

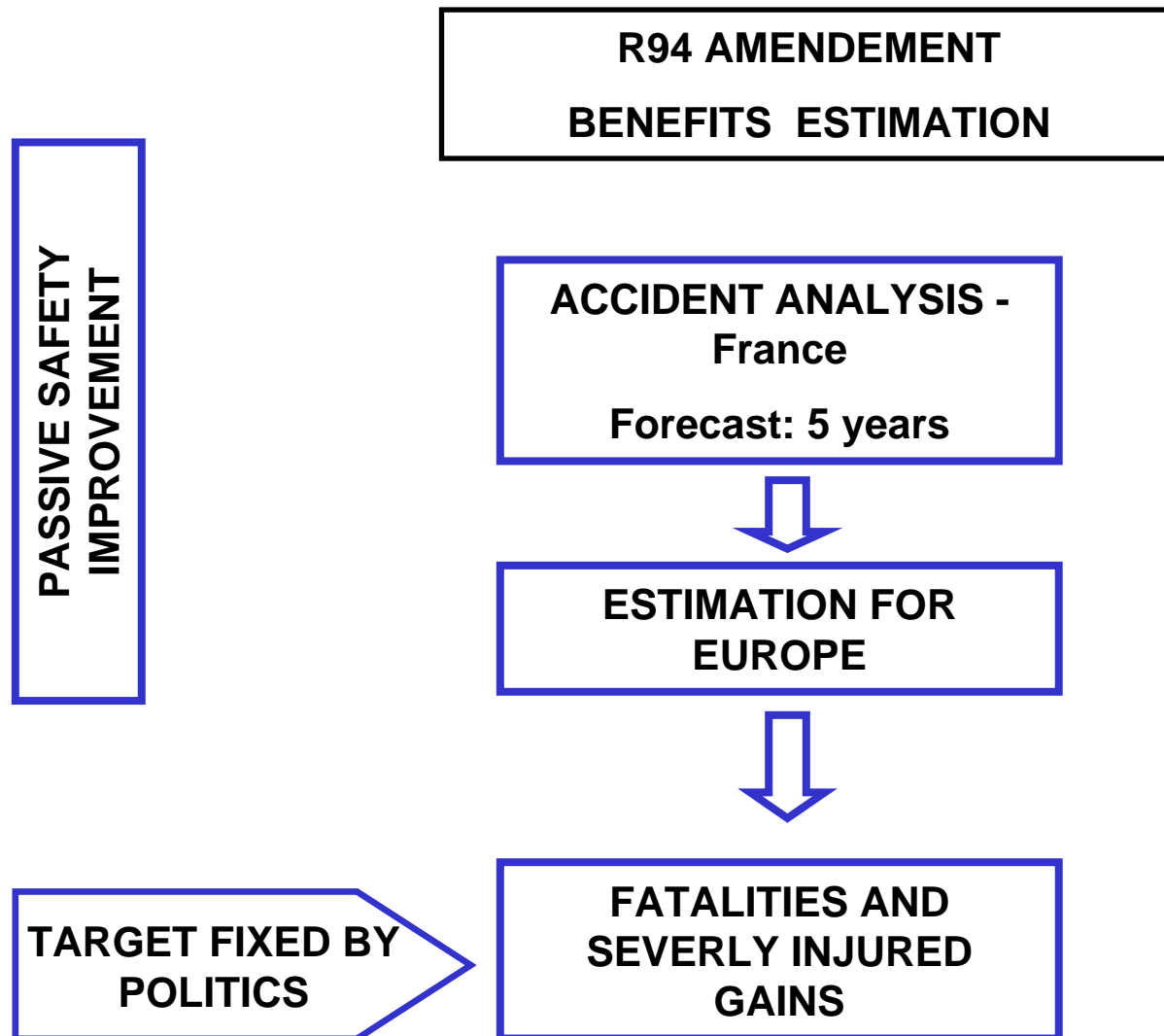
R94 AMENDEMENT BENEFITS

APPROACH

French Experts

May 2009

1. Possible benefits (passive safety approach)
2. Parameters that influenced accidents data
3. Methodology to improve the current situation



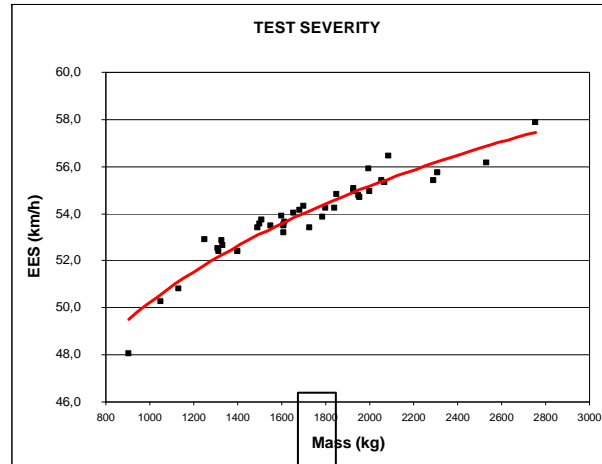
PARAMETERS THAT INFLUENCED FRONT FORCE DEFORMATION



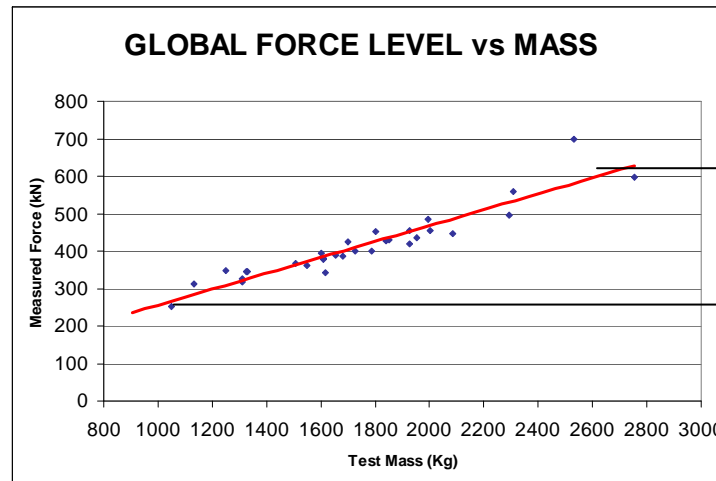
DIFFERENT MASS / SIZE



R94 TEST SEVERITY



SAME PERFORMANCE REQUIRED (intrusion and dummies)



300 kN
force
difference!

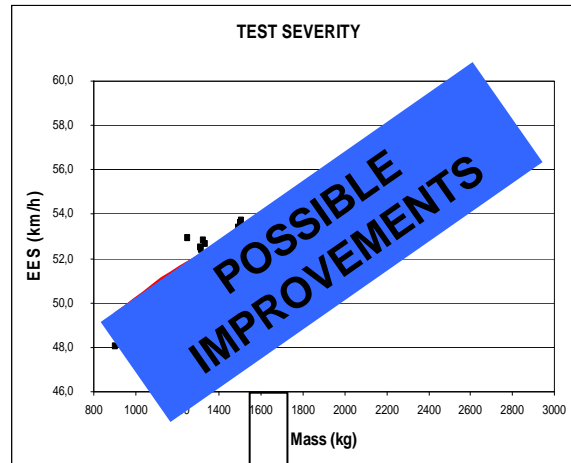
⇒ IMPOSSIBLE TO REACH FORCE MATCHING



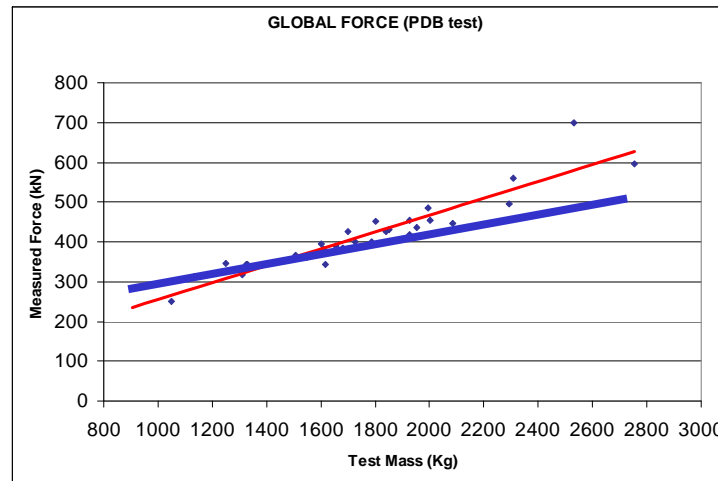
DIFFERENT MASS / SIZE



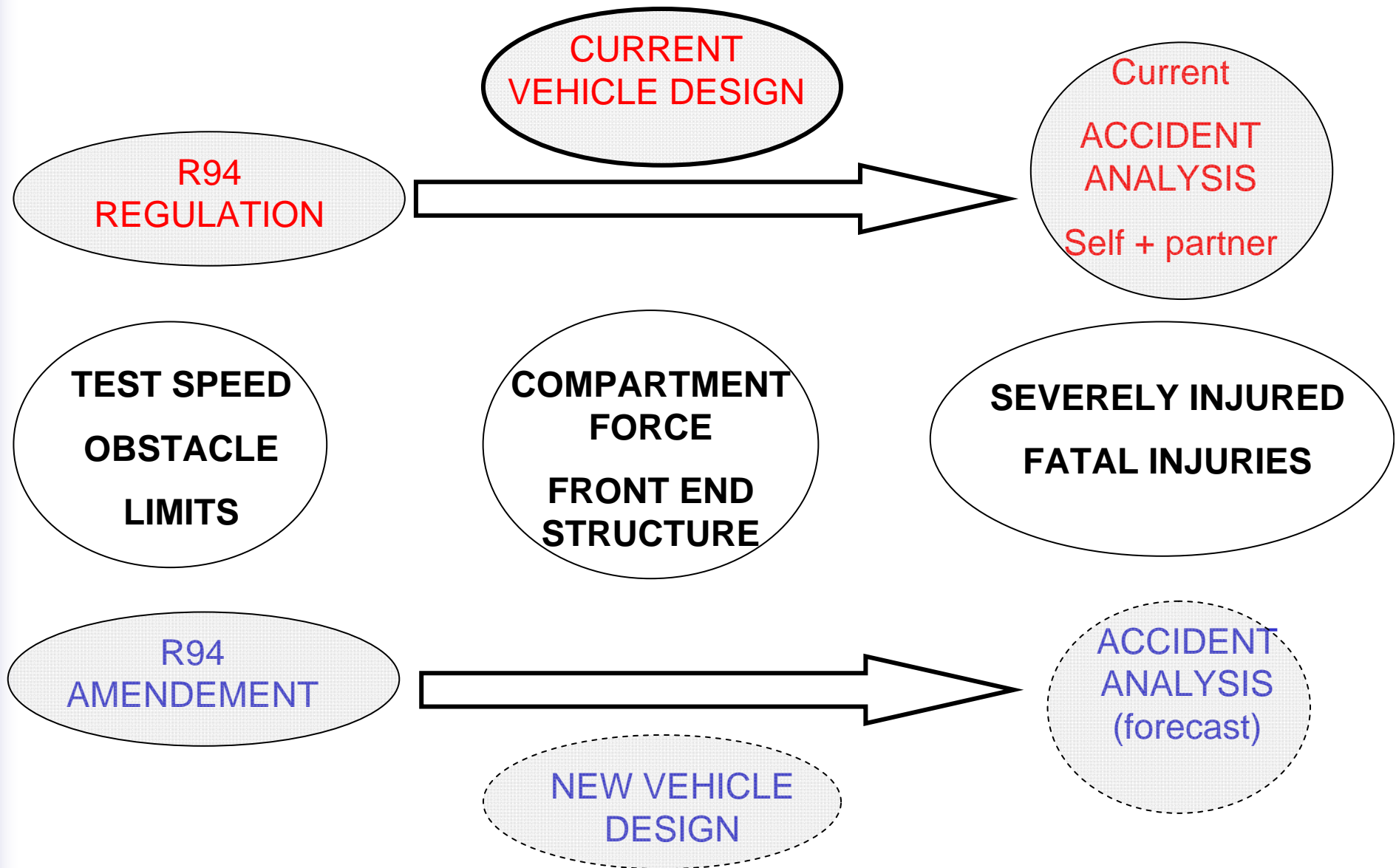
R94 TEST SEVERITY

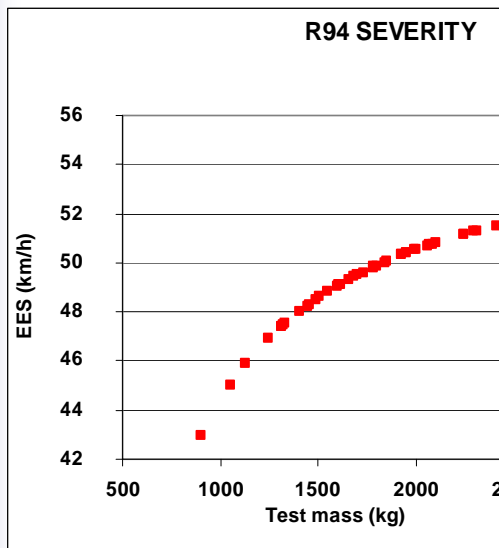


SAME PERFORMANCE REQUIRED

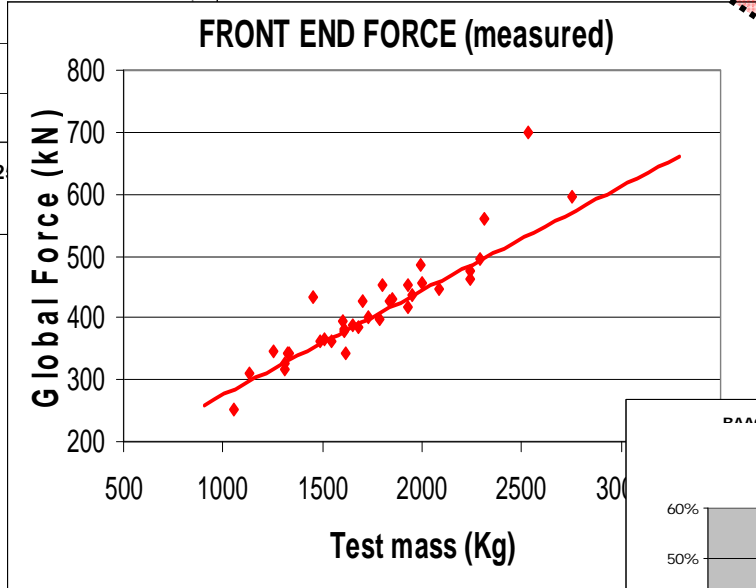


⇒ POSSIBILITY TO IMPROVE FORCE MATCHING



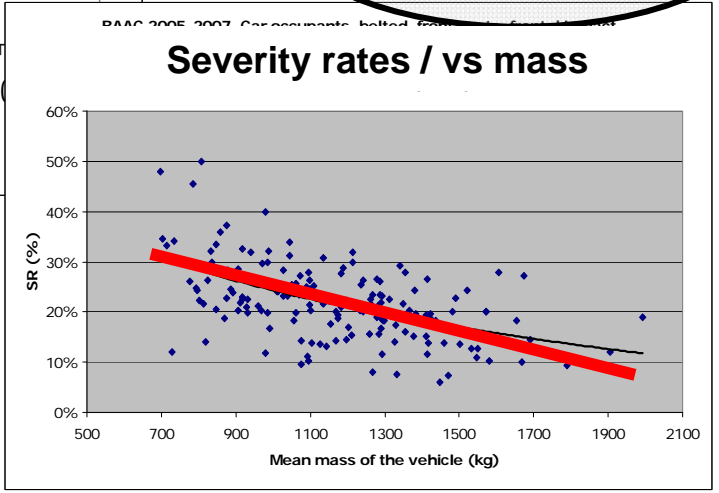


**R94
REGULATION**



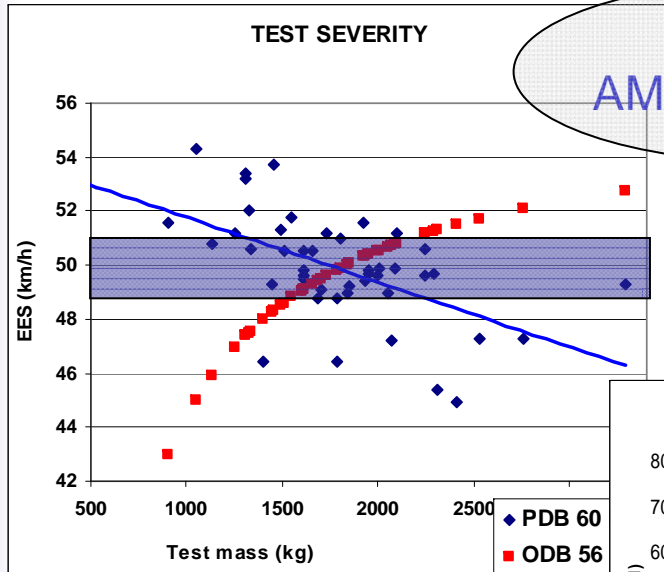
**CURRENT
VEHICLE DESIGN**

**CURRENT
SITUATION**

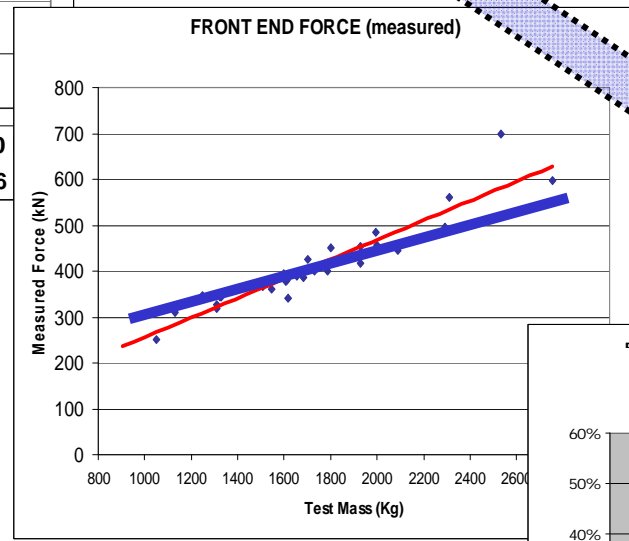


⇒ DIFFERENT FORCE LEVELS LEAD TO DIFFERENT SEVERITY RATES

FUTURE SITUATION WITH R94 AMENDMENT INTRODUCTION

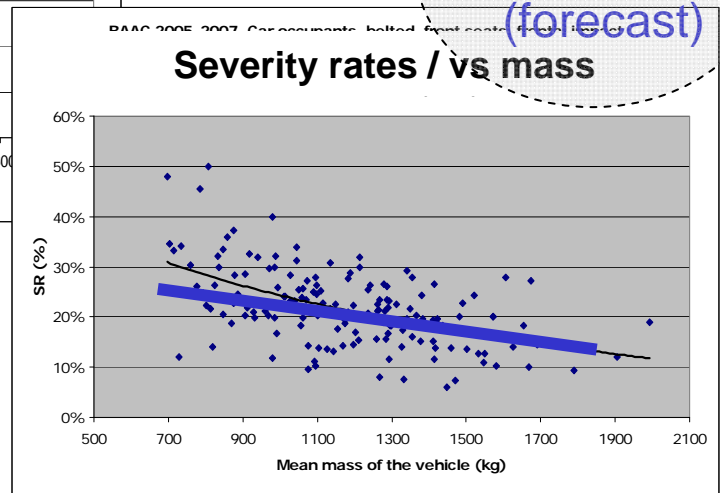


R94
AMENDEMENT



NEW VEHICLE
DESIGN

ACCIDENT
ANALYSIS
(forecast)



⇒ HARMONISATION OF FORCE LEVELS
LEADS TO LOWER SEVERITY RATES

- ⇒ Accident analysis focused on self and partner is required

- ⇒ Vehicles are designed with inhomogeneous front end force to meet current R94.

- ⇒ Inhomogeneous front end force are responsible for different severity rates among fleet mass

- ⇒ Changing front end force vs mass slope will reduce and harmonize severity rates