



THE BI BUILDERS

"Our goal is to improve healthcare worker safety in the province of British Columbia. This new system allows healthcare professionals and researchers across the province to make more informed decisions towards that goal."

*Tony Gilligan, Director of Information Systems,
Information Technology and Communications, OHSAH*

Case Study

BI SOLUTION BRIEF

Customer: The Occupational Health & Safety Agency for Healthcare in British Columbia

Industry: Government, Healthcare

Location: Vancouver, British Columbia

System: SAP BusinessObjects Edge Business Intelligence (BI)

Service: BI Jumpstart, Universe Design & Development

THE ORGANIZATION

The Occupational Health and Safety Agency for Healthcare (OHSAH) is a provincial agency, represented by the healthcare employers and unions in British Columbia. Its mission is to work with all members of the healthcare community to develop guidelines and programs designed to promote better health and safety practices and safe early return to work, promote pilot programs and facilitate the sharing of best practices and develop new measures to assess the effectiveness of programs and innovations in this area. To this end, OHSAH developed the Workplace Health Indicator Tracking and Evaluation (WHITE™) database that enables the analysis of occupational health data. OHSAH also provides programs and expertise in disability and disease prevention, occupational hygiene, ergonomics, occupational medicine, mental health and organizational development, education and training, and program evaluation.

OHSAH works with health employers and unions to evaluate potential interventions and to produce training programs that reduce and prevent injury. As part of this mandate, OHSAH tracks and reports on healthcare worker injuries. Injuries range from back problems due to heavy lifting while transferring patients, through to communicable disease exposures from inadvertent needle punctures.

THE CHALLENGE

Director of Information Systems Tony Gilligan recognized early on that OHSAH needed to make its healthcare injury information easily available for policy makers and other stakeholders. Under his guidance, OHSAH created the Workplace Health Indicator Tracking and Evaluation (WHITE™) system. WHITE™ was designed for healthcare professionals and researchers to gain a clear, contextual picture of workplace health injuries that could be tracked over time. This information is important for planning optimal education or mitigation programs.

"While we created a world class software system to track and record incidents and perform case management, it is based on a fairly complicated data architecture that requires a certain level of technical expertise to work with," says Gilligan. "OHSAH scientists had to wait while the IT department performed SQL queries for them, even for small, iterative changes to a report. It was more challenging for external healthcare administrators and policy makers to access and manipulate the valuable information in WHITE™. We needed to make this process easier for them."

Gilligan's vision was to create a province-wide, Web-based information portal that scientists and stakeholders, such as regional health authorities, healthcare unions and WorksafeBC, could use to view key indicators and statistics themselves. "While we developed WHITE™ in-house using web and database programming technologies, our developers didn't have the expertise for creating the business intelligence solution that we needed," says Gilligan.

THE SOLUTION

OHSAH chose a business intelligence (BI) solution based on SAP BusinessObjects Edge BI software and partnered with BI Builders to help integrate the solution with WHITE™. The BI Builders are a business intelligence solution provider. SAP BusinessObjects Edge BI is designed for mid-size companies and takes advantage of Xcelsius® software for superior dashboards and metric visualization, and Web Intelligence® software for easy, online reporting.

“We chose BI Builders for their proven expertise in the business intelligence space,” says Gilligan. “We wanted to learn from working side-by-side with the experts.”

OHSAH database administrators gained a better understanding of the WHITE™ data model from the BI Builders consultants prior to implementing SAP BusinessObjects Edge BI. The team optimized the data structures to boost system performance.

“Then we implemented the SAP BusinessObjects Edge BI server and the BI Builders consultants showed us how to use the tools to provide users access to the underlying data structure,” says Weilin Yu, database administrator at OHSAH. “These tools are designed to make data interpretation much easier for the healthcare analysts.”

OHSAH and BI Builders used the types of information most required by healthcare stakeholders to create the Universes, which present data in easy-to-understand terminology that’s more intuitive than the WHITE™ data structure. Non-technical healthcare workers can easily search through the Universes without having to write SQL queries or perform complicated table joins.

BI Builders then helped the OHSAH team deploy SAP BusinessObjects Web Intelligence to deliver online query and analysis functionality for the information stored in the universes. Healthcare administrators and stakeholders simply sign into the Web portal to gain secure access to intuitive dashboards and user-friendly reports that help them access and analyze the information they need to do their work.

RESULTS

Together, OSHAH and BI Builders created a business intelligence solution that has far reaching implications for the healthcare industry in British Columbia. Healthcare administrators and researchers across the province can access the data in WHITE™ to improve healthcare workplace safety and lower the cost of healthcare worker related incidents, injuries and time loss. Access to the data has already helped WorksafeBC focus their resources and attention to high risk areas.

With easy access to WHITE™ data, researchers and health authorities can track work time losses. Working days lost as a result of injuries can be tallied to provide an accurate cost analysis. This information helps decision-makers allocate resources to new equipment, procedures and training. The Health Authority Dashboard allows executives to easily compare their health authority’s performance against others in the province, helping to build upon lessons learned from other regions.

“Before we developed WHITE™ and launched the new business intelligence solution, this kind of analysis would have taken hundreds of thousands of dollars and hundreds of hours to achieve,” said Gilligan. “Now, almost anyone with a sense of the data stored in WHITE™ can gain a better understanding of the nature of injuries and their determinants.”

In the future, OHSAH envisions that hundreds of people around the province will access the database for improved healthcare worker safety. “We really are happy with the work and support that we received from BI Builders. It was a truly collaborative effort and they delivered on time and under budget,” says Gilligan. “We’ll be working with BI Builders in the future.”

“Thanks to the coaching and knowledge transfer we got from BI Builders, we built the entire solution and exposed the production version on the Web to our clients in less than four months.”

-Tony Gilligan, OHSAH

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