

# BMW ConnectedDrive. Life in motion.

8.30 a.m.  
Witness to accident, emergency call made to get help fast

10.12 a.m.  
Traffic congestion avoided

11.22 a.m.  
Call from my BMW Service Partner

12.10 p.m.  
Felt like pasta, Googled Italian restaurant

2.25 p.m.  
Reserved ticket, calculated route

5.03 p.m.  
Booked short holiday

5.25 p.m.  
Checked e-mail

6.00 p.m.  
Immediately found parking space



BMW  
ConnectedDrive

Las Vegas  
January 2008



Sheer Driving  
Pleasure

# BMW ConnectedDrive. The philosophy of networking.

*The car as part of a network.*

Surroundings and Lifestyle



Driver

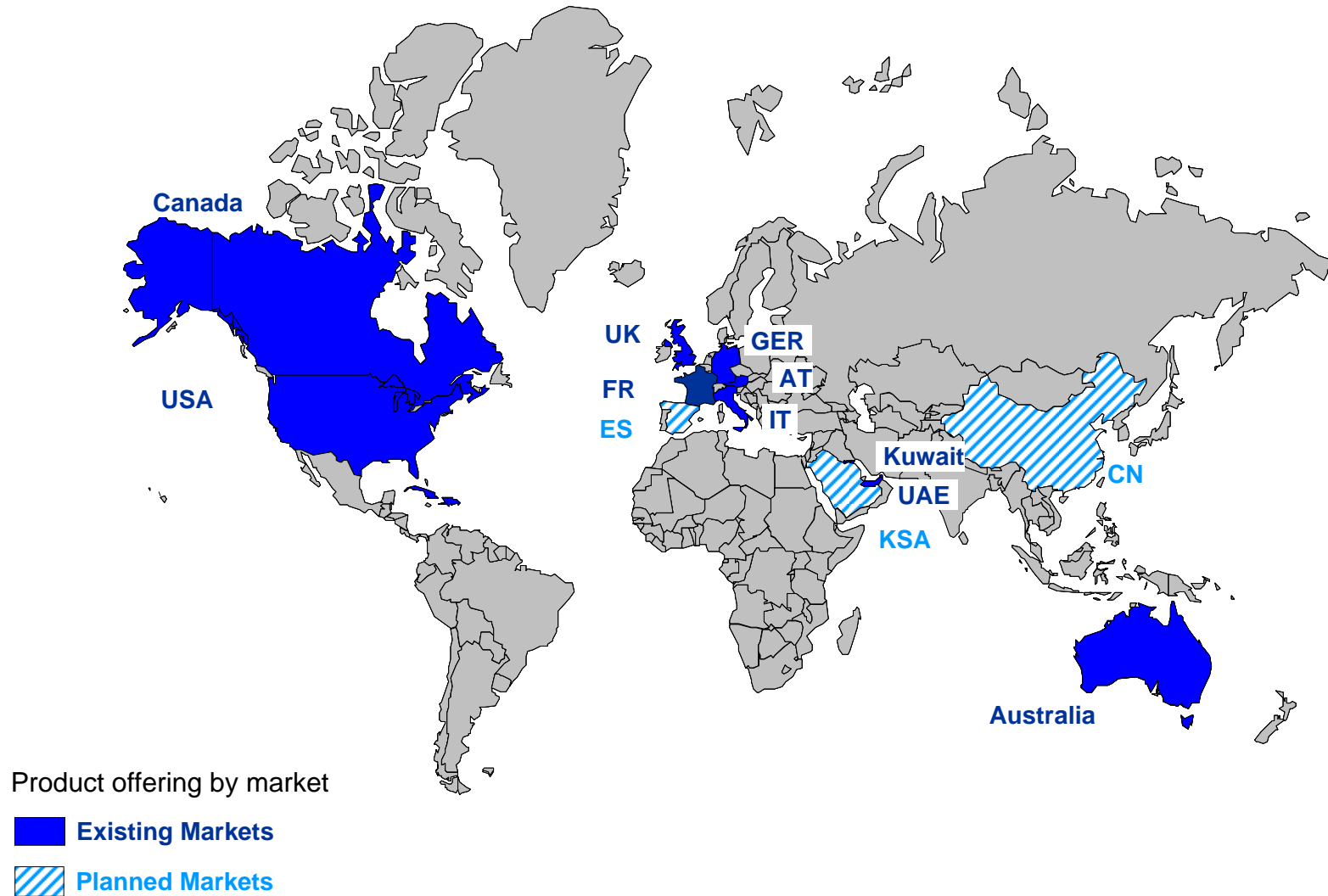


Vehicle

BMW ConnectedDrive

# BMW ConnectedDrive Today.

## Global market expansion since 1997.



# BMW ConnectedDrive Today.

## Product offerings.

### BMW ConnectedDrive

#### BMW Online

Internet-based portal, office functions, services, mobility information.

*Be well-informed,  
everywhere.*

#### BMW Assist

Voice-based functions, interactive communication channel at the touch of a button.

*Get there faster, more  
comfortably and safely .*

#### BMW TeleServices

Faster, easier and more convenient BMW vehicle maintenance.

*Relax, you are in good  
hands.*

#### BMW Tracking

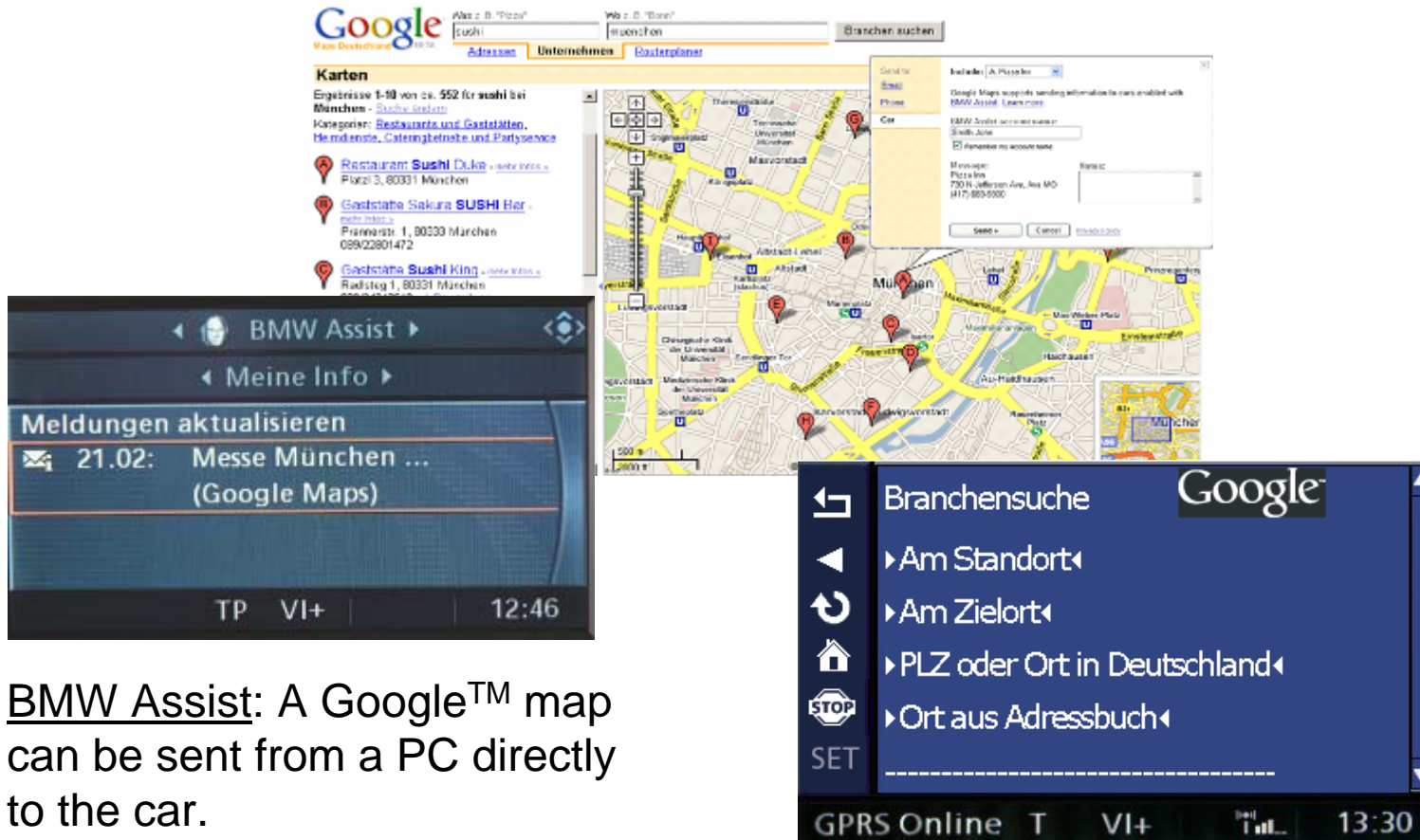
Location of a stolen vehicle via a tracking module integrated into the car.

*Take the loss out of  
theft.*



# BMW ConnectedDrive Today.

## Two channels to access Google™ in the car.



BMW Assist: A Google™ map can be sent from a PC directly to the car.

BMW Online: Local information can be searched on Google™ directly in the car.

# BMW ConnectedDrive Today. BMW Online.

## News



The latest international, local, business and finance, and sports news.

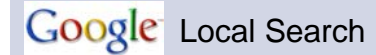
“My News”:  
Create a personal news portal via RSS-Feeds

## Weather



National and international weather forecasts, seasonal forecasts (ski resorts, snow depths, frost and weather for convertible driving).

## Information



Search local business information.

Data (address, telephone number, and distance from the current position) can be transferred to the navigation system or phone at the touch of a button.

## Travel



Search information about POIs, free parking spaces, etc. (Address, telephone number, opening hours, free parking spaces).

## Office



E-Mail Account:  
Receive, read and answer e-mails.  
Address book:  
Look up personal addresses.  
Synchronise and update addresses and e-mails via the BMW Online Internet Portal.

## Extras



Define personal settings (favourites, etc.).

Latest BMW ConnectedDrive information.

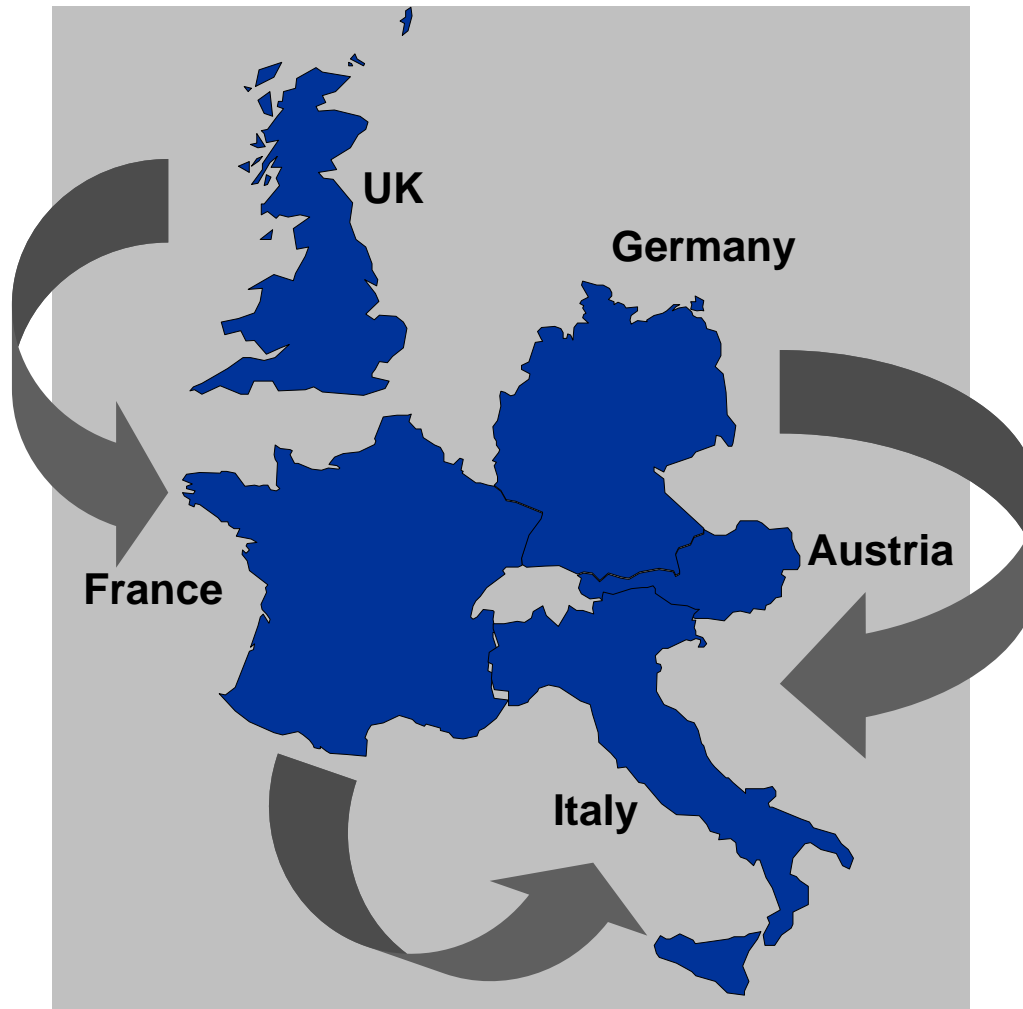
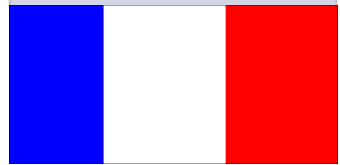
Help button.

# BMW ConnectedDrive Today.

All services are available in the native language independent from where the customer is located.



UK driver crosses Channel but will still receive services in English while in France



German driver travels to Italy for the weekend but still receives services in German while enjoying wine and pasta



# BMW ConnectedDrive Today.

## Leading connectivity capabilities.



- June 2007, BMW announces integration of the Apple iPhone into its vehicles

- Highly flexible. iPhone functionality accessed via either the in-vehicle controls and central information/radio display or via an iPod/USB interface option.
- Phone and vehicle integration. If call comes in, the music program stops until the call is completed.

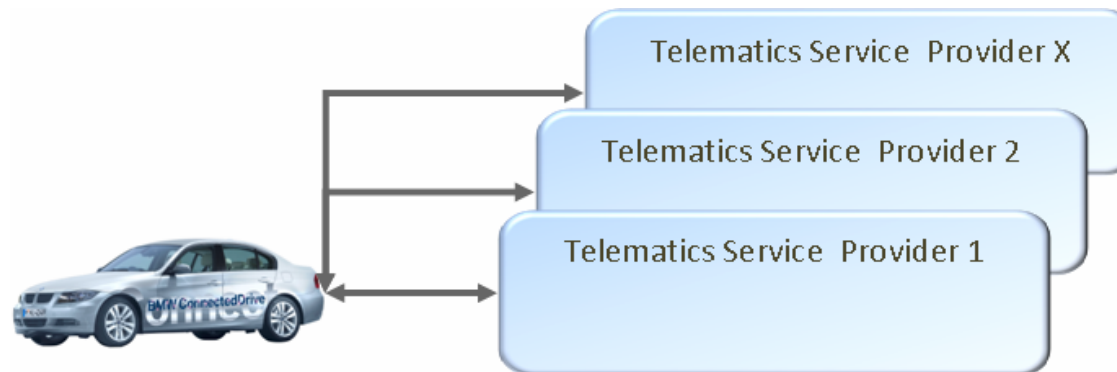




# BMW ConnectedDrive Tomorrow. Strategic growth challenges.

Future challenges to maintaining telematics technology leadership

- Reducing barriers to collaboration and implementation
- Enabling adoption of new technologies as they come online
- Developing leading-edge products in an increasingly fast and agile market
- Supporting legacy systems for connectivity throughout the service life of a vehicle
- Offering global solutions and local tailoring



# A new open implementation approach – NGTP. Facilitates expansion and market potential.

- Paradigm shift needed- new thinking requires a new approach
- Need to move from proprietary systems to a flexible platform
    - New open protocol
    - Flexible interfaces
  - A fresh approach to industry collaboration
    - Engaged two industry partners, **Connexis** and **WirelessCar**
    - Developed and tested rigorously
      - Team dedicated to one year of development
      - Compatibility testing done with existing providers



# BMW ConnectedDrive Tomorrow.

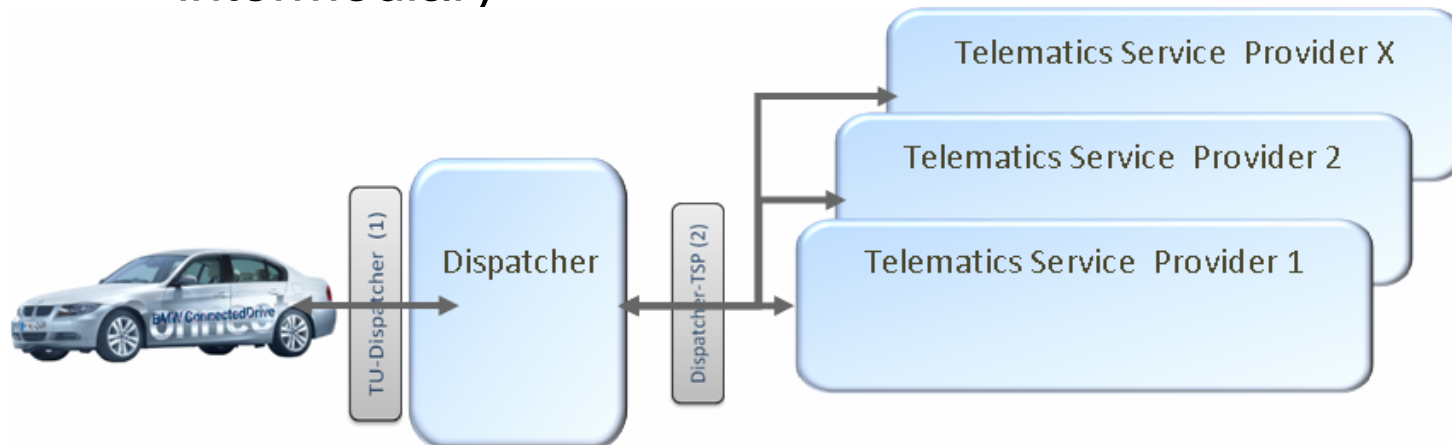
## Key elements of Next Generation Telematics Protocol.

Consistent and open interfaces.

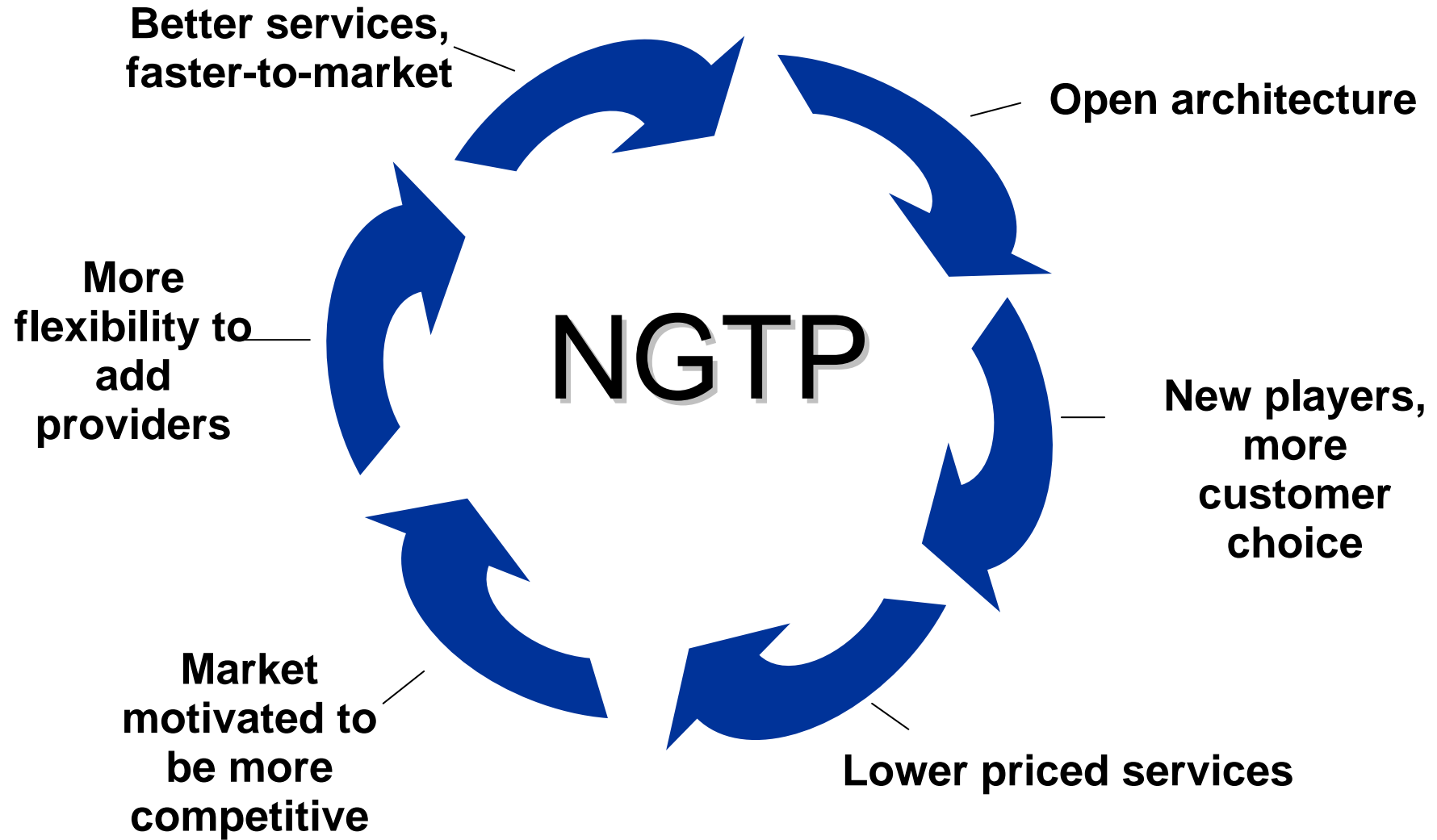
- Separates components of telematics delivery chain
- Interchangeable service providers
- Adaptable to legacy and new systems
- Benefits all telematics industry members

Open architecture.

- Introduces 'dispatcher' as technology-neutral intermediary

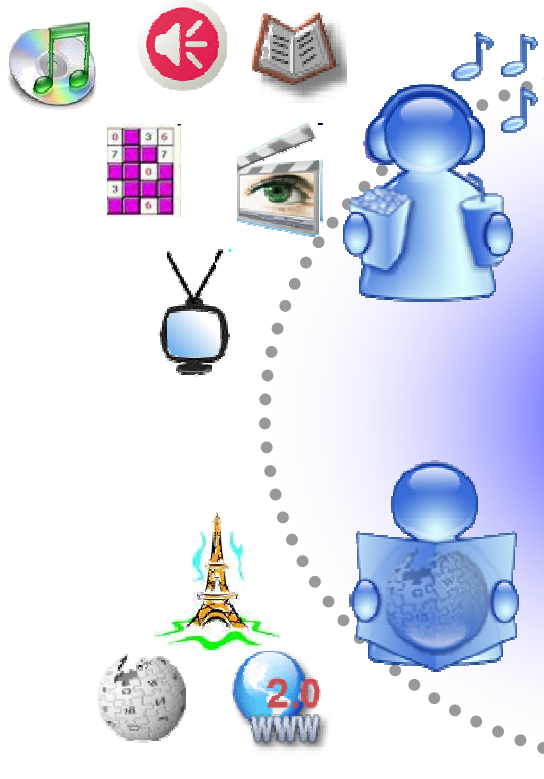


# Industry trends under NGTP. Enhanced market dynamics.

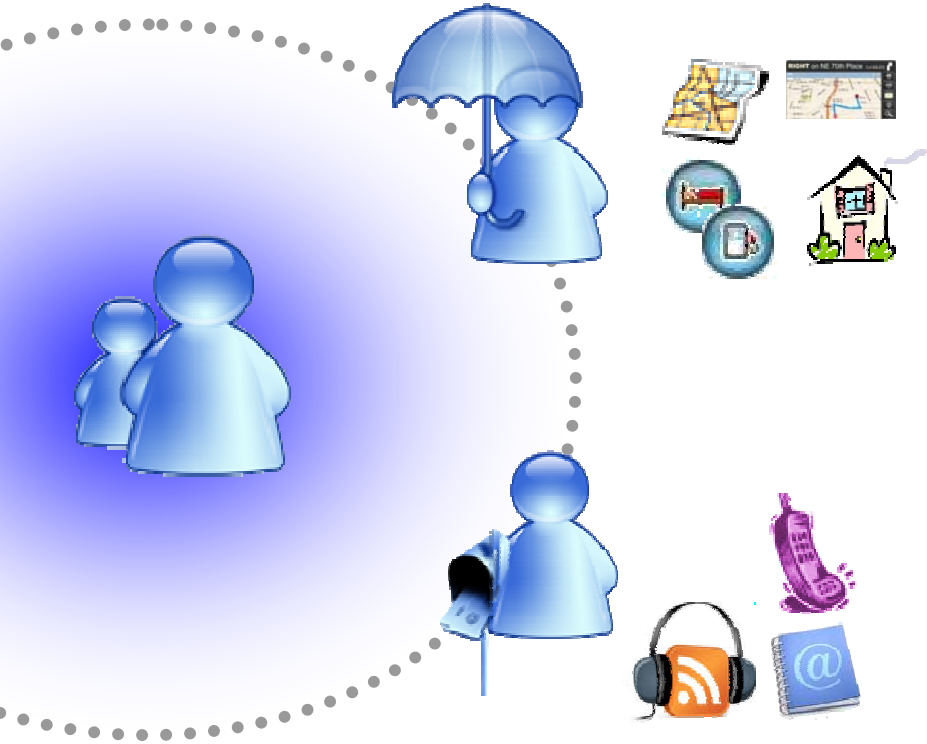


# BMW ConnectedDrive Tomorrow. Future service trends.

Entertainment



Navigation &  
Location-based Services

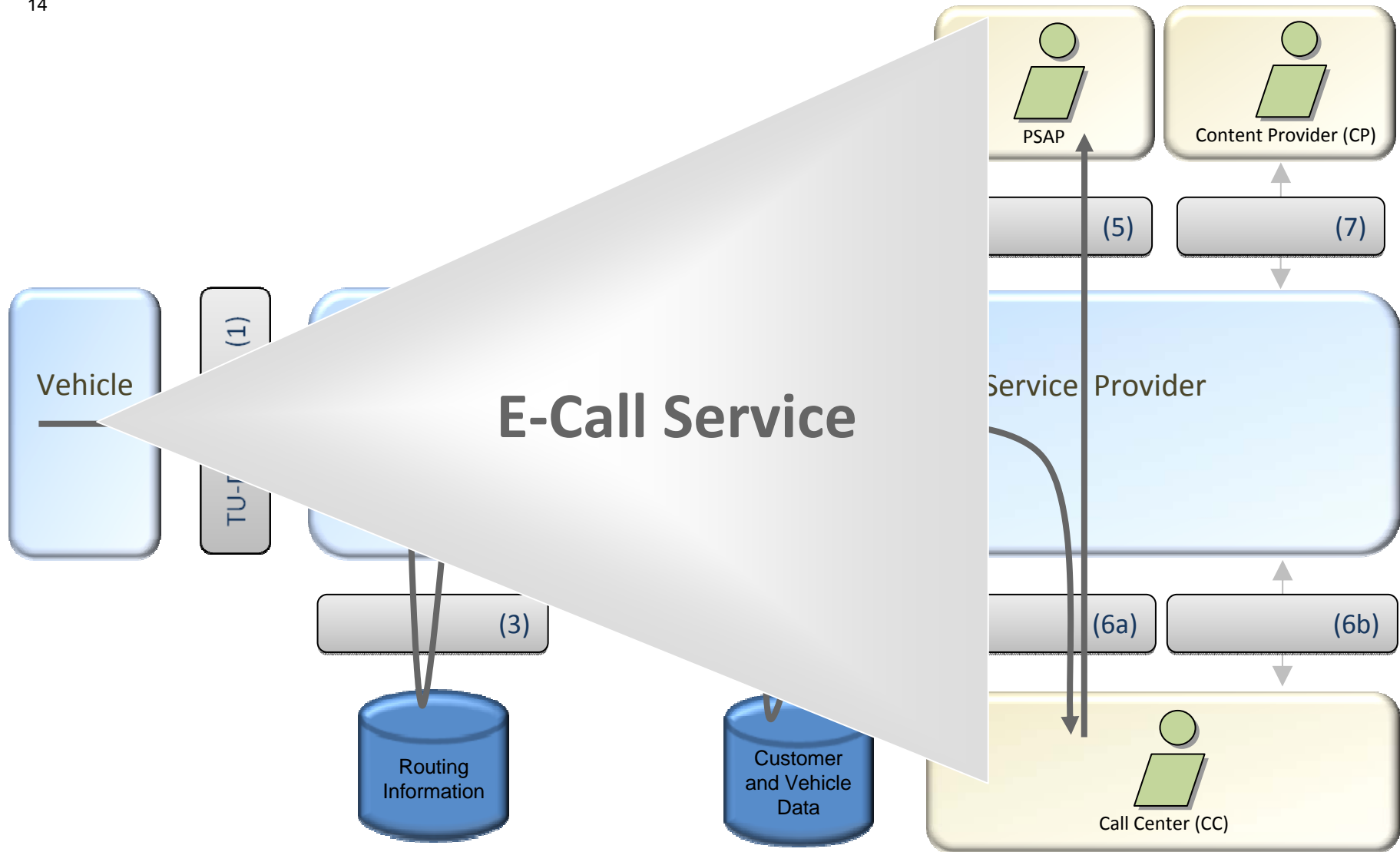


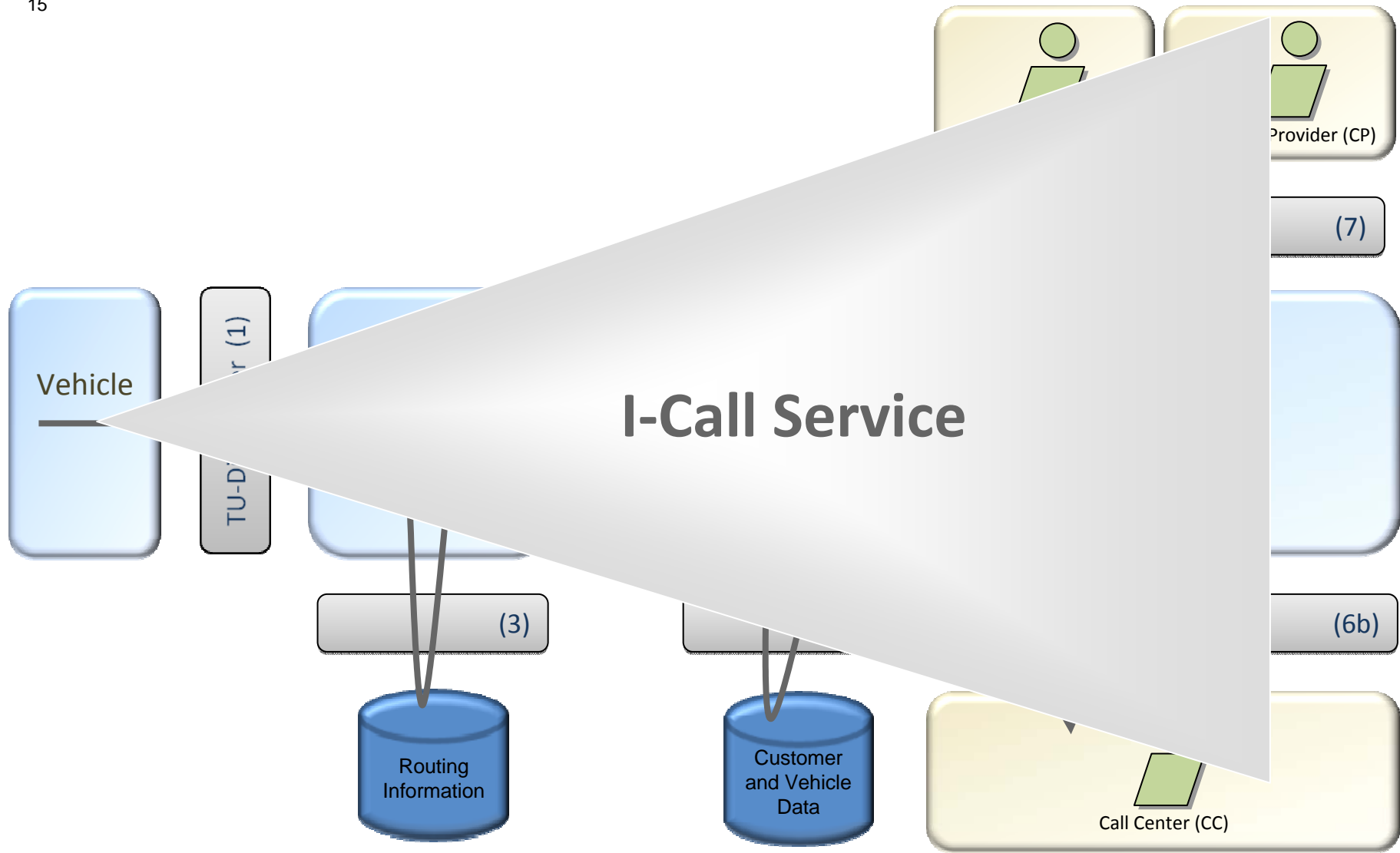
Infotainment

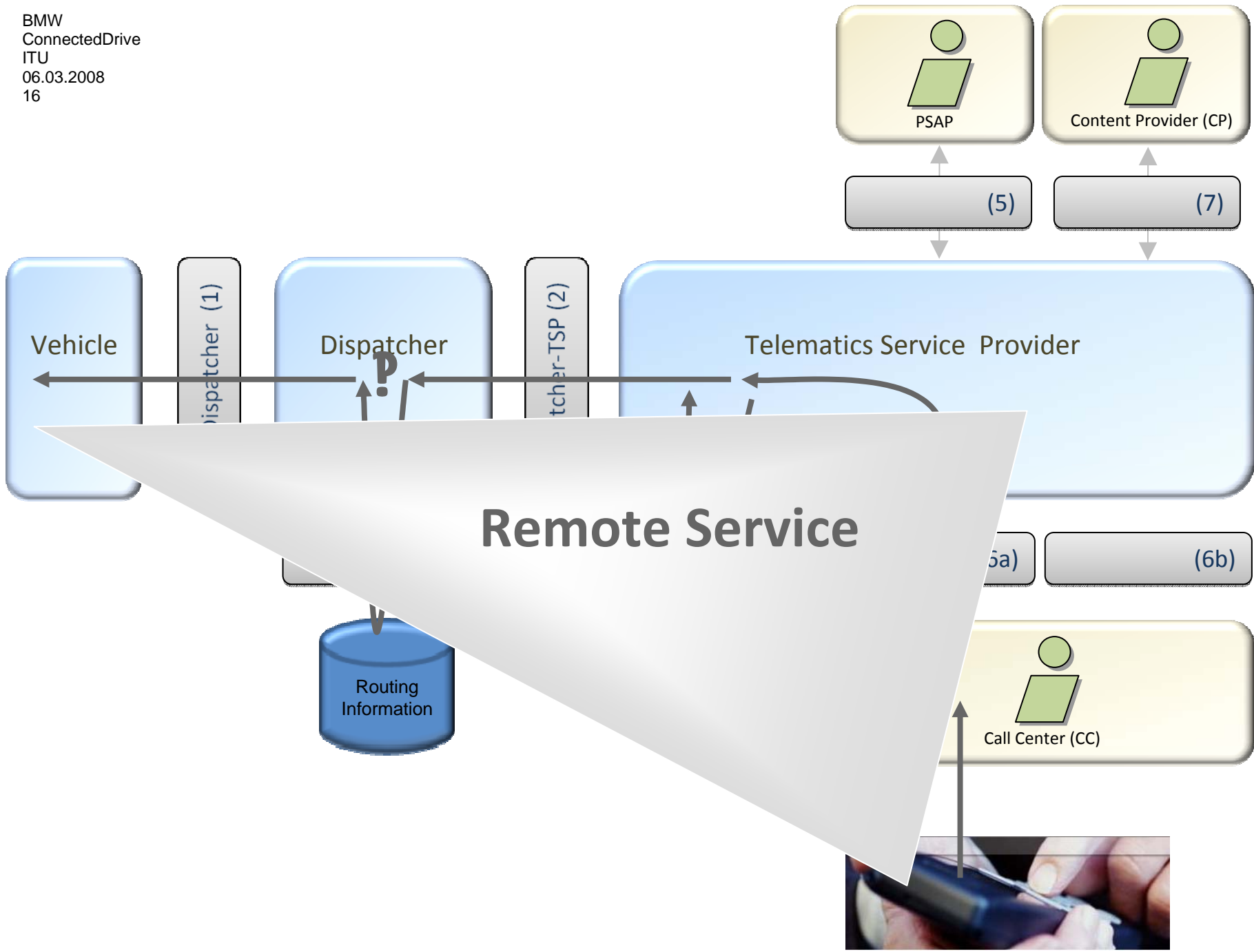
Connected

➔ **BMW has already begun to implement NGTP**







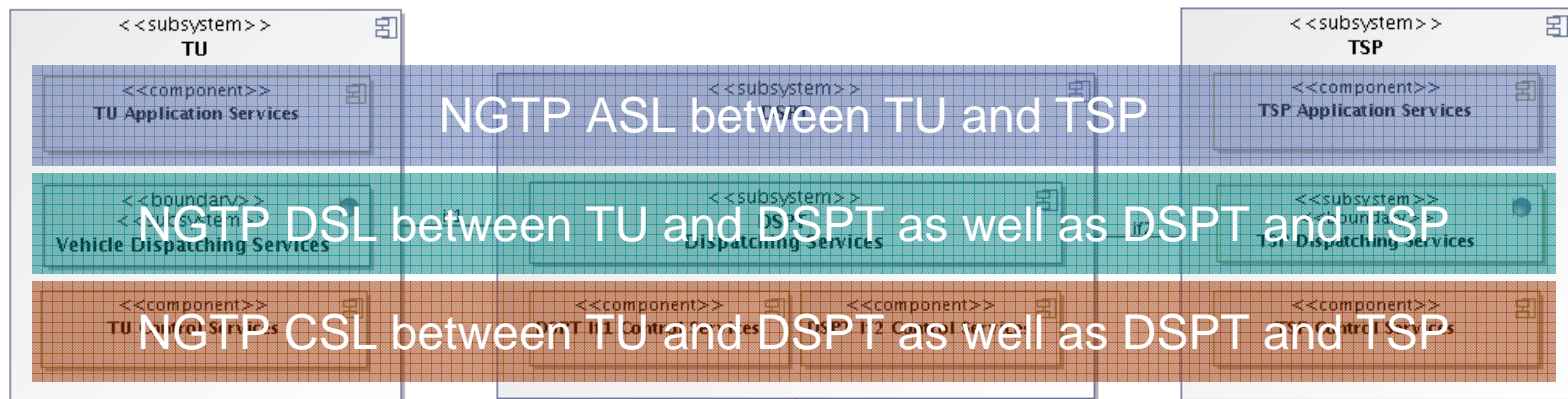


# BMW ConnectedDrive.

## NGTP – Specification: What has been done.

NGTP follows the OSI layer model and can be split into the 3 specified layers:

- NGTP Application Services Layer (ASL)
- NGTP Dispatching Services Layer (DSL)
- NGTP Control Services Layer (CSL)



# **BMW ConnectedDrive.**

## **NGTP – Specification: What has been done.**

### Specification – 4 documents.

1. General Overview  
(Introduction, Table of Specification Content)
2. Application Services Layer
  - Interfaces 1 – 7
3. Dispatching Services Layer
  - Interfaces 1 – 3
4. Control Services Layer
  - Interfaces 1 – 3



# BMW ConnectedDrive. NGTP – Website <http://www.ngtp.org>.

The screenshot shows a Mozilla Firefox browser window displaying the NGTP website. The browser's address bar shows the URL <http://www.ngtp.org/>. The website features a navigation menu with links for Home, About, Press, Downloads, Contact us, and Search. A 'Main Menu' sidebar lists Home, About, Press, Downloads, Contact us, Search, and Administrator. A 'Login Form' section includes fields for Username and Password, a 'Remember me' checkbox, and buttons for Login, Lost Password?, and Register. The main content area is titled 'What is NGTP?' and describes the Next Generation Telematics Protocol (NGTP) as a technology-neutral protocol developed by BMW, Connexis, and WirelessCar. It also lists 'Reasons for Developing NGTP', highlighting the benefits of a more open and standardized approach to delivering services. A 'Latest Events' section mentions the 2008 International CES in Las Vegas, held from January 7 to 10, 2008. A calendar for January 2008 is also visible, with the 9th and 10th highlighted.

NGTP.ORG - Mozilla Firefox

Datei Bearbeiten Ansicht Chronik Lesezeichen Extras Hilfe

<http://www.ngtp.org/> Google

Home About Press Downloads Contact us Search

**Main Menu**

- Home
- About
- Press
- Downloads
- Contact us
- Search
- Administrator

**Login Form**

Username

Password

Remember me

[Login](#)

[Lost Password?](#)  
No account yet? [Register](#)

Home

## What is NGTP?

### Next Generation Telematics Protocol (NGTP)

*BMW, in collaboration with telematics service providers (TSPs) Connexis and WirelessCar, has developed both a new telematics framework and a technology-neutral telematics protocol to bring greater flexibility and scalability to the industry. The result of this collaboration is a new open approach to implementing telematics services called the Next Generation Telematics Protocol (NGTP).*

### Reasons for Developing NGTP

Historically, vehicle manufacturers have offered customers proprietary services and have been dependent on a single TSP for delivery of these services in a specific market. This supply chain inflexibility made it difficult for providers to gain economies of scale and advance their offerings.

A more open and standardized approach to delivering services has clear benefits for the marketplace, but previous standardization efforts focused on replacing existing protocols, rather than integrating them, which met barriers to adoption.

With the proliferation of new technologies (e.g., UMTS, WiFi, VoIP), it is likely that future in-vehicle devices will access services using multiple methods

January 2008

| Su | Mo | Tu | We | Th | Fr | Sa |   |
|----|----|----|----|----|----|----|---|
|    |    |    | 1  | 2  | 3  | 4  | 5 |
| 6  | 7  | 8  | 9  | 10 | 11 | 12 |   |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |   |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |   |
| 27 | 28 | 29 | 30 | 31 |    |    |   |

**Latest Events**

- [2008 International CES, Las Vegas](#)  
January 07, 2008 (7:00 am) - January 10, 2008 (11:59 pm)  
(General) With more than four decades of success, the International CES reaches across global markets, connects the industry and enables CE innovations to grow and thrive.  
[View Full Calendar](#)

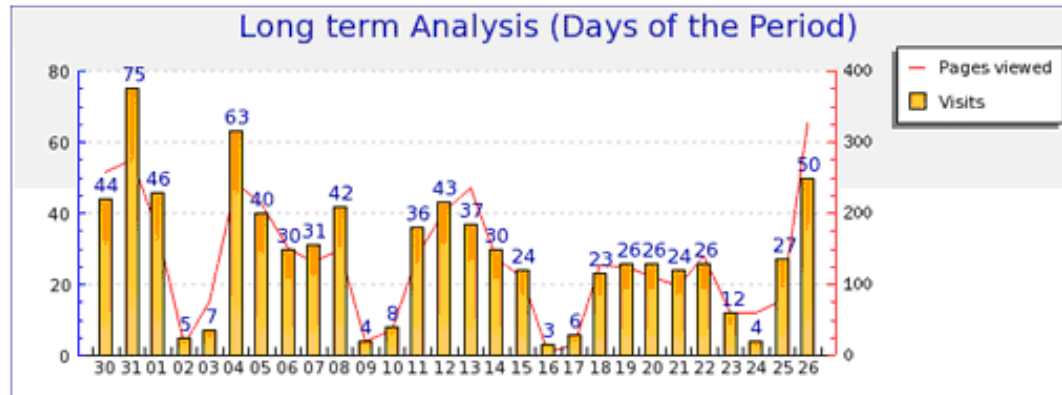
Fertig

# BMW ConnectedDrive. NGTP – Statistics.

The statistics is just to show you the interest in NGTP.  
These figures illustrating the stable accesses to the website  
and the ongoing communication we have.

Hits total: appr. 50.000 since launch in Jan 08  
Download of specs total: appr. 200

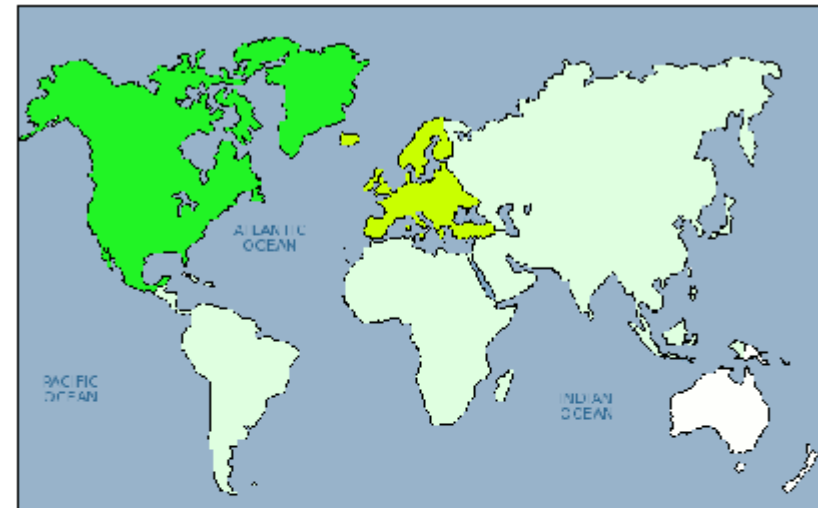
Hits per day (Feb 08).



# BMW ConnectedDrive. NGTP – Statistics.

Hits per country (Feb 08).

| Countries Summary     | Number       |
|-----------------------|--------------|
| <b>Germany</b>        | 430 (36.4 %) |
| <b>United States</b>  | 387 (32.8 %) |
| <b>Sweden</b>         | 103 (8.7 %)  |
| <b>Unknown</b>        | 45 (3.8 %)   |
| <b>France</b>         | 35 (3.0 %)   |
| <b>Great Britain</b>  | 29 (2.5 %)   |
| <b>Hungary</b>        | 28 (2.4 %)   |
| <b>Japan</b>          | 27 (2.3 %)   |
| <b>Finland</b>        | 11 (0.9 %)   |
| <b>United Kingdom</b> | 10 (0.8 %)   |
| <b>Spain</b>          | 10 (0.8 %)   |
| <b>China</b>          | 8 (0.7 %)    |
| <b>Italy</b>          | 8 (0.7 %)    |
| <b>Mexico</b>         | 7 (0.6 %)    |
| <b>Georgia</b>        | 6 (0.5 %)    |
| <b>Austria</b>        | 4 (0.3 %)    |
| <b>Belgium</b>        | 4 (0.3 %)    |
| <b>Canada</b>         | 3 (0.2 %)    |



| Continent                        | Number       |
|----------------------------------|--------------|
| <b>Europe</b>                    | 682 (57.7 %) |
| <b>North America</b>             | 390 (33.0 %) |
| <b>Asia</b>                      | 50 (4.2 %)   |
| <b>Unknown</b>                   | 45 (3.8 %)   |
| <b>South and Central America</b> | 12 (1.0 %)   |

BMW  
ConnectedDrive  
ITU  
06.03.2008  
22

# BMW ConnectedDrive.

Thank you for your attention.

