IAM Field Development Planning and Operations Software

Make more informed decisions to extract the most value from your field over its lifetime

APPLICATIONS
- Integrated asset modeling
- Field development plan optimization
- Brownfield rejuvenation projects
- Production optimization and reservoir management
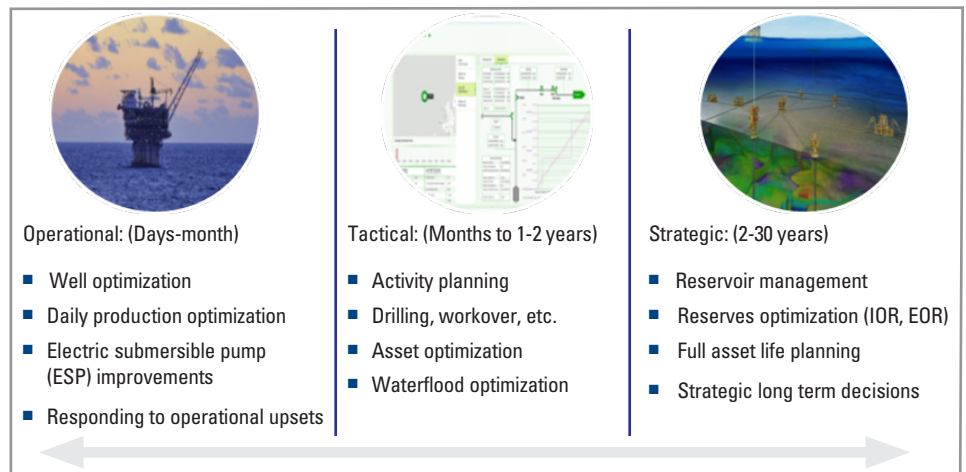
BENEFITS
- Improves forecast accuracy
- Unites understanding of subsurface and surface
- Enables multidisciplinary work processes
- Optimizes CAPEX required for field development by enabling full asset understanding
- Optimizes OPEX by evaluation of through-life flow assurance needs
- Maximizes revenues and field production profiles

FEATURES
- Open architecture for dynamic coupling of reservoir simulators with multiphase flow simulators, process simulators, and economic models
- Field planning powered by conditional logic including "what if?" scenarios
- Broad selection of optimization routines, including downstream dynamic matrix optimizers
- Open data framework to support live asset models

Enable critical, asset-level decisions through a total system model

A single production simulation environment integrates all asset details contained in the individual simulation models of the reservoir, wells, surface infrastructure, and process facilities. The simulation environment enables the implementation of logical connections, constraints, and optimization routines so the value of multiple operational, tactical, and strategic scenarios can be studied, compared, and optimized. With this total system model approach, more opportunities exist for collaboration between surface and subsurface teams, which helps align them to common planning and operations goals over the lifetime of the field.
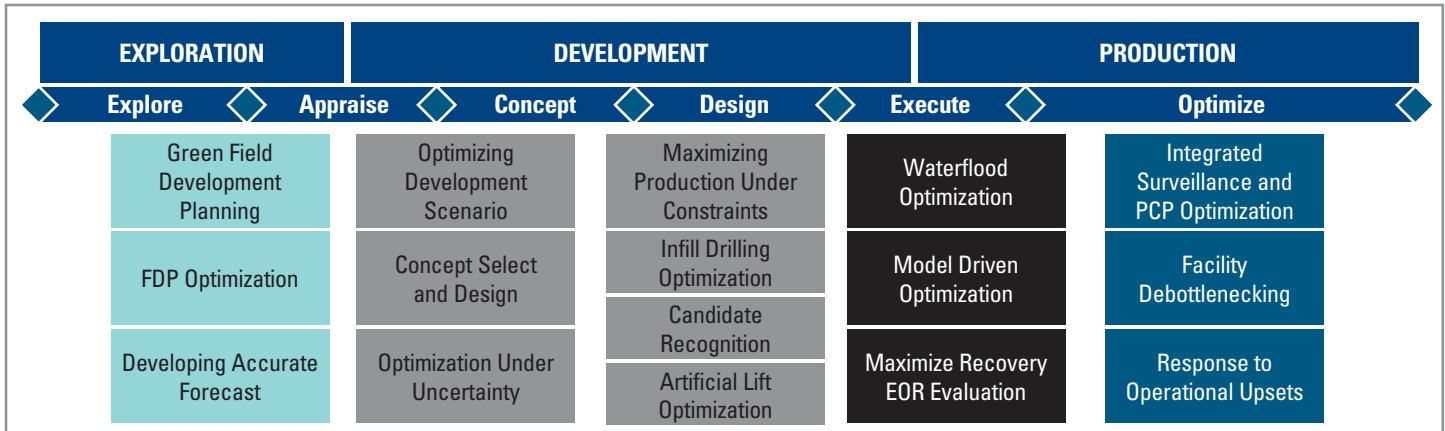

Operational: (Days-month)
- Well optimization
- Daily production optimization
- Electric submersible pump (ESP) improvements
- Responding to operational upsets

Tactical: (Months to 1-2 years)
- Activity planning
- Drilling, workover, etc.
- Asset optimization
- Waterflood optimization

Strategic: (2-30 years)
- Reservoir management
- Reserves optimization (IOR, EOR)
- Full asset life planning
- Strategic long term decisions

IAM software enables surface and subsurface teams to simulate various operational, tactical, and strategic scenarios.

Solve your asset-specific challenges

IAM* software offers the flexibility to couple any combination of models into one fully integrated asset model while preserving the fidelity of individual detailed models. From production forecasting for reservoirs, wells, and networks to complex optimization problem-solving based on field constraints, IAM software enables you to solve a range of complex technical challenges.

- Achieve more accurate forecasts by accounting for the interactions of subsurface deliverability with surface infrastructure and operational constraints.
- Model compositional blending, mixing, and injection of multiple producing zones and reservoirs to meet product specifications.
- Optimize the use of artificial lift, EOR, and improved oil recovery (IOR) injection.
- Maximize reservoir recovery and defer abandonment.
- Plan gas storage operations by predicting deliverability and optimizing compression design.
- Control crossflow between sands using optimized inlet control valves in complex wells.

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EXPLORATION	DEVELOPMENT		PRODUCTION
Explore	Appraise	Concept	Design	Execute	Optimize

Green Field Development Planning	Optimizing Development Scenario	Maximizing Production Under Constraints	Waterflood Optimization	Integrated Surveillance and PCP Optimization
FDP Optimization	Concept Select and Design	Infill Drilling Optimization	Model Driven Optimization	Facility Debottlenecking
Developing Accurate Forecast	Optimization Under Uncertainty	Candidate Recognition	Maximize Recovery EOR Evaluation	Response to Operational Upsets
		Artificial Lift Optimization		

IAM software provides solutions to various challenges addressed in achieving effective asset management.

Improve results through coupling of best-in-class simulation tools

The open framework of IAM software enables the coupling of a wide number of simulation software applications including:

- Reservoir simulation models
  - ECLIPSE* industry-reference simulator for black-oil, compositional, thermal, and streamline reservoir simulation
  - INTERSECT* high-resolution reservoir simulator that goes beyond the capabilities offered by conventional simulators
  - MBX material balance tank model for fast and simple reservoir modeling
  - IMEX reservoir simulator tool from Computer Modeling Group
  - MBAL material balance simulator from Petroleum Experts
- Multiphase flow simulation models
  - PIPESIM* steady-state multiphase flow simulator
  - OLGA* dynamic multiphase flow simulator
  - GAP multiphase oil and gas software from Petroleum Experts
- Process and facilities simulation models
  - Symmetry* process software platform
  - HYSYS from AspenTech
  - Petro-Sim from KBC Advanced Technologies
  - UniSim process modeling tool from Honeywell
- Economic and optimization models
  - Merak Peep for full economics, portfolio, and reserves management

In addition, IAM software has Rest API and OPC DA model adapter for real-time connection for digital oil field workflows. Third-party software integration is supported for Microsoft Excel and other engineering packages for reservoir, well, and surface simulations.

Improve Field Development and Optimize Production

IAM software integrates subsurface and surface understanding enabling better decisions for field development and production optimization of the entire asset. The open source framework of IAM software enables you to couple with a wide range of simulation software applications for a complete system analysis.

In order to unlock mature oilfield, IAM provides a framework that efficiently closes the gap between the existing production and the maximum available capacity. This requires a series of workflows to solve various challenges within and across reservoir, planning and operations disciplines. The Integrated Live Asset Model integrates these disciplines with a single platform for collaborative decision-making. These workflows are interrelated and are supported by an underlying foundation framework that keeps model live/up-to-date with the current reservoir and production changes, creating the most efficient asset optimization system.
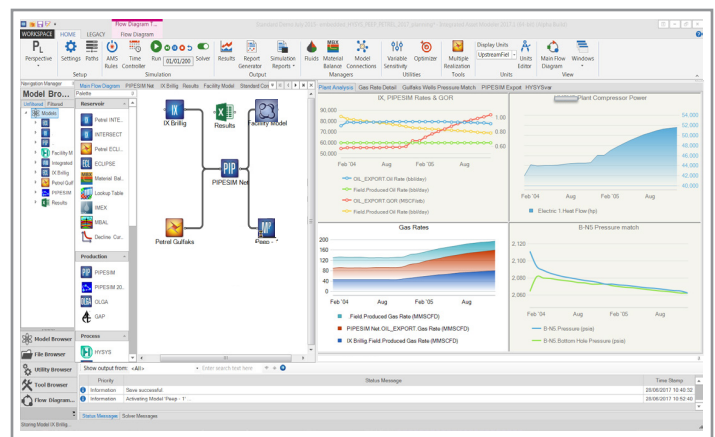
Continuous IAM usability improvements to offer the best user experience.

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