STATE OF CALIFORNIA

California Department of Corrections and Rehabilitation

Enterprise Information Services

Time and Shift Project

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2016 NASCIO Recognition Award Submission

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Executive Summary

The California Department of Corrections and Rehabilitation (CDCR) implemented the Systems, Applications and Products (SAP) Enterprise Resource Planning (ERP) solution to manage the Department's core administrative functionality, beginning in 2007. The Business Information System (BIS) is the largest ERP implemented in California's Public Sector. BIS replaced hundreds of standalone databases, legacy systems and manual processes with an integrated, proven solution for achieving operational efficiencies.

A critical component of the department's mission is to ensure the health and safety of both CDCR employees and inmates within the adult and juvenile facilities 24 hours a day/365 days a year. The Time and Shift module is a key module within BIS that manages statewide staffing of posted positions, from shift scheduling responsibilities, through all SAP Time Management activities (time recording, time evaluation, and time reporting). This module encompasses complex contractual agreements with four separate bargaining units, and tracks 35,000 custody and nursing staff throughout 35 adult and juvenile institutions and the use of approximately $540 million annually in overtime usage.

CDCR identified a split application approach to tracking the posts and schedules along with overtime payment and leave tracking. The department successfully implemented TeleStaff for posting activities interfacing with SAP for time-related functionality.

TeleStaff provides post tracking and shift-scheduling tool which tracks post assignment and interfaces daily to SAP, where time recording, time processing, and time evaluation activities are automatically performed. Employee profiles are created in TeleStaff, including qualifications and post requirements, and used to determine post assignments and fill vacancies. This ensures all posts within an institution are filled by staff with the requisite qualifications.

SAP provides all CDCR employee master data. Each employee record contains specific employee information such as hiring information, including the State Controller's Office (SCO) position number, organizational structure, salary, pay differentials, hire dates used for seniority, etc. Additionally, all absences, attendances, overtime, leave balances, and seniority stored as part of SAP master personnel data.

The Time and Shift project is part of the department's strategy to utilize the integrated capability of SAP to identify and manage the cost drivers of our budget. Rolling out a cohesive time tracking component (Telestaff/SAP) has allowed the department to accurately track and report on unanticipated expenditures (overtime usage) as well as provides a tool to reduce our Accounts Receivables with accurate leave availability.

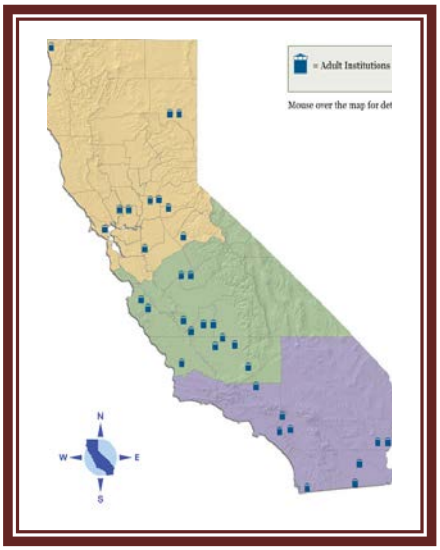
An additional benefit from this implementation was the identification of a disaster recovery plan for this functionality. The ability to schedule posted positions at all times is a core requirement to ensure appropriate safety and security of each institution drove the need to acquire a solution that provided a viable disaster recovery plan. CDCR was able to accomplish this task during the deployment of this module.

Business Problem and Solution

Problem: The department's three main correctional program areas, Department of Adult Institutions (DAI), Department of Juvenile Justice (DJJ), and California Correctional Health Care Services (CCHCS), each used separate legacy and/or manual systems to meet their specific post scheduling and reporting needs.

The DAI utilized the Personnel-Post Assignment System (PPAS)/Watch Office Tracking System (WOTS) applications for this purpose. The DJJ institutions used a 4D database system and CCHCS used a manual scheduling method for their nursing staff. Additionally, overtime calculations also varied by program area and from institution to institution; a minimum of five to ten different overtime calculations worksheets were identified during blueprinting sessions based on local interpretation of contract rules..

Due to the variety of tools used to schedule custody and nursing staff, both institution-specific and statewide reporting capabilities were basically non-existent. The DAI legacy PPAS/WOTS applications utilized by each of CDCR's 35 institution's system required 3½ floppy disks to be submitted from the institution Personnel Assignment Office to their PPAS staff, who would then extract the necessary information for the requested report.



When statewide reports were requested, each of the institutions ran their own location-specific reports and sent them to the Personnel Services Unit located at Headquarters for consolidation. The timeframe for extracting the necessary information and merging this data into a department-wide report would take from 30 – 45 days. The lack of accuracy, timeliness, and integrity of the information posed a risk to department executives that had critical decisions to make related to budgetary, business, and workload issues. Another item that posed a challenge was the lack of an identified disaster recovery plan in the event of a catastrophic event involving the legacy tracking applications.

Many factors contributed to the difficulty in moving from the existing manual/legacy processes to an integrated state-wide solution. Accurately identifying and applying all of the complex scheduling, seniority, overtime and leave accrual/usage rules for the four impacted bargaining units and classifications was crucial as these items directly impact an employee's payroll calculations. Payment issued to an employee had to be absolutely correct; "almost right" was not acceptable. Failure to do so would result in not only negative publicity, but potentially numerous employee grievances through their unions.

The department faced a daunting task, not only in identifying and implementing a Time and Shift solution that would meet the needs of the program areas, but in working with the end-users to embrace and accept the significant business process changes necessary. Many staff within CDCR had been with the department for a significant number of years and robust change management activities were crucial to the success of the project.

Solution: CDCR had worked over a number of years on a solution for the Time and Shift requirements prior to implementation of the current functionality. The original solution used SAP exclusively for both time management and shift scheduling. Unfortunately, after 18 months of intense development, the effort was stopped as the SAP solution was almost 100 percent custom development and did not fill all of the needs of the business. The department then broadened their vision, considering other tools to meet the complex scheduling requirements for custody and nursing staff. After a detailed Fit Gap analysis, a vendor with significant experience in the realm of shift scheduling for state/county/city entities requiring 24-hour mandatory fill-behind abilities was identified. The TeleStaff time management application was identified as a close fit for CDCR with the ability to interface into SAP for time management activities.

By leveraging additions to our current SAP software along with additional technology via TeleStaff, this solution provided our organizations with integrated timekeeping and shift scheduling systems for posted employees. This functionality replaced the existing legacy systems used for posted custody and nursing staff in the adult and juvenile facilities. For the very first time, nursing staff were able to utilize an automated shift scheduling/timekeeping solution.

The implementation involved aspects of many department organizations, including the Adult, Juvenile and Nursing personnel assignment offices, scheduling watch offices, personnel offices and Union representatives. There was an arduous effort over six months, beginning in January 2012, to collect and document all business requirements which came primarily from ratified bargaining unit contracts through input from our major stakeholders and their subject matter experts (SMEs). These blueprint sessions consisted of 15 – 20 SMEs imbedded at BIS as well as other departmental experts. BIS staff and business owners also proactively met with impacted bargaining unit representatives to obtain early and up-front buy-in, including addressing local bargaining unit agreements to allow standardization of contracts.

These blueprinting and labor union efforts were followed by very complex development and testing activities to ensure the accuracy of seniority and overtime calculations, functionality vital to issuing accurate payroll and overtime pay. All work schedules and rules, leave accrual and usage rules, along with all applicable earnings IDs, wage types identified by the bargaining unit agreements and SCO, had to be captured in order to create the complex coding schemas necessary for each of the almost 40 classifications within the four impacted bargaining unions. Some of the coding schemas include 20,000 lines of code. Also, during this period, CDCR was able to identify a viable disaster recovery plan for this module. CDCR separated the custody (CDCR) and nursing (CCHCS) databases, housing them in separate locations. In the event one of the locations goes down, CDCR can switch functionality to the other location with minimal effort.

A side-by-side pilot effort comparing legacy system calculations and the new SAP/TeleStaff functionality took place for 12 months at one adult institution. Concurrently, the BIS Change Management team partnered with the major stakeholders and began an extensive and focused change management strategy to prepare the end-

users for the upcoming changes to existing business processes. Monthly conference calls were held to keep the business appraised of project process. Upon stakeholder approval, implementation began using a 12 month "Wave" approach. Two weeks of hands-on training was conducted prior to a go-live, with an additional week of post-implementation support provided by BIS staff. Full implementation of Time/Shift functionality to DAI/DJJ facilities was completed in 2014. The CCHCS Nursing component rolled out during the middle of 2015.

The path from identifying an acceptable solution to full implementation forged a partnership between program areas that had not previously worked together in a collaborative effort. This project brought the opportunity for all participants to understand the business needs of other areas and effectively communicate to ensure all the departments' requirements and goals were met. Together the diverse team was able to develop an integrated communication plan to meet the varied change management needs of the project. Change management information released throughout the project lifecycle were signed by management from DAI, DJJ, OPS and CCHCS, showing the integrated, united focus for the Time and Shift module. CDCR, by utilizing a collaborate approach, with integrated and effective communication among the impacted program areas, was able to successfully implement this statewide initiative, an effort that other statewide entities such as the California State Controller's Office were not able to accomplish.

Significance of the Project

The Time and Shift project exemplifies the effort of integration, standardization and collaboration of best practices to align with the State's goal of standardizing business practices through the use of Information Technology. Accurate reporting is essential to successful management of the CDCR business operations. Timely and accurate reporting is critical for safety within the institutions and facilities in order to ensure required posts are covered at all times and that staff can be accounted for in the event of an emergency. Proficient reporting is expected to save the department over $2.0 million each fiscal year by reducing the work effort for generating reports by 80 percent.

Significant savings are realized as all overtime pay calculations are processed and calculated automatically in SAP using real-time data and using enhanced reporting and tracking capabilities. Anticipated savings of $2.5 million are expected due to a reduction in staff time previously required to manually calculate overtime and track absences. The implementation of Time and Shift also furthered collaboration efforts between institutions and their respective program areas. This project brought the diverse program areas within CDCR into a creative and effective partnership, allowing CDCR's OPS, DAI, DJJ and CCHCS to successfully design, develop and implement this successful, vital project. The project aligns with the NASCIO State CIO priorities by consolidating and optimizing CDCR's internal administrative services to increase operational efficiencies. The project also aligns with the California Information Technology Strategic Plan, Objective 4.3 to enhance the value of state information through tools to increase the ease of collaboration and data analysis.

The success of the Time Management and Shift module at CDCR has reached the notice of other departments within the state and beyond. Demonstrations of the functionality

have been provided to the California Highway Patrol, department of Parks and Recreation and the State Controller's Office, along with detailed information on this functionality to other entities that require 24-hour mandatory coverage. Additionally, dialogues have occurred with Homeland Security's Border Control staff and State of Pennsylvania Correctional Division, among others, regarding CDCR's innovative approach to shift scheduling and time management implementation.

Benefits of the Project

The Time and Shift project provides an automated and integrated way to administer day-to-day scheduling operations that are critical to the department and the mission to ensure the safety and security of both department employees and inmates alike. The real time reporting and scheduling of daily activities has streamlined the departments' critical daily business processes.

Increased Efficiencies:

- Real time reporting, including the capability to report department-wide down to program levels;
- Ability to report on regular, overtime, and temporary help hours worked;
- Real time scheduling of absences and overtime;
- Accurate, standardized calculation of employees' time including regular pay, overtime, and shift pay;
- Accurate leave quota reporting, increasing the department's ability to identify employee's with leave shortages, thus avoiding salary accounts receivables (A/Rs). From 2013 – 2015, salary advance ARs fell by $2.6 million and overpayment A/Rs were reduced by $2.1 million.
- Ability to proactively work with employees to reduce excessive sick leave usage.

The functionality provided by the Time and Shift project has allowed the department to put an end to the use of the myriad stand-alone databases, spreadsheets and other manual options used by programs by providing the integrated automated tool that meets the needs of CDCR. This tool has standardized how overtime eligibility is determined, thus ensuring that "favoritism" is not part of this determination. Institutional management are able to run a leave usage "Rainbow" report from SAP which identifies leave usage abuser in a color-coded visual "at-a-glance" fashion. This allows management to try and help these employees and also to identify them and avoid A/Rs due to dock situations.

Retired Legacy Systems:

Personnel-Post Assignment System (PPAS)/Watch Office Tracking System (WOTS): PPAS tracked daily custody staff work assignment and attendance, while WOTS collected and tracked daily employee absences, post vacancies and fill-behind hours. This functionality is now captured in TeleStaff and interfaced daily to SAP for automatic time recording, time processing, and time evaluation activities. As a result, CDCR is able to redirect existing staff to other workload efforts as the same staff will be utilizing SAP/TeleStaff instead of the PPAS/WOTS legacy systems. Significant savings (estimated at $2.5 million) are being realized as all overtime pay calculations are processed and calculated automatically in SAP during time evaluation.

Time and Expenditure Management System (TEMS): TEMS tracked regular, overtime, and temporary help hours and related costs, and provides reports on leave and overtime usage. SAP automatically captures all the same data through Time and Shift, and provides reporting monthly or on an ad-hoc basis. Cost savings of approximately $1.4 million are estimated, based on an 80 percent savings in work effort to generate required reports.

Overtime Meal Compensation (OMC)**:** Meal tickets were previously issued to employees at the institution or by a travel claim for reimbursement. CDCR now utilizes SAP Time Evaluation to automatically determine eligibility and process approximately 13,500 overtime OMC payments. Payment is via a payroll warrant and ensures the payment is taxed appropriately.

Interface(s) and Benefits:

Along with the work schedule and overtime information, employee leave balances and seniority are calculated in SAP and interfaced over to TeleStaff for scheduling purposes. The scheduling offices in the institutions no longer have to refer to paper seniority lists when filling vacancies as TeleStaff provides an automated process for this resulting in filling vacant posts without delay. Reports are available from TeleStaff and/or SAP that track un-manned posts, employee redirections, post requirements, employee qualifications, etc.

As a next step, CDCR has initiated the Time Pay$ project, which will interface with SCO to automate keying of leave usage and overtime pay. Since leave and overtime is calculated in SAP, this information will be interfaced to SCO monthly. The leave usage/leave balances interface has been implemented. The remaining functionality is under development. Once fully implemented, this will reduce the need for manually keying data into SCO; saving approximately $1.2 million a year.

Future Enhancements:

As a result of the above-described benefits, CDCR kicked off the Time and Shift Phase 2 project in March 2016. Under this effort, the remaining 23,000 non-posted positions within the department will have all time management activities processed through SAP, and subsequently interface via the TimePay$ project, increasing the identified savings and efficiencies within CDCR.