **Measurement:** Track how often this historical view was run during the first two weeks, three months, six months, and one year to verify an increase in use. **Results:** The case details page in FRAME displays all active and historic program information and there is no current method of separating when a worker views active vs. historic information. The intent of this measurement was to make sure that workers would have access and the ability to use historical information to make decisions regarding a case. Therefore we believe we have met this objective.

Work with counties to create and provide a best practice business flow process and implement organizational change to take advantage of those best practices	Met	**Measurement:** All 53 counties will receive a documented best practice business flow process and accompanying training by the State. **Results:** The best practice document is saved to the Department of Human Services' (DHS) intranet for access by the workers. On-site regional training for County workers and outside agency users of the FRAME system was held in the fall of 2009. Prior to this training, screen shots of the system's pages were sent out to provide workers a familiarity with the system. **Measurement:** Identification of a method to keep the documented business flow process current and provide on-going training. **Results:** Michelle Watne at DHS is responsible for the maintenance of the work flow process and on-going training. **Measurement:** Track how consistently required data elements are completed via the annual Children and Family Service Review (CFSR). **Results:** The next full CFSR is scheduled for September. However, the results of the second objective lead us to believe that we will be successful in our goal of providing this information. **Measurement:** Track number of log-ins to the new front end system for the first two weeks, three months, six months, and one year to verify use. **Results:** Initially we believed that these numbers would be available to us, however upon system completion, we found there is no way to determine this information. However, because of feedback from the workers in the field and the fact that use of the system is required for payment to the counties, we believe that consistent system use is statewide and we have met the objective. **Measurement:** Track how many alerts are generated for the first two weeks, three months, six months, and one year to verify a decrease. **Results:** During the first two weeks, the system generated 4227 alerts. During the first three months, the system generated 49,817 alerts. We expected that the alerts would initially increase as more users entered more information into the system. The results of this measurement cannot be determined until the future measurements are taken.

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The information system will support consistent practice as related to state and federal policy	Met	**Measurement:** Track how consistently required data elements are completed via the annual Children and Family Service Review (CFSR).
		Results: The next full CFSR is scheduled for September. However, the results of the second objective lead us to believe that we will be successful in our goal of providing this information.
		Measurement: Track number of log-ins to the new front end system for the first two weeks, three months, six months, and one year to verify use.
		Results: Initially we believed that these numbers would be available to us, however upon system completion, we found there is no way to determine this information. However, because of feedback from the workers in the field and the fact that use of the system is required for payment to the counties, we believe that consistent system use is statewide and we have met the objective.
Data and/or reports will be readily available to allow for more timely decisions	Results TBD	**Measurement:** Six months after implementation, survey a key group, including county directors, to determine time savings, ease of use, and data quality. Perform three more follow-up surveys, occurring every six months for the following two years.
		Results: Both the reports accessed directly from the FRAME application and reports obtained via a data warehouse will be part of this survey, scheduled for August 2010.
		Measurement: Six months after implementation, survey key system users to verify a decrease in use of the shadow systems. Perform three more follow-up surveys, occurring every six months for the following two years.
		Results: The initial survey of the county directors during the project did not conclusively determine a number of shadow systems. We are hopeful that the six month survey will help us determine a baseline of these systems and that FRAME's design will help eliminate the need for them.

Schedule Objectives					
Met/ Not Met	Original Baseline Schedule (in Months)	Final Baseline Schedule (in Months)	Actual Schedule (in Months)	Variance to Original Baseline	Variance to Final Baseline
Not Met	17	19	24	34.8% over	25.6% over

Budget Objectives					
Met/ Not Met	Original Baseline Budget	Final Baseline Budget	Actual Costs	Variance to Original Baseline	Variance to Final Baseline
Met	$1,021,257	$938,946	$988,641	13.5% over	5.4% over

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Major Scope Changes
Addition of data warehouse – increased the schedule by 2 months and increased the cost by $75,000.

Lessons Learned

1. When scheduling Cognos reporting, make it a separate activity from Programming.

    a. Example: The Cognos reports were a step under the Java Programming activity in Primavera. However, because Cognos was a new product to ITD, additional time was needed for writing the transactional reports. We decided to finish the Cognos reports in conjunction with system testing. This caused the entire Java Programming activity to finish behind schedule, when it was really just the Cognos reports that were behind.

2. The QA testing plan should be fully compared with the project plan to make sure there are no inconsistencies, e.g., deliverables, prior to discussing the plan with the project team and/or Sponsor.

3. A meeting should be held prior to development between the developers and QA to verify the following:

    a. Which environment will be used for testing (see #8 below)

    b. This environment will be updated with all fixes

    c. Process to notify QA of new build deployments

    d. Which browser will be used, e.g., Firefox or IE, as this can affect the testing.

    e. Process to notify QA of issues with external dependencies

        i. Example: Changes to the MCI

    f. Entry and exit criteria for system test environments

4. If there are no project limitations, QA should use a true test environment, i.e., the user acceptance testing environment (UAT), and not a development environment.

    a. Example: QA and system testing on the FRAME project used the development environment, which did not have production data. When the database was copied over to the UAT environment and the production data converted, UAT was delayed because of errors in the copy of the database.

5. When involving QA on projects, their standard plan is to work in iterations. This requires additional time during development on the schedule and planning of the iterations up front. Additional time should be allowed between development and system testing to allow for the final QA iteration.

6. QA resources need to be identified early in the project and addressed in the project plan. It is important to find out what type of testing they will be doing, e.g., manual or automated, and what they will be testing, e.g., unit testing, system testing, and/or acceptance testing.

7. Load testing should be included in a QA testing plan, naming the elements that will be load tested along with the acceptable quality metrics for each.

    a. Example: The FRAME project did not have documented minimum load testing quality standards and there was confusion as to whether or not all the reports were load tested prior to release to the DHS acceptance testers.

8. There is no load testing on the mainframe while the Legislature is in session.

9. It is important to make sure that the database resources are part of the testing team and that the timeframe and responsibilities of the resources are given to them and their managers.

    a. Example: Both of ITD's DB2 resources were out of the office on our first day of acceptance testing. There was an issue with the database that ITD was unable to correct without them. Even though it appeared to be an easy fix and the resource was able to make the change from home that night, we missed a full day of testing.

10. Allow time at the end of acceptance testing for web page validation. This is typically the time that ITD allots for

"web development".

11. When bringing in stakeholders/users for testing, verify what they want to test when writing up the acceptance test plan.

    a. Example: FRAME testing plan allowed for Child Support to view CCWIPS and verify that could see information necessary for their work process. However Child Support also wanted to test what would happen if there were two ES100K numbers for a client. This required the addition of the FACSES, TECS, and Vision applications to integration testing.

12. Make sure the acceptance test plan notates all the applications that will need to be on the test environment if integration testing will be performed, and verify that the chosen test environment has all those applications.

    a. Example: FRAME testing used the CICS-D environment to test CCWIPS replication, but when it came to Child Support testing, FACSES, TECS and Vision were not on that environment.

13. Allow time for fixes in-between agency acceptance testing sessions.

    a. Example: Testing was scheduled as a continuous activity. This placed a burden on testers who needed time to return to functional work or go home periodically.

    b. Note that due to the timeframe we believed was required for the project to complete, testing was not given the time it should have been given in the schedule.

14. When doing a conversion involving the mainframe as part of the project, a risk contingency for the CPU time and batch run needs to be included in the budget. The project manager needs to be informed that an estimate will be needed from ITD's computer services.

    a. Example: During the FRAME project, DHS was billed a CPU charge of $38903 and a batch charge of $2746 for the conversion work. This was not included in ITD's estimates, and therefore not included in the budget.

15. Conversion testing should be formalized, with test scripts, and the same cases tested for conversion into the Test environment and for conversion in the Production environment.

    a. Example: A formal review of pre-selected cases was not included as part of the conversion testing and issues were found during the conversion to the Production environment when selected cases were thoroughly reviewed.

16. The mainframe runs at full load around month end and therefore the conversion job run VERY slowly – 2 days, and caused a delay in our implementation timeframe.

17. The data warehouse should have its own test environment.

    a. Example: The data warehouse shared the same test environment as the application. When the application went live, there were still issues and enhancement work that required changes to the test system. Changes to the test system then affected the data warehouse work.

18. Data warehouses may work best in iterations of each fact/subject area to allow data validation early and often in the project. The iterations should consist of development and Atomic layer testing. However, consideration should be given to whether or not the iterations should include reviews and revisions of the data model if necessary.

19. Data warehouse Analysis layer testing may work best via results comparison (running a report from each system and comparing numbers). This should be its own phase at the end of the development/Atomic testing iterations because the agency tester may need multiple facts/subject areas to compare the numbers.

20. Document report requirements from all stakeholders in conjunction with creating the data model for a data warehouse. This will allow a verification of the data model and provide parameters for a data warehouse scope of work.

    a. Example: We did not document the report requirements until the start of the actual report writing and part way through data validation. We discovered additions to the data needed to generate the reports the agency was hoping to obtain.

21. When building a data warehouse from an existing system, define a process to handle enhancements/changes to the existing system, including notifications, release dates, etc.

    a. Example: We found needs for the data warehouse that we could fulfill by enhancements to the FRAME

application that were already in progress. However, these enhancements were not scheduled for release until after our data warehouse due date.

22. When a cost estimate differs greatly from the revised cost estimate (e.g., the after analysis estimate), prepare a document that breaks down and explains the differences.

23. Consider doing a separate project for analysis if a technical solution needs to be determined based on the results of the analysis.

    a. Example: In this project, the scope of the solution needed was unknown and determining it needed to be a lengthy collaborative effort involving the Counties, State, and other outside agencies.

24. When creating documents that need review and approval from a large group, consider creating a draft with a smaller group first.

    a. Example: This was done with the new business practice flow chart, but would have worked well with the current business practice flow chart that was completed earlier in the project.

25. Dedicate certain meetings to certain programs.

    a. Example: Oftentimes more than one program/department was covered in a meeting.

    b. Note that while we tried this, it was difficult to execute if people were missing.

26. Review the prototype with the field/stakeholders closer to design when the decisions and reasons were still fresh.

27. The project team should have done interviews with the counties on how they used SPOC as each county tended to use it in a different way. This could have then been addressed in either the system design or the training.

28. More time needs to be spent mitigating the data warehouse and Cognos risks, including the resources available from ITD and ITS.

    a. Example: When the project team made the decision to add Cognos and the data warehouse to the scope of work, we did not approach it as a new technology and therefore did not include enough effort identifying the risks involved and the mitigation strategies required.

29. Consider the effort required of the resources, including the agency staff, during implementation.

    a. Example: We did not consider the impact to the resources that implementation would cause, especially since the after the FRAME application was implemented, the project continued with the data warehouse phase.

30. Consider publishing the schedule, communications plan, and team member names and responsibilities to the field at the beginning of the project and keeping it updated throughout.

31. User by-in can be achieved through regular, consistent communication throughout the project, preferably from a single source.

    a. Example: Michelle met with all 53 counties to introduce herself and then started sending out regular power point presentations, including screen shots of the prototype, to get the users familiar with the new system ("Fact or Fiction" series – which included a video/audio format and the Fact or Fiction "game" to keep users involved in the series). She also presented the prototype to various authority groups from the state and counties in order to gain insight as to what questions the users were having so that she could write her next communication accordingly.

32. Maintain contact with other project managers working on projects for the same agency via the PMO to determine if there are any dependencies on other projects, and include those project managers in the communication plan.

    a. Example: DHS originally wanted the data warehouse that was developed for FRAME to be an enterprise data warehouse, which could then be combined with the MMIS data warehouse. Conversations with the MMIS project team led us to discover that it was not feasible to do this work as part of this project.

    b. Example: When the MCI implementation was delayed, it posed high risk to the FRAME project. Weekly meetings between the project managers helped to mitigate those risks.

33. Develop a communication plan for crises.

    a. Example: The project team did not have a communication plan if something went wrong on the project or the implementation. We should have had a plan that we could have implemented that would include alerts,

who to contact, how and when people should be contacted, etc.

34. In a project where change is a concern, having a fully developed organizational change management plan, provides a strong foundation from which to build the communications plan.

    a. Example: Creating the plan allowed the project team to explore and gain outside input on the concerns that the users had about switching to a new product, and we could address our communications accordingly

35. When communicating about a project that involves rewriting or changing an existing system or process, providing a "new way vs. old way" style of comparison may provide users with a more concrete understanding of the differences in the new system.

36. Have a prototype mimicking the working system to use as a communication tool.

    a. Example: Michelle was able to use the prototype to do demonstrations to multiple groups in order to obtain feedback and provide education of what the system would look like. She was also able to take screen shots of this prototype to send out with her "Fact or Fiction" communication series to the end users.

37. Consider a longer, phased pilot.

    a. Example: The users felt the Burleigh County pilot could have been longer as there were not enough new cases generated, even though it involved double-entry on those new cases into the new and old systems. It would also have been helpful to increase the pilot to a region for a period of time before going live statewide. The project team neglected to include the regional office in the pilot, and when this error was discovered and they were brought in, it was too late in the pilot for them to do anything.

38. When implementing a large system, consider a minimum of four months of high-demand effort for the resources during the transition/maintenance phase.

    a. Example: After go live the work increased for those members of the project team that were part of the maintenance team due to problems, requests, and questions. It was more than a full time job for a team of 5-6 people.

39. Include a budget just for training.

    a. Example: There was no specific training budget on this project, but this large training effort demanded one so that consideration could be given to resource costs/effort, external possibilities, equipment, and locations.

40. As part of the training plan, address the ongoing training effort after implementation.

    a. Example: DHS will need to continue training the field including new hires, further hands-on training as the training effort for the project needed to be too abbreviated, "helpful hints" training, and training on future enhancements.

41. Train the users to use the help desk instead of calling a single person.

    a. Example: While expectations were given to the field about the need to utilize the help desk instead of calling Michelle, she still received requests from users who contacted her directly. In one instance, due to her own training, she did not see an email until well after the request was sent causing frustration with the user.

42. Send out reminders to the project team of their roles and responsibilities on long projects to keep them informed of their importance to the project.

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Success Stories
1. The project team kept the discussion during design and analysis at the worker level – letting their needs drive the system instead of the system driving their process.
2. The project team had the ability to spend time going through the service delivery process to address all the programs and determine what would work most efficiently.
3. The design process allowed the project team to hear the comments from different programs and different responsibilities. This helped each program to understand the needs of the other.
4. There was a consistent and timely flow of information from the project team to the project manager, thereby eliminating the standard need for regular status meetings.
5. The transition from the project team to the maintenance team for both FRAME and the data warehouse was seamless as the core team members remained the same.
6. There was very good synergy between members of the project team, especially those that needed to work closely together.
7. A comprehensive system and reporting capabilities exist now for the CPS users, supervisors, and State staff. This only existed in a minimal format previously with no case management capabilities available electronically.