Aqualia

Predictive analysis used to understand water consumption, improving resource management

Madrid, Spain
www.aqualia.es

Solution Components

- IBM® SPSS® Modeler Desktop V14
- IBM SPSS Services

Founded in 2002 and based in Madrid, Aqualia operates as a water management company, servicing a population of more than 27 million people worldwide. With more than 7,000 employees, the company engages in the management of public water services and offers solutions for the management of the complete cycle of water for agricultural, industrial and domestic purposes. The company offers solutions to both public and private entities, and provides services in Italy, Portugal, Algeria, China, Mexico, Czech Republic and Poland.

The Opportunity

To align supply and distribution to customer demands, Aqualia wanted to accurately forecast water consumption for its agricultural, industrial and consumer customers in more than 450 municipalities across Spain at regional and national levels. However, its existing processes lacked the capability to provide insight into common usage patterns and causes for fluctuations in consumption and took weeks to aggregate all the necessary data and estimate water needs at the national level.

What Makes It Smarter

Efficient water management is crucial in preventing shortages, especially for a country plagued with low rainfall and varying degrees of drought. To help ensure water conservation and meet customer needs, Aqualia uses sophisticated statistical analysis to identify water consumption patterns and trends in customer data to predict future demands. New insights help the company understand water consumption levels of different customer groups across 450 municipalities throughout Spain, pinpointing the contributing factors for varying levels of demand, especially low and peak demand periods. For example, based on consumption history, demographics and other related data such as

What if a utility company could predict precisely when, why and how much water its customers will consume?

climate forecasts, the solution helps the company identify and take into account the influx of tourism in specific regions during the summer months and the effect of irregular weather patterns and potential fires on other regions. As a result, the company can precisely predict and prepare for varying consumption levels as well as low and peak periods across the country within minutes. The utility now has the precision to accurately align its water supply resources and operations to demands and provide more precise pricing options for its customers.

Real Business Results

- Improves water distribution for 450 municipalities by 100 percent
- Reduces the prediction error for future water consumption to around 4 to 5 percent through precise statistical modeling
- Accelerates the process for predicting national water consumption by 99 percent—from a month to 30 minutes—by automating data aggregation and implementing statistical modeling

For more information

Please contact your IBM representative or IBM Business Partner. Visit us at **ibm.com**/spss.

To learn more about Aqualia, visit www.aqualia.es.

"By applying advanced analytics to demand forecasting, we can now provide our customers with reliable water supply, even during high peak periods, through accurate pricing policies."

— Manuel Antonio del Castañedo Rodríguez,
Management and Customers Control Director, Aqualia

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