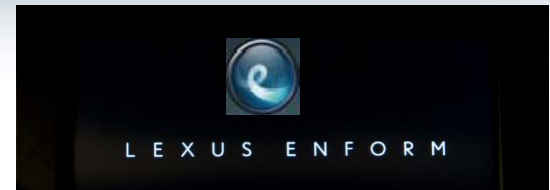




North American Connected Vehicles

Paul Haelterman
Vice President, Global Advisory Services
January 12, 2010



Agenda

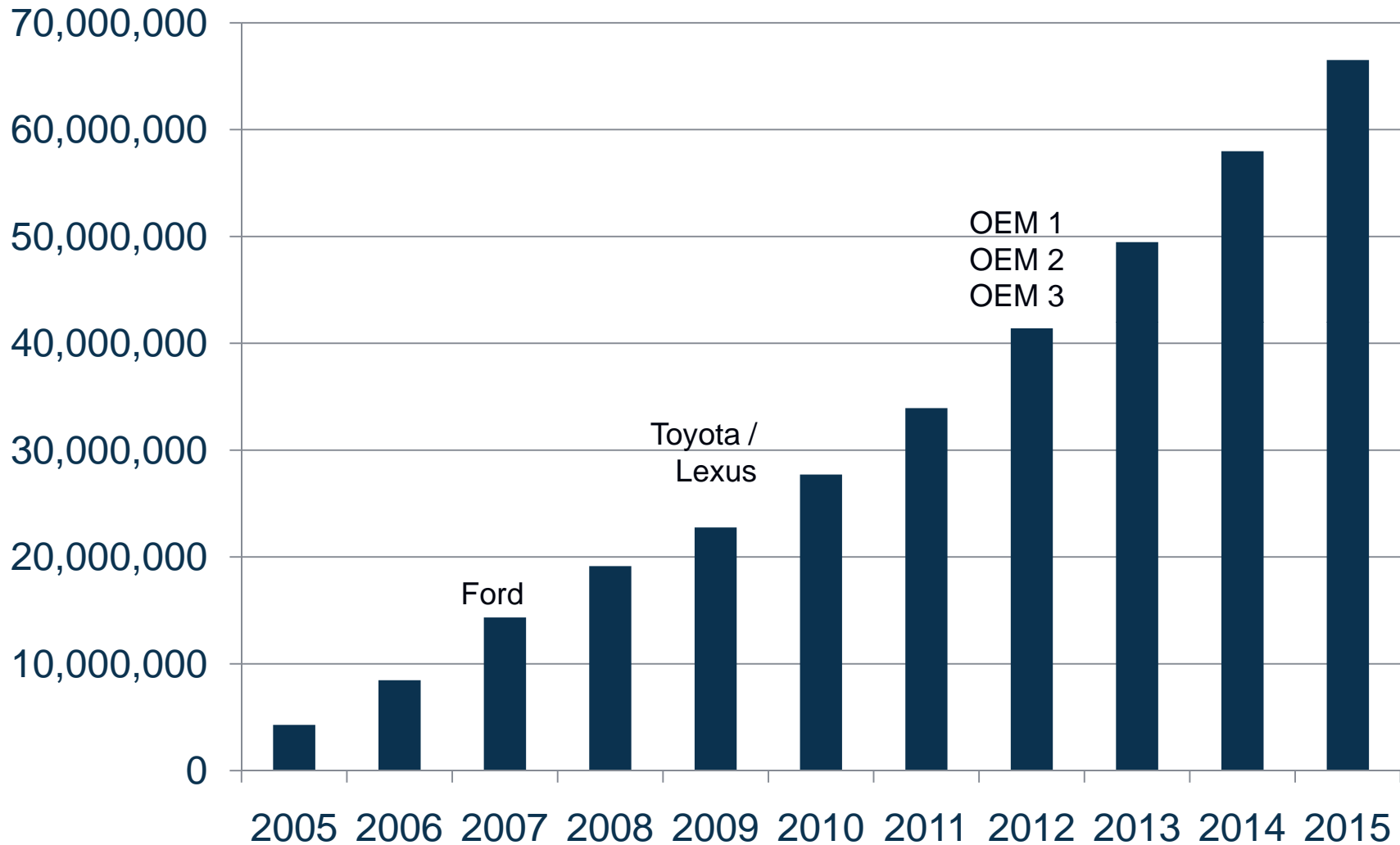
- Introduction To Connected Vehicles (CV)
- CV Cumulative Units: 2005 – 2015
- CV Penetration: 2005 – 2015
- CV Market Share: 2005 – 2015
- Connected Vehicle Drivers
- Optimal Solution?

Introduction

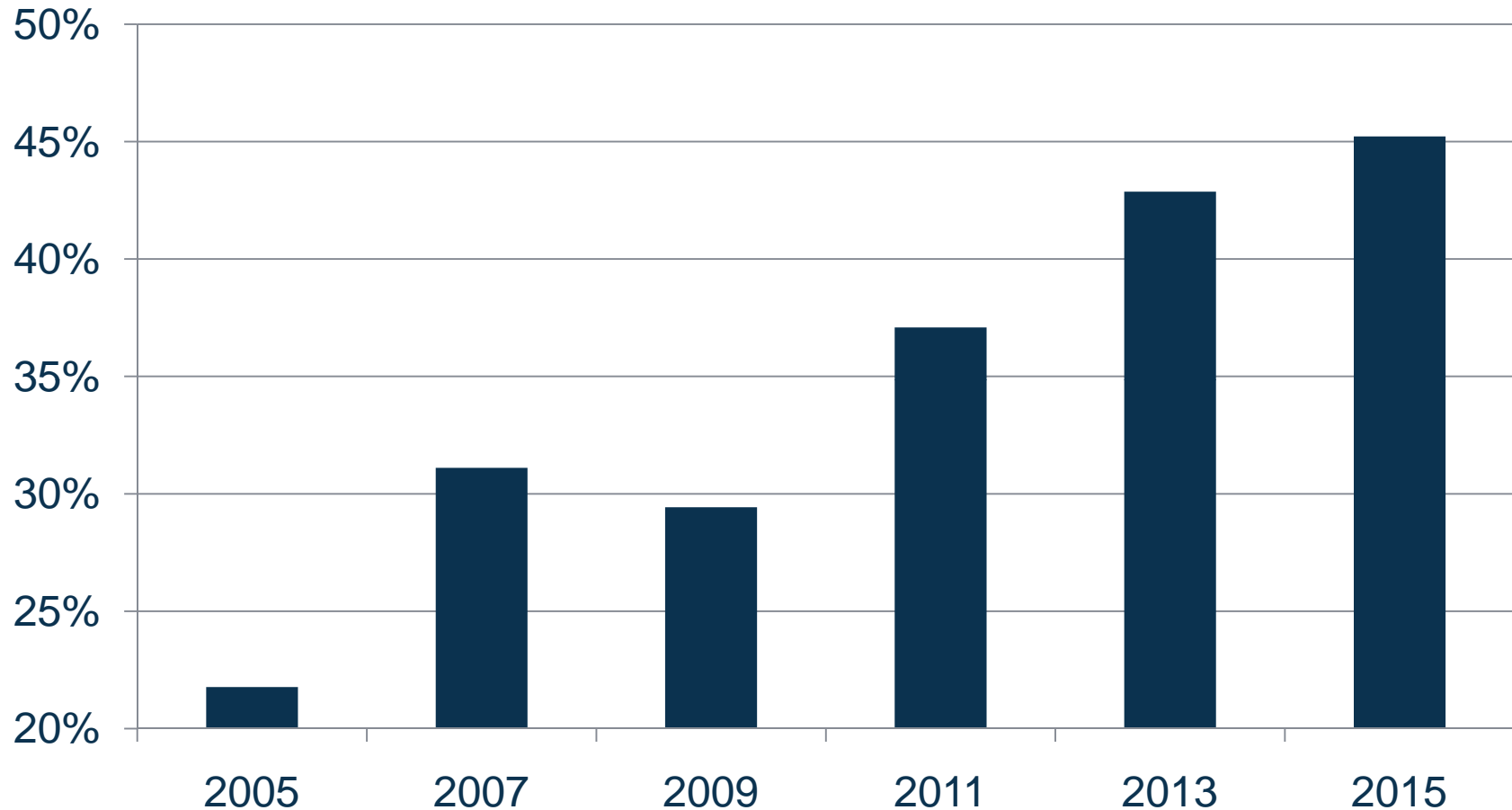
- CV's are defined as automatic two-way connectivity between the vehicle and emergency responders (minimum requirement)
- CV's are here to stay and will continue to grow, but how?
 - Embedded or Closed Architecture Systems like OnStar
 - User Connected or Open Architecture systems like Sync
 - Or maybe a hybrid of the above?
- Most major OEMs will offer a telematics solution within the next three years
- The primary challenges include how to pay for the basic safety & security services, what value-add services do consumers want **and will pay for**, and how does the value chain make a profit.

Connected Vehicles – “NA Car Park”

CAGR: 31.6%

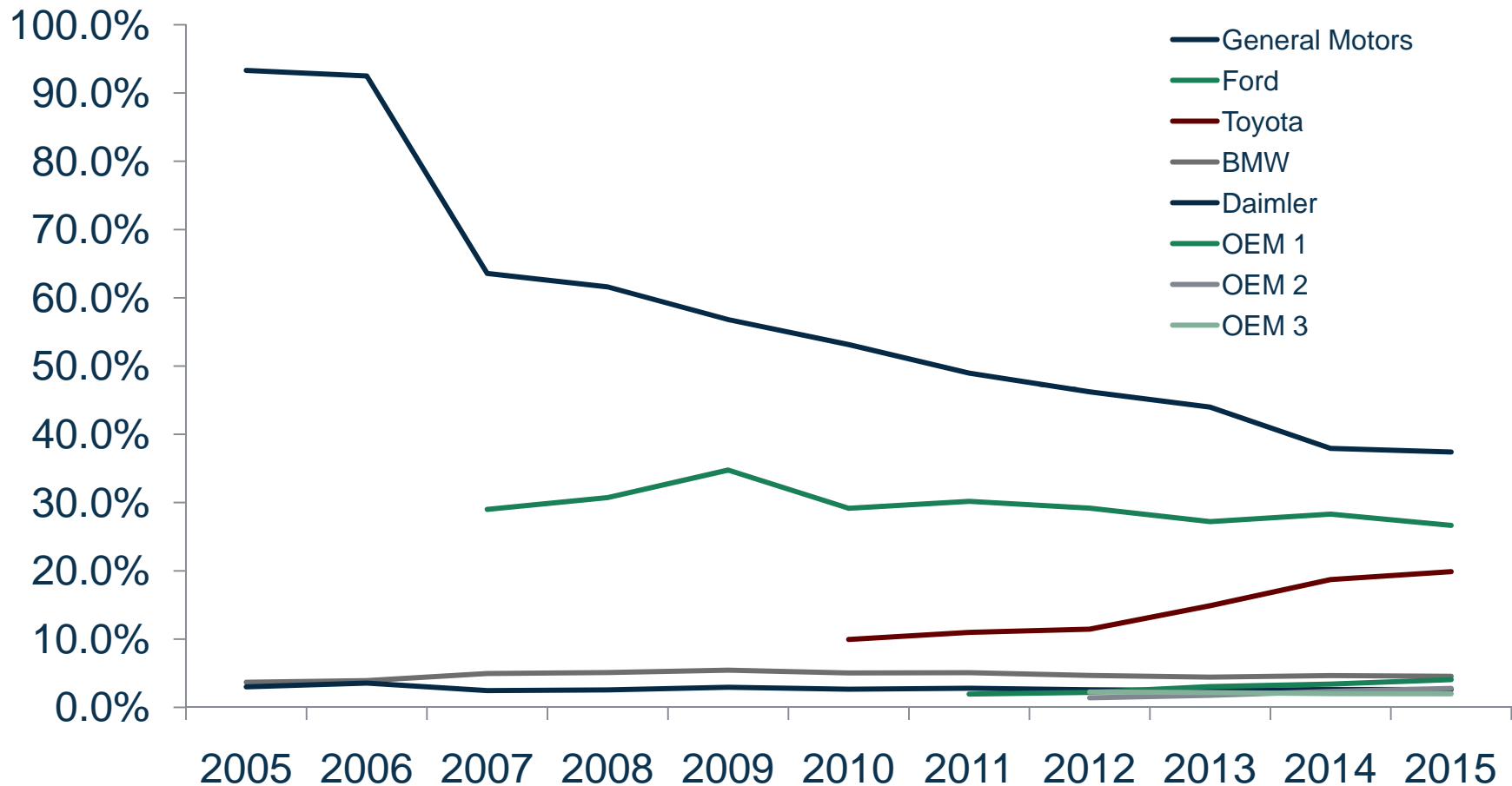


Connected Vehicle NA Market Share



- Growth is driven by...
 - New OEMs adding Connected Vehicle services
 - Expansion of Connected Vehicle services to more platforms and broader customer demand

Connected Vehicle Market Share by OEM



- GM is only major OEM with mass deployment of CV in early years
- New OEMs entering market begins to level out market share
- Connectivity becomes virtually standard on most luxury brands

Connected Vehicle Drivers

Growth Accelerators

- Customer demand to stay connected
- Expanded connectivity options
- Platform commonality
- Pay-as-you-drive insurance and mileage-based taxing initiatives
- Government mandates
- Early adoption thru CE devices
- Enhanced CRM opportunities
- Real-time vehicle feedback to OEMs
- Electric Vehicles

Growth Inhibitors

- Customer privacy issues
- Business model
- Legacy & evolving technologies
- Interoperability
- Driver distraction concerns
- Overreach of government bans on cell phone usage in vehicles?
- CE devices replacing OEM systems
- Liability Risk Management

Optimal Hardware Solution?

Closed Architecture

- Closed system
- Controlled access to vehicle bus / data
- Unique wireless data upload
- Manageable Liability Risk
- Limited user customization (currently)



Hybrid Architecture

- Embedded safety & security
- Gateway to vehicle bus / data
- Flexible user customization
- Manageable Liability Risk



Open Architecture

- Open system
- Gateway to vehicle bus / data
- Cell phone dependant connectivity
- Flexible user customization
- Unknown OEM Liability

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