

## SAE Green Engineering and Technology Transfer Workshop Survey Summary

Following the conclusion of the workshop, participants were asked to complete a survey not only about the workshop, but about their views on green engineering, technology transfer and “green practices.” About half of the 70 participants responded to the survey. The full results will be available online in the near future. The following is a summary of the survey results.

1. What are your views on a green engineering and technology transfer center? The concept of a center was well received, however, there are items that need further discussion. The first item would be to define green and what green means to the automotive sector. Second, identify a mission, scope, goals and deliverables for a center. It was suggested that a center would be most useful if it does not reaffirm the status quo, but focuses on hazard reduction, encourages continuous improvement and cutting edge design changes to make the industry a global leader. A critical issue would be obtaining support from the global Original Equipment Manufacturers (OEMs) community.
2. What areas should be included in a center? List the areas. In general, without first establishing a mission and vision for a center, all areas covered by the workshop were recommended, with standards, materials, research and development and education emphasized. Pre-competitive research and development was highlighted as important so that OEMs could more easily work together.
3. Could a center facilitate industry-academic –government partnerships? All respondents agreed that a center could bring together these important groups to create partnerships that focus on green industry issues. However, a high priority will be to obtain OEM support.
4. Could a center foster green technology in the Automotive Industry? All respondents agreed that a center could foster green technology in the automotive industry. There was a wide range of responses as to how, with OEM involvement seen as critical. A few respondents suggested that a center not be industry-specific. Other issues identified for a center for the automotive industry was the importance of including purchasing agents to support green technology, sharing best practices, and preventing Intellectual Property (IP) issues from becoming an obstacle. Through collaboration, standardization and anticipation of regulations, a center could provide a forum for communication and exchange of ideas.
5. What is the single most important action that would help advance the implementation of green chemistry and green engineering education? Several suggestions were made, including defining green chemistry and engineering for the automotive industry, requiring green chemistry and engineering training courses at universities, defining metrics for the benefits of green technology, finding the right stakeholders, gaining OEM and supply chain support. Determining funding for a center would be a vital factor.

6. What is the most important aspect of green to you? All four areas of discussion from the workshop were rated important, with Materials and R&D leading the way. In addition to the workshop areas, business development and jobs were listed as important.

	1 <sup>st</sup> Choice	2 <sup>nd</sup> Choice	3 <sup>rd</sup> Choice	4 <sup>th</sup> Choice
Materials and R&D	9	2	1	4
Technology Transfer	6	7	0	1
Education	5	2	4	4
Principles, Standards and Regulatory Trends	5	1	7	3

7. Does your organization currently make use of green practices or are you looking for further information on how to become green? Over 70% of the respondents answered yes this question, indicating that many companies have some of green initiatives implemented within their organization. However, many are still looking for more ways to be green and cost effective.
8. What new skills or knowledge do you need to perform green efforts/activities? While a wide range of responses were made to this question, the most consistent response was education, whether employee education, how to provide cost effective alternatives, how to evaluate new chemical impacts, how use tools such as life cycle analysis, or how environmental regulations impact vehicle materials.
9. What barriers, if any, stand in the way of implementing green practices at your organization? Would a center help your organization be successful? A wide range of responses were made to this question about barriers, but the most frequent response concerned cost and the perception that green always costs more. A center could show examples of successes and expand green efforts. There is a lack of understanding from leadership about the benefits of a green approach and a center might be able to provide more people and businesses information that they currently do not have.
10. Any additional comments regarding this workshop? Respondents indicated that workshop provided an excellent exchange of ideas, bringing a diversity of presenters and key industry people together. Respondents stressed that critical steps are to define what green means, define the scope and goals for a center, and gain stakeholder buy-in and commitment. Next steps should be implemented quickly to maintain momentum.

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