Petrobras uses AIMMS for Offshore Gas Planning

About Petrobras

Founded in 1953, Petrobras is the largest corporation in Brazil with a net revenue of R$ 321.6 billion. It operates on an integrated and specialized basis in the following segments of the oil, gas and energy industry: exploration and production, refining, commercialization and transportation, petrochemicals, distribution, biofuels, natural gas and energy. The company has upwards of 135 production platforms, 15 refineries, 31,000 kilometers of pipelines and more than 8,000 service stations.
Problem
Petrobras has several Oil & Gas fields in the Campos basin, located on Brazil’s southeast coast. The basin produces 20.8 million cubic meters of gas per day and its monthly revenue on onshore delivered gas is up to 100 million dollars. Fields in the basin are explored by more than 30 oil platforms. A gas network connects these platforms with the shore, where gas is subsequently sold, used to generate energy or reinjected to enhance oil production. Planning the efficient use of this network is crucial to keep the platforms operating and supply the company’s customers in a timely way. The Operations Research and Information Technology team at Petrobras needed a fast, reliable and intuitive decision support application to support its offshore gas planning. They had already migrated from spreadsheets to an optimization environment, but were looking for a solution with higher performance, scalability and improved integration with other systems.

Solution
The company chose to work with AIMMS to develop MOVIGAS, a decision support App for multi-annual offshore gas planning. The application helps managers maximize Oil & Gas exploitation at the Campos basin. It is connected to several company databases, providing the user up to date information in an intuitive graphical interface. Using AIMMS as its core optimizer, planners can now navigate through the gas network, generate an optimal plan and identify bottlenecks. The software is also used by planners in similar gas networks operated by the company.

Results
Thanks to the App’s user-friendliness, systems integration and visualization tools, Petrobras’ planners were able to achieve desired performance requirements.

Benefits include:
- Improved planning agility
- Improved ability to meet demand
- Higher output and increased revenues