

## The Charles Machine Works

### Manufacturer Takes Full Advantage of SAP Data by Deploying a Microsoft BI Solution

The Charles Machine Works (CMW) depends heavily on SAP data to run its business, but found it difficult to create business intelligence (BI) reports, let alone make broader use of SAP data. Rather than use SAP products, including SAP HANA, CMW chose Microsoft technology and Simplement Data Liberator. With this solution, CMW has broadened its use of SAP data, simplified and sped up SAP reporting, gained more time for IT to better support the business, and avoided huge cost increases.

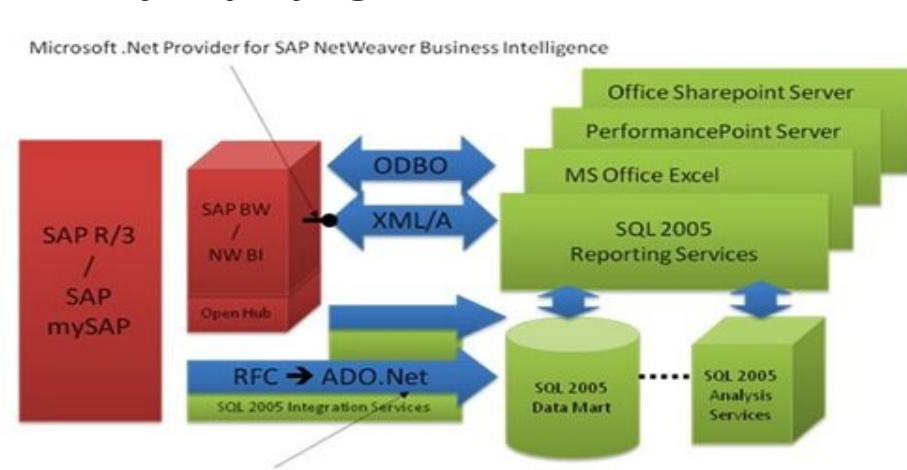


Figure 1 - Microsoft Business Intelligence Interoperability with SAP

“By using the Microsoft-Simplement solution .... we replaced 80 percent of our SAP BW reports in one month. IT is generating reports faster than ever before, and stakeholders now have self-service BI. Plus, IT architects can enhance web services with SAP data.”

Chris Simon  
The Charles Machine Works  
Data Warehouse Analyst

### Business Needs

The Charles Machine Works, Inc. (CMW), manufacturer of Ditch Witch underground construction equipment, got its start in 1949 by introducing a compact service line trenching machine to replace the pick and shovel for installing residential services. Since then, CMW has expanded its offerings to include backhoes, electronic guidance tools, directional drilling systems, and other underground construction equipment.



CMW runs its entire business on SAP, and all managers and executives depend on SAP-based reports to track incoming orders, know which products are selling and which products to build, and ascertain profitability. The problem was that it was very difficult to get data out of SAP. CMW used SAP Business Information Warehouse (BW) to produce BI reports, but the process was time-consuming and the output often stale, which led to guesswork.

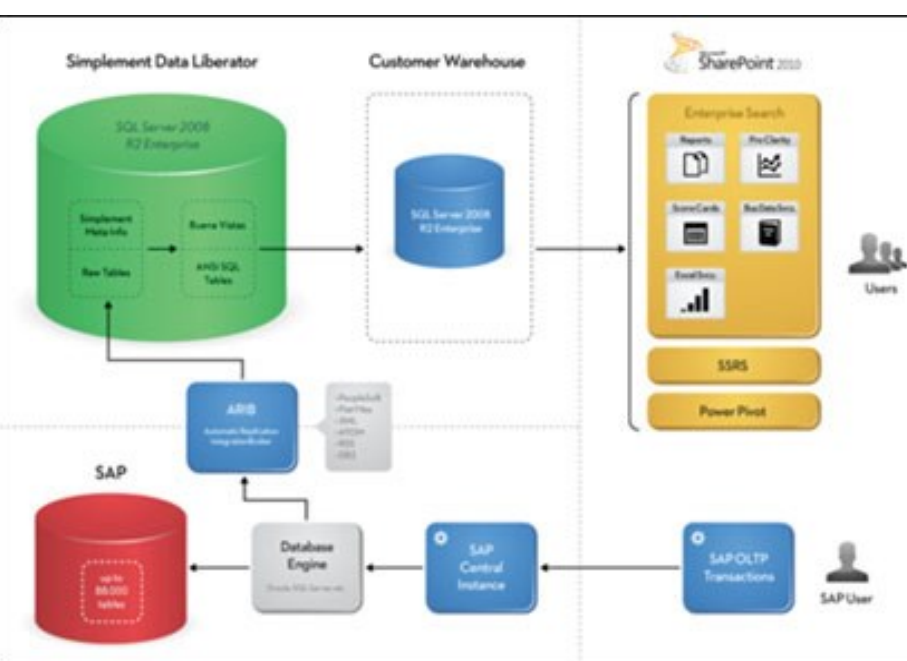
A few maverick power users manually exported data into Microsoft Excel spreadsheet software to create their own reports, but most employees relied on Chris Simon, Data Warehouse Analyst at CMW, to produce BI reports for them. “Employees spent hours or days generating reports or waiting on me to generate them, which was practically all I did,” Simon says. “The pace of the business was slowed because employees didn’t have the timely data they needed to make decisions.”

Extracting and integrating SAP data was so difficult that CMW couldn’t mine its rich trove of SAP data for other purposes besides BI, such as creating web services and enriching applications. The company’s pursuit of service-oriented architecture (SOA) was also hindered.

In spring 2010, CMW saw no resolution forthcoming in either SAP BW or the Business Objects (BO) platform SAP recently acquired. “We relied on our SAP business systems, but couldn’t depend on the vendor to support our BI or SOA strategies,” Simon says. “SAP BO was more expensive and did not address our data availability needs.”

### Solution

In mid-2010, Jason Newell, an application architect at CMW, attended a Microsoft TechEd conference with a colleague. There they heard about a BI solution based on Microsoft SQL Server 2008 R2 software and the Simplement Data Liberator (SDL) from Microsoft partner Simplement. Combined with SQL Server, SDL makes SAP data continuously available in real time and optimizes analysis—with no batch-load windows or additional demands on the production SAP system.



“When we saw how easily and reliably the Microsoft-Simplement solution unlocked SAP data, optimized reporting and analysis, and integrated with Microsoft SharePoint Server, we realized it would open many doors for us,” says Newell.

In 2011, CMW deployed SDL for SQL Server 2008 R2 and within two days had its existing profitability analysis reports running in the new environment. CMW identifies the SAP data it needs for BI, and SDL makes it automatically and continuously available in SQL Server. SAP data is then integrated with data from other sources and natively consumed by familiar and powerful Microsoft BI tools such as Microsoft SQL Server PowerPivot for SharePoint and Microsoft SQL Server PowerPivot for Excel. Employees use these technologies, as well as Microsoft SQL Server 2008 R2 Analysis Services and Microsoft SQL Server 2008 R2 Reporting Services, to pull performance data from SAP into SharePoint Server and Excel, where they can slice and dice them to understand performance trends.

In late 2012, Simplement helped CMW install Microsoft SQL Server 2012 Enterprise, which features the xVelocity in-memory database and tabular data model. The new solution accelerated BI analysis and empowered its executives to do analytics using PowerPivot.

Beyond improving BI, the solution’s fast, easy access to SAP data enhances the company’s ability to design new web services and improve its online parts catalog and SharePoint workflows.

When SAP introduced SAP HANA, an in-memory database, CMW was not interested, because the Microsoft-Simplement solution was fully meeting its needs at a much lower cost.

### Benefits

With the Microsoft-Simplement solution, CMW gives more employees access to SAP data, relieves the IT staff of onerous report writing and data refreshing, and uses SAP data in other areas.

#### Accelerates Access to Real-Time Data

By using SQL Server 2012 and the Simplement Data Liberator, CMW has been able to give more employees faster access to SAP data and, as a result, improve how it runs its business. “With faster access to real-time business data, our teams and executives make faster, better decisions, which helps speed up the pace of CMW business,” says Simon.



#### Frees IT to Better Support the Business

With employees more self-sufficient in reporting, Simon has far more time to support other areas of the business. He has been able to convert casual users into power users and help more employees learn how to get the most value from their SAP data. “By using the Microsoft-Simplement solution, we are making great strides in using SAP data for BI and in support of SOA,” he says. “We replaced 80 percent of our SAP BW reports in one month. IT is generating reports faster than ever before, and stakeholders now have self-service BI. Plus, IT architects can enhance web services with SAP data.”



#### Saves Money, Uses Data More Broadly

The Microsoft-Simplement solution costs about 25 percent of what SAP BO and SAP HANA would have cost. But far more important is that CMW can do so much more with its data. “In addition to BI, Simplement Data Liberator gives us an easy way to take our SAP data and inject it into many other applications, such as writing web services for our customer portal,” Newell says. “We’re just scratching the surface of what we’re able to accomplish with it.”



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