

# **Mobile and the Car**

## **Google and Apple battle for the car, the ultimate mobile device**

### **Introduction**

Technology giants [Google](#) Inc. and [Apple](#) Inc. are about to expand their battle for digital supremacy to a new front: the automobile. At the January 2014 Consumer Electronics Show in Las Vegas, Google and German auto maker [Audi](#) AG announced that they are working together to develop in car entertainment and information systems that are based on Google's Android software. The aim is to allow drivers and passengers to access music, navigation, apps and services that are similar to those widely available now on Android-powered smartphones.

### **Market**

The increased focus on in-car electronics underscores a significant challenge for auto makers. Where earlier buyers based purchase decisions on characteristics such as horsepower or fuel economy. A new generation of consumers wants their cars to be as connected and intelligent as the phones in their pockets. With 80 million new cars and light trucks sold each year, automobiles represent a significant new opportunity for Internet based software and services

### **Competition**

Apple has announced its "iOS in the Car" initiative and hopes to turn the [iPhone](#) into a kind of brain for operating dashboard electronics, using the car's built-in display to interact with services such as maps and traffic information.

Google by contrast, hopes to have Android and related applications running on the car's own built-in hardware.

### **Product development plans**

Car makers are adding powerful processors based on the same technology that [ARM Holdings](#) PLC of Britain licenses to smartphone chip makers. Such processors require operating systems, and Google's free and open Android software is an emerging option.

Honda, based in Japan, is now starting to roll out new models that allow the driver to activate Siri from a button on the steering wheel and to talk to Siri using the car's hands-free audio system. That enables a driver to use Siri to read out newly arrived email or text messages, check weather, set the navigation system or enter appointments on the iPhone's calendar—all while keeping both hands on the wheel.

### **Summary**

Automobile makers are feeling the pressure to keep up with the rise of "smart" technology. Google and Apple have both entered this space, both seeing the opportunity to further expand their mobile technologies. Google wants car makers to use Android as the operating system for the embedded computers they are installing in their cars. Apple wants car makers to adopt the iPhone as a control hub for dashboard electronics. It remains to be seen which approach will gain the upper hand as "smarter" cars enter the market.

**Study Questions:**

1. In the smart car market who is the customer for Apple and who is the customer for Google?
2. What do these customers want?
3. What activities/strategies are Apple and Google using to compete for these customers?
4. What will be the outcome of this competition?
5. What actions do you recommend to the CEOs of Apple and Google to win in the smart car market?

Exhibit 1: Apple, Google Annual Data (2013), \$ in thousands

	<b>Apple</b>	<b>Google</b>
Revenue	US 170.9 billion	US 59.8 billion
Net profits after tax (% of revenue)	US 37.0 billion (22%)	US 12.9 billion (22%)
R&D Expenditures (% of revenue)	US 4.8 billion (2.8%)	US 7.9 billion (13.8%)

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