

(OGM)™

Consistent approach to optimization of oil and gas production concepts and lifecycle cost

OGM is an industry leading softwaresolution driven by process simulation for feasibility evaluation, concept selection and design, and cost estimation of upstream and midstream oil and gas development and brownfield projects.

OGM plays an important role in the oil and gas Greenfield and brownfield development and modernization lifecycle. When E&P (Exploration and Production) companies have assessed the extent of the reservoir during exploration activities, they typically want to look at the feasibility of various field development concepts and assess production economics over the useful life of reservoir depletion. Various aspects such as drilling and completion of production wells, logistics, accommodation, process configuration and export of hydrocarbons from the production facility for sale are evaluated in terms of size, weight and cost of engineering, procurement, construction, hook up, commissioning and startup.

With OGM, Owner/Operators, EPCs and engineering consulting firms can consolidate a company's design practices in a single tool to rapidly apply a first principles-based field development plan generation approach creating project deliverables that are linked to an auditable trail of management decisions.

Our Expertise

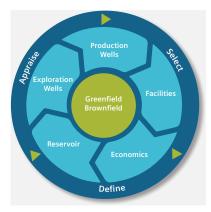
Siemens OGM is recognized as the differentiator over competition with:

- Our history, implemented by major international oil and gas companies worldwide since 2004
- Our people, subject matter experts and software implementation team supporting the full software program
- Partnerships, joint development with major oil and gas industry leaders
- One-of-a-kind program offering rapid first principles-based facility design

Our Value, Our Customer

A company has an oil and gas block it is preparing to bid for or invest in and needs to determine if the block is economically feasible to develop. As part of the feasibility study, the company has to determine a high level lifecycle cost estimate for a number of production concepts that process the fluids from the reservoir. OGM has predefined facility templates for offshore and onshore upstream oil and gas facilities that allow users to quickly generate concept level sizing and cost estimates with limited input data.

Companies invest hundreds even thousands of engineering manhours toward identifying the most economical production design concept. How can my company reduce time and be more cost effective? OGM provides the capability for a single user or a globally located team to evaluate conventional offshore and onshore field development concepts in a fraction of the time it takes for an engineering study using spreadsheets.



• A company has an existing oil and gas production facility with declining reserves in the reservoirs and would like to examine alternative hydrocarbon recovery concepts to increase or maintain production. The company also needs to determine bottlenecks in the existing facility and determine if it is capable of handling the reservoir fluids. OGM provides the capability of modeling an existing facility and comparing the existing facility capacity versus a revised capacity requirement to identify which equipment items may need to be upgraded. OGM also allow users to create a revised design for the facility to do a first pass analysis of the size and cost of the facility upgrades.

Published by Siemens 2018

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OGM Benefits

Field Development Planning

- Facility costs provide input for evaluation of field economics
- Optimize process design by assessing the impact of changes in production profiles

Feasibility Studies

 Compare multiple concepts quickly and consistently

Conceptual Engineering

- Automate engineering calculations and customize cost norms to reduce effort for a complete initial design and facility cost estimate
- Get consistent and traceable results by incorporating design preferences, benchmarks and past project experience
- Evaluate greenfield or brownfield design change impacts quickly and consistently

Efficiency

- Significant saving over using spreadsheet
- Collaborative tool that enables the experience of the entire project team to be incorporated

OGM Features

Building Block approach

- Drag and drop icons for field layout
- Choose from a number of standard facilities including but not limited to FPSO, SPAR, TLP, Subsea, Pipelines, Compressor and Pump Stations

Process modelling

- Built-in process simulator determines process, hydraulic, and utility parameters used to compare concepts, calculate sizing and cost for entire field
- Most offshore and onshore upstream and mid-stream concepts can be modeled
- Reservoir profiling and brownfield modeling for comparison of the impact of the changes in production profile on design cases

Repository of cost data

 Cost indices from published sources provide centralized, customizable source for cost norms

User Experience

- Tree design for easy access to details
- Use as standalone or corporate wide
- Secure access to the program
- Save case history
- Case management for multiple users in network installation mode

OGM Outputs

- On Screen process streams data sand visual field arrangement
- More than 50 reports for Management, Engineers, Cost Estimators
- Toggle report output between Excel and PDF for output format
- Multi-case graphs for sensitivity analysis