



CHALLENGE SPECS

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The Dow Chemical Challenge: Seeking Ideas to Expand the Market for New Oil-Soluble Polyalkylene Glycols ("Oil-Sol PAG")

DISCIPLINES

Business/Entrepreneurship, Chemistry, Food/Agriculture, Physical Sciences

CHALLENGE AWARD

\$15,000

SOLVERS ENGAGED

313

SOLUTIONS

60

PROGRAM DURATION

60 Days

GLOBAL SOLVER PARTICIPATION



Dow had recently introduced a new generation of oil-soluble Polyalkylene Glycols (PAGs), which unlike traditional PAGs could be mixed with hydrocarbon or mineral oils and offered greater versatility and unique performance properties. Dow Chemical were looking for uses, formulations and chemical processing ideas that could accelerate the commercialization of oil-soluble PAGs in existing or new markets.

Challenge

- Dow wanted to find uses for a new generation of oil-soluble Polyalkylene Glycols (PAGs), which were already demonstrating performance advantages in industrial lubricants and increased energy efficiency in automotive applications
- Oil-soluble PAGs have a potentially vast array of other applications in markets such as household cleaning, fabric conditioning, sunscreen, skin care, hair care, cosmetics, deodorant, pharmaceuticals, agriculture, marine, air, space, defense and more
- Dow was hopeful that Solvers' expertise could accelerate the identification and development of new applications and markets for Oil-Sol PAGs

Solutions

- Dow awarded two potential applications \$15,000 each, doubling the originally stated total award amount
- Joel Martin submitted a novel pharmaceutical application that could be used to treat a range of eye-related ailments and address the limitations of existing technology, helping meet the needs of an underserved global population
- Dmitry Tipikin applied oil-soluble PAGs to the process of demulsification of oil-in-water emulsions, which could be used in extraction and hydration inhibition in oil, gas and mining applications. It brought the potential for improved environmental standards, operating procedures and yield.

Result

- Not only did the Challenge allow Dow to address a key need, it provided exposure for their new technology and brought them closer to end users.

"We saw some excellent ideas from around the world, and the two winners resonated with Dow's expertise in these markets. And the collaboration doesn't end here. The winning applications are under review with scientists across Dow businesses to evaluate further implementation for our customers."

Lisa Inoue, Strategic Marketing Leader, Dow