

EXECUTIVE SUMMARY

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## Delivering Online Capabilities on the Road

In Europe, the LTE Connected Car appeals most strongly to consumers under age 35

With LTE Connected Car service, consumers can enjoy always-on mobile connection to the Internet, along with an array of entertainment, traffic, navigation, car maintenance and safety features.

## Introduction

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In November 2009, Alcatel-Lucent Market Advantage surveyed European consumers to assess demand for the LTE Connected Car service. The LTE Connected Car is a solution concept of the ng Connect Program. This end-user research was conducted in the United Kingdom, Germany, France, Spain, Italy, the Czech Republic and Poland — and focused on the following key objectives:

- Determine the appeal of the LTE Connected Car concept.
- Evaluate interest in individual applications.
- Measure consumers' willingness to pay.
- Assess new business models for ecosystem.

*Thirty-four percent of Europeans are likely to purchase LTE Connected Car. On average, they would pay €27 per month for the service.*

### LTE CONNECTED CAR CONCEPT

This service package provides always-on access to the Internet, along with entertainment and real-time navigation systems.

Standard features include:

- Access to social and communication information, as well as streamed radio, TV and video content
- Live updated information about traffic and locations of interest
- Accident and emergency assistance, along with stolen vehicle recovery systems

Enhanced features include:

- Screens in front and rear of the vehicle
- Wi-Fi access for portable devices
- Device integration for mobile phones, media players, gaming and computers
- Live map data



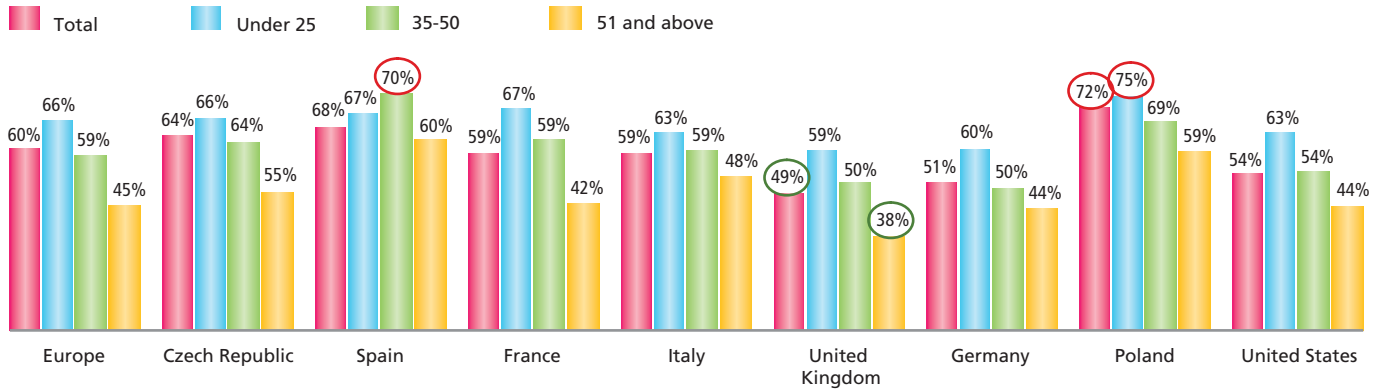
- Video and audio services, such as on-demand movies and access to TV and Internet video
- Location-based services, including Google Maps
- Communication and messaging service access
- Remote vehicle diagnostics, maintenance tracking and notifications systems
- Natural language voice interaction for safety

## Key research findings

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Nearly sixty percent of Europeans find the LTE Connected Car “Very Appealing” or “Appealing”, with the highest level of interest residing in Poland. When findings are broken out by age, LTE Connected Car has the strongest appeal to the under 35 market segment, as shown in Figure 1. When considering the available features, consumers across all segments show the greatest willingness to pay for the Augmented GPS and Maintenance, Tracking and Notification applications. Nearly half of Europeans find the wireless components of the LTE Connected Car “Very Important.”

**Figure 1. The under-35 age group shows the strongest interest in LTE Connected Car**



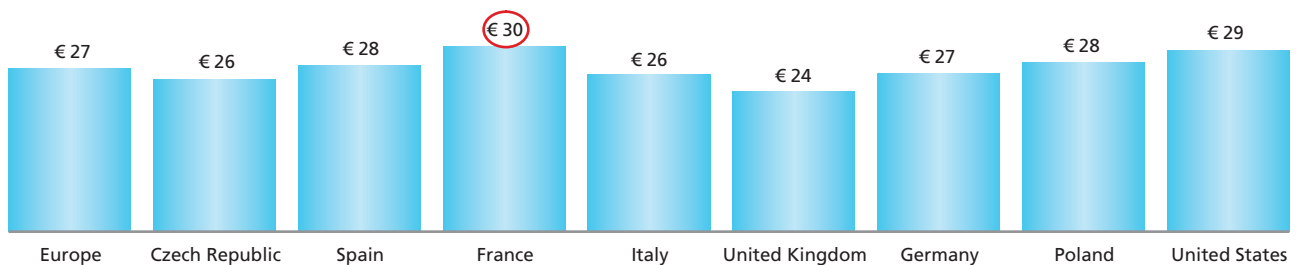
### Willingness to pay

Nearly a quarter of Europeans would purchase the LTE Connected Car in the next six months, with roughly the same percentage of these consumers aged under 35 and 35 to 50. European consumers would be willing pay an average of €1904 above sticker price to have LTE Connected Car as part of their new vehicle.

On average, European consumers would pay a standalone monthly fee of €27 for LTE Connected Car service, while consumers in France are willing to pay €30 per month, as shown in Figure 2. Forty five percent of respondents prefer this standalone payment method, while 26 percent would rather bundle a LTE Connected Car payment with their existing mobile subscription. In a bundled subscription, Europeans are willing to pay an extra €20 per month for LTE Connected Car service.

Over half of consumers in Italy, Poland and the Czech Republic would be willing to receive advertising to reduce the monthly cost of the LTE Connected Car service.

**Figure 2. How much consumers would pay monthly for LTE Connected Car service**



(European Median: \$20.)

### Leading applications and component preferences

Among the LTE Connected Car features, Europeans are most willing to pay for Augmented GPS, followed by the four other applications listed in Figure 3. Table 1 also shows their optimal price points.

**Table 1. Top five applications in order of willingness to pay**

LTE CONNECTED CAR APPLICATION	OPTIMAL MONTHLY PRICE POINT
1. Augmented GPS	€10
2. Maintenance, Tracking and Notification	€11
3. Wireless Internet Access using Wi-Fi	€10
4. On-Line Analysis for Environmental Purposes (best route for fuel savings)	€13
5. Virtual Mechanic	€11

For 80 percent of respondents, it's important that all LTE Connected Car components are wireless (with no visible wiring). An MP3 player is the wireless device that European consumers are most likely to bring into their cars.

### Segmentation findings

Across all the market segments defined in Figure 4, Italians are most likely to purchase the LTE Connected Car service, along with Spanish, French, Italian and Polish business travelers. However, aspirers are more willing to pay for applications and services than other segments in Europe.

**Table 2. Market segments analyzed in our study**

SEGMENT	DESCRIPTION
Early adopters	Consumers who have five or more features in their current vehicle and still desire five or more features
Initiators	Consumers who have five or more features in their current vehicle but desire less than five features
Aspirers	Consumers who do not have five or more features in their current vehicle but desire five or more features
Active drivers	Consumers who drive three hours or more on a daily basis
Business travelers	Consumers who use their personal car for business travel

## Conclusion

In Europe, the LTE Connected Car service has strong overall appeal among the under-35 age group, and Internet connectivity is perceived as highly desirable. Consumers are receptive to a monthly recurring fee for the service and more than a third would prefer a mobile service provider to offer the LTE Connected Car service. Consumers will need, however, assurances on both privacy issues and safety concerns related to the distractions associated with an LTE Connected Car.

### About the Market Advantage program and Alcatel-Lucent research initiatives

This research is part of a broader initiative by Alcatel-Lucent to characterize the impact and potential benefits of telecommunications services globally. The Alcatel-Lucent Market Advantage program is an exclusive resource, working with service providers to analyze and identify new market opportunities, drive demand with effective marketing programs and speed the development of profitable new services.

For more information on this study or how Alcatel-Lucent is working with service providers and stakeholders globally to better understand consumer needs, please visit [www.alcatel-lucent.com/map](http://www.alcatel-lucent.com/map).

## **About the ng Connect Program**

The ng Connect Program was founded by Alcatel-Lucent in 2009. Today, with 32 members from diverse industries, it is the leading global ecosystem delivering innovative applications and business models for ultra-high bandwidth technologies. The LTE Connected Car is perhaps the most widely recognized solution concept to be delivered by the program to date. This concept vehicle can be thought of as a “smartphone on wheels”, putting enhanced navigation, vehicle maintenance, home control, entertainment and communications at the user’s fingertips to deliver rich, personalized experiences through multiple touchscreens in the car.

For more information on the ng Connect Program and the LTE Connected Car, visit <http://www.ngconnect.org>.

## **About Bell Labs Business Modeling**

Leveraging the primary market research performed for ng Connect and complementing it with LTE and automobile market data, allows Alcatel-Lucent to develop analysis that quantifies both traditional and new business models. These business models include partners developed as part of the ng Connect ecosystem. This analysis permits us to demonstrate the market opportunities afforded service providers by offering the LTE Connected Car solution to their traditional customers. These monetary flows are supplemented with new revenue streams from non-traditional customers such as automobile manufacturers. Through this analysis, we estimate the end-user revenue opportunity from familiar business models, but also new revenue streams enabled by this solution.