



FLEET MANAGEMENT

GFOAT Luncheon

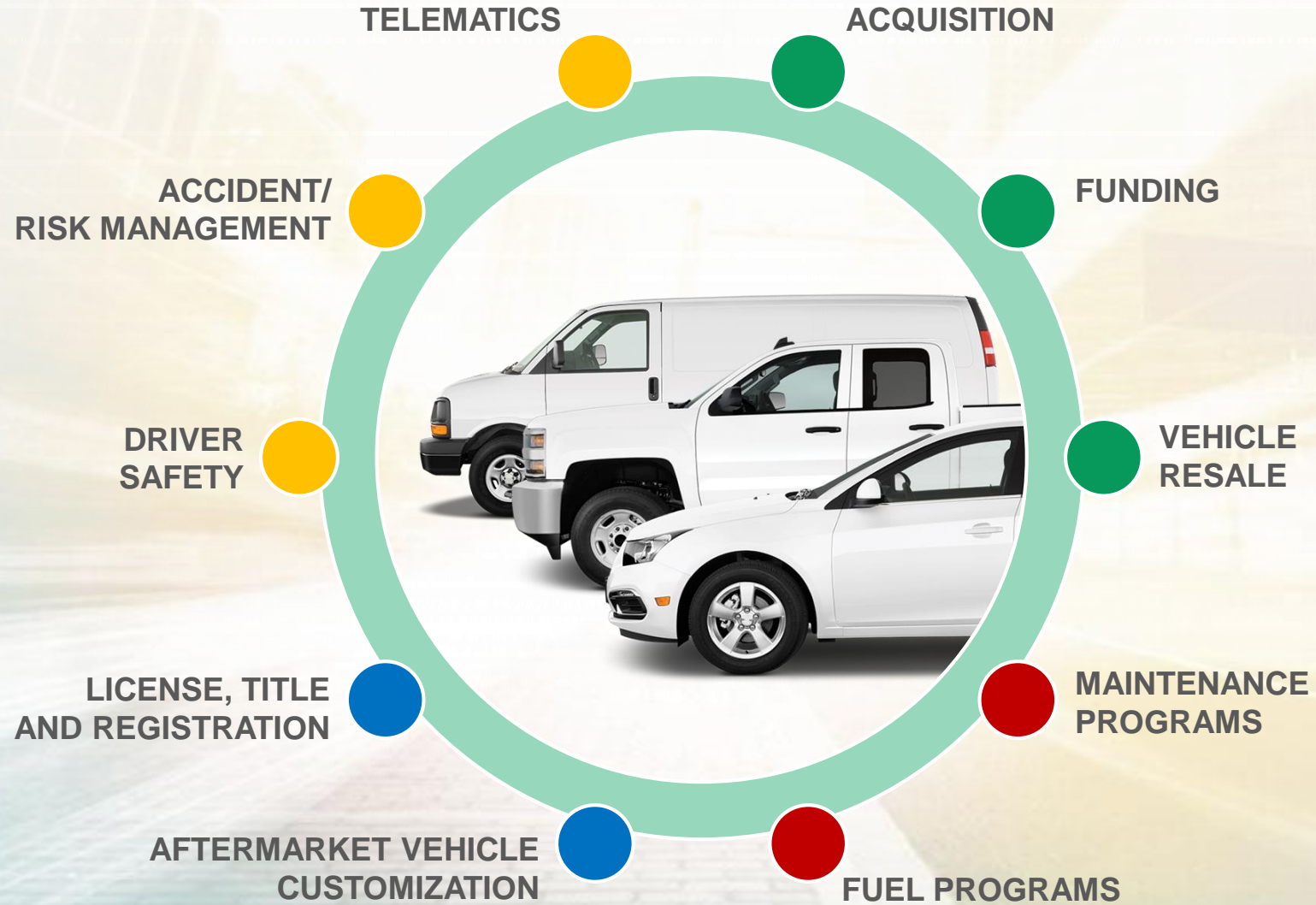
Cost Effective Fleet Management



AGENDA

- Fleet Management
- Today's Challenges
- Total Cost of Ownership
 - Capital
 - Effective Vehicle Life-Cycle
 - Operating
- Safety
- Vehicle Updates
- Q&A

FLEET MANAGEMENT



Tasked to do more with less

- ▶ **Fiscally Stressed**
- ▶ **Underfunded & Unfunded State Mandates**
- ▶ **Limitations on Revenue Sources**
- ▶ **Future Challenges –**
 - *Municipal Bond Changes, Pension Liabilities, Recruitment & Retention, Establishing Funds to address maintenance and/or equipment replacements across various departments .*

TYPICAL FLEET PROFILE

▶ Aged Vehicles

- 9 Years

▶ Low Annual Mileage

- 7,500 – 15,000 annual miles

▶ Multiple Departments with Multiple Plans & Budgets

▶ Capital Budget drives Fleet Replacement

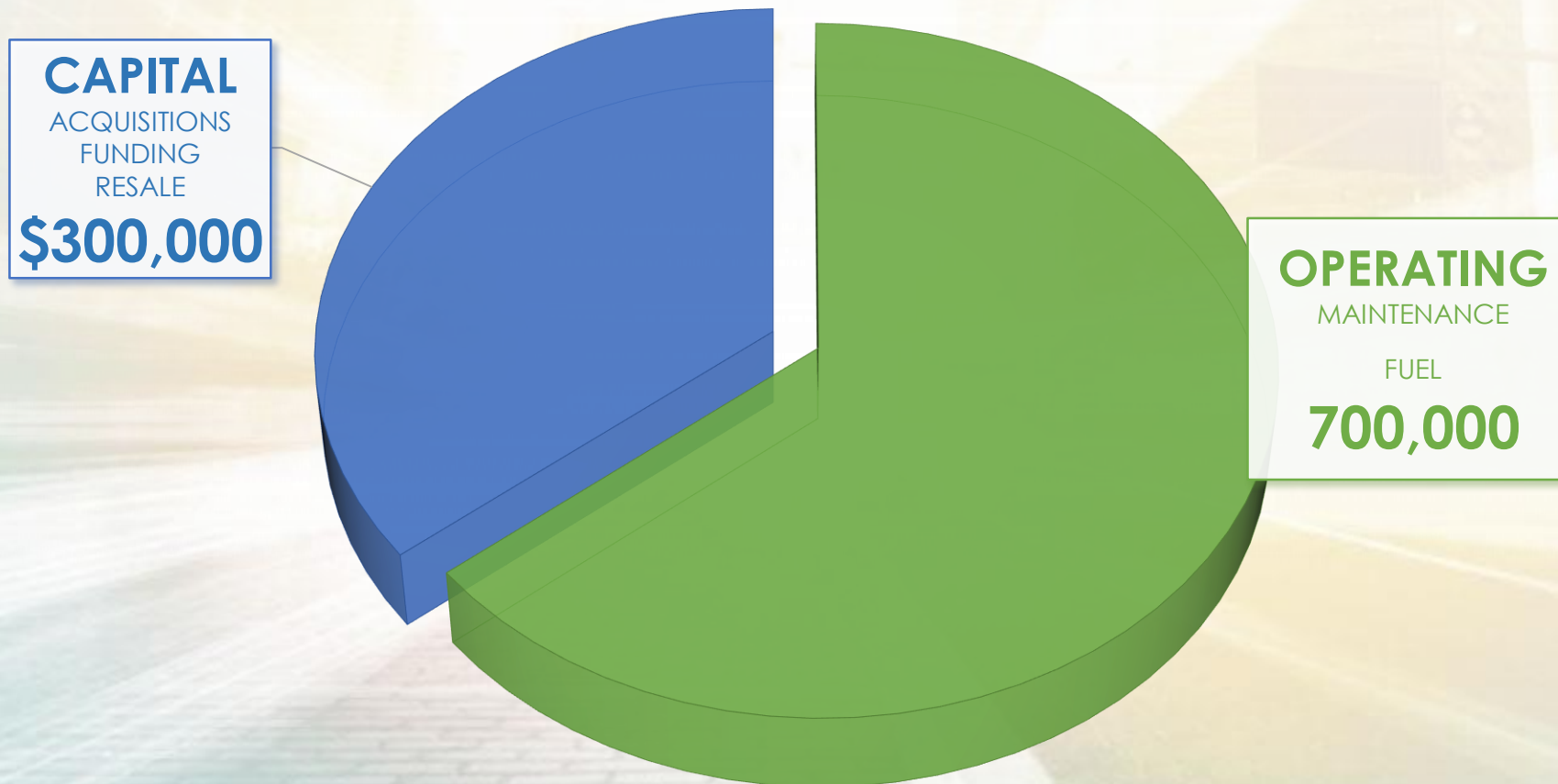
Average Vehicle Age in Years by Class

| Class/Description | Average |
|--|----------|
| 702 – Heavy trucks (26,001 lbs. and more) | 13 |
| 715 – Medium trucks (15,000 lbs.–26,000 lbs.) | 11 |
| 719 – Buses (29+ passengers) | 11 |
| 710 – Mounted equipment (with truck chassis) | 11 |
| 708 – Cargo and passenger vans | 10 |
| 716 – Minivans | 10 |
| 720 – Other vehicles | 10 |
| 709 – Light trucks (8,600 lbs. and less) | 9 |
| 718 – Buses (16-28 passengers) | 8 |
| 714 – Light/medium trucks (8,601 lbs.–14,999 lbs.) | 8 |
| 701 – Passenger cars | 6 |
| 703 – Small buses (up to 15 passengers) | 5 |
| 707 – Sport utility vehicles | 5 |
| 704 – Motorcycles | 5 |
| Overall Average | 9 |

Source: 2017 Texas State of the Fleet The State Comptroller

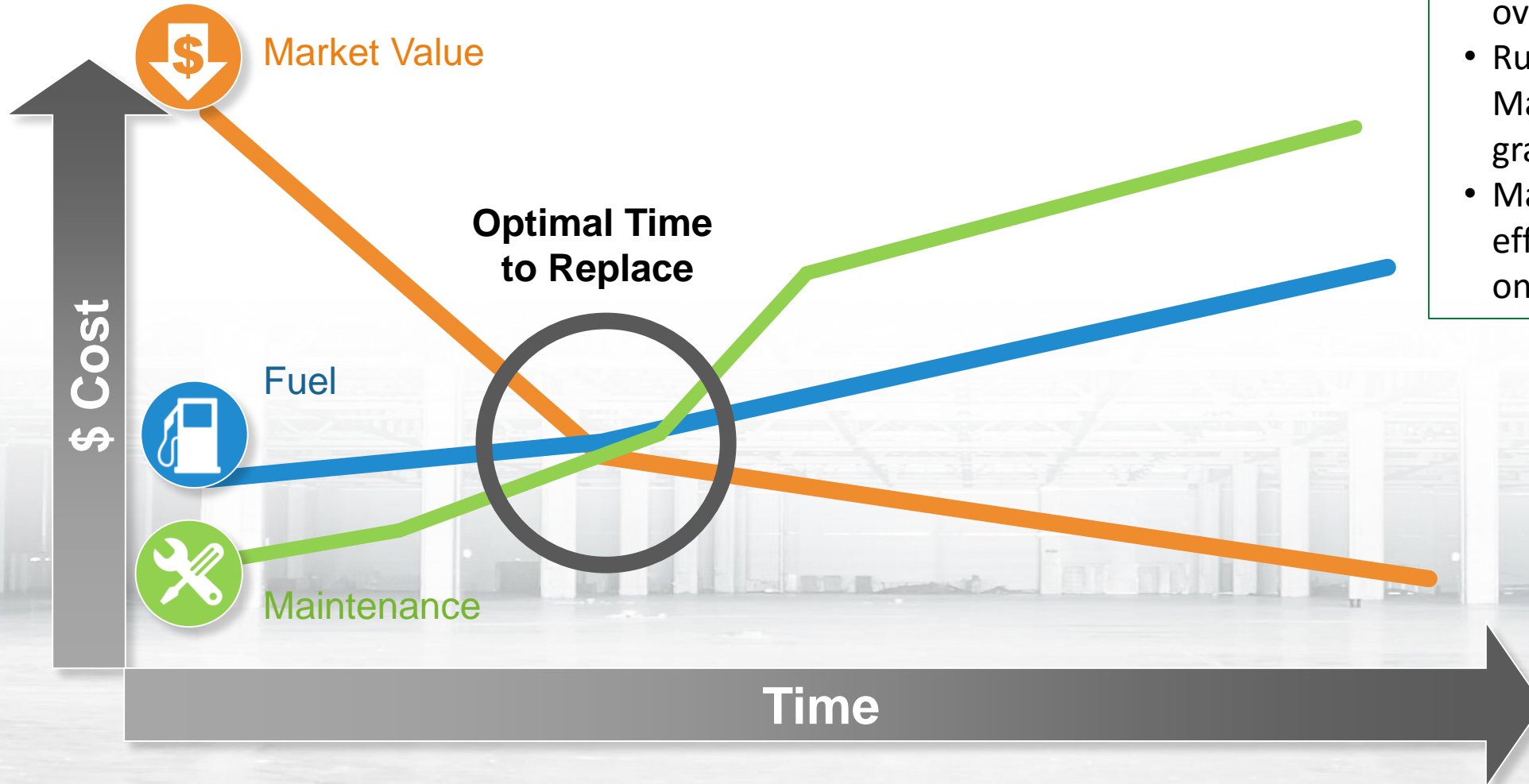
EXAMPLE CAPITAL & OPERATING BUDGET

FLEET VEHICLE BUDGET: \$1,000,000



Typically 60% -70% of the total fleet budget is Operating Expense. In most cost cutting scenarios the capital budget is cut first. There are little to no action plans to reduce operating cost.

EFFECTIVE VEHICLE LIFECYCLE



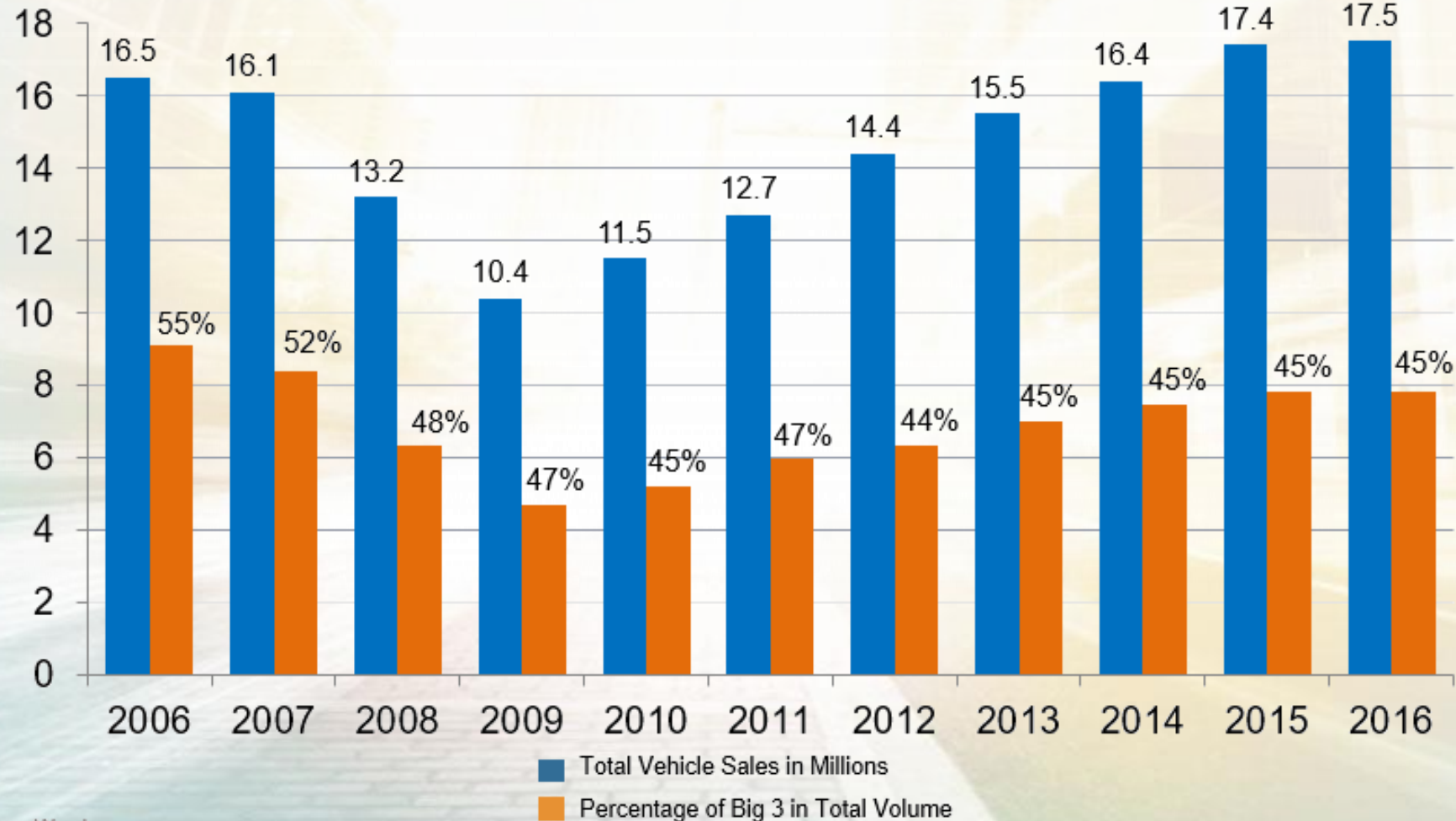
Key Observations

- Depreciation/year declines over time
- Running costs of Fuel and Maintenance increase gradually over time
- Mandated MPG efficiencies reward staying on technology wave

HISTORICAL VEHICLE SALES - US MARKET



SAAR – US Market

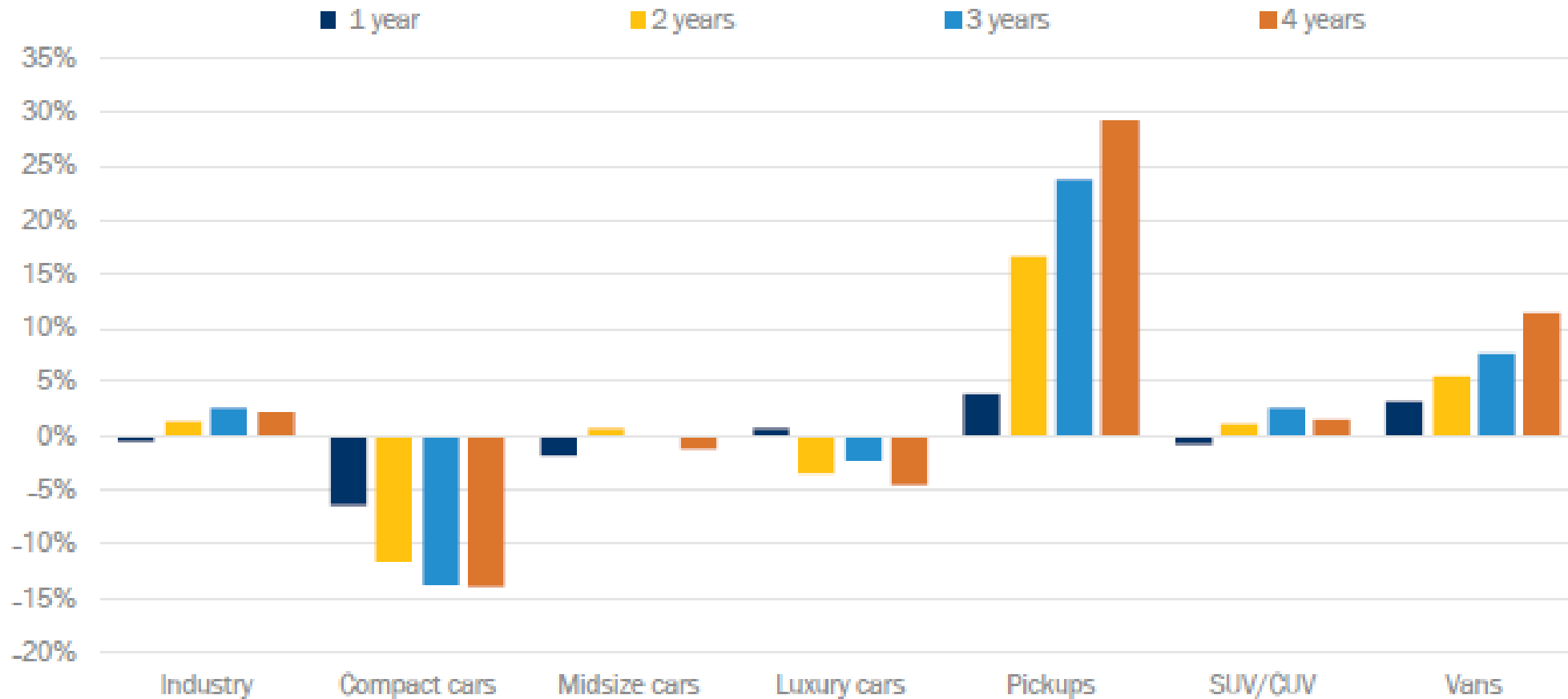


Source: Wards

Confidential and Proprietary

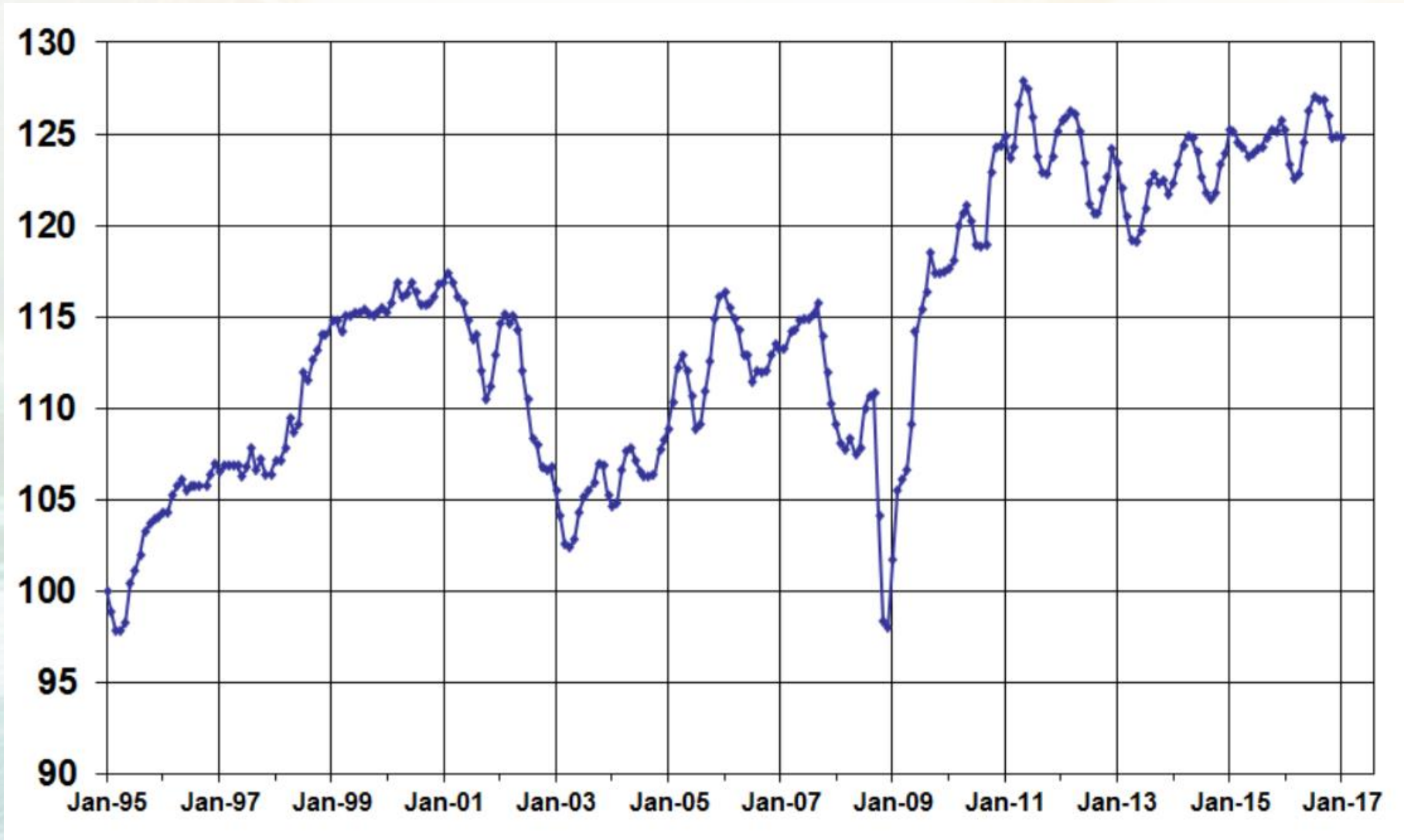
MARKET VALUES PER VEHICLE SEGMENT

PERCENT CHANGE IN WHOLESALE PRICES FOR SELECTIVE MARKET SEGMENTS



Source: Manheim Consulting

USED VEHICLE SALES SINCE 1995



Source: Manheim Auction

CONFIDENTIAL AND PROPRIETARY

CAFÉ STANDARDS- FUEL ECONOMY



- » Enacted by Congress in 1975
- » Requires Manufacturers to improve fuel economy between 3.5% and 5% every year through 2025
- » Newer vehicles will have better fuel economy than older vehicles

CHANGES IN FUEL TECHNOLOGY - TRUCKS



Improved
Engine

Improved
Performance

Higher
MPG

| F150 Regular Cab Long bed | Engine | Output HP/ Torque | Combined MPG |
|---------------------------|-------------------|-------------------|--------------|
| 2017 | 2.7L Eco boost V6 | 325HP/375 | 21 |
| 2012 | 3.7L V6 | 302HP/278 | 18 |
| 2007 | 4.6L V8 | 248HP/294 | 15 |
| 2002 | 4.2L V6 | 202HP/252 | 16 |
| 1997 | 5.4L V8 | 235HP/310 | 14 |

Improved
50%
in 20 years

CHANGES IN FUEL TECHNOLOGY – CARGO VANS



Improved
Engine

Improved
Performance

Higher
MPG

| ½ Ton Ford Cargo | Engine | Output HP/ Torque | Combined MPG |
|--------------------|---------|----------------------|-----------------|
| 2017 (Transit 150) | 3.7L V6 | 270HP/250 | 17 |
| 2012 (E150) | 4.6L V8 | 225HP/286 | 15 |
| 2007 | 4.6L V8 | 225HP/286 | 15 |
| 2002 | 4.2L V6 | 191HP/244 | 14 |
| 1997 | 4.2L V6 | 191HP/244 | 13 |

Improved
31%
in 20 years

CHANGES IN FUEL TECHNOLOGY - SEDANS



Improved
Engine

Improved
Performance

Higher
MPG

| Ford Fusion | Engine | Output HP/ Torque | Combined MPG |
|---------------|----------------|----------------------|-----------------|
| 2017 | 1.5L Eco boost | 181HP/185 | 27 |
| 2015 | 2.5L | 175HP/172 | 25 |
| 2007 | 2.3L | 160HP/156 | 23 |
| 2002 (Taurus) | 3.0L | 155HP/185 | 20 |
| 1997 | 3.0L | 155HP/185 | 20 |

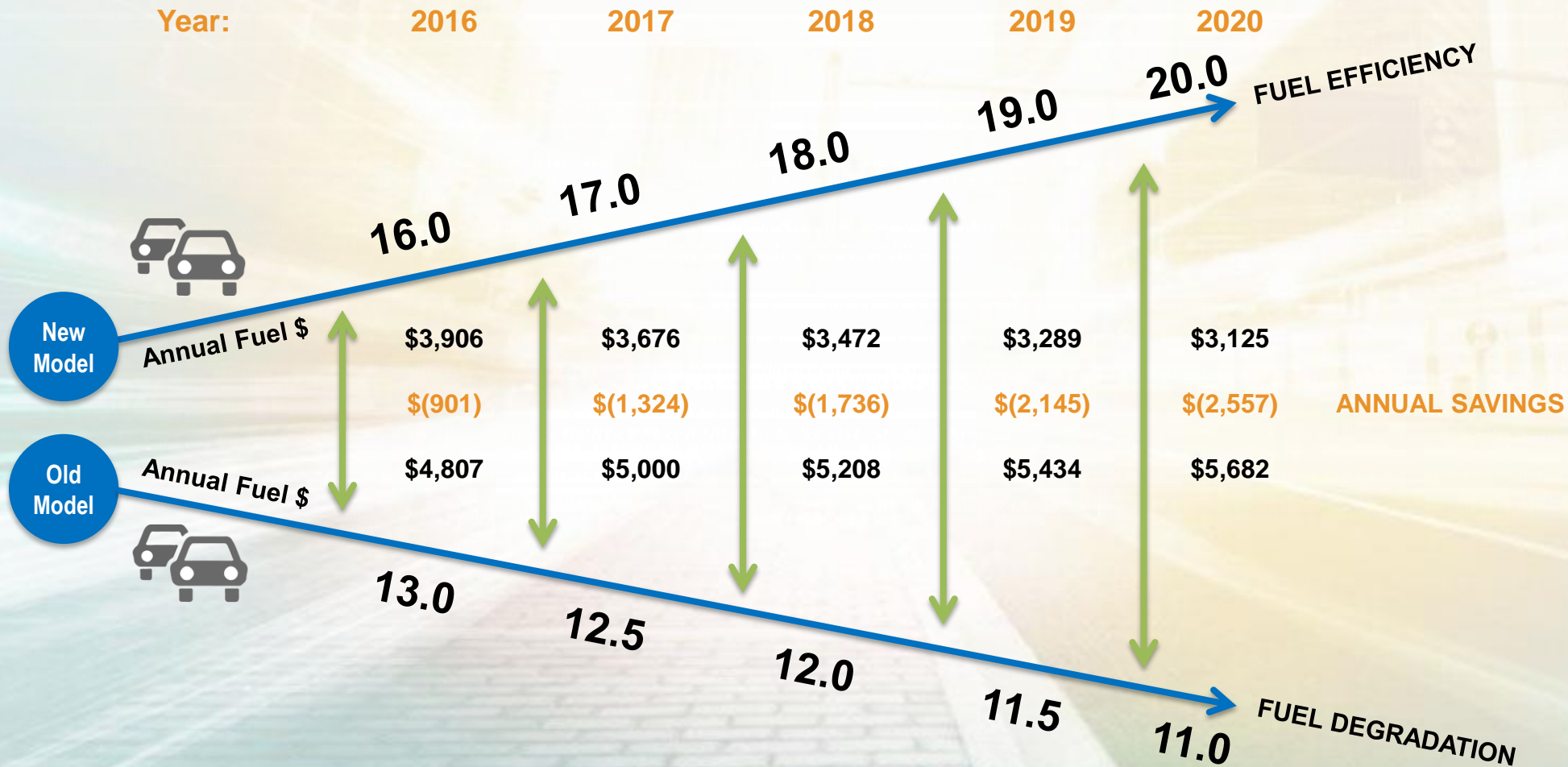
**Improved
35%
in 20 years**

OPERATING EXPENSES

Fuel

Vehicle MPG Change

Effects of Newer Fuel Efficient Models vs Fuel Degradation in Older Models

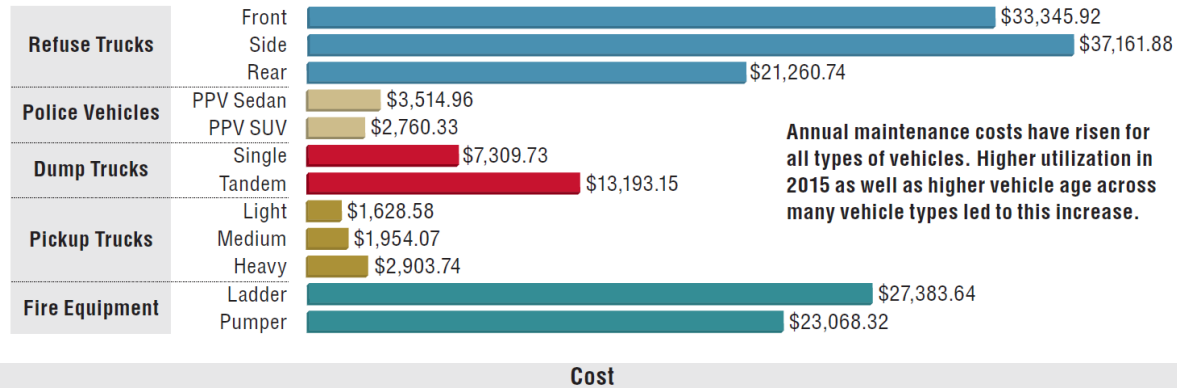


OPERATING EXPENSES

Maintenance

GOVERNMENT FLEET

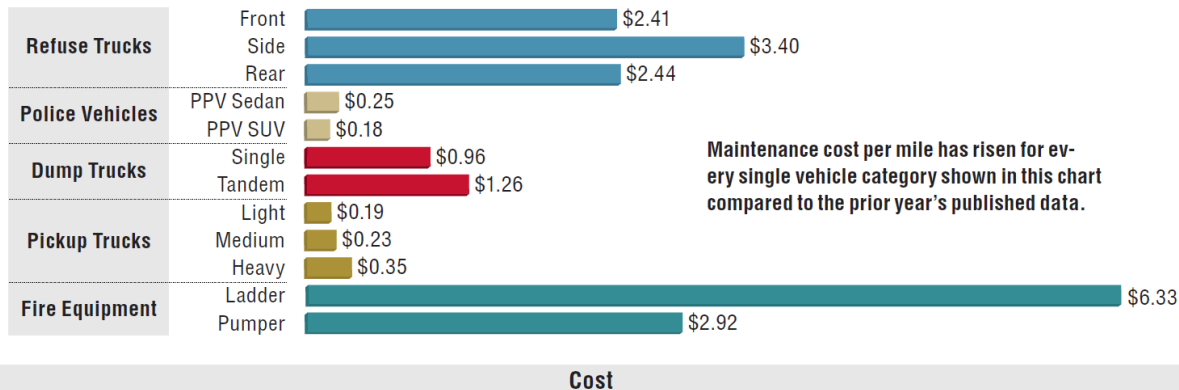
Annual Maintenance Cost



SOURCE: UTILIMARC

Annual maintenance costs have risen for all types of vehicles. Higher utilization in 2015 as well as higher vehicle age across many vehicle types led to this increase. Source: Utilimarc

Maintenance Cost Per Mile



SOURCE: UTILIMARC

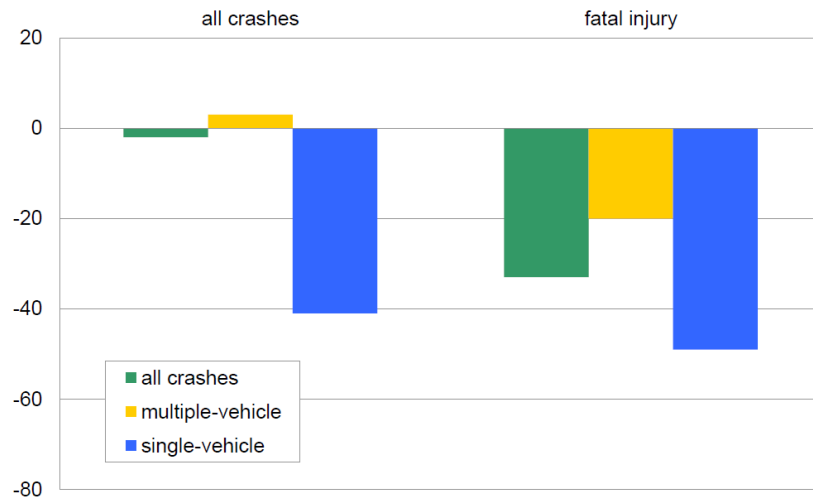
Maintenance cost per mile has risen for every single vehicle category shown in this chart compared to the prior year's published data. Source: Utilimarc

IMPACT OF SAFETY

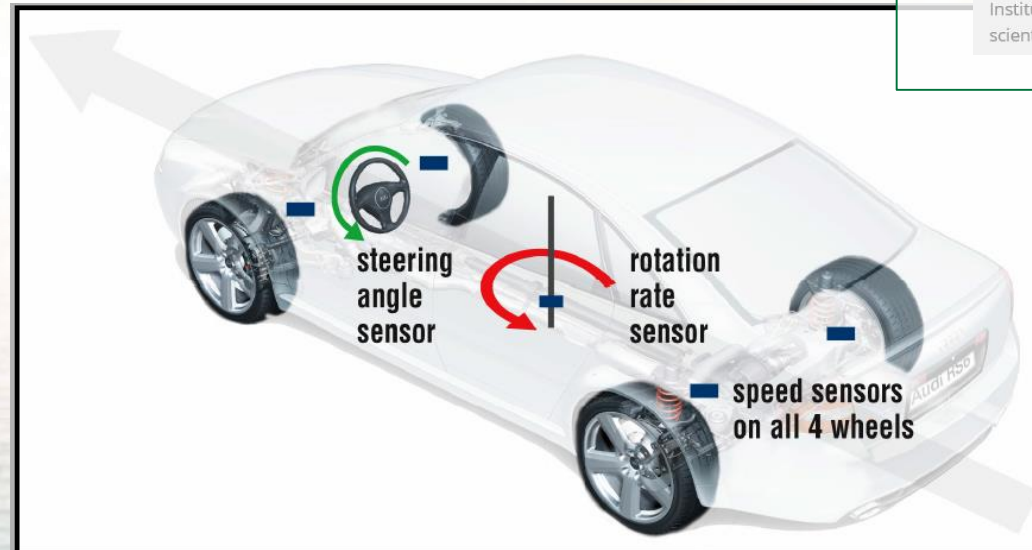
- « According to IIHS, Electronic Stability Control has been a major contribution to vehicle safety measures
- « This technology helps drivers maintain control of their vehicle during extreme steering maneuvers by keeping the vehicle headed in the driver's intended direction, even when the vehicle nears or exceeds the limits of road traction.

Effects on crash risk

Percent change in crash rates for vehicles with standard ESC vs. optional or no ESC, updated May 2010



www.iihs.org



IIHS
HLDI
Insurance Institute for Highway Safety
Highway Loss Data Institute



Adrian Lund

is the current president of the Insurance Institute for Highway Safety and the affiliated Highway Loss Data Institute. He joined the Institute in 1981 as a behavioral scientist.

IMPACT OF SAFETY

- « If you have vehicles that are 10 years old or older, you are not taking advantage of standardized safety improvements.

2007

- Front/Side Crash Test
- Anti-lock Brakes
- Airbags

2012

- **Electronic Stability Control**
- Rear Video
- Lane Departure Warning

2017

- Blind-spot Warning
- Forward Collision Warning
- Offset-crash Test

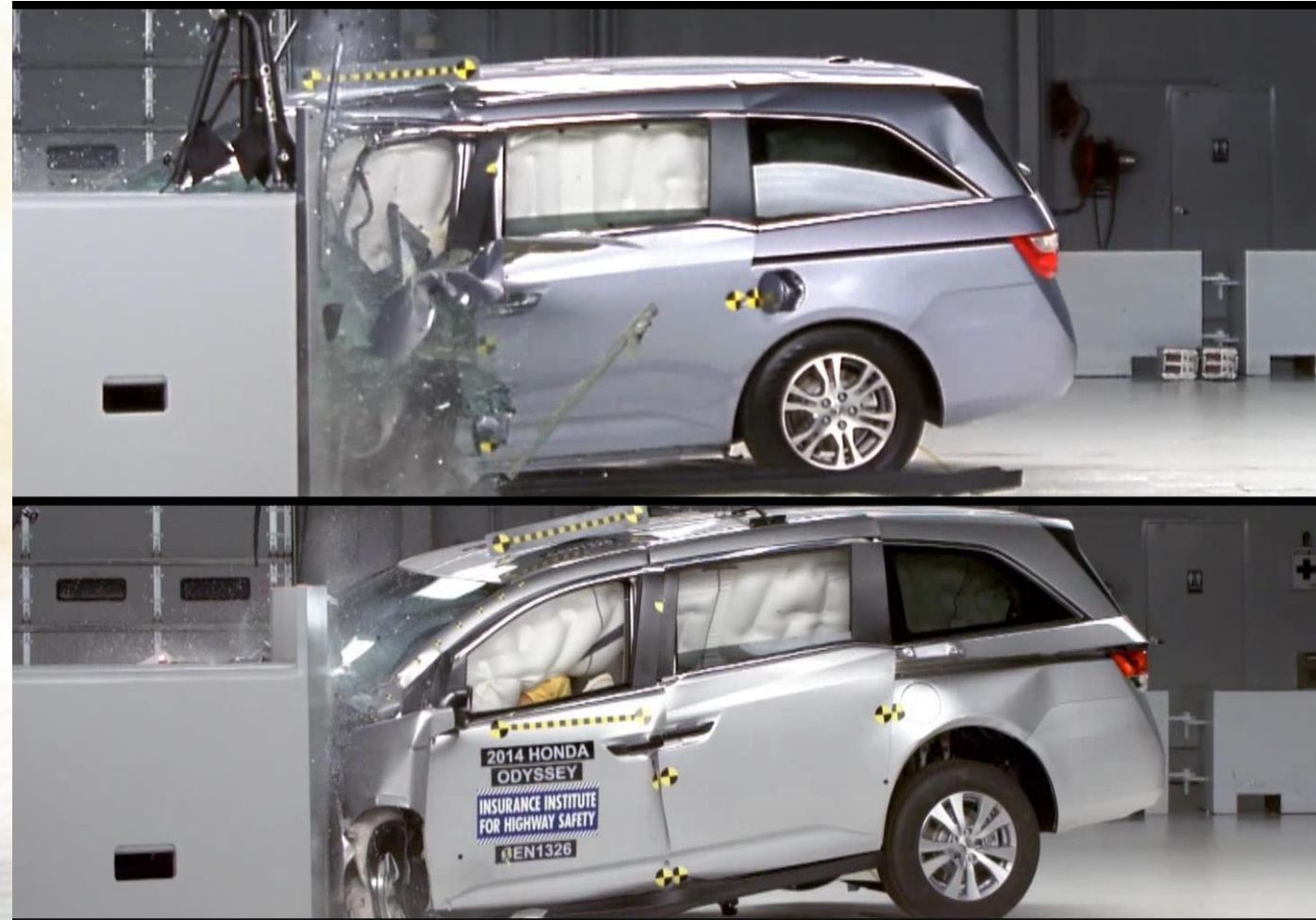


IMPACT OF SAFETY

**2012
Honda
Odyssey**

VS

**2014
Honda
Odyssey**



IMPACT OF SAFETY

**2015 Ford
F150**

VS

**2016 Ford
F150**



Small Cargo Van Segment

- » Accommodates payload requirements of 1500-1800 pounds
- » TCO winners with good fuel economy
- » All foreign-built with fairly long lead times
- » New entrant Mercedes Benz Metris bridges gap between small and large cargos



Large Van Segment

- » Transition continues toward “European-Style” Unibody design
- » Multiple roof heights and lengths
- » Supply of GM vans is now open



Compact Pick-Up Segment

- » Very popular among retail buyers making fleet allocation a challenge
- » Modest gain in fuel economy against full size counterparts
- » Limited allocation for Colorado and Canyon
- » Ford Ranger anticipated for 2019 Model Year
- » Accommodates payload range of 1,000-1,400 pounds



Large Pick-Up Segment

- » Sales staying strong as fuel prices stay low
- » CAFE standards driving fuel saving technology
- » Allocation of “fleet-spec” models make factory ordering the best strategy
- » Nissan introducing new Titan with all-new 5.0L Cummins diesel



SUV/CUV Segment

- » Compact utilities continue to take share from passenger cars in 2016
- » AWD or FWD
- » Appealing to drivers and generally strong resale performers
- » Almost every manufacturer has an offering
- » Compact SUVs displacing traditional cars and full size SUV counterparts



Car Segment

- » Low fuel prices fueling slight decrease in sales
- » Best TCO of all segments
- » Factory order allocation is generally good



RECAP – Questions to Ask

- How long are you holding onto vehicles?
- Are you making replacement decisions based purchase price or Total Cost of Ownership?
- Are you focusing on Capital expenses, Operating, or both?
- How you create your capital and operating budgets?
- How safe are your employees in these vehicles?
- Do you have a fleet management plan? If so, are you executing it?
- How are you benchmarking your costs or strategy?
- What goal do you have in place to reduce the costs associated with owning and operating your fleet of vehicles?



FLEET MANAGEMENT

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