

# ROI Case Study: Kronos Visionware CHRISTUS Health

## **THE BOTTOM LINE**

CHRISTUS Health has used the Kronos Visionware solution to track labor usage and ensure that different departments are meeting predetermined productivity standards. The organization's main returns have come through reduced use of agency labor, increased charge captures, and improved employee productivity.

**ROI: 399%**

**Payback: 3 months**

## **THE COMPANY**

The not-for-profit CHRISTUS Health was formed in 1999 by a merger of Incarnate Word Health System and Sisters of Charity Health System. CHRISTUS Health operates more than 40 hospitals and other healthcare facilities in four states, as well as in Mexico. Facilities range from acute-care hospitals to outpatient centers and also include hospice centers, medical education centers, and long-term acute-care facilities. CHRISTUS Health's predecessor organizations have their roots in the order of the Sisters of Charity of the Incarnate Word, founded when three French nuns arrived in Texas in 1866 to care for the poor and sick.

## **THE CHALLENGE**

CHRISTUS Health had been using an internally developed system to monitor productivity and manage labor usage levels for various departments. However, this legacy system proved too cumbersome to operate and maintain, and the key employee who was most familiar with using it eventually left CHRISTUS. Without a centralized means for tracking and gauging labor efficiency, the organization had no systematic way of maintaining controls over the steadily rising costs of supplemental agency labor and employee overtime.

In the absence of a standard productivity-monitoring tool, the organization faced the following challenges:

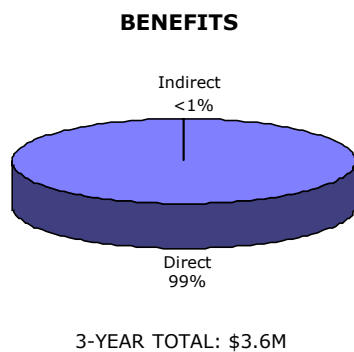
- Manual tracking of labor. Most departments were tracking labor usage information in individual spreadsheets, following a process that was both time consuming and error prone.
- Lack of accountability. Executives could not hold managers accountable for productivity performance in the short term, limiting the organization's ability to understand and control its labor costs. Often, departments would believe their usage fell within targeted standards, but variances would be discovered only upon later comparison with annual financial statements.
- Poor charge capture. Patient charge data was not tracked regularly, and this often led to lost and misfiled charges and eventually to late billing. If too much time transpired between the date of service and the date of billing, the hospital would not be reimbursed on those late charges.

CHRISTUS Health realized that it needed a productivity monitoring tool that would enable managers to track labor on a daily and biweekly basis, allow the organization to enforce productivity standards across different departments, and to better manage the costs associated with supplemental and overtime labor.

### THE STRATEGY

In early 2001, CHRISTUS Health began searching for a solution. The organization was in the process of implementing a time and labor application from Kronos and was introduced to the Kronos Visionware labor analysis tool during its deployment. In July 2001, the organization decided to implement the Kronos Visionware solution because of its capabilities for daily reporting and analysis and because it would integrate easily with Kronos's Workforce Timekeeper solution.

In September 2001, CHRISTUS Health started developing its Visionware system with the help of Kronos technical consultants and one internal employee. The organization also engaged external consultants to evaluate its internal productivity metrics, benchmark those against industry standards, and work with CHRISTUS in defining and developing new productivity standards that Visionware would monitor and enforce. The project team worked together for the next three months to complete the development of the Visionware system. Toward the end of 2001, 30 CHRISTUS managers received a week-long training session provided by Kronos professional services staff, covering Visionware functionality and outlining the new productivity monitoring processes. In January 2002, the Kronos Visionware solution was rolled out on an enterprisewide scale at CHRISTUS Health.



### KEY BENEFIT AREAS

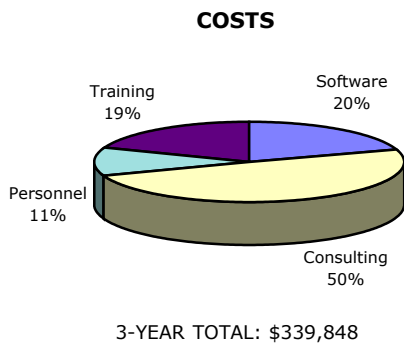
Kronos Visionware has allowed CHRISTUS Health to track and analyze its labor usage on a daily and weekly basis, enabling managers to measure their performance against preset objectives and to adhere to the productivity standards for their respective departments or divisions. Key benefits from Visionware include the following:

- Reduced costs of supplemental labor. Improved and timely visibility into labor usage trends has allowed CHRISTUS Health to eliminate the use of expensive agency nurses and to fill positions with regular staff instead — reducing supplemental labor costs and improving the morale of full-time employees.
- Improved charge captures. CHRISTUS is recovering several hundred thousand dollars in revenues every year because of better charge captures. Daily entry and review of patient charge information have allowed departments to ensure that they are not losing insurance reimbursements because of late billing.
- Increased productivity of payroll staff. The implementation of Visionware, and the improved integration between Visionware and time and labor data have improved time and attendance reporting, by enabling daily review and correction of associate's

time by department. This has eliminated “payroll Monday” crunch-time processing, and saved payroll staff several hours a week; CHRISTUS attributes two hours of this weekly time savings to Visionware.

### KEY COST AREAS

The key costs associated with CHRISTUS Health’s implementation of the Kronos Visionware solution were for software, consulting, training, and personnel. Consulting made up the largest cost area, accounting for 50 percent of the organization’s total investment. Software licenses and maintenance for Kronos Visionware made up the next largest expense, at 20 percent of overall costs. Training and personnel accounted for the remainder of the organization’s investment in the solution.



### LESSONS LEARNED

CHRISTUS Health realized that the key to effectively implementing and deriving value from an enterprisewide labor analytics solution is ensuring the support of senior management. The organization was able to use the Kronos Visionware application to increase the accountability of departmental managers and improve overall adherence to productivity standards, primarily because of consistent and clear buy-in from CHRISTUS Health’s executives.

### CALCULATING THE ROI

Nucleus quantified the costs of software, consulting, personnel, training, and other investments over a 3-year period to quantify CHRISTUS Health’s total investment in Kronos Visionware. Direct benefits calculated included decreased costs of agency nursing labor because of better staffing with Visionware and an increase in revenue through more timely submission of patient charges. Indirect benefits, including increased payroll productivity due to better time and labor reporting enabled by Visionware, were calculated based on the fully loaded hourly cost of CHRISTUS employees. A productivity correction factor was applied to account for the inefficient transfer from time gained to time worked.

**SUMMARY**

Project:	<b>Kronos Visionware</b>
Annual return on investment (ROI)	<b>399%</b>
Payback period (years)	<b>0.25</b>
Net present value (NPV)	<b>2,414,889</b>
Average yearly cost of ownership	<b>113,283</b>

<b>ANNUAL BENEFITS</b>	<b>Pre-start</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Direct	0	1,202,350	1,202,350	1,202,350
Indirect	0	936	936	936
<b>Total Benefits per Period</b>	0	1,203,286	1,203,286	1,203,286

<b>DEPRECIATED ASSETS</b>	<b>Pre-start</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Software	50,000	0	0	0
Hardware	0	0	0	0
<b>Total per Period</b>	50,000	0	0	0

<b>DEPRECIATION SCHEDULE</b>	<b>Pre-start</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Software	0	10,000	10,000	10,000
Hardware	0	0	0	0
<b>Total per Period</b>	0	10,000	10,000	10,000

<b>EXPENSED COSTS</b>	<b>Pre-start</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Software	0	6,016	6,016	6,016
Hardware	0	0	0	0
Consulting	168,000	0	0	0
Personnel	15,600	23,400	0	0
Training	64,800	0	0	0
Other	0	0	0	0
<b>Total per Period</b>	248,400	29,416	6,016	6,016

<b>FINANCIAL ANALYSIS</b>	<b>Results</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Net cash flow before taxes		1,173,870	1,197,270	1,197,270
Net cash flow after taxes		1,173,870	1,197,270	1,197,270
<b>Annual ROI - direct and indirect benefits</b>				<b>399%</b>
Annual ROI - direct benefits only				398%
<b>Net present value (NPV)</b>				<b>2,414,889</b>
<b>Payback (years)</b>	<b>0.25</b>			
Average annual cost of ownership		327,816	166,916	113,283
3-year cumulative ROI	809%			
3-year IRR	392%			

**FINANCIAL ASSUMPTIONS**

All government taxes	0%
Discount rate	15%

All calculations are based on Nucleus Research's independent analysis of the expected costs and benefits associated with the application profiled in the accompanying case. Financial modeling tool, format, and methodology copyright Nucleus Research Inc., all rights reserved.