



Lech Schimmelpfennig
Board Member

Gaining Ground

Poland's leading chemicals and fertilizer manufacturer uses SAS® to understand production costs and optimize processes and product portfolio.

Industry

Education

Business Issue

How do we continually adjust our product portfolio to prioritize high-margin products when raw material costs fluctuate and our production processes are so complex?

Solution

With SAS® Enterprise BI Server and SAS® Activity-Based Management, ZAP analyzes complex supplier, market and production data and distributes the results to decision makers.

Benefits

ZAP can make rapid-fire supplier, production and pricing decisions, increasing its profit margins – and its competitive position.

Zakłady Azotowe “Pulawy” (ZAP) specializes in the production of nitrogen fertilizers like ammonium nitrate and chemicals such as melamine, the production of which meets 20 percent of European demand. Sixty percent of its products are exported. Within two years of debuting on the Warsaw Stock Exchange, ZAP’s revenues reached US\$730 million. Manufacturing costs, including the costs of raw materials such as natural gas, electricity, benzene and coal, have a big impact on the company’s profitability, and such costs are significant at ZAP.

“We need to optimize production costs and maximize production processes, which means understanding costs at each stage of production,” says Lech B. Schimmelpfennig, a board member at ZAP. “With SAS we gained a far broader and deeper understanding of the entire production process. We can optimize our processes and the structure of our product portfolio, and evaluate the performance of different manufacturing units. We have much better control over costs because with fast access to strategic information, managers have more time to react to changing market conditions (such as fluctuations in raw materials’ costs) to improve our financial performance. SAS helps us compete more effectively.”

Adjusting for best profit margin

As a key exporter of ammonium nitrate liquid fertilizer, the world’s third-largest producer of melamine and Poland’s only producer of hydrogen peroxide, ZAP operates a system of continuous production. In order to maintain

profitability, ZAP needs to focus on the production of higher margin chemical products while maintaining leadership in the fertilizer sector.

ZAP needed the flexibility to try different what-if production scenarios based on different market conditions in order to better control its product portfolio and profit margins. “We needed detailed information on the total cost of production,” Schimmelpfennig says. “This included information about the structure of variable and fixed costs per product unit rolled up to different levels – particularly the enterprise level. We wanted fast analyses to be able to understand and act on the changes in raw material prices, and to view processes from many different perspectives.”



ZAKŁADY AZOTOWE “PUŁAWY”
SPÓŁKA AKCYJNA

He adds, “If you manufacture products with low ‘value add’ and low margins, you risk being unprofitable. Our goal is to mitigate this risk by focusing on products that provide the best margins. If the market price for a product changes by 1 or 2 percent, we need to understand how this will affect our margins and profits. We need to be able to share this information quickly and throughout the company in order to make profitable decisions.”

“When you can control real costs and adjust product portfolio quickly to maximize profitability, then you can really compete.”

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From raw data to manufacturing insights

“We thought we could build our solution in-house,” says Schimmelpfennig. The plan was to interface to ZAP’s Manufacturing Resource Planning (MRP) system from Microsoft Excel. “However, we soon encountered problems and limitations, so we decided to find a reliable solutions provider,” says Schimmelpfennig. “SAS has experience providing manufacturing systems for companies worldwide. And SAS was the only supplier who responded quickly with a pilot solution that showed it could meet our requirements.” In short, SAS provided a customized business intelligence platform able to deliver the insights needed.

The SAS platform accesses data from the MRP system, as well as finance and accounting systems, to provide analysis and reporting on the entire manufacturing process – from costs of materials through production to outputs.

Schimmelpfennig says, “The system is easy to use, easy to modify, and we have the advanced analytic capabilities we wanted. Taking a multidimensional view, we can be as flexible as we need to be. We can respond to different user reporting requirements

covering over 30 process steps in our multistage production and can analyze huge amounts of data in a short time. It’s easy to configure the content and look of reports, presenting the total cost of production at different levels and providing detailed cost cumulations. We now have cumulated consumption figures as well as cumulated unit costs, and can present results in line with different calendars.” The system not only covers raw material costs, but also resource costs such as maintenance and human capital to calculate the total unit cost of each product.

Schimmelpfennig says SAS provides a clear “value add” through a collaborative environment where it’s easy to publish reports and share knowledge. The system enables:

- Fast margin calculations for individual products and the marketability of different combinations.
- The ability to optimize the product portfolio to maximize margins and profitability.
- More effective control and management of production facilities to reflect changing market conditions.
- Profitability analysis of finished products and their intermediate stages.

Schimmelpfennig adds, “We can make supplier, production and pricing decisions on a far more reliable basis – fact-based decisions rather than managers making a best guess based on their experience. We can choose sources of supply – for example, should we buy ammonia from Russia or Ukraine? And we can optimize our product portfolio. We can focus on what will give us the most profit and calculate the cost of what might happen if we don’t deliver a product to a particular client. Our main goal was operational: to work better, increase profits and be more competitive. When you can control real costs and adjust product portfolio quickly to maximize profitability, then you can really compete.”

But ZAP’s relationship with SAS doesn’t end there. Schimmelpfennig says ZAP has plans to continue working with SAS to incorporate predictive modeling into its capabilities, “to move towards our vision of the future – together,” he says.



**THE
POWER
TO KNOW.**

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