

# Oil & Gas Innovation

## *with Invention Machine Goldfire*

Fierce competition for resources, challenges with conventional exploration, increasing government regulations, and marketplace demand for sustainable development and energy efficiency have created enormous demand for innovative from the oil and gas industry. How will you find new oil and gas resources? How will you develop better extraction methods to turn resources into economically viable reserves. Are your innovation efforts aligned to fully capitalize on these opportunities? Are you extracting the maximum value out of your investment and highly-engineered operations?

Invention Machine Goldfire is a unique software solution that transforms ideas into commercial products, making innovation a repeatable and sustainable process.

Designed with engineers, scientists and researchers in mind, Goldfire automates more than a dozen critical innovation tasks spanning a product's lifecycle—from identifying a new market to developing a new product to improving existing products.

Fusing proven innovation tools and methods with precise access to corporate and external knowledge, Goldfire systematically guides users through every day innovation tasks to bring structure and uniformity to inventive problem-solving, concept discovery, and idea generation and validation.

Leading oil and gas companies—including Shell, ENI Saipem, and StatOil — are using Goldfire to:

- Develop new and improved products and processes to retrieve and process the reserves
- Reduce costs - improve operations for better ROI on capital assets, sites, technologies
- Gain precise understanding of components, techniques and operational systems
- Mitigate loss of graying workforce through capture and reuse of internal expertise
- Enhance technology solutions to stay ahead of competition and deliver more differentiation
- Help raise IP barriers to protect against competitor entry
- Minimize risks, ensure compliance and reduce liability

*“Really clever people can often be sitting in the dark, making innovation subject to chance. Invention Machine Goldfire has proven to be entirely effective for us.”*

*- Shell Global Solutions*



## SNAPSHOT OF PAST OIL & GAS PROJECTS WITH INVENTION MACHINE GOLDFIRE

- Gain competitive advantage by being the first to solve technical problems associated with the use of microseismicity for hydrocarbon reservoir management (i.e., oil and gas production monitoring and optimization).
- Evaluate alternatives or improvements to using Synthesis Aperture Radars (SAR) for monitoring an oceanic oil-spill.
- Identify and refine concepts for commercializing marine algae as biofuel.
- Research innovative ways to explore oil reservoirs in ultra deep water.
- Research methods to improve the deep-water mooring system to minimize the motion of drilling and production vessels.
- Reduce cost and improve the pumping flow performance of a line leak detection unit used at gasoline filling stations.
- Mitigate risk of ground water contamination during urban drilling operations.
- Investigate novel technologies using gas injection for mitigation of severe slugging in risers in offshore deepwater developments.
- Perform a patent vulnerability analysis on technologies used to stimulate rock fractures.
- Explore methods to increase the rate of steam injection into an existing well in order to increase the well's oil yield.

Changing geopolitical relationships, the emergence of new competitors, changes in supply and demand dynamics, social and environmental pressures, and demographic shifts, are transforming and reshaping the oil and gas industry.

Explore how Invention Machine Goldfire can transform your innovation processes to drive optimum innovation results for your organization.

At a leading global oil company, two research projects required 1000 technical documents on heavy oil processing to be categorized and analyzed. One was done manually and took six months.

The other - using Goldfire - took just five hours, and produced superior results.

**ACUITY**  
Your engineering technology partner

[www.acuityinc.com](http://www.acuityinc.com) ■ [info@acuityinc.com](mailto:info@acuityinc.com)

Main Office: 7320 SW Hunziker Street, Suite 205 Tigard, OR 97223  
Toll-free: 888.747.0850 ■ Direct: 503.747.0850 ■ Fax: 503.747.4269

Global 2000 manufacturers in more than 25 countries rely on Invention Machine Goldfire for product innovation, process improvement and market expansion. For additional information, please visit [InventionMachine.com](http://InventionMachine.com).