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# ROI CASE STUDY KRONOS UNIVERSITY OF SAN DIEGO

# THE BOTTOM LINE

Nucleus Research examined the adoption of Kronos at the University of San Diego to identify the benefits of automating time and attendance in an academic institution. Analysts found that payroll costs were lowered as a result of more accurate application of pay rules and reductions to reported overtime. The deployment also increased the productivity of payroll administrators, employees, and their managers.

ROI: 546%

Payback: 3 months

Average annual benefit: \$1,555,477

# THE COMPANY

The University of San Diego is a private Roman Catholic university with 7,800 students. The university has 3,800 employees, many of which are students who work part time.

# THE CHALLENGE

In 2004, the university determined that it could reduce payroll costs and make its payroll department more productive by automating time and attendance processes. Although the university used an aging homegrown system for a portion of its workers in academic settings, payroll managers believed that a reliance on paper-based processes put the university at risk of inflating its compensation costs. One problem was potential overpayments. Managers suspected there was a high payroll error rate as a result of its manual bi-weekly payroll process, which required the majority of its employees to record their attendance data on timesheets that were then manually approved by managers and later rekeyed by hand into a payroll system. Another problem area was overtime. Without a way to automate the application of overtime rules, the determination of when and how to apply overtime rates was left to the employees themselves.

The challenge is one commonly faced by schools and universities. If there is no way to correctly apply pay rules across a workforce with many part-time employees, an organization is at risk of overpaying its employees as a result of errors and opportunistic interpretations of poorly defined rules.

Corporate Headquarters Nucleus Research Inc. 100 State Street Boston, MA 02109 Phone: +1 617.720.2000 Nucleus Research Inc. Nucleus Research.com

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TOPICS

Employee Management Applications

# THE STRATEGY

In order to improve the accuracy of its payroll payments, the university decided to fully automate its payroll processes. After exploring its alternatives, the university decided to adopt Kronos, which was deployed over a 4-month period by a team of three university employees working with two Kronos consultants. In order to deploy Kronos, the team:

- Configured pay rules. The deployment team surveyed the university's work sites in order to identify all of the rules which determined how employees were paid. This information was then used by consultants to configure the rules engine within Kronos so that the application could automate payroll calculations.
- Installed time clocks. Time clocks were deployed for the collection of employee attendance data and configured with rounding rules so that employees arriving late for their shift would not be overpaid.
- Trained employees. Employees were taught how to use Kronos to record their attendance and obtain leave information. Managers were taught how to review and approve their employees' attendance data and how to access data related to leave, overtime, and department-specific labor costs.

Kronos was deployed in February of 2005 and used to record the time and attendance of 1,000 of the university's employees. Two years later, the deployment was expanded to 600 additional employees who had been tracked on a homegrown system. Once the deployment was live, the payroll department reduced the amount of time employees spent clocking in and out by installing six additional time clocks in locations close to employee work sites.

# **KEY BENEFIT AREAS**

Nucleus analysts found that by adopting Kronos, the university decreased payroll overpayments, reduced overtime costs, and improved productivity. Benefits of the project included:

- Reduced payroll error. Before the deployment, payroll overpayments often occurred as a result of the errors in the manual processes for recording attendance and applying pay rules. By automating these processes with Kronos and improving accuracy, the university reduced the payroll error rate by 93 percent.
- Reduced overtime. Before the deployment, many employees had inaccurate information about pay rules for overtime and often overestimated the amount of overtime they worked. By deploying Kronos and applying overtime rules uniformly across the organization, the university eliminated \$702,000 in annual overtime costs.
- Improved manager productivity. Managers now view and approve their employees' biweekly timesheets in Kronos, reducing the amount of time they spend on the bi-weekly payroll process by 71 percent. Managers also turn to Kronos, rather than manual record keeping, for the tracking of accruals and the handling of employee time-off requests.
- Improved employee productivity. The deployment improved the productivity of employees, who spend less time examining their paychecks for accuracy.
  Before, correcting an underpayment in a paycheck typically took an employee away from their job for an average of 20 minutes.



TOTAL: \$4,666,431

Reduced payroll headcount. After the deployment, productivity improvements enabled the department to redeploy one administrator to another department. Productivity in the payroll department increased for two reasons. First, automation of the bi-weekly payroll process in Kronos eliminated the need for administrators to manually collect and rekey data from 1,600 timesheets every pay period. Second, improved payroll accuracy and the availability of data in Kronos enabled administrators to spend less time correcting errors and fielding questions from employees and managers. With a reduction in the average number of manual checks per pay period from 30 to two, the time savings from improved accuracy was significant.

# **KEY COST AREAS**

Key cost areas for the deployment included software, hardware, consulting, personnel, and training.



TOTAL: \$325,970

The Kronos deployment was completed by three university employees who spent 20 percent of their time on the deployment over a 4-month period. The team was assisted by two Kronos consultants in deploying and configuring Kronos Workforce Timekeeper, Kronos Workforce Connect, and time clocks. Once Kronos was fully deployed, an administrator in the payroll department spent 10 percent of her time

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maintaining the application by performing tasks such as upgrades, the onboarding of new managers and employees, and the management of permissions. The university paid Kronos to train two payroll managers in the use of Kronos and create a training manual customized for the university's deployment. Employees used the manual to learn how to record their attendance and access information related to compensation and leave. Managers used the manuals to learn how to access standardized reports and review and approve employee timekeeping records.

#### BEST PRACTICES

One reason the deployment was so successful was that the deployment team ensured that the entire workforce adopted Kronos. When Kronos was adopted, 600 of the university's employees recorded their attendance on an aging homegrown time and attendance application. These employees, most of whom were salaried workers in academic roles, were uninterested in adopting Kronos because it required them to change some of their daily tasks. The deployment team eventually overcame this resistance by permitting these workers to record their time and attendance themselves in Kronos, rather than using time clocks. Once Kronos was adopted uniformly across the university, the benefits from the deployment increased.

#### CALCULATING THE ROI

Nucleus calculated the costs of software, consulting, personnel, training, and hardware, and other investments over a 3-year period to quantify the University of San Diego's investment in Kronos.

Direct benefits quantified included reductions to payroll error, overtime, and payroll department headcount. Nucleus quantified the benefit from reduced payroll overpayments by estimating the total annual value of manual checks cut both before and after the deployment, and calculating the reduction. The value of manual checks is a strong proxy for payroll overpayments because a payroll error is as likely to cause an overpayment as an underpayment. The benefit of reduced overtime was based on the number of hourly employees, an estimate of the percentage of their hours incorrectly categorized as overtime before the deployment, and the reduction to this percentage after the deployment. Reduced headcount was quantified based on the fully loaded annual cost of the employee who was redeployed to a position outside of the payroll department. Although academic entities such as the University of San Diego are not subject to corporate taxation, a rate of 50 percent was used to enable direct comparison to deployments in the private sector.

Indirect benefits included improved productivity of managers and employees. These benefits were based on the average fully loaded annual cost of each group of workers and an estimate of the time saved because of task automation, better access to information, and a reduction in the volume of payroll errors. A correction factor was applied to these benefits to account for the inefficient transfer of time between time saved and additional time worked.

# DETAILED FINANCIAL ANALYSIS UNIVERSITY OF SAN DIEGO

SUMMARY	
Project:	Kronos
Annual return on investment (ROI)	546%
Payback period (years)	0.21
Average annual benefit	1,555,477
Average annual total cost of ownership	108,657

ANNUAL BENEFITS	Pre-start	Year 1	Year 2	Year 3
Direct	0	1,311,500	1,311,500	1,838,000
Indirect	0	68,477	68,477	68,477
Total Benefits Per Period	0	1,379,977	1,379,977	1,906,477

DEPRECIATED ASSETS	Pre-start	Year 1	Year 2	Year 3
Software	90,400	0	0	0
Hardware	0	0	0	0
Total Per Period	90,400	0	0	0

DEPRECIATION SCHEDULE	Pre-start	Year 1	Year 2	Year 3
Software	0	18,080	18,080	18,080
Hardware	0	0	0	0
Total Per Period	0	18,080	18,080	18,080

EXPENSED COSTS	Pre-start	Year 1	Year 2	Year 3
Software	0	37,000	37,000	37,000
Hardware	13,000	3,000	3,000	0
Consulting	50,000	0	0	0
Personnel	12,870	6,500	6,500	6,500
Training	23,200	0	0	0
Other	0	0	0	0
Total Per Period	99,070	46,500	46,500	43,500

FINANCIAL ANALYSIS	Pre-start	Year 1	Year 2	Year 3
Net cash flow before taxes	(189,470)	1,333,477	1,333,477	1,862,977
Net cash flow after taxes	(139,935)	675,778	675,778	940,528
Annual ROI - direct and indirect benefits				546%
Annual ROI - direct benefits only				522%
Net present value (NPV)				1,811,779
Payback (years)				0.21
Average annual cost of ownership				108,657
3-year IRR				485%

#### FINANCIAL ASSUMPTIONS

All government taxes	50%
Discount rate	8%

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