

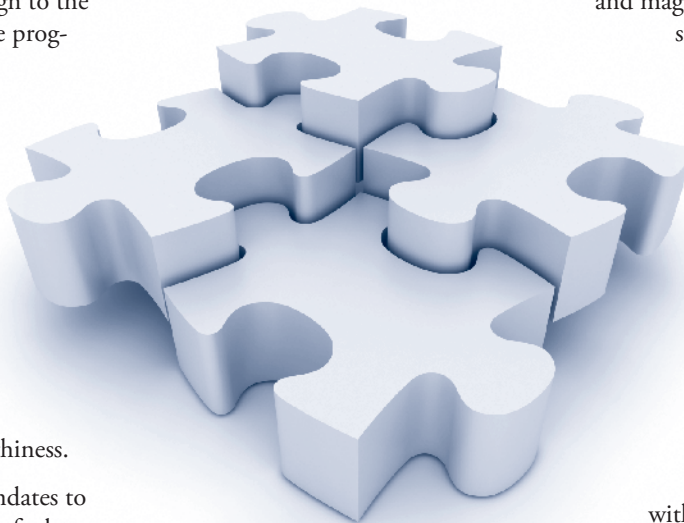
## CAR Launches the Coalition for Automotive Lightweighting Materials

*CAR has announced the formation of the Coalition for Automotive Lightweighting Materials (CALM). The purpose of CALM is to support the cost-effective integration of mixed materials to achieve significant reductions in mass through the collaborative efforts of different material groups and the auto manufacturers.*

Mass reduction and electrification have received a lot of attention as two primary technologies to reduce fuel consumption. Vehicle mass reduction has been occurring since the inception of the automobile, typically by a material substitution approach leading to incremental improvements. New architectures have also helped to reduce mass, such as the change from the body-on-frame design to the unibody design. The progress to reduce mass has been masked by the additional content added to the automobile (such as bigger powertrains, more electronics and other options,) increased size and improved crashworthiness.

Pending federal mandates to *significantly* increase fuel economy are intensifying the attention on mass reduction. The low-risk, incremental and conservative approach favored by the industry is not viable with aggressive mass reduction goals. In the Technology Assessment Report (TAR) published last September by EPA/NHTSA and the California Air Resources Board, it was suggested that vehicle mass be reduced by 25%, and that the cost to achieve this will be less than one-third of prevailing industry estimates.

It is broadly recognized that to achieve mass reduction of 25% or more in today's automobiles, a totally new, mass-optimized design approach is necessary. Further, in order to contain cost, a mixed material design is most likely, and is one that will primarily emphasize high strength steel, aluminum, reinforced composites/plastics, and magnesium.



Even with an optimized design, cost and supply chain issues appear to be limiting factors for the amount of mass that can be reduced. The mixed material vehicle brings integration challenges with joining and corrosion. The materials' industries (steel, aluminum, composites/plastics and magnesium) have conducted significant research and developed innovation around the forming, joining and corrosion resistance for each of their materials. However, the integration of mixed materials has been largely addressed by the automotive manu-

facturers. Since traditional new vehicle development is incremental, the optimized, mixed-material vehicle poses new product development challenges for the manufacturer from the extensive introduction of new technology.

Supported by the Steel Market Development Institute, the American Chemistry Council and the Aluminum Association, CAR announced the formation of the Coalition for Automotive Lightweighting Materials (CALM). Corporate members of these associations offer significant innovation and technology that can help address mass reduction, and respond to this urgent priority. CALM will accelerate the introduction of off-the-shelf innovation to more rapidly achieve aggressive levels of mass reduction.

### For more information please contact:

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### INSIDE CAR:

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# Repurposing Automotive Manufacturing Sites—Opportunities for Communities

As the automotive landscape in the United States has changed during its 100+ year presence in the country, many manufacturing facilities have closed. But in the recent economic downturn, the auto industry went through an accelerated restructuring, downsizing operations and closing even more manufacturing facilities. The unprecedented numbers of idle and shuttered facilities cripple local communities—not only because of the resulting jobs losses, but also due to the scar left on their physical landscapes. It can be a very long process to redevelop automotive industrial sites, avoid blight, and replace some of the jobs once supported by economic activities on the site.

In the recent industry restructuring, many fairly modern facilities that were supported by significant public investments in trans-



portation and utilities infrastructure were closed. However, these closed facilities represent opportunities for communities to reinvent themselves by finding productive, new uses for the properties. The Center for Automotive Research received a grant from U.S. Department of Labor, at the request of the White House Office of Recovery for Auto Communities and Workers, to research

these opportunities. The project includes developing a database of closed and repurposed facilities as well as case study reports on seven communities that have dealt with a plant closure and attempted, both successfully and unsuccessfully, to transition the property.

Automotive property redevelopments bring with them a unique set of challenges, and CAR aims to provide communities with answers, guidance, and best practices to model as they move forward. The study will be released late this fall, and will provide policymakers and communities with information on conditions that lend themselves to repurposing a site as well as strategies that other communities have used successfully.

This study is expected to be released late fall 2011.

## CAR Research Areas

The Center for Automotive Research is involved in the research of significant issues that relate to the future direction of the global automotive industry. CAR's automotive industry research is performed by distinct groups and programs.

- ▣ **Labor & Industry Group**
- ▣ **Manufacturing, Engineering & Technology Group**
- ▣ **Sustainability & Economic Development Strategies Group**
- ▣ **Transportation Systems Analysis Group**

### Profile: Transportation Systems Analysis Group (TSA)



Under the direction of **Director Richard Wallace**, the **Transportation Systems Analysis Group** at CAR is concerned with the broad context within which motor vehicles are operated. Much of this effort focuses on the planning and operation of transportation infrastructure, as well as on interactions between infrastructure, vehicles, and

vehicle operators. Increasingly, this research includes communications technology as a key component of these interactions. In this area, the TSA group is heavily involved in connected vehicle and intelligent transportation systems work. Ultimately, the goals of these efforts are to help both the automotive and transportation industries deploy technologies that enhance safety, improve mobility, contribute to economic vitality, and reduce the environmental consequences of transportation.

### Current and recent TSA research includes:

ITS-Program Office Services—Michigan Department of Transportation

Mobile Computing Applications Platform (MCAP) Phase IV—National Automotive Center, U.S. Department of Defense

Research and Innovative Technology Administration (RITA) Infrastructure Planning Project-Bridge Health Monitoring—U.S. Department of Transportation

ITS-VII Coordination—Michigan Department of Transportation

U.S. Department of Transportation Border Crossing Study—U.S. Department of Transportation

Vehicle Testing and Research Center Business Plan—Michigan International Speedway

### For more information please contact:

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# Conferences & Events

## CAR Management Briefing Seminars 2011...and 2012

CAR's flagship event attracted more than 850 attendees—a considerable increase from 2010. The event marked the first appearance of Sergio Marchionne at the CAR MBS and his extraordinary keynote presentation provided tremendous food-for-thought during the Automotive strategy session. Leadership from BMW, Ford, General Motors, Toyota, Volkswagen and the UAW was also well-represented in addition to executives from Magna, TI Automotive, Bosch, Eaton, Honeywell, Continental and BorgWarner. More than 85 media representatives covered the event.

**Dates for 2012 are August 6–9** at the Grand Traverse Resort & Spa. CAR begins planning almost immediately following the event each year. For topic and speaker suggestions, please contact Lisa Hart, vice president of operations, [lhart@cargroup.org](mailto:lhart@cargroup.org) or 734-929-0465.

## CAR Breakfast Briefing Series

*November 29, 2011*

### The Meaning and Impact of the New UAW–Detroit Three Agreements and the Implications for U.S. Automotive Competitiveness

*VisTaTech Center, Schoolcraft College, 18600 Haggerty Road, Livonia, MI*

Join us for an in-depth analysis of the first UAW–Detroit Three agreements reached in the post-bankruptcy U.S. auto industry. What these agreements mean for the industry and the broader economy?

Dr. Sean McAlinden will provide introductory remarks on the economic impact of the agreements, and will moderate the session. Kristin Dzikczek, director of CAR's Labor and Industry Group, and Art Schwartz, president of Labor and Economics Associates and former General Director, Labor Relations at General Motors, will review the recent UAW–Detroit Three negotiations and discuss implications for overall competitiveness.

## CAR Affiliates Industry Briefing & Dinner

*October 26, 2011*

CAR Affiliates will gather and network at the next CAR Affiliates Industry Update and Networking Dinner, October 26th at The Inn at St. Johns in Plymouth, MI. This event is exclusive to CAR Affiliates and will feature a State of the Industry outlook and review of CAR research activity. For more information please contact Brian Esterberg, Affiliates Program Director at 734-929-0466 or [bestenberg@cargroup.org](mailto:bestenberg@cargroup.org)

### For more information about CAR conferences and events:

[www.cargroup.org](http://www.cargroup.org)

## Automotive Trade Mission: Korea

**Hyundai, Kia, GM Daewoo, SsangYong / November 14–18, 2011**

Two years in the making, the Center for Automotive Research (CAR) is pleased to present a unique trade mission to companies interested in marketing products and services to OE automotive sector companies in South Korea. This mission is offered in partnership with FedEx, the “Korea Auto Parts & Auto-Related Industries” (KOAA) show organizer, the US Department of Commerce Automotive Team, and Automation Alley.

**Where:** South Korea

**What:** Trade mission to Hyundai, Kia, GM Daewoo, SsangYong and KOAA Show

**When:** November 14–18, 2011

**Who:** Suppliers of automotive parts/services, production equipment, and technology, plus community and economic development representatives

### Benefits of Participation:

- ▣ US Embassy briefing on commercial, economic, political environment on arrival
- ▣ 1-on-1 meetings with pre-screened companies selected for each participant
- ▣ Participation in/opportunity to present at automotive importers roundtable in Seoul
- ▣ Business briefing at Hyundai/Kia headquarters in Seoul
- ▣ Factory briefing, tour, presentations at:
  - Hyundai Ulsan plant*
  - GM Daewoo Bupyeong plant*
  - KIA Hwasung plant*
  - SSangYong Motor Co plant*
- ▣ Ribbon cutting ceremony at KOAA & luncheon with Governor Kim Moon Soo
- ▣ Exhibit in the American Business Center at KOAA
- ▣ Staff support at American Business Center during participation in Mission activities
- ▣ Mission participants & US Embassy will jointly host a technical seminar at KOAA
- ▣ High-level business networking reception at residence of US Ambassador to Korea
- ▣ Counseling & follow-up support provided by CAR & US Department of Commerce



### For more information please contact:

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# CAR Affiliates

CAR Affiliate contributors support research, industry education and networking for the greater good of the automotive industry.

Alliance of Automobile Manufacturers  
Aluminum Association  
American Axle & Manufacturing  
American Chemistry Council  
ATX Group  
AUTO21  
BASF  
BorgWarner  
Chevron  
Continental Automotive Systems

Delphi  
Denso  
Ernst & Young  
Ford  
Freudenberg-NOK  
General Motors  
Honda  
IAC  
IBM  
Kostal of America  
KPMG  
LG Chem  
Macomb Community College  
McKinsey & Company  
Michelin

National Automotive Center  
National Renewable Energy Laboratory  
Nissan  
PTC  
Raytheon Professional Services  
RDA Group  
Robert Bosch  
Shainin LLC  
Siemens PLM Software  
Steel Market Development Institute  
Team Australia Automotive  
Toyota  
Ulsan National Institute of Science and Technology

## CAR Affiliates

Affiliates support CAR's independent industry research and education, and enable CAR to respond quickly to inquiries from policy makers, industry and media.

Program membership provides organizations with research results and a variety of networking and collaborative opportunities. Affiliates gain early access to CAR studies, accessibility to CAR's research staff for requested information, and an opportunity to guide CAR's future research, conference activities and more...

- ▶ **Early access to CAR research** and reports before public release
- ▶ **Advisory and thought leadership** role helping to guide CAR on key auto industry issues
- ▶ **Direct access to CAR** research staff
- ▶ **Networking** and collaboration with industry organizations
- ▶ **Industry briefings** and timely research presentations
- ▶ **Opportunity to co-sponsor** events including CAR breakfast briefings
- ▶ Support in responding to industry matters and public inquiries **promoting a sustainable industry**

### For more information contact:

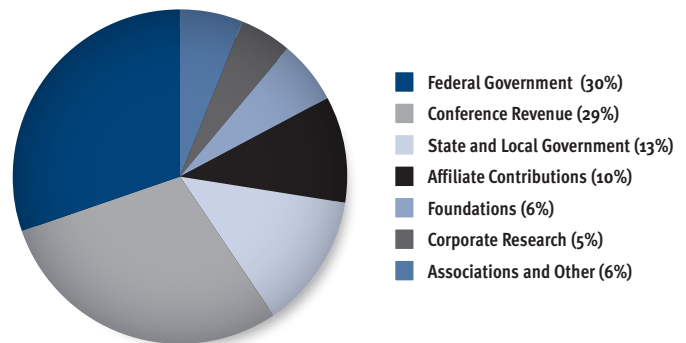
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## 2011 Funding Sources

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For more information on CAR research, including how to develop a project with CAR, contact Dr. Sean McAlinden, CAR's Executive Vice President of Research and Chief Economist at 734.662.1287.

The Center for Automotive Research, a nonprofit organization, is focused on a wide variety of important trends and changes related to the automobile industry and society at the international, federal, state and local levels. CAR conducts industry research, develops new methodologies, forecasts industry trends, advises on public policy, and sponsors multi-stakeholder communication forums.