



IHS AUTOMOTIVE

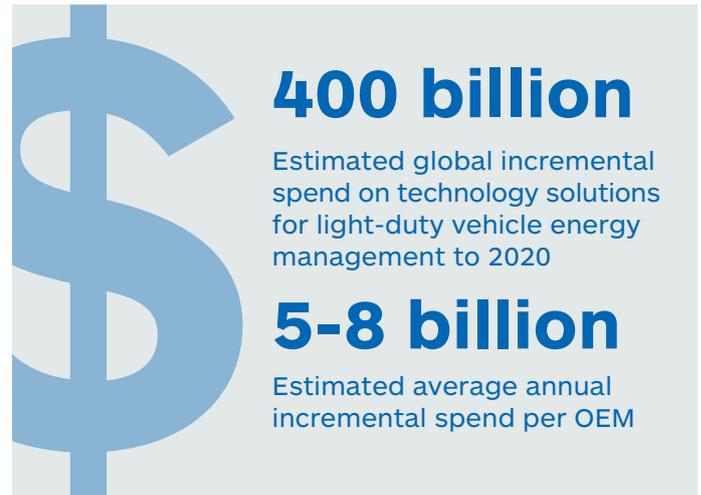
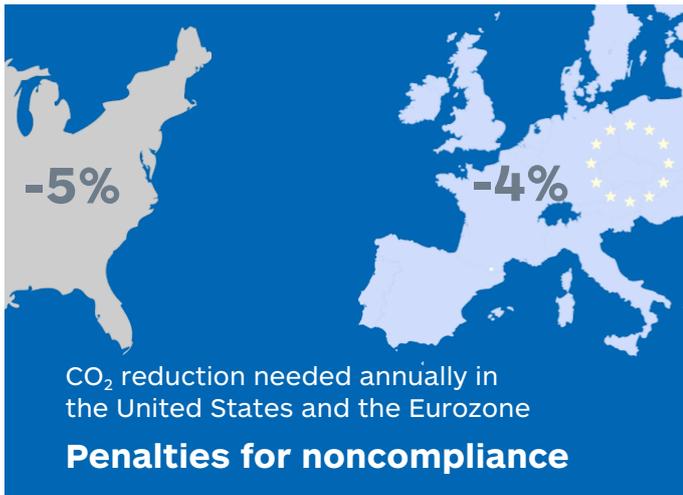
Vehicle Performance and Compliance Monitor (VPaC)

Powered by Novation Analytics

**Understand, Plan, and Balance:
Efficiency, Emissions, Performance + Compliance**



What's at stake?



Brand image as a leader in technological advancements and environmental sustainability

Buyers' perception of vehicle performance, utility & efficiency = **vehicle profitability/ market share**

Balancing global powertrain development remains as polarizing and politically charged as ever. Manufacturers need to navigate with growing urgency an increasingly complex landscape. The result is a mixture of complex decision making and vehicle energy management technology spread-betting.

To balance the politics of regulation with customer demand for fuel efficiency technology, internal OEM and supplier departments will need to come together more tightly than ever before to achieve the "Perfect Compromise" of efficiency, emissions, performance & compliance.

IHS Automotive Vehicle Performance and Compliance Monitor (VPaC), powered by Novation Analytics

Leveraging the industry-leading forecast methodology and deep industry expertise of IHS and a computation core provided by our partner, Novation Analytics, this cloud-based portal offers three core modules:

CO₂ /Fuel Economy

Integrates sales-based powertrain forecasts with fuel consumption and fuel economy & CO₂ regulation parameters.

Vehicle Performance

Enables insight into competitive positioning on the important trade-off between vehicle performance and efficiency.

Vehicle Compliance

Provides an unbiased, physics-based independent outlook on potential OEM compliance gaps, the single biggest area of global automotive R&D investment.

VPaC provides critical insight into the single greatest area of research and development (R&D) in automotive. Starting with a view into OEM fleets and competitive CO₂ performance, VPaC identifies who will strike the best balance between performance and emissions (by brand, segment or model line) and which OEM may face financial penalties. VPaC offers a one-stop-shop for vehicle performance and compliance insight enabling:

Automakers to:

Improve product planning and marketing

- Determine CO₂ and fuel economy for competitors' future vehicles across your segments

Improve product engineering

- Determine the competitive CO₂ and fuel economy targets/benchmarks to which you are designing
- Understand tradeoffs of various technology options to achieve mass reduction and powertrain efficiency—and the resulting competitive impact on vehicle performance

Manage compliance and sustainability

- Determine the total anticipated CO₂ /fuel economy performance across your entire future sales fleet
- Assess the trade-offs of government compliance penalty fees versus potential market sales volume/revenue versus need to purchase CO₂ market credits
- Develop incentive strategies to sell vehicles

Auto suppliers to:

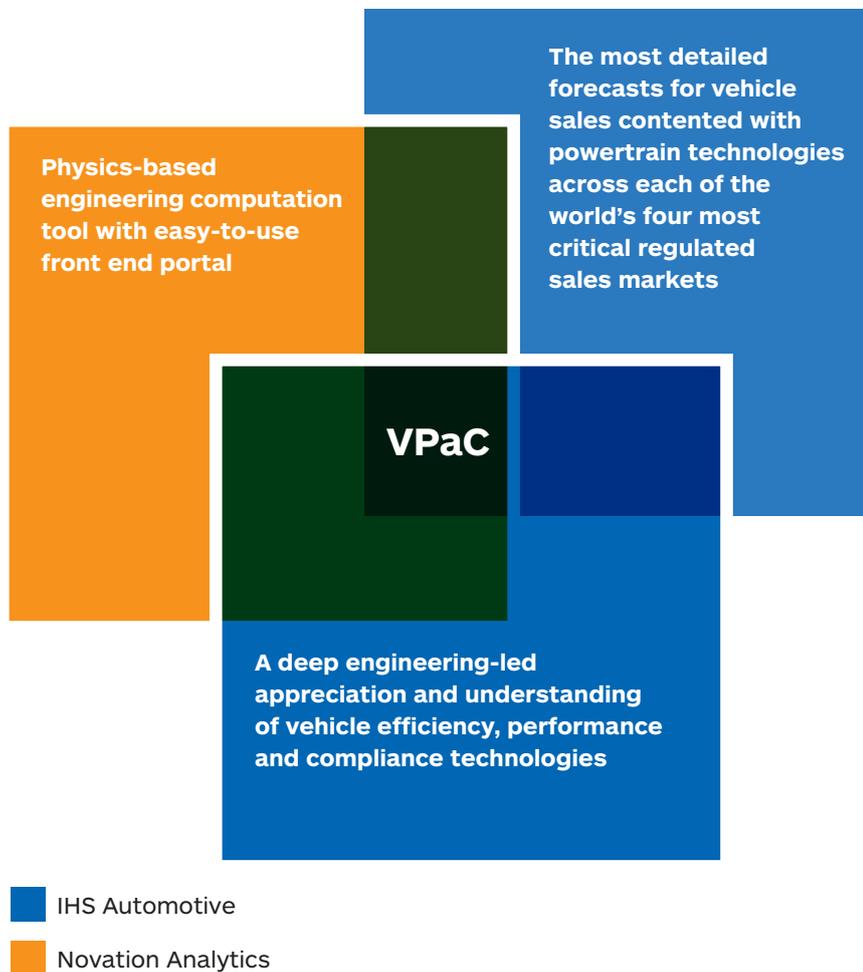
Improve marketing, sales, and R&D

- Target OEMs and vehicle models that need your technology most
- Determine the cost/benefit business case for my technology versus other viable options

“There are strong indications that the Chinese government will usher in a carbon dioxide credit exchange for automakers -- providing what could be a major boost for producers of electric cars. The exchange -- which would require automakers to buy carbon dioxide credits if they fail to meet fuel-economy targets -- also could be a huge relief for automakers that fall short of China's increasingly stringent fuel-efficiency rules.”

**-- Automotive News China
4 June 2015**

IHS Automotive and Novation Analytics have brought together three revolutionary capabilities that will enable you to achieve the perfect compromise between efficiency, emissions, performance and compliance.



Deliverables include

- Access to a dedicated portal containing a range of precomputed analytics, tables, and databases
- Semi-annual subscriptions at the sales market (United States, EU28, Brazil, and China) and module access (CO₂/fuel economy, performance, compliance)
- Projected fuel consumption, tailpipe CO₂ emissions, and acceleration performance for over 36,000 unique vehicle-powertrain combinations
- Over 160 attributes per vehicle-powertrain combination
- Current, plus seven-year forecasts
- Optional twelve-year extension forecast module adds five additional years to the base forecast

ABOUT NOVATION ANALYTICS

Novation Analytics – leading the way in disruptive predictive technology. Our pioneering physics-based algorithms – fueled by data from tens of thousands of vehicles – empower planners and engineers to assess the competition and optimize attributes with breathtaking speed and efficiency. The solutions we deliver enable our clients to advance future designs with previously unimaginable levels of accuracy. At Novation Analytics, we're continually reinventing how data is shaping the vehicles and fleets of tomorrow. For more information about Novation Analytics, please visit www.novationanalytics.com

IHS AUTOMOTIVE

driven by **POLK**



ABOUT IHS AUTOMOTIVE

IHS Automotive offers clients the most comprehensive content and deepest expertise and insight on the automotive industry available anywhere in the world today. With the addition of Polk, IHS Automotive now provides expertise and predictive insight across the entire automotive value chain from product inception—across design and production—to the sales and marketing efforts used to maximize potential in the marketplace. No other source provides a more complete picture of the automotive industry. For more information about IHS Automotive, please visit www.ihs.com/automotive or email automotive@ihs.com.