Plastics:

- Creating New Material Technologies
- Enabling Future Automotive Innovations
- Sustainable Solutions

https://www.youtube.com/embed/B6RyBH51VQ?rel=0
Advanced Plastics

Weight savings, parts consolidation
Improved safety helps protect occupants
Unique, flexible vehicle designs
VISION:

By 2030, the automotive industry and society will recognize plastics and polymer composites as preferred material solutions.
Roadmap Priority Actions

1. Technology Development Center
2. Generic Cost Models
3. Material Properties Database
4. Design Guidelines
5. Material and Component Models
6. High-Speed Manufacturing Center
7. Joining Techniques
8. Engineered Materials with Improved Properties
9. Education and Training
Technology Solutions

Needs:
• Pre-competitive tech center

Solutions:
• Institute for Advanced Composites Manufacturing Innovation (IACMI)
  ○ Technology, Tooling and Training
Needs:
• Advance High Speed Manufacturing
• Reduce / Eliminate Retooling

Solutions:
• IACMI
• Fiber Orientation Detection Tool - ORNL
• Design Without Retooling
• 3D Printing for Tooling
Education and Training

Needs:
• Training classes
• Degree programs at universities

Solutions:
• CCS
• Kettering
• New degree programs
• Benchmarking globally, e.g. BMW

Lightweight seating foam. Courtesy of BASF
The Future Is Now: Electric Powertrains
The Future Is Now: 3-D Printing
Item 4: 48.7 mpg Car

Carbon fiber demand to reach $28 billion by 2024 - 49.7 mpg

The Future Is Now: Autonomous Vehicles
Thank you!

Learn More at [www.plastics-car.com](http://www.plastics-car.com)