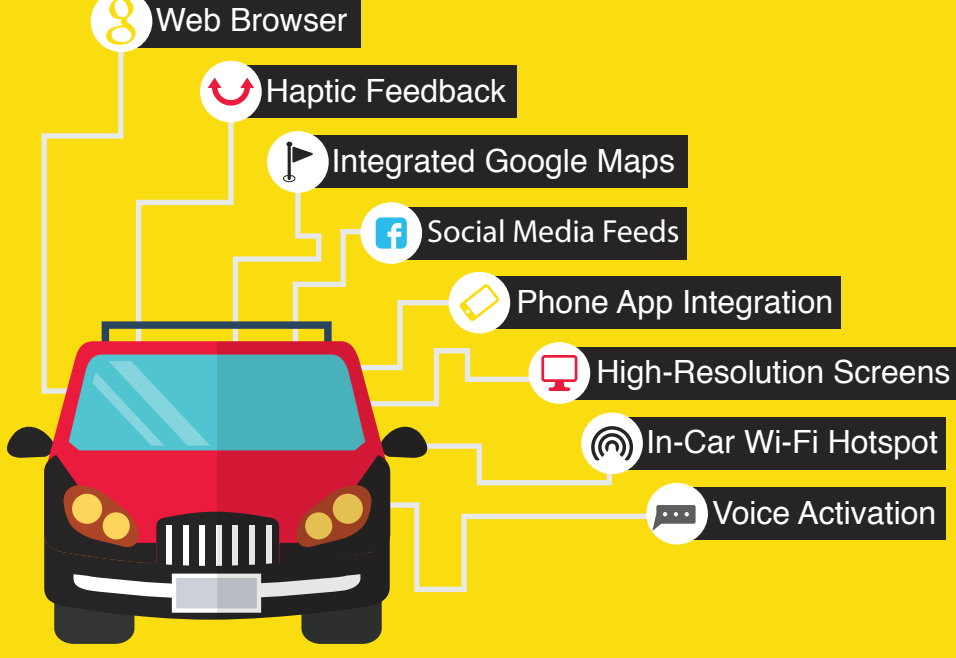# 5 TRENDS FOR AUTOMOTIVE HMI Cosmos 2015

1 Infotainment

What's Hot? Customers demand to be connected in their vehicles, and manufacturers are keen to provide better, more exciting services to differentiate their brand and stay ahead of the competition.

- Web Browser
- Haptic Feedback
- Integrated Google Maps
- Social Media Feeds
- Phone App Integration
- High-Resolution Screens
- In-Car Wi-Fi Hotspot
- Voice Activation

Signs Infotaiment Systems are Hot

- **10%** of the price of buying a new car
- **22%** growth of global automotive infotainment processor revenue by 2018
- **25%** auto head unit infotainment processor chips revenue growth by 2018

2 Wireless

Wireless Communication is a key enabler for vehicle connectivity.
Manufacturers are incorporating wireless communications into both economy and luxury models.

- **32%** of global cars smartphone-connected by 2017
- **3rd** 3rd fastest-growing connected device
- **90%** of cars will be Internet connected by 2020
- **$98.42 billion** market by 2018
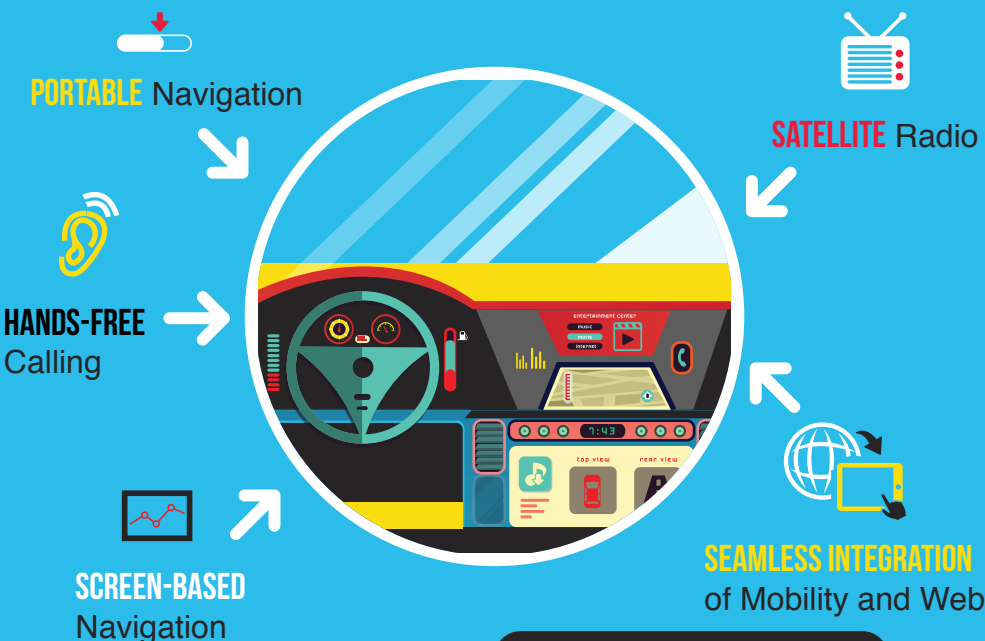- **10m** lines of code per car
- **83%** of cars crashes can be avoided by using connected vehicle tech
- **70%** of U.S. cars smartphone-connected by 2017

3 Telematics

Will our cars be smarter than smartphones?

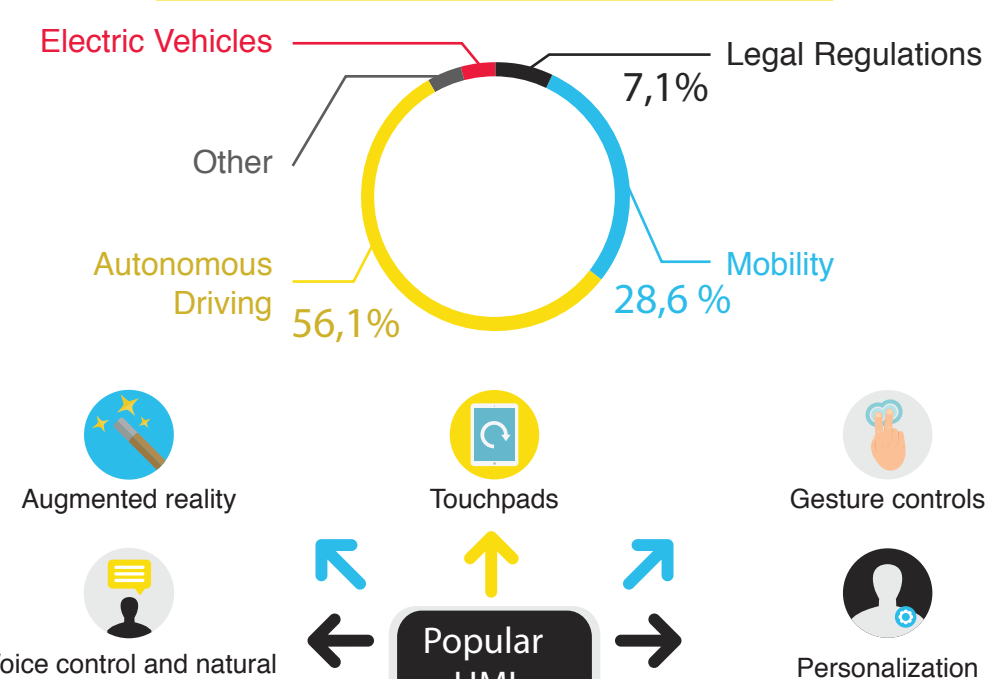Communication technologies will enable ubiquitous connectivity to the internet from car dashboards.

- **PORTABLE** Navigation
- **SATELLITE** Radio
- **HANDS-FREE** Calling
- **SCREEN-BASED** Navigation
- **SEAMLESS INTEGRATION** of Mobility and Web

4 Human Machine Interface

Will my car understand my voice and gestures?

The combination of meaningful interactions e.g. gesture and voice recognition is the key to getting the best out of HMI in a car.
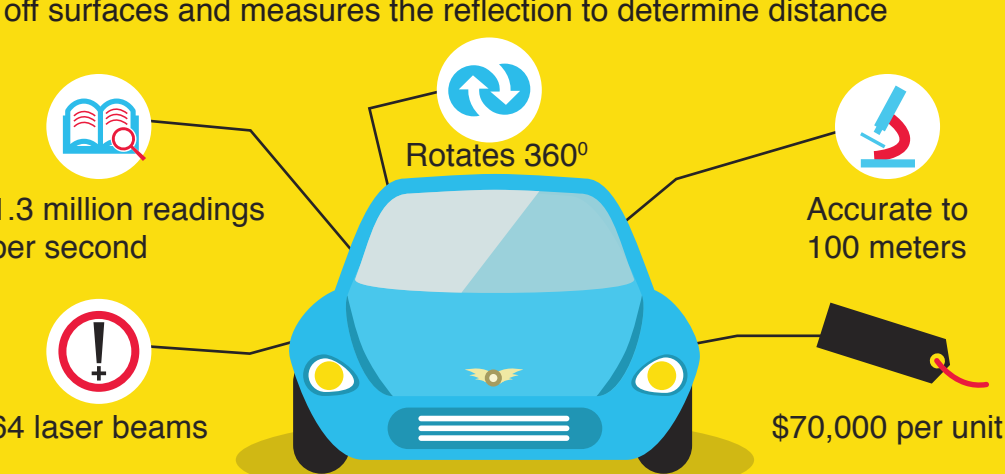
Trends Influencing Vehicle HMI

- Electric Vehicles
- Legal Regulations **7,1%**
- Other
- Mobility **28,6 %**
- Autonomous Driving **56,1%**

Popular HMI

- Augmented reality
- Touchpads
- Gesture controls
- Voice control and natural speech recognition
- Personalization

5 Self-driving

How will tech help cars detect and avoid obstacles?

Currently used on self-driving vehicles, LiDar will help our cars see everywhere at once

LiDar

Light Detection and Ranging - laser-based tech that bounces a beam off surfaces and measures the reflection to determine distance

- **1.3 million** readings per second
- Rotates **360°**
- Accurate to **100 meters**
- **64** laser beams
- **$70,000** per unit

Paving the way for driverless cars Roof-mounted LiDar on Google's autonomous car