Examining Gram Strategies, Best Practice Experiences And Approaches To Tackle The Challenges Of Reducing The Cost Of Sourcing, Integrating & Manufacturing Light Weight Materials To Deliver Improved Fuel Economy Commercially Viable Routes For Mass Market Scalability

Comprehensive Per Material Analysis Examining How To Achieve Sufficient Scalability Of Advanced Lightweight Materials Through Technically And Economically Viable Solutions

- **OEM BEST PRACTICE CASE STUDIES:** In-Depth Focus Benchmarking Progress Of Single And Multi-Material Solutions For Cost Effective Lightweighting
- **BODY-IN-WHITE WEIGHT SAVINGS:** Scrutinising Approaches To Balancing Weight Gains From The Body Structure With The Impact On Performance
- **MATERIALS SUPPLY:** Aluminium, Magnesium, Carbon & Alternative Composite Suppliers’ Views On Enabling Widespread Adoption And Steps To Forging A Harmonised Global Supply Chain
- **SCALABILITY:** Introducing Strategic Visions And Technical Solutions For Scaling Up And Implementing High Volume Multi-Material Lightweight Solutions
- **FORMING, TOOLING & JOINING:** Comprehensive Per Material Analysis On Carbon Fibre, Aluminium And Hybrid Materials Analysis To Systematically Improve Forming, Tooling And Joining Techniques For Lightweight Vehicles
- **AUTOMATION:** Extensive Per Material Analysis Of Meeting The Remaining Challenges Of Automating Parts Processing For Sufficient Volume And Mass Market Scalability
- **TECHNOLOGICAL INNOVATION:** Identifying Solutions, Cultivating Collaboration and Capitalising On R&D breakthroughs To Support Reduced Cost Of Manufacturing Lightweight Materials Without Compromising Performance

The several Q&A sessions, as well as the breaks in the exhibition area offered a good chance for discussions and to come or stay in contact with experts and decision makers” Daimler
Dear Colleague,

Would you like to understand how to cost-effectively source, integrate and manufacture lightweight metallic and composite materials into vehicle systems?

If so, we invite you to join us at Global Automotive Lightweight Materials 2012 where BMW, Audi, McLaren, Jaguar Land Rover, TATA Motors, Bugatti, Fiat Auto, Ford and many more will provide you with best practice experiences and their approach to tackling the challenges of sourcing, integrating and manufacturing lightweight materials to deliver improved fuel economy.

Clearly lightweight materials will be a significant factor in meeting increasingly stringent carbon emission regulations, providing customers with improved MPG fuel economy and boosting vehicle OEM gram strategies.

With joint ventures formed by BMW & SGL, Audi & Voith and Daimler & Toray, arguably the world leaders in vehicle lightweighting, it seems adoption of advanced metallic and composite materials is set to dramatically increase. Of course though, it is widely recognised that key challenges of both cost and performance must be tackled to achieve the levels of scalability required for mass market application.

Day One of Global Automotive Lightweight Materials 2012, through a comprehensive case study analysis, will benchmark current approaches and identify remaining barriers through a per material cost benefit analysis managing the trade offs between cost, performance and weight before welcoming Material Suppliers to examine the central concern of enabling a harmonised global supply chain, supporting you in finding pragmatic, cost-justified solutions to achieving scalability.

Day two will showcase the latest developments from research & development institutions to aid stakeholder collaboration and following that, you will witness key vehicle OEMs analysing manufacturing infrastructure concerns, the labour intensive forming and tooling processes and joining of dissimilar materials before closing discussions with the crucial topic of examining how to decrease energy usage and minimise material wastage across the manufacturing cycle.

Designed by your industry peers, Global Automotive Lightweight Materials 2012 this idea generation platform will deliver the latest solutions for a technical and commercially viable lightweight strategy. Browse through the enclosed agenda and visit www.global-automotive-lightweight-materials.com for the fastest way to register.

I look forward to meeting you in April.

Ben Jeffreys
Conference Director, Automotive Innovation

Sponsorship And Exhibition Opportunities At Global Automotive Lightweight Materials 2012

Need to generate new sales leads, engage key decision makers, build new future business relationships in key markets, or simply educate the industry about a new product? Then you need to sponsor or exhibit at Global Automotive Lightweight Materials 2012. Our busy exhibit area is an integral part of the Summit and is of genuine practical value to delegates, who are looking for new solutions and technologies. Becoming a Conference Sponsor will help you position yourself as a market leader and centre of excellence to the key decision makers in the automotive industry.

TO REGISTER: call 44(0)20 7033 4970 email info@london-business-conferences.co.uk www.global-automotive-lightweight-materials.com
Delivering a commercially viable strategy to high volume use of advanced lightweight materials: OEM best practice case studies with cost-benefit per material analysis and material supplier perspectives on achieving scale

Day One
Wednesday 25 April, 2012

08.00 Registration Opens
08.45 Conference Welcome
08.25 Chair’s Opening Remarks

Opening Keynote: Lightweight Materials

Case Study 1: Luxury Market Body-in-White & Vehicle Systems
09.50 Transferring Lessons Learned In Low Volume Production For High Volume Roll Out: A Case Study On Technological & Commercial Lightweight Solutions In The Bugatti Veyron

- Introducing Bugatti’s learning experiences from the Veyron’s monocoque structure
- Overcoming the technical challenges of manufacturing carbon fibre – key lessons learned
- Summarising lessons and experiences from the Bugatti Veyron to offer take-away insights into monocoque structures for medium and high-volume application

Dr. Oliver Schauerer, General Manager, Bugatti

10.20 Question & Answer Session

Small to Medium Production Volumes: Tooling Solutions
10.30 The Evolution Of A Class Carbon Fibre Composite Body Panels From Single Tool Solutions

- Engineering the materials as well as the component
- The perspective of Gurt Automotive as a tier 1 supplier, delivering small to medium production volumes
- Introducing cost appropriate tooling for small and medium production builds
- Integrating composite materials into OEM builds, alongside traditional materials

Ian Cowley, Programme Manager - Automotive, Gurt

10.50 Question & Answer Session

11.00 Morning Refreshments In Exhibition Area

Case Study 2: Single Material Composite View For Body Structures
11.30 Analysing Optimal Fibre Orientation And Laminate Thickness For High Energy Absorption: Harnessing Desired Performance From Low Volume To High Volume Application

- Understanding composites material characteristics for accurate assessment of how they can be best utilised for what you want them to do
- Estimating how to increase the fibre volume fraction and the most optimal fibre alignment strategy to improve part performance
- Developing and validating simulation tools to optimise composite structures for minimum weight
- Highlighting composite materials responses to crash situations to define the required energy absorption characteristics

Paul Brisco, Senior Analyst Engineer, McLaren Automotive

12.00 Question & Answer Session

Case Study 3: Mixed Material Solutions For Body Structures
12.10 Current Application Of Mixed-Material Solutions For Cost Effective Weight Savings Of The Body-In-White: The Material Concept Of The BMW 6 Series

- What mixed-material solutions have shown feasibility for cost effective light weighting of the body-in-white to deliver improved fuel economy to the customer?
- Evaluating high strength steel for structural components and carbon fibre for non-structural components to deliver promising crash impact resistance results
- How can we enable accurate prediction of crash modelling and crash behaviour of composites to ensure structural performance?
- To what extent are current simulation models applicable to composites?
- Understanding the complex joining, tooling and corrosion demands of a mixed-material body-in-white structures
- Identifying a solution to the issues of joining metallic to composites examining thermal responses and impact on choice of composites
- Benchmarking progress towards mass market application and assessing pragmatic solutions to meet the remaining challenges enabling advantageous weight benefits within a commercially viable cost

Dr. Markus Pfestorf, Manager Material Concepts For Body-In-White Construction, BMW

12.40 Question & Answer Session

12.50 Networking Lunch Break In Exhibition Area

Case Study 4: Steel and Aluminium Further Weight Savings
1.50 Considering The Future Of Steel And Aluminium In Terms Of Vehicle Body Lightweight: How Realistic Is Further Weight Savings?

- Highlighting recent advances in steel technology that could provide cost effective weight savings within existing framework – will this rival the weight aluminium body-in-white structures?
- Determining future technology developments as a catalyst for extracting further mass from the vehicle – what are the expected timeframes of introduction and costs associated with new and innovative technology?
- Evaluating the opportunities for a multi-material steel & aluminium body-in-white to display cost & weight results
- Introducing software optimisation as a tool for extracting further weight from future steel body-in-white structures

Simon Black, Senior Manager Body Structures, Jaguar Land Rover

Case Study 5: UHSS Steels And Aluminium
2.10 Fiat’s Perspective On Automotive Application To Drive Cost Competitive High Volume Adoption Of UHSS Steels And Aluminium

- Examining various application of UHSS steels or aluminium to increase understanding for automotive functions and usage
- Introducing smart material experience and knowledge to offer insight into front crash-box system developments
- Analysing recent smart material advances such as press hardened steel parts to capitalise on new material technology for weight reduction

Rosanna Serra, Group Materials Lab Director, Fiat

2.30 Shared Question & Answer Session

Material Suppliers’ Panel
4.30 Showcasing Suppliers’ Views On The Most Commercially Viable Routes To Market Per Material To Eliminate The Supply Issue Preventing Integration Of Lightweight Materials For High Volume

- Suppliers views on cost projections and capability for large series production
- When realistically can each material be available in quantity?
- What is being done to secure supply?
- What is currently being done to eliminate the lack of materials and competing demands of the aerospace industry?
- How can bottle necks be pragmatically solved in a commercially viable way for all stakeholders?

Dr. Jiro Sadanobu, General Manager, Teijin Daniel Juberia, Director Automotive Sales & Marketing, Novolis Europe Alex Markin, Managing Director, International Magnesium Group

5.15 Conclusions, Comparisons And Key Take-Aways To Drive Forward A Harmonised Supply Chain

Big Picture Vision: Enabling Cost Effective Scalability Of Multi-Material Lightweight Solutions
5.30 The Vision For Scaling Up And Implementing High Volume Multi-Material Lightweight Solutions: Comparative Cost-Benefit Analysis Of Manufacturing Processing

- Evaluating how lightweight composite and metallic materials can be integrated into a high volume application
- Understanding the necessary investments required to deliver an automated and highly efficient manufacturing process
- Analysing how to decrease production time to improve cost per part ratios
- Assessing strategies to indicate plant investments required to facilitate high volume production

5.50 Extended Question & Answer Discussion

6.00 Chair’s Closing Remarks

6.10 – 7.10 Evening Networking Cocktail Reception

To Register: Call 44(0)20 7033 4970 Email info@london-business-conferences.co.uk www.global-automotive-lightweight-materials.com
UNDERTAKING A COMPREHENSIVE MANUFACTURING CYCLE ANALYSIS TO INITIATE AUTOMATION & INCREASE FORMING, TOOLING & JOINING QUALITY TO GUARANTEE PART PERFORMANCE & DELIVER COST EFFICIENCIES

MANUFACTURING PROCESSING: EVALUATING THE MANUFACTURABILITY AND ASSEMBLY COSTS ASSOCIATED WITH ALUMINIUM, MAGNESIUM, CARBON FIBRE AND ALTERNATIVE COMPOSITES TO OFFSET SET REMAINING CHALLENGES AND GENERATE A REALISTIC FUTURE STRATEGY FOR HIGH VOLUME PRODUCTION

AUTOMATION

10.30 – 12.00 Assessing The Practicality Of Automating Metallic And Composite Parts Processing To Enable Sufficient Volume And Scalability For Mass Market: Per Material Comparison

10.30 Session A: Providing Automation For Aluminium To Enable An Economical Alternative To Steel
• Summarising recent aluminium automation developments and cost estimates to predict the material’s future applicability as a mass market contender for body in white structures
• Evaluating aluminium as the ‘short-term’ scalable lightweighting solution for body in white structures — how significant are the remaining barriers to mass market adoption and what is the vision for tackling these?
• Contemplating the scalability of aluminium to real current high strength steel manufacturing times and cost per part

10.50 Session B: Taking Forward Automation Of Magnesium
• Identifying previous automation of high-volume metallic manufacturing accomplishments to reveal successful part production scaling
• Forecasting investment levels and payback period to develop automated processing for magnesium
• Key avenues and areas of future technological development that could produce a commercially viable solution for widespread adoption of magnesium

11.20 Session C: Automating Manufacturing Processes For Carbon Fibre
• What are the key bottlenecks preventing automation of carbon fibre parts processing? Can these be pragmatically countered in a commercially viable timeframe?
• What type of technology would be necessary to allow the efficient processing of carbon fibre for high volume?
• How feasible are the cost projections to enable automation of manufacturing processes suitable for carbon fibre processing?
• Assessing realistic solutions to both technically enable automation, and strategically in terms of cost effectiveness
• How could mass-market volume manufacturing impact on carbon fibre composite part quality?

11.50 Networking Lunch Served In Exhibition Showcase Area

DESIGN CONSIDERATIONS

2.00 Cost-Effective Design Considerations For Lightweight Automobiles With Fibre Reinforced Polymers
• Understanding the importance of fibre reinforced polymers when designing lightweight automobiles
• Highlighting key challenges in designing automobiles with the fibre reinforced polymers
• Reviewing a current status of characterization of fibre reinforced polymers
• Evaluating how to model the fibre reinforced polymer by using predictive tools in design

4.20 Factors Influencing CO2 Emissions In Future Cars, The End Of Life Vehicle Directive & The Resulting Requirements For Lightweight Materials
• Summarising the mixed-materials used in today’s cars
• Discussing the influences of the energy mix used for conventional and electric drives
• Summarising the mixed-materials used in today’s cars
• Summarising the end of life vehicle directive and the resulting requirements for lightweight materials

5.30 Chair’s Closing Remarks & Conference Close

TO REGISTRER: call 44(0)20 7033 4970 email info@london-business-conferences.co.uk www.global-automotive-lightweight-materials.com
DEMONSTRATE THOUGHT LEADERSHIP

Advanced Lightweight Materials for the automotive sector is a growing area of technological development. You may be pioneering these advances, but do your customers know what differentiates you from your competitors? Use targeted, editorially reviewed keynotes and case studies to demonstrate thought leadership to your target audience.

RAISE BRAND AWARENESS AND INCREASE YOUR PROFILE

Any solutions selected by Vehicle OEMs must be subjected to careful comparative cost-benefit analysis. Of course automakers take into account, profile, credibility and market leadership when selecting suppliers to support, their lightweighting strategies. Your organisation must be at the forefront when these decisions are made. Cement your leadership position with targeted branding and profiling campaigns directed at the leading Vehicle OEMs.

MEET AND NETWORK WITH DECISION MAKERS

Thought leadership, branding and profiling are converted into contracts through extensive face-to-face relationship building. As a dedicated event to Lightweight Materials, this intimate forum enables you to meet specific job titles in one place at one time, giving you the best possible chance of influencing key decision makers.

To secure your sponsorship or to discuss further, please contact Steve Thomas on 44 (0)20 7033 4970 or email steve@london-business-conferences.co.uk

VENUE INFORMATION

The Summit will be held at the Business Design Centre
52 Upper Street
London
N1 0QH
+44 (0)207 288 6272
www.businessdesigncentre.co.uk

Situated in fashionable Islington, the Business Design Centre is London’s most stylish exhibition centre in the UK. Opened 20 years ago in 1986, and formerly the Royal Agricultural Hall, the building was rescued from demolition in 1981 by entrepreneur Sam Morris and was fully restored and re-opened as the UK’s first integrated trade, exhibition and conference complex.
I would like to register the delegate(s) below for the 2 day conference GLOBAL AUTOMOTIVE LIGHTWEIGHT MATERIALS

Delegate 1

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Organization</th>
<th>Address</th>
<th>Country</th>
<th>Zip/Postal Code</th>
<th>Telephone</th>
<th>Fax</th>
<th>Email</th>
<th>Signature</th>
</tr>
</thead>
</table>

Delegate 2

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Organization</th>
<th>Address</th>
<th>Country</th>
<th>Zip/Postal Code</th>
<th>Telephone</th>
<th>Fax</th>
<th>Email</th>
<th>Signature</th>
</tr>
</thead>
</table>

DELEGATE RATES

We have team discounts so you can involve your whole organization or team

DELEGATE FEES  (Guests are responsible for their own travel and accommodation arrangements)

<table>
<thead>
<tr>
<th></th>
<th>Standard Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Day Conference</td>
<td>£1099 + VAT</td>
</tr>
<tr>
<td>I would like to order the presentations on CD, including audio files</td>
<td>£299 + VAT</td>
</tr>
</tbody>
</table>

PAYMENT

Payment must be received in full prior to the event.

- [ ] Check
- [ ] Payment by Wire Transfer
- [ ] Credit Card

For Check:
I enclose a cheque in UK Pounds Sterling payable to London Business Conferences for £

For Payment by Wire Transfer:
A copy of the bank transfer document should be attached to your registration form so appropriate allocation of funds can be made to your registration.

Bank: Barclays Bank  
Account Name: London Business Conferences  
Account number: 60827312  
Sort Code: 209821  
IBAN: GB81BARC20982160827312  
SWIFTBIC: BARCGB22

For Credit Card:
Please charge my  
- [ ] Visa  
- [ ] American Express  
- [ ] Mastercard

Amount £  
Card number: __________  
Expiry date: __________  
Security Code / CVV (required)  
Signature of card holder

TO REGISTER:  
call +44 (0)20 7033 4970  
email info@london-business-conferences.co.uk  
www.global-automotive-lightweight-materials.com

Terms and Conditions
The conference is being organised by London Business Conferences, a limited liability company formed under English company law and registered in the UK no. 5090859. Cancellations received one calendar month (or the previous working day whichever is the earliest) before the event will be eligible for a refund less £75 administration fee. Cancellations must be made in writing. After that point no refund can be made. If you are unable to attend, no refund can be given but you may nominate a colleague to take your place.

London Business Conferences reserves the right to alter or cancel the speakers or program. Receipt of this booking form, inclusive of or exclusive of payment constitutes formal agreement to attend and acceptance of the terms and conditions stated. If you are claiming the early booking discount this may not be used in conjunction with other discounts advertised elsewhere. We would like to keep you informed of other London Business Conferences products and services. This will be carried out in accordance with the Data Protection Act. Please write to the Head of Marketing, London Business Conferences at the address below if you specifically do not want to receive this information.

London Business Conferences, First Floor 44-46, New Inn Yard, London EC2A 3EY, UK. London Business Conferences will not accept liability for any individual transport delays and in such circumstances the normal cancellation restrictions apply.

London Business Conferences Limited, Registered in England No. 5090859

TO REGISTER:  
call +44 (0)20 7033 4970  
email info@london-business-conferences.co.uk  
www.global-automotive-lightweight-materials.com