Ford Honored for Logistics Developments

Ford has been awarded the 2013 INFORMS Prize from the Institute for Operations Research and the Management Sciences.

The award recognizes Ford's long-running, company-wide effort to use data science and predictive analytics to improve overall operations and performance.

Applying rigorous analytics, including machine learning, operations research, data mining and big data throughout the business has played a key role in the resurgence of Ford in the past seven years.

When Chief Executive Officer Alan Mulally came to Ford in 2006, he helped to expand and institutionalize data-driven decision-making throughout all aspects of the company.

"Analytics and operations research was a major enabler of our turnaround and our ongoing success as a data-driven company," said Bob Shanks, Ford's executive vice president and chief financial officer. "Receiving the INFORMS Prize is recognition of the significant role and impact of analytics at Ford."

Operations research and statistical control have a long history at Ford, dating back to just after World War II when Henry Ford II hired 10 young veterans of the U.S. Army Air Force's Statistical Control Command.

The group became known as the "Whiz Kids" and included Charles "Tex" Thornton, who later founded Litton Industries; Robert McNamara, who rose to president of Ford before serving as U.S. Secretary of Defense under President John F. Kennedy; and J. "Ed" Lundy, who eventually became Ford's chief financial officer.

The team brought the lessons of organizing wartime logistics for the United States military to the problems of running a huge manufacturing enterprise.

In the early 1980s, Ford again took a leadership position in American industry as one of the first U.S. companies to implement statistical process control methods pioneered by W. Edwards Deming.

"We continue to build on our history of data-driven decision-making," said John Ginder, manager, Systems Analytics and Environmental Sciences. "Throughout the company, we're using data science to create smarter business strategies, make better product decisions, assist dealers to be more successful, and improve customer satisfaction."

Analytics is used widely in diverse applications at Ford, including research, product development, manufacturing, supply chain, marketing and sales, finance, purchasing, information technology, and human resources.

Ford Motor Credit Company, the financing subsidiary of Ford, houses a major center of excellence in analytics. The Global Analytics team, established 20 years ago, developed proprietary scorecards to facilitate consumer and dealer lending and effective account management, and provide sophisticated analysis to support other areas of the business.

The Ford Marketing, Sales and Service Global Lifecycle Analytics team developed a range of models that help determine how to distribute cars to dealers and fleets, establish pricing and project residual values.

The Systems Analytics and Environmental Sciences team harnesses the power of super-computing and advanced mathematics to mine big data, model market trends and optimize decisions.

In the U.S. market, more than 90 percent of vehicle sales come from dealer stock and costs for carrying that inventory can often add up significantly. That makes it critically important for dealers to maintain the right mix of vehicles to maximize sales. Ford's Smart Inventory Management System, known as SIMS, analyzes historical sales and inventory data to generate recommended orders for dealers based on projected future inventory levels and targets.

Just as maintaining inventory is a major expense for dealers, stocking large quantities of parts is costly for factories. Just-in-time delivery of parts to assembly plants dramatically reduces manufacturing costs, and is one example of how Ford has used analytics to improve many facets of the production process, from the plant floor to component and vehicle logistics.

Ford developed the Just-in-time Execution & Distribution Information system, or JEDI, to help schedule the production and delivery of body panels from stamping plants to assembly facilities when they are needed. This minimizes premium shipping and overtime expenses when there is a mismatch between supply and demand for parts.

Saab Unveils New Hybrid

Saab, which was recently purchased by the Chinese subsidiary National Electric Vehicle Sweden, unveiled a new vehicle at the April 2-7 Monaco Car Show.

Slated for mid-June release, Saab NEVS Ab have developed a new hybrid vehicle based on the prior Saab 9.3x.

The all-wheel-drive-platform will be powered by a variety of hybrid direct-injected power units linked to either a six-speed Getrag manual or seven-speed Aisin automatic transmission and limited slip differentials.

The hybrid power units are capable of 310 horsepower and 400 lb.-ft. of torque in Dual Drive Mode in the high-pressure turbocharged-gasoline-electric Aero model and 290 horsepower and 520 lb.-ft. of torque in Dual Drive Mode in the 1.9-liter high-pressure, turbocharged-diesel-electric model.

The low-pressure turbocharged-diesel-electric model will achieve combined economy and emissions figures of 52.7mpg and 121g/km of CO_2 respectively. Victor Muller, CEO of Spyker N.V., and former Chairman and CEO of Saab said, "This is the car that could have saved Saab just a few years ago."

National Electric Vehicle Sweden CEO Kai Johan Jiang sees the new Saab H1x as a way to reenter the U.S. market. "The H1x will focus on lightweight and performance. The American market won't compromise performance for efficiency, so NEVS will provide a car that is excellent in handling, while providing excellent fuel efficiency."