



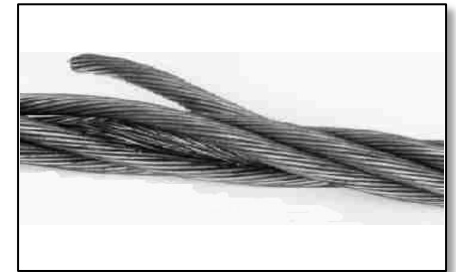
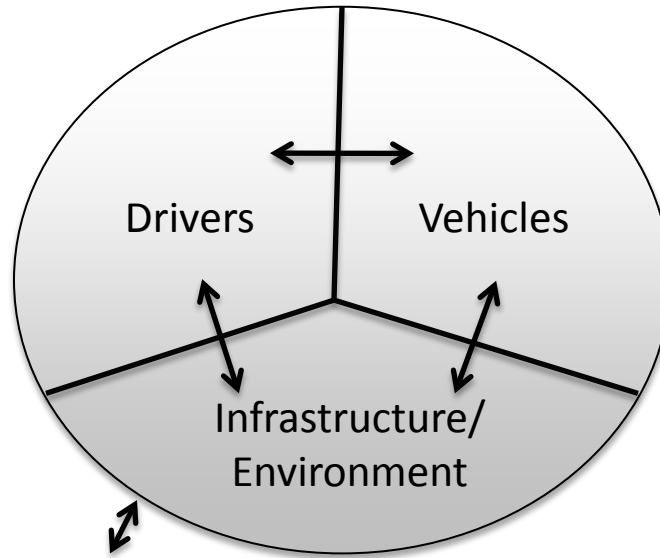
# Human Factors in Transportation Safety

Greg Fitch, Ph.D.

Virginia Tech Transportation Institute



# Transportation System Design



Organizational  
Design



# Naturalistic Driving Research





78% of crashes involve inattention



# Cell Phone Distraction

Subtask	Risk Rate Ratio
Visual-Manual	<b>2.93*</b>
Call-related	<b>3.34*</b>
Text-related	<b>2.12*</b>
Talking/Listening	0.84
Cell Phone Use – Collapsed	1.32
HH Cell Phone Use (Collapsed)	<b>1.73*</b>
PHF Cell Phone Use (Collapsed)	1.06
IHF Cell Phone Use (Collapsed)	0.57



Front      FwD +0.05      LAT -0.04      Time -8.00      26 MPH GPS      Rear



Front

FWD -0.04

LAT +0.06

Time -10.00

Rear



# Collision Avoidance Systems







# Collision Avoidance Systems





# Automated Vehicles





# Automated Vehicles

- Must not create new driver errors
- Required Research
  - Transferring control from vehicle to user
  - Meeting driver expectations
  - Identifying and preventing misuse
  - Driver adjustability



# Questions

