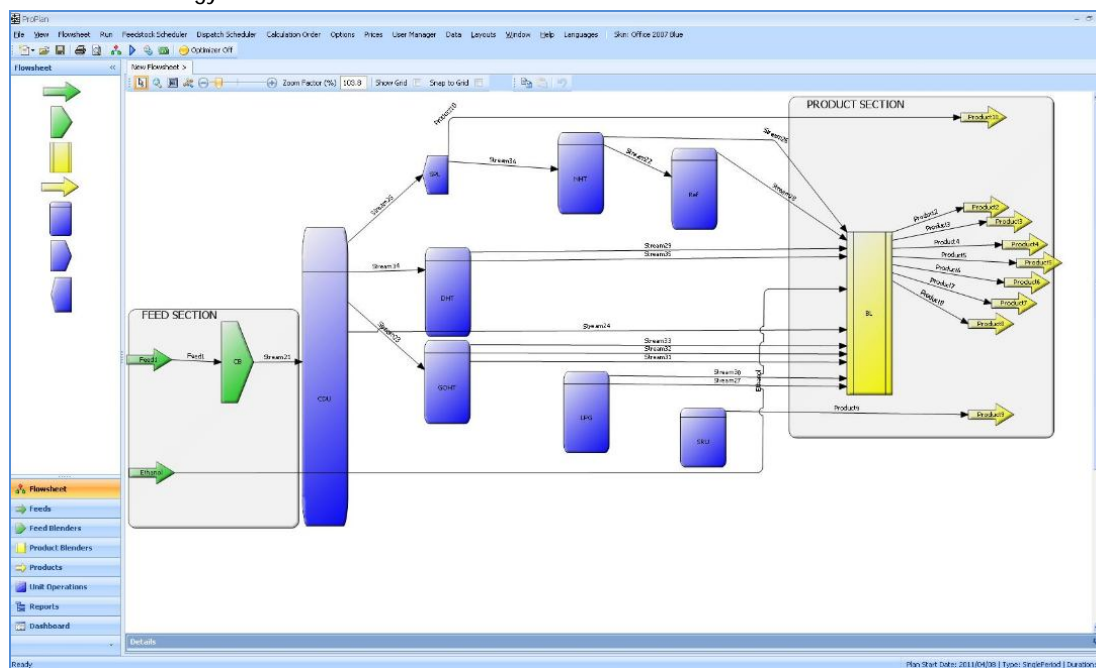


ProPlan

Refinery and petrochemical modeling and planning software

Process plant modeling and strategic planning are key functions supported by corporate management and supply chain groups. Their critical task is to maximize profitability while ensuring quality and flexibility are maintained.

ProPlan is a modeling & planning simulator designed for process industry. It's an ideal strategic planning, material balance and process modeling tool for refining, petrochemical, energy and gas processing industries. If you are tied down with complex, difficult to understand LP tools, then ProPlan is the right option for you. ProPlan provides an intuitive graphical interface with flowsheet modeling to quickly build models and assess what-if options and planning scenarios. An economic analysis together with flexible planning of products and or capacities may be conducted for the complete plant. ProPlan has available options for integration with third party packages such as data historians, Microsoft SQL server, web services and other OPC compliant applications. ProPlan is based on Microsoft .Net technology.



ProPlan simulates plant operations by performing block-by-block calculations to determine all streams (e.g. feedstock, oils, and blended products) flowing between the various units of the plant (e.g. splitter, crude distillation unit, LPG). The simulator uses non-linear (empirical) equations to predict yields, product properties, and the consumption of utilities. Profitability is maximized employing the powerful LINDO optimizer. ProPlan determines the optimum operating conditions and allocation of components to finished products, subject to user-specified quality concerns. The objective function is to maximize the profitability of the process plant.

ProPlan Highlights

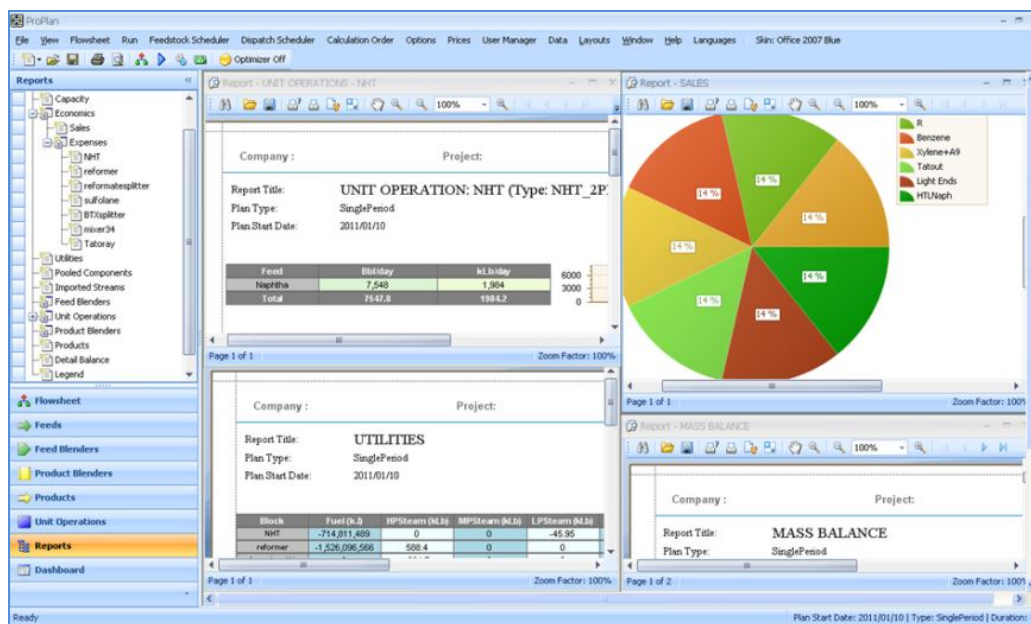
- LINDO LP & NLP optimizer for global optimum
- Comprehensive Report generation for unit operations, finances, utilities, profitability, summary etc
- Single and multi-period (Long term plan with desegmented short periods) operation planning
- Manage planned and maintenance shutdowns in multi-period planning.
- Produce daily production instructions/reports

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- Options to integrate with web services, data historians and Microsoft SQL server.
- Product and feed blender to optimize feed purchase and product sales and overall profitability
- Short learning curve, full developmental capability for user to build and add custom equations and units
- Extensive library of customizable process models for refining, petrochemical and gas processing industries

Features

Graphical User-Interface: A clean & modern graphical user-interface assists in modeling. The interface provides a convenient directory tree and means to develop flowsheets, enter data and constraints, and review the results of the simulation. The input forms are structured so that data for crude assay, streams, all blocks, and utilities may be intuitively entered.



Crude assay integration: Develop models from a library of crudes or create your own crude within the application. Easily import and export crudes from various crude databases or custom crudes from Excel.

Dashboards

- One-shot glance of the economics of the entire plant (Sales and Operation).
- Detailed expense and revenue analysis of complete plant.
- Short term and long term planning, & process unit details

Process models

ProPlan has a library of 35+ process models including most refinery, petrochemical & gas processing units. New units can be easily created using existing units as a template. This allows ProPlan the flexibility to be used for any continuous production plant. Sample process models include:

Refinery: Crude Distillation, Vacuum distillation, Hydrotreaters (4), Reformer, Hydrocrackers (3), Catalytic cracking, LPG, Naptha stabilizers, Delayed coking, Amine, Sulfur recovery, Power generation, Hydrogen plant, Isomerization, Alkylation etc

Petrochemical: Aromatics complex, paraxylene etc

Gas Processing: Demethanizer, Depropanizer, Debutanizer, & LPG processing

ProPlan Applications

- Production Planning: Short term and long term planning. Evaluate feedstock and opportunity crudes.
- Process modeling: Build quick flow sheet models of continuous plants with equations and material balances. Add custom processes and equations as needed. Conduct feasibility analysis for new and revamp plant configurations.
- Process Optimization. Suggest the ideal range of operation of the existing units
- Showcase Proprietary technology. Demonstrate impact or superiority of one technology over another
- Training and Learning. Promote better understanding of plant operations & economics.