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ROI CASE STUDY COGNOS TRILLIUM HEALTH CENTER

THE BOTTOM LINE

Trillium Health Center deployed Cognos Healthcare Performance Management to provide its employees with ad-hoc reporting, improve productivity, and reduce software costs.

ROI: 46%

Payback: 2.17 years

THE COMPANY

Trillium Health Center is one of the leading community hospitals in the Canadian province of Ontario and meets the health care needs of more than one million residents in Mississauga, West Toronto, and surrounding areas. With sites in both Mississauga and West Toronto providing diagnostic, laboratory and pharmaceutical services, Trillium delivers comprehensive services for both inpatient and ambulatory care. The hospital is rapidly growing and in 2008, a new 7-story wing will open at the Mississauga location showcasing the innovative thinking and patient-centered philosophy fueling Trillium's mission. The hospital is also aggressively improving its use of information technology to support patient care.

THE CHALLENGE

Trillium recently began a 7-year initiative to identify new and innovative ways to use technology to deliver information and support safe and effective care.

Objectives in this initiative include:

- Providing patients and families with access to their electronic health information to enable them to take a more active role in managing their health and wellness.
- Providing integrated information across the continuum of care to ensure caregivers have appropriate, accurate, and timely information for making decisions in treating patients.
- Preserving Trillium's existing investment in electronic-based systems while taking advantage of new technologies that can enhance patient care.

In order to achieve these objectives, Trillium needed to convert its vast stores of data into rapidly accessible information that could be used in a consistent way by all employees. In early 2005, the hospital was focused on its finance, human resources, payroll, and statistics data, and began looking for a solution that would serve the business intelligence and performance management needs of the organization.

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THE STRATEGY

Trillium received proposals from 40 vendors including Hyperion, Oracle, Cognos, and Business Objects. The hospital selected Cognos Healthcare Performance Management, including Decisionstream, Reportnet, Powerplay, Metrics Manager, and Enterprise Planning for a number of reasons, including:

- **Functionality.** Cognos met all of Trillium's business requirements, including reporting, analysis, and dashboarding.
- **User friendliness.** Trillium believed that the Cognos solution was sufficiently flexible and user friendly that the company would not have to hire external consultants when it needed to create new reporting functionality after the initial deployment.
- **Service-oriented architecture (SOA).** Cognos Healthcare Performance Management is SOA-compatible, which the hospital thought would be helpful in both its adoption of SOA and its initiative to preserve the value of its existing databases.
- **Browser based.** Trillium wanted its business intelligence applications to be browser-accessible so that they would both be user friendly and not require installation on users' PCs. Trillium found that more of Cognos's applications were browser-accessible than the other vendors.

Cognos Healthcare Performance Management was deployed in only five months by a team consisting of three employees from Trillium and three consultants from Cognos. The team first performed an assessment of the hospital's current applications, reporting structures, best practices, and data stores. Meetings were then held with Trillium employees who would be building reports and using data in order to determine the scope, definitions, and business requirements of the project. The team then worked with Cognos consultants to install Cognos on new servers, integrate it with the existing databases, and make the applications browser-accessible to employees over the hospital's intranet.

Cognos Healthcare Performance Management is now used by 245 employees and all levels of management in the hospital's finance, human resources, payroll, and statistics departments. Trillium expects to broaden the deployment to include all 3,000 of the hospital's employees in order to improve the quality and timeliness of data available to caregivers.

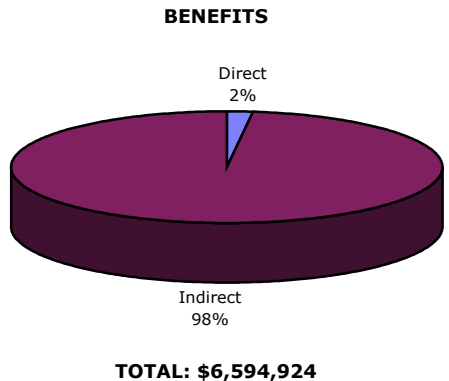
KEY BENEFIT AREAS

Adopting Cognos Healthcare Performance Management has enabled Trillium to reduce software costs, provide employees with ad-hoc reporting capabilities, and improve productivity. Key benefits from the solution include:

- **Reduced software costs.** The breadth of features in Cognos Healthcare Performance Management has enabled Trillium to retire a number of solutions that became redundant, including ESS, Crystal Reports, and Clinsaver.
- **Improved analyst productivity.** Cognos Healthcare Performance Management enables employees to rapidly create their own reports by drilling down and across the data that they view in standardized reports and dashboards. Additionally, the solution makes it easier for analysts to link data in various stores — in departments such as operations, programs, and finance — in order

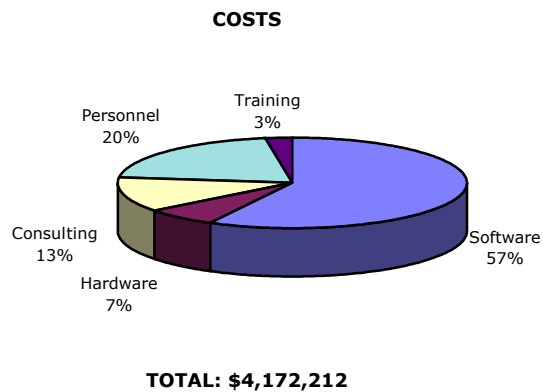
to perform more meaningful analyses. As a result, the analysts that create reports for the organization is approximately 20 percent more productive.

- Improved employee productivity. Employees who utilize the reports are also more productive because ad-hoc reporting enables them to more rapidly perform analyses and reach conclusions. Because these employees now work with data that has consistent definitions across the hospital, they spend less time reconciling data and reports when they are collaborating.



KEY COST AREAS

Key cost areas for the deployment included software, personnel, hardware, and training. Trillium purchased an enterprise license for Cognos Healthcare Performance Management, which is supported by seven servers so that the solution does not require space on employees' PCs. Six employees worked on the deployment for five months and these employees now support the solution on an ongoing basis. Before the application went live, the deployment team trained on the solution for 15 days.



LESSONS LEARNED

One reason Trillium's deployment was successful was that the deployment team maximized the involvement of end users throughout the deployment, a best practice that Nucleus often sees in successful deployments. Trillium's deployment team knew that adopting Cognos Healthcare Performance Management would result in changes to workflows that some employees would resist. Employees were accustomed to requesting and receiving custom reports from an internal report building team, and some employees resisted taking on their own reporting tasks. In order to counter this resistance and maximize adoption, the deployment team regularly held focus groups with employees in order to help them understand that the deployment would result in ad-hoc reporting that would better enable them to complete their jobs. By sharing with the deployment team their preferences and requirements during these meetings, users became more invested in the process, which reduced their resistance.

CALCULATING THE ROI

Nucleus calculated the costs of software, personnel, hardware, and training over a 3-year period to quantify Trillium's investment in Cognos Healthcare Performance Management.

Direct benefits calculated consisted of maintenance fees for decommissioned software. Indirect benefits included increased productivity of both the analysts who create reports and the employees in the finance, human resources, payroll, and statistics departments who utilize both standardized and ad-hoc reporting. Time savings associated with more rapid report building and more efficient use of data were calculated based on the average fully loaded annual cost of employees. A productivity correction factor was applied to account for the inefficient transfer of time from time saved to time worked.

Not quantified in the ROI calculation is the improvement in the ability of Trillium's clinical staff to improve the quality of patient care, a benefit the hospital expects to achieve when Cognos is deployed to other parts of the hospital.

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DETAILED FINANCIAL ANALYSIS

TRILLIUM HEALTH CENTER

SUMMARY

Project:	Cognos Healthcare Performance Management
Annual return on investment (ROI)	46%
Payback period (years)	2.17
Net present value (NPV)	112,482
Average yearly cost of ownership	1,390,737

ANNUAL BENEFITS	Pre-start	Year 1	Year 2	Year 3
Direct	0	42,602	42,602	42,602
Indirect	0	2,155,706	2,155,706	2,155,706
Total Benefits Per Period	0	2,198,308	2,198,308	2,198,308

DEPRECIATED ASSETS	Pre-start	Year 1	Year 2	Year 3
Software	1,600,000	0	0	0
Hardware	275,000	0	0	0
Total Per Period	1,875,000	0	0	0

DEPRECIATION SCHEDULE	Pre-start	Year 1	Year 2	Year 3
Software	0	320,000	320,000	320,000
Hardware	0	55,000	55,000	55,000
Total Per Period	0	375,000	375,000	375,000

EXPENSED COSTS	Pre-start	Year 1	Year 2	Year 3
Software	0	270,000	270,000	270,000
Hardware	0	0	0	0
Consulting	529,000	0	0	0
Personnel	0	283,500	283,500	283,500
Training	107,712	0	0	0
Other	0	0	0	0
Total Per Period	636,712	553,500	553,500	553,500

FINANCIAL ANALYSIS	Year 1	Year 2	Year 3
Net cash flow before taxes	1,644,808	1,644,808	1,644,808
Net cash flow after taxes	1,009,904	1,009,904	1,009,904
Annual ROI - direct and indirect benefits			46%
Annual ROI - direct benefits only			-3%
Net present value (NPV)			112,482
Payback (years)			2.17
Average annual cost of ownership			1,390,737
3-year IRR			18%

FINANCIAL ASSUMPTIONS

All government taxes	50%
Discount rate	15%