Integration of ADAS into the passenger fleet

"Reaching Zero Crashes: A Dialogue on the Role of Current Advanced Driver Assistance Systems
October 27, 2016
Washington, DC

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Vice President
Highway Loss Data Institute
Phase in of collision avoidance systems
New vehicle series with electronic stability control
By model year

[Bar chart showing the percentage of new vehicle series with electronic stability control by model year, with colors indicating standard, optional, or not available.]
Registered vehicles with electronic stability control
By calendar year

- **Standard**
- **Optional**
- **Not Available**
Registered vehicles with available electronic stability control, actual and predicted
By calendar year
New vehicle series with front crash prevention
By model year

[Bar chart showing percentage of new vehicle series with front crash prevention by model year, with standard, optional, and not available categories indicated.]
Registered vehicles with front crash prevention
By calendar year

- standard
- optional
- not available
Registered vehicles with available front crash prevention, actual and predicted
By calendar year
New vehicle series with adaptive headlights

By model year
Registered vehicles with adaptive headlights
By calendar year

- Standard
- Optional
- Not available
Registered vehicles with available adaptive headlights, actual and predicted
By calendar year
New vehicle series with blind spot warning
By model year

[Bar chart showing the percentage of new vehicle series with blind spot warning by model year, with the years 2006 to 2014 along the x-axis and the percentage on the y-axis. The bars are color-coded to indicate which features are standard, optional, or not available.]
Registered vehicles with blind spot warning

By calendar year

<table>
<thead>
<tr>
<th>Year</th>
<th>Standard</th>
<th>Optional</th>
<th>Not Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td></td>
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<tr>
<td>2008</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2010</td>
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<td></td>
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<tr>
<td>2012</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2014</td>
<td></td>
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</tbody>
</table>
Registered vehicles with available blind spot warning, actual and predicted

By calendar year
Year available features reach 95% of registered vehicles with and without hypothetical mandate

<table>
<thead>
<tr>
<th>Year</th>
<th>Feature</th>
<th>Without Mandate</th>
<th>Hypothetical 2017 Mandate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>Forward collision warning with autobrake**</td>
<td></td>
<td></td>
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<tr>
<td>2030</td>
<td>Lane departure warning</td>
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<tr>
<td>2040</td>
<td>Adaptive headlights</td>
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<tr>
<td>2050</td>
<td>Blind spot warning</td>
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<td></td>
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<tr>
<td></td>
<td>Rear camera*</td>
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<td></td>
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<tr>
<td></td>
<td>Rear parking sensors</td>
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</tr>
</tbody>
</table>

*rear camera mandate May 1, 2018
** front crash prevention agreement, 2022
Predicted percentage of registered vehicles with feature X
By calendar year
Estimated change in PDL claim frequency due to increased fitment of FCW systems

Based on estimated effect of 10%
The effect of electronic stability control on vehicle longevity
Vehicle registrations
By calendar year

- optional and not available ESC
- standard ESC
- Linear (optional and not available ESC)
- Linear (standard ESC)
Annual change in registration
By ESC status

-2.5%
-2.0%
-1.5%
-1.0%
-0.5%
0.0%
-1.0%
-1.5%
-2.0%
-2.5%
optional and not available ESC  standard ESC
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