



IHS Automotive Scenarios Advisory Service

An ongoing scenario planning resource to help organizations create robust, flexible strategies and make informed decisions as they face inevitable future change.



Position Your Organization for Success in an Uncertain Future

In this time of global uncertainty, shifts in the economy, politics, security, and energy resources could have profound implications for future industry structure and corporate strategy worldwide. Organizations need to build dynamic strategies to best position themselves for success.

IHS Automotive Scenarios Advisory Service

This service helps organizations prepare for the future by examining the key forces that will shape the global business environment in the years ahead, and the possible implications for the automotive industry.

At the heart of the service is a set of three distinct scenarios called the **Global Scenarios Framework**. Each scenario provides a qualitative narrative—or storyline—and quantitative analyses addressing possible futures for economic growth and policy, politics, trade, security, technology, the environment, and energy on the world stage to 2030.

Through ongoing quarterly updates, this service helps you:

- Develop strategies
- Test specific decisions against alternative futures
- Monitor signposts
- Identify opportunities for strategic advantage

By incorporating the service into your planning process, you will have better control of your organization's performance in times of change.

Answering Your Critical Questions

The IHS Automotive Scenarios Advisory Service addresses your critical questions about the future of the automotive industry:

- Under different scenarios how will alternative powertrain and propulsion systems—and developments such as advances in battery technology—shape the evolution of the transportation fuels mix?
- How will vehicle emissions policy impact the automotive industry and powertrain developments?
- What factors are needed for widespread adoption of plug-in electric vehicles?
- How will market fundamentals in transportation fuels influence key legislative actions and policy decisions?
- Can transportation fuels policy avoid causing unintended consequences in one market while trying to optimize another?
- What are the environmental impacts of alternative fuels and alternative powertrain technologies?
- How will the new equilibrium in transportation fuels and technologies affect carbon emissions?
- Where are the growth opportunities and how are the potential returns and associated risks influenced by different business environments?

Who Should Use the Service?

Senior Managers

The IHS Automotive Scenarios Advisory Service can help operating executives and senior management think beyond the current assumptions to answer the big questions:

- What is really driving the business?
- Where are we most vulnerable?
- What if our fundamental assumptions are wrong?
- Where are the investment opportunities?

Strategic Planners, Chief Economists, and Analysts

The combination of expansive qualitative thinking and the rigor and feedback of quantitative modeling allows you to:

- Compare internal forecasts against the three IHS scenarios
- Use data to plug into internal models to stress test the company view
- Adopt a framework to test strategic options
- Fill in gaps in your own outlook
- Reveal bias in your company strategy

How Can Your Organization Benefit?

To succeed in an unpredictable business environment you need to anticipate potential crises and consider the ramifications of unexpected events.

- **Enhance the analytical** rigor of your planning, to create robust, flexible strategies that will withstand dramatically different conditions such as changing sales or production trends or powertrain mixes
- **Identify the future risks and rewards** of entering a new sector, a new region or investing in new technologies particularly as they relate to powertrains
- **Understand the interdependencies** of macro-economic drivers, and the automotive and energy industries
- **Harness the collective insight and capabilities of IHS** in a cost-effective format
- **Exchange perspectives** and insights with our experts and your peers at our regular workshops
- **Benchmark** strategic assumptions
- **Follow global long-term megatrends** that will impact your organization's future environment
- **Complement your existing macroeconomic forecasts** by identifying game changers and plans B and C driven by a range of factors
- **Avoid future pitfalls** by recognizing the early signposts that indicate a need for strategic review
- **Use qualitative and quantitative outputs** as valuable inputs into your planning process
- **Use the service as a tool** to quantify and explain risks to executives
- **More effectively assess strategies** and investment portfolios in light of the range of futures that could emerge

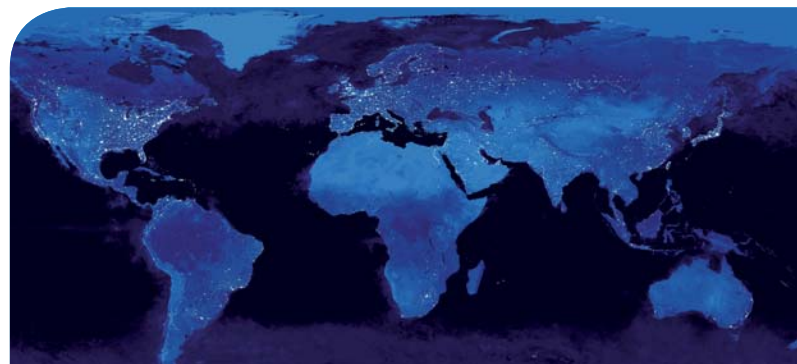
Access the Collective Insight of IHS

The IHS Automotive Scenarios Advisory Service draws from the combined insight and expertise of IHS to provide a broad-based, in-depth understanding of the key issues and challenges facing the global automotive industry.

Additionally we offer an energy industry scenarios service, each built around the same Global Scenarios Framework. All our industry scenario services complement each other, so organizations can often benefit from accessing them simultaneously.

Using the scenarios methodology developed by IHS CERA, we examine a broad range of factors that could create discontinuous change for organizations.

The scenarios team uses an interdisciplinary approach featuring contributions from experts across IHS Global Insight, IHS Automotive, IHS CERA, IHS Herold, IHS Jane's, and IHS Fairplay, as well as external contributors.



Learn More About Scenario Planning

Download our white paper:

**“Questioning the Present to Understand the Future:
The Value of the Scenario Process”**

www.ihsglobalscenarios.com/whitepaper

What Are the Big Questions Shaping the Future?

During a series of workshops in 2009, over 250 IHS clients—representing a broad range of industries and perspectives—identified their most significant uncertainties about the future of the global economy, politics, security, and energy resources. This feedback was distilled into three fundamental “big questions” for global business today:

Will major powers cooperate to enhance global prosperity, or will cooperation fail?

How quickly and to what degree will the world shift to a low-carbon economy?

How successful will major powers be in avoiding a recurrence of economic turbulence and a weakening of the global economy in the coming decade and beyond?

Examining Three Plausible Future Scenarios:

At the heart of the IHS Global Scenarios Framework are three distinct future scenarios that explore alternative outcomes to the “big questions.”



Global Redesign: The IHS Planning Case

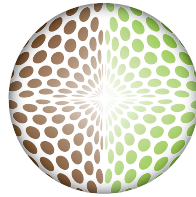
Increase in personal wealth in Asia puts vehicle ownership within reach of significant portions of the Asian population

Urbanization, congestion, and rising carbon emissions targets start to push consumers towards smaller vehicles

Electric vehicles become economically competitive with ICE's by 2020

Anxious transition:

- From G8 to G20
- From high debt to sustainable debt in developed economies
- From fragmented efforts to slow nuclear proliferation to more effective cooperation
- From young to old populations



Metamorphosis

High oil prices early in the scenario spur technology innovation across the energy and automotive space

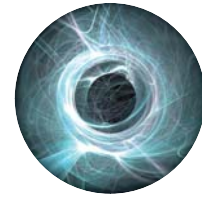
Alternative fuels and vehicles, are seen as options to enhance energy security through diversification of transport fuel demand

Innovation sparks the beginning of a transformation to a low-carbon energy future

Transformation slows economic growth early, then accelerates it late in the scenario period

The great irony: a lower-carbon economy, but less secure because of nuclear proliferation

Effective limits on GHG are only achieved by a group of “like-minded” countries; no effective global scheme



Vortex

Low GDP and oil price negatively impacts vehicle sales

“Lost Decade” in auto technology innovation

A second global economic crisis occurs just a few years after the Great Recession of 2008/09

Confidence in global markets wanes

Political instability grows

Fear and uncertainty force leaders to become more insular and less interested in global cooperation on environmental and economic issues

Long slowdown in global economic growth and innovation

Participation Options and Deliverables

Option 1

Multiclient Study Only

Quantitative

- Detailed data sets of historical and projected data points (to 2030) by scenario, downloadable in Excel format

Qualitative

- Complete scenario narratives of the Global Framework and Automotive Scenario storylines delivered via written report

Online access to research deliverables

Access to IHS Global Scenarios researchers

Option 2

Multiclient Study and Ongoing Advisory Service

Membership includes all deliverables from Option 1 (Multiclient Study), plus:

Invitations for two participants to attend annual workshops

Quantitative: semiannual updates to all data elements

- Detailed sets of historical and projected data points by scenario
- Updates issued every first and third quarter of the calendar year
- Downloadable in Excel format

Qualitative: semiannual updates and monitoring of signposts

- Issued every second and fourth quarter of the calendar year
- Semiannual updates to scenario storylines
- Delivered via web conference and PowerPoint

Two special reports addressing topics determined by IHS Automotive Scenarios clients as having significant implications for automotive markets—delivered biannually

Option 3

Customized Services

Please speak to your account manager about customized and on-site services that can be arranged to support your membership.

Content Overview

Drawing on the collective insight and capabilities of IHS, the IHS Automotive Scenarios Advisory Service provides a uniquely broad and in-depth understanding of the key issues and challenges facing the global automotive industry. The Global Scenarios Framework is the cornerstone of the service.

IHS Automotive IHS CERA IHS Fairplay IHS Global Insight IHS Herold IHS Jane's

Global Scenarios Framework

Key Deliverables:

Contains qualitative analysis and data sets for each of our three scenarios: Global Redesign, Meta and Vortex

Qualitative Analysis

(Scope: global, high-level regional, sector, and major country)

- Geopolitics and Security
- Environment and Climate Change Policy
- Trade Policy
- Demographics
- Macroeconomics
- Technology

Data Set

(Scope: global, high-level regional, sector, and major country)

- CO2 Prices
- Crude Oil Prices
- Population
- Macroeconomic Data

Automotive Scenarios

Key Deliverables:

Contains qualitative analysis and data sets for each of our three scenarios: Global Redesign, Meta and Vortex

Qualitative Analysis

(Scope: global, in-depth regional, sector, and major country for Light Vehicles)

- Summary of Global Trends
- Impact on Automotive Market
- Powertrain Evolution
- Energy Demand / Emissions

Data Set

(Scope: global, in-depth regional, sector, and major country for light duty vehicles)

- Passenger and light commercial vehicle sales forecast by region and major country to 2030 by vehicle powertrain (various forms of gasoline, diesel, PHEVs, EVs, NGVs, and 3 levels of hybrids)
- Fuel demand by fuel type (gasoline, diesel, electricity, natural gas, ethanol, biodiesel)
- Total vehicle miles traveled by region and major country

The IHS Automotive Scenarios Team

The IHS Automotive Scenarios Advisory Service features contributions from experts across IHS.

Lead Advisors

Nariman Behraves IHS Chief Economist

Directing the entire IHS economic forecasting process, Dr. Behraves is responsible for developing the economic outlook and risk analysis for the United States, Europe, Japan, China, and other emerging markets. He oversees the work of over 400 professionals located in North America, Europe, Asia, Latin America, the Middle East, and Africa who cover economic, financial, and political developments in over 200 countries.



Daniel Yergin IHS CERA Chairman

A highly respected authority on international politics, economics, and energy, Dr. Yergin is a Pulitzer Prize winner and recipient of the United States Energy Award for “lifelong achievements in energy and the promotion of international understanding.” He is both a world-recognized author and a business leader as Chairman of IHS CERA (formerly Cambridge Energy Research Associates), one of the world’s leading consulting and research firms in its field.



IHS Automotive Scenarios Project Directors

The IHS Automotive Scenarios Advisory Service is led by a team of experts with a deep and broad knowledge of the automotive industry and its interdependencies with macroeconomic drivers, geopolitical trends, and the impact of shifts in key industries.

Nigel Griffiths Chief Automotive Economist, IHS Automotive

Phil Gott Managing Director, IHS Automotive Consulting

Tiffany Groode, Ph.D Associate Director, Transportation Energy, IHS CERA

James Burkhard Managing Director, IHS CERA

Tom De Vleeschauwer Director, IHS Automotive Consulting

Bill Veno Senior Director of Research, IHS CERA

Advisory Board Members

David Hobbs, IHS CERA

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