Dow Mixes Analytics With Chemicals

Dow Chemical doesn't just dabble in analytics. With a portfolio including specialty chemicals, advanced materials, agro sciences and plastics the global giant has developed thousands of predictive models across multiple lines of business.

Dow has enjoyed particular success gauging costs of raw materials - both volatile in price and slim in margin. Dow builds cost models to analyze billions in raw materials spend. The results shape decisions about when to buy or renegotiate contracts.

After riding initial successes in supply chain, purchasing and health and environmental sciences, Dow showered the entire company with analytics in 2010.

Doug Henschen at InformationWeek gives us a deeper look into Dow's data prowess.

Dow employs a team of data scientists to do their analytics handiwork. Armed with PhDs, and experts in mathematics and modeling, these seasoned pros captain a bigger analytics team. Dow contracts out other analytics consultants on a project basis. Further downstream, 40 to 50 BI specialists round out an analytics team working in, or with, each business unit.

Service departments were the first beneficiaries of Dow's data expertise. Now, 85 percent of analytics projects originate in individual business units.

How Dow positions advanced analytics to boost revenues while reducing costs:

- Decision-makers access layered dashboard reports comprised of BI, forecasts and industry stats.

- Dashboards contain updated data and predictions for segments, geographies and business units under each decision-maker's watch.

- Exchange rate and margin analyses dictate product pricing and drive raw material purchases.

- Staffing models help Dow target premium talent, and hire at the right time.

Although Dow continues to find new ways to merge advanced analytics with standard processes and practices, key functions have already hit homeruns with BI and predictive analytics:

Supply Chain – Dow has a laser focus on the supply chain, applying analytics models to customers internally and externally. By designing or modifying supply chains for business partners, Dow helps light the way to new global markets. Everybody wins. Using this team concept, analytics align production, sales, and inventory for customers that may or may not buy from Dow. Improving cost plans and revenue for customers is a value-add service with long-term benefits.

Energy Management – Dow has been making smarter decisions around shipping and transportation. Whether hunting the best rail rates, or modeling oil and gas costs, analytics helps Dow control energy expenditures. Dow reported 41 percent of production costs stem from energy and hydrocarbons. Analytics enables Dow to cut energy and hydrocarbon usage, while locating alternative sources.

Forecasting – Analytics has reduced errors in Dow's sales forecasts. Each business unit knows midmonth if performance targets will be met, allowing business unit leaders to make strategy adjustments. And Dow's best forecasting trick may have been sidestepping the recession by sharing intelligent data with business units on a daily basis. According to Dow, this real-time data was the catalyst for losing less money in the down cycle, and making more money coming out of it.