



**GVPM Track & Suspension Overview**  
**Mr. Jason Alef & Mr. Geoff Bossio**

11 Aug 2011

# Report Documentation Page

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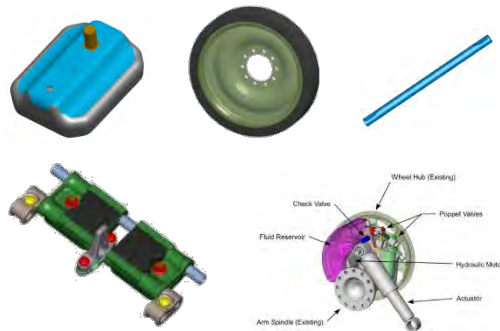
# Track & Suspension

## Challenges we have:

- Delivering lightweight, survivable, durable track systems with common architectures
- Modular advanced suspension systems, with energy regeneration, and Electronic Stability Control
- Durable, fire resistant elastomer components

## Solutions we are investigating:

Reduce running gear system level weights,  
reduce rolling resistance of track



Improve platform stability and  
mobility across all terrain conditions



Utilize Elastomer Improvement  
Laboratory to formulate and test  
advanced track materials

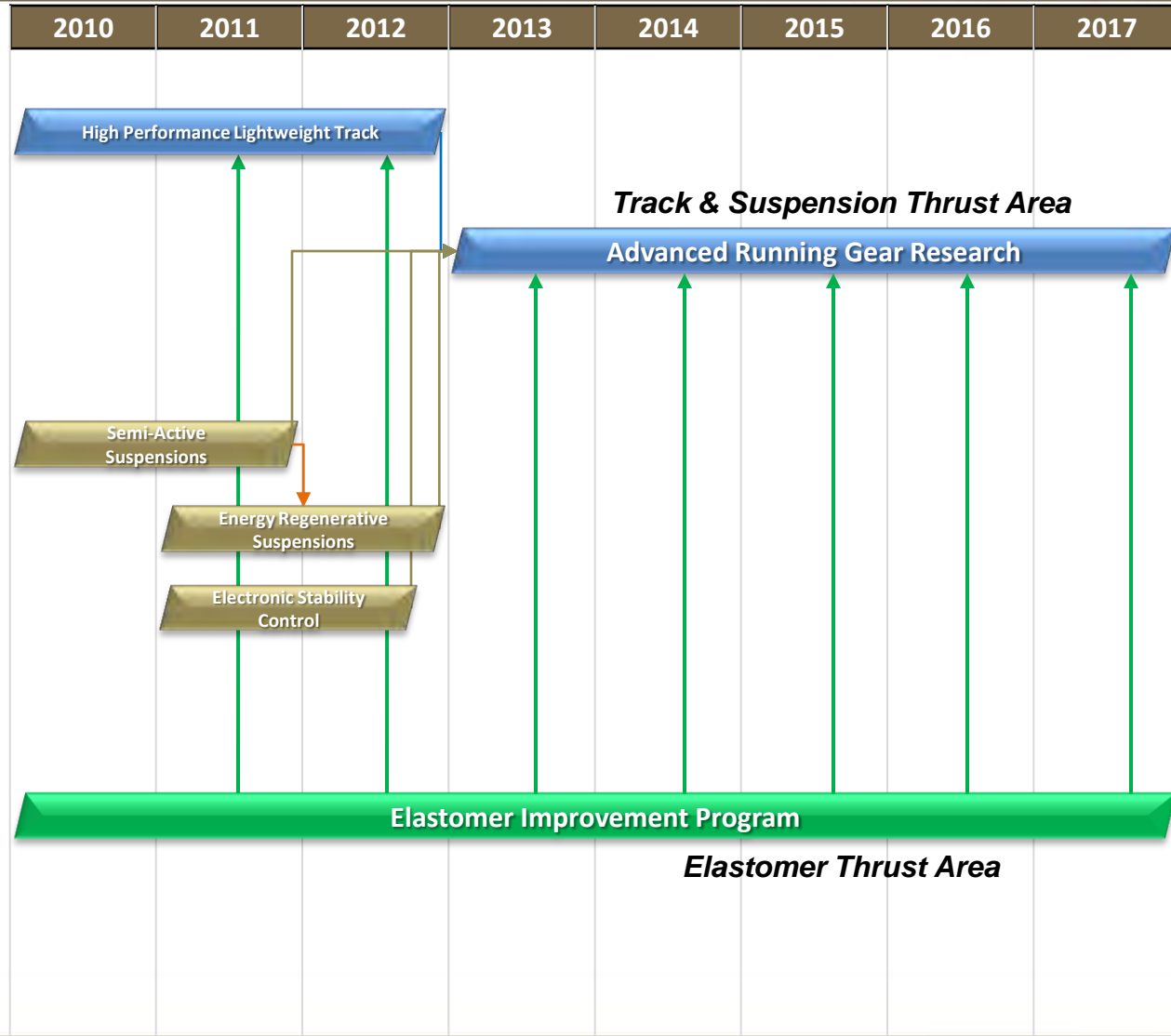


## Where we need your help:

- Identify opportunities to reduce track system weight, reduce rolling resistance, and optimize presently fielded designs for commonality
- Increase efficiencies of energy regenerative suspensions, and integrate advanced preview sensing to suspension control algorithms
- Develop fire resistant, durable elastomers, advance the integration of nano materials in elastomer formulations

# Projects Current & Future

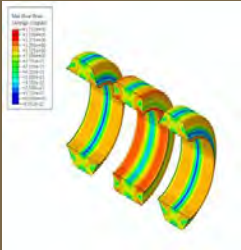
- Reduce track system weight, increase off-road stability and performance
- Develop common track architectures, reduce rolling resistance, increase platform agility, stability and mobility
- Increase track system durability and fire resistance



# Laboratory Capability Current & Future

**GVSETS**  
GROUND VEHICLE SYSTEMS ENGINEERING AND TECHNOLOGY SYMPOSIUM

## Current Capability



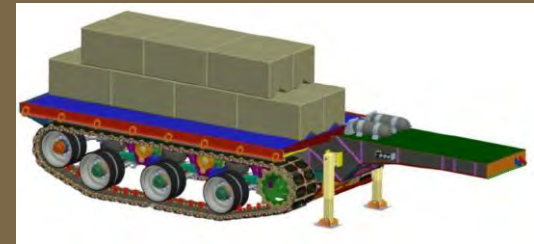
### • EIP Laboratory

- Characterization / Performance Testing
- Life Cycle Testing
- Failure Analysis

**EIP**  
Elastomer Improvement  
Program

**Elastomer  
Roadmap**

## Future Capability



### • EIP Laboratory +

- Full Pitch Test Machine
- Trailer Test Rig
- Elastomer Material Formulation
- Material → Component → System Testing

# Track & Suspension Technology Thrusts

# GVSETS

GROUND VEHICLE SYSTEMS ENGINEERING AND TECHNOLOGY SYMPOSIUM

## FOCUS ON THE SYSTEM

