

# Optimizing the pipeline planning system at the national oil company

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© 2019 This paper describes the creation, development, implementation and impact of a system optimizing the distribution of petroleum products by pipeline at Empresa Nacional del Petroleo, the state-owned oil company in Chile. Refined oil products are sent via a pipeline from a refinery in the South to terminals located between the refinery and the center of the country. The sequencing of different products needs to be determined. This scheduling used to be done by hand, based on experience and on the need to satisfy physical constraints in the pipeline, supply constraints in and out of the refinery and demand constraints from clients. The complexity of the problem and the need to cut down on operating costs suggested turning to optimization, specifically integer programming. The positive results of the project owe a lot to the constant interaction between schedulers, decision makers, and the optimization team, and to the insights provided by the schedulers that allowed to limit the mo