



mAutomotive

Connected Car Forum

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Unique Moment for Connected Vehicles...



General Drivers

- **Using Any device**
- Services covering **all consumer needs and environments**
- **Interaction throughout the Day**
- **Constant Innovation and New Products**

Evolution in consumer demand: Flexibility and SERVICES

Technology Drivers

- **Cloud based services**
- **HTML5** – changing the services offered in the car
- Shift from solely proprietary to **mixed solutions** (native OS and Html)
- **High bandwidth cellular network deployment**

Connected Vehicle Drivers

- **Brazil**
- **Europe**
- **Russia**

Regulatory Measures Resulting in Mandatory Fitment of Embedded Solutions in Vehicles

New Business Models

- **Services**
- **Connectivity**

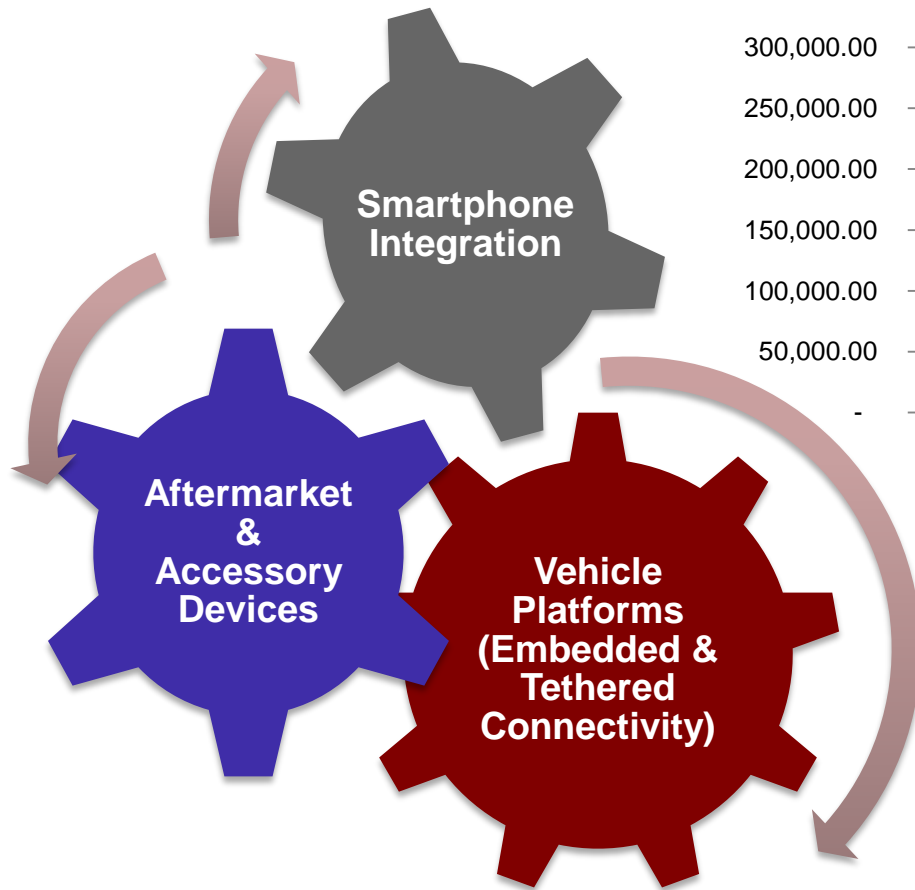
mAutomotive Objectives

Increasing Connected Vehicle Services Sector Opportunity:

- More Connected Vehicles
- Increased Variety of In-Vehicle Services
- Increased Geographical Coverage of In-Vehicle Services
- Increased Service Usage

Increasing MNO Value –Add Automotive Services

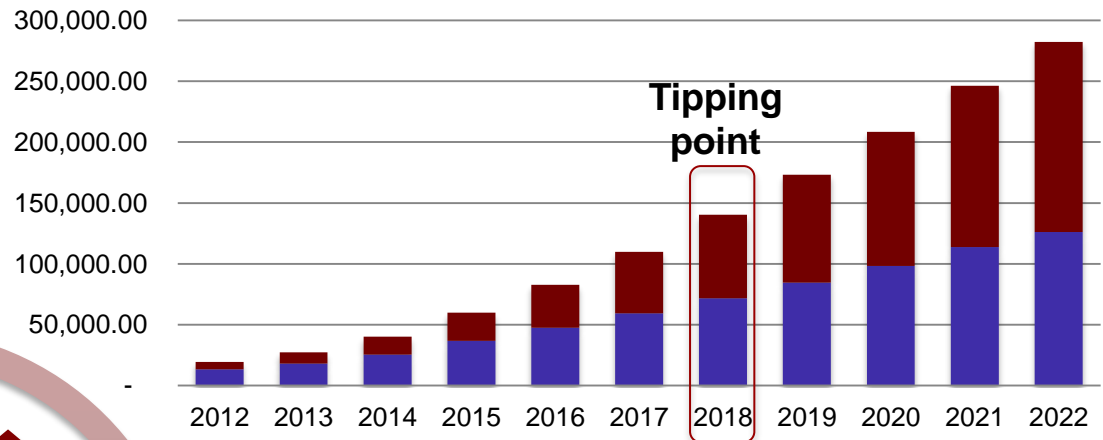
mAutomotive: Connected Services in Vehicles



Connected Service Solutions

mAutomotive Opportunity

- Vehicle platform total revenue (USD Millions)
- Aftermarket total revenue (USD Millions)



Source: Machina, 18 October 2013

What is the GSMA Connected Car Forum?



What is it?

The GSMA Connected Car Forum (CCF) is where automakers and mobile operators meet to:

- Share information and enable industry cooperation
- Resolve barriers to connected car deployment
- Speed the adoption of telematics and infotainment services.

Focusing on?

The GSMA CCF addresses cross-industry initiatives of international relevance that focus on telematics & infotainment services:

- **Enablers** for service deployment
- **Operational improvements** for services
- **Business Development** Opportunities for service deployment
- Regulations for mandatory telematics fitment

Results Oriented...

GSMA CCF members commit to laying the groundwork for connected cars becoming ubiquitous. Target figures include:

- More than 20% of global vehicle sales in 2015 to include embedded connectivity solutions
- More than 50% of global vehicles sales in 2015 to be connected (either by embedded, tethered connectivity or smart phone integration)

Who participates in the GSMA CCF?

Leadership Team: KDDI, Orange, Softbank, Telecom Italia, Telenor, Telefonica, Vodafone



No other group focuses purely on resolving primary connectivity barriers and fostering opportunities for connectivity growth

Automakers:

Audi, BMW, Chrysler, Fiat, Ford, GM, Honda, Hyundai, Jaguar Land Rover, Mazda, Nissan, Peugeot, Renault, Toyota, Volvo, VW

Trial Participants: Audi, BMW, GM, PSA, Renault, Volvo

Operators:

AT&T, Bell Canada, China Unicom, Deutsche Telecom, KDDI, KPN, KT, NTT Docomo, Orange, Rogers, Softbank, Sprint, Telecom Italia, Telefonica, Telenor, Telstra, Teliasonora, Turkcell, Verizon Wireless, Vodafone

Trial Participants: China Unicom, Deutsche Telecom, KDDI, Orange, Softbank, Sprint, Telecom Italia, Telefonica, Telenor, Verizon, Vodafone

Why is the GSMA CCF unique?



What we do...



Not just a talk shop - pragmatic approach to solving common problems that both industries face

How we do it...



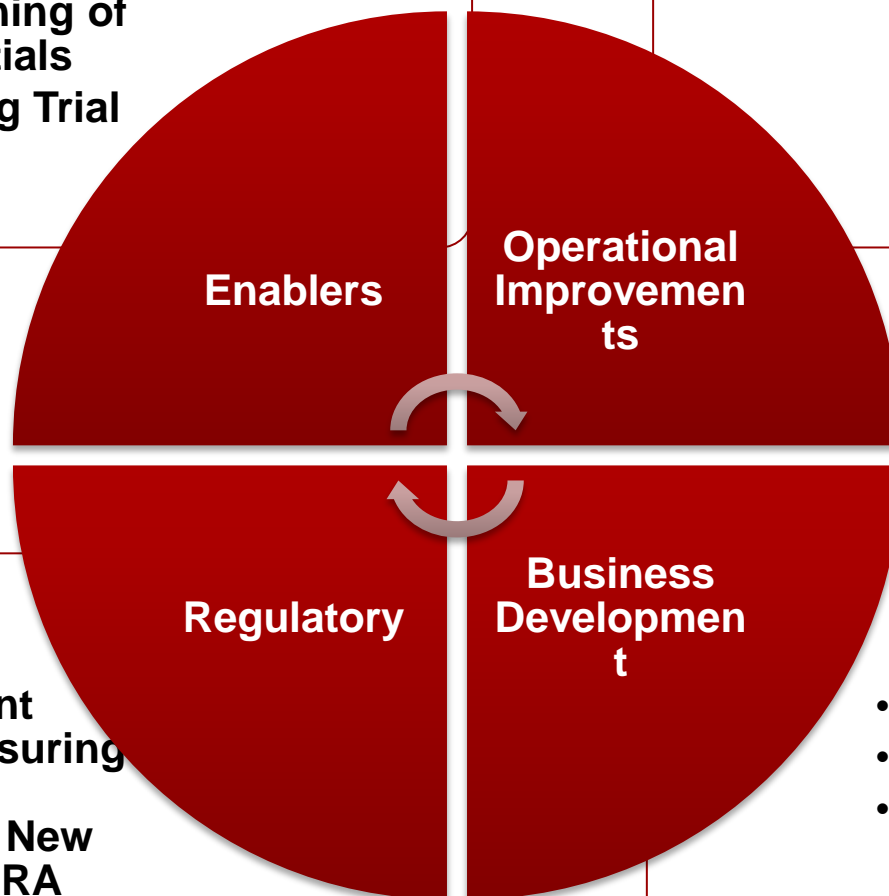
Identification, prioritisation and execution of activities occurs with the participants of the group

Key themes for 2013/14



- **Common Interoperable Remote Provisioning of Operator Credentials**
- **Charging & Billing Trial**

- **Optimising Current Tethering / Defining Next Generation**



- **Regulatory Fitment Mandates and Ensuring Value-add Opportunities for New Services: eCall, ERA GLONASS, SIMRAV**

- **Big Data**
- **LTE in Cars**
- **Aftermarket devices**

Embedded SIM in mAutomotive & Proof of Concept



- Contributing to future proofing of embedded connectivity
- Responding to 13 out of 17 use cases for embedded connectivity
- Showcasing industry commitment to common standard

Scoping

- Mapping of Embedded Connectivity Use Cases
- Evaluation of remotely provisionable SIM concept as an enabler for the embedded connectivity use cases

Action: Proof of Concept for remotely provisionable Embedded SIM

- Builds upon Embedded SIM ecosystem findings
- Interoperability of MNO profiles with different SIM vendor proprietary solutions
- Common business requirements, use cases & field trials
- Showcase industry commitment to common standard
- Feedback on key requirements

Education & Promotion: Demonstrations at MWC

- Promotion of objectives, work to date, use cases
- Showcase solutions for automotive sector

2013 - onwards

Action: mAutomotive Proof of Concept:

- Extended OEM field trials
- Additional technical topics of relevance (including LTE)

Action: mAutomotive Proof of Concept on Complying with Embedded SIM Project Stage 3 Specifications for Interoperability

- Demonstration in a automotive context the stage 3 specifications
- Highlighting both MNO and SIM Vendor Interoperability (according to specs)
- Provide proof points to external ecosystem on the validity of the approach

MNOs

OEMs

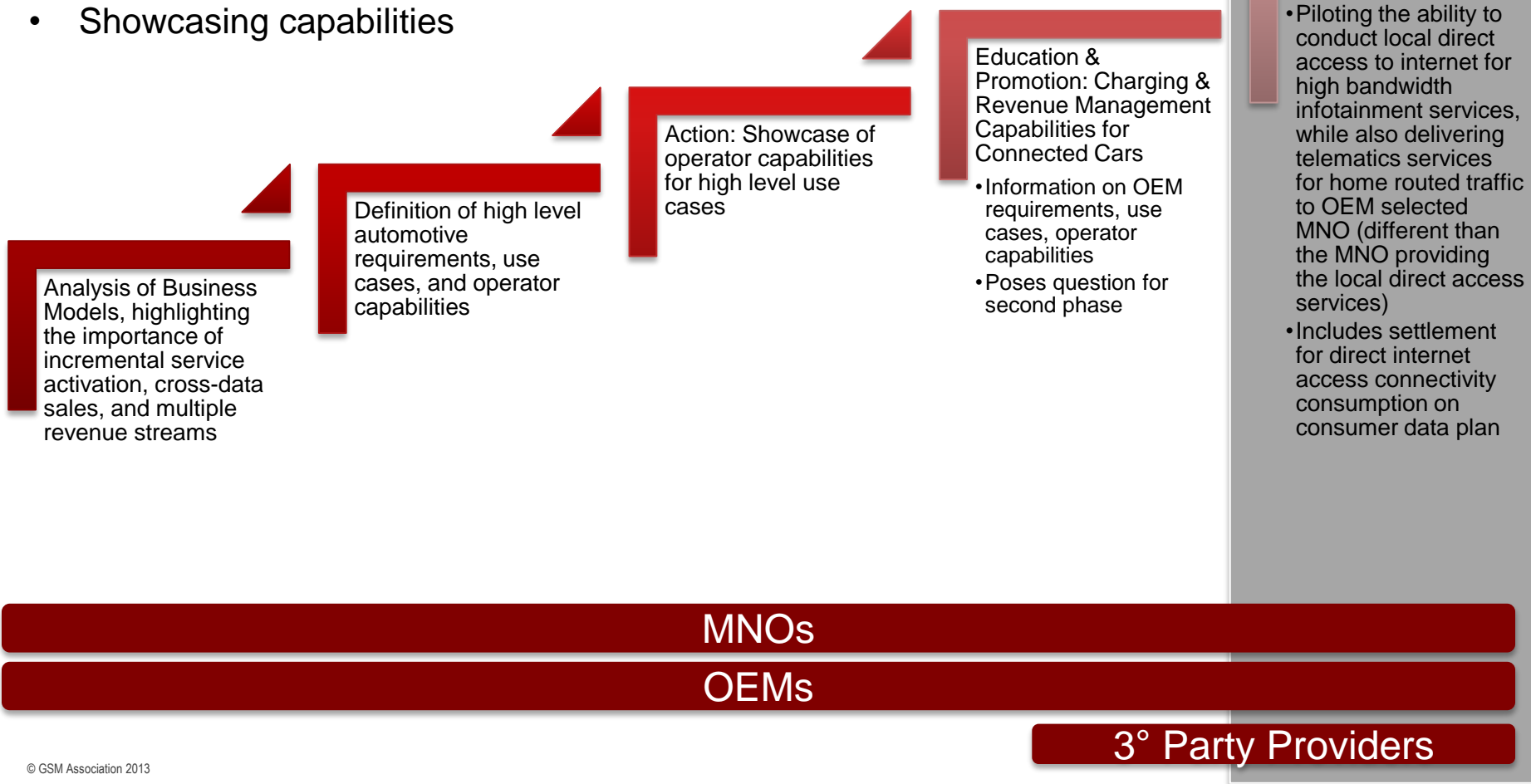
SIM Vendors

GSMA Embedded SIM Project

Charging & Billing Theme



- Contributing to deployment of embedded connectivity, especially for high-bandwidth services
- Fundamental enabler for innovative business models
- Showcasing capabilities



Big Data: Unlocking the value of data and the larger ecosystem to drive connected car services



- Contributing to business development of connected solutions
- Evaluating opportunity scale for cross-industry action in generating value

2013

Creation of trial

- **Marketplace** for cross-industry data sets
- Involvement of **data users** to obtain requirements for additional use cases and data monetisation opportunities
- Take-up of **enabler guidelines across ecosystem**, creating fertile environment for new services and reducing risk associated to service roll-out

Exploration of Key Use Cases

- **Accident Prediction** – Unlock trends from layered, multi-source big data on the factors influencing road accidents.
- **Usage Based Insurance** – Use MNO/OEM position data rather than fitting expensive data-loggers.
- **Pre-emptive Car Service Engagement** – Automate driver-dealer contact through big-data mash-ups around vehicle diagnostics.
- **Contextual Concierge** – Use a customer's accumulated activities & trends from multi-source big data to predict their needs.
- **Weather Alerts**. Drivers are notified of weather related hazards ahead on their route (eg. Black ice, heavy rain, fog, standing water, etc).
- **Road Hazard Alerts**. Drivers are notified of dangerous hazards ahead on their route (eg. Animals crossing, pot holes, obstacles in road way, etc).

MNOs

OEMs

System Integrators

Other Stakeholders

eCall: Example of Regulatory Themes



2013

- Contributing to increased fitment Opportunity for VAS
- Ensure operator-compatible regulations & standards
- Promote industry commitment to common standard
- Extended to ERA GLONASS, SIMRAV

Participation in EC deployment meetings (European eCall Implementation Platform)

Education & Promotion: Showcase commitment & ensure common understanding

- Operator-only webinar
- Public newsletter
- Interviews

Updates to Stakeholder Audience

- eCrog briefings
- CCF briefings

Action: Guidelines on standards

- Feedback on key MNO positions, into standards and policy/regulatory debate
- Revision of CEN standards – in particular, End to End Conformance Testing
- Liaison Statement on Periodic Testing Inspection to European eCall Implementation Platform
- Maximising the opportunity for Operators
- Value Add Service Opportunity, privacy implications
- Education on eCall

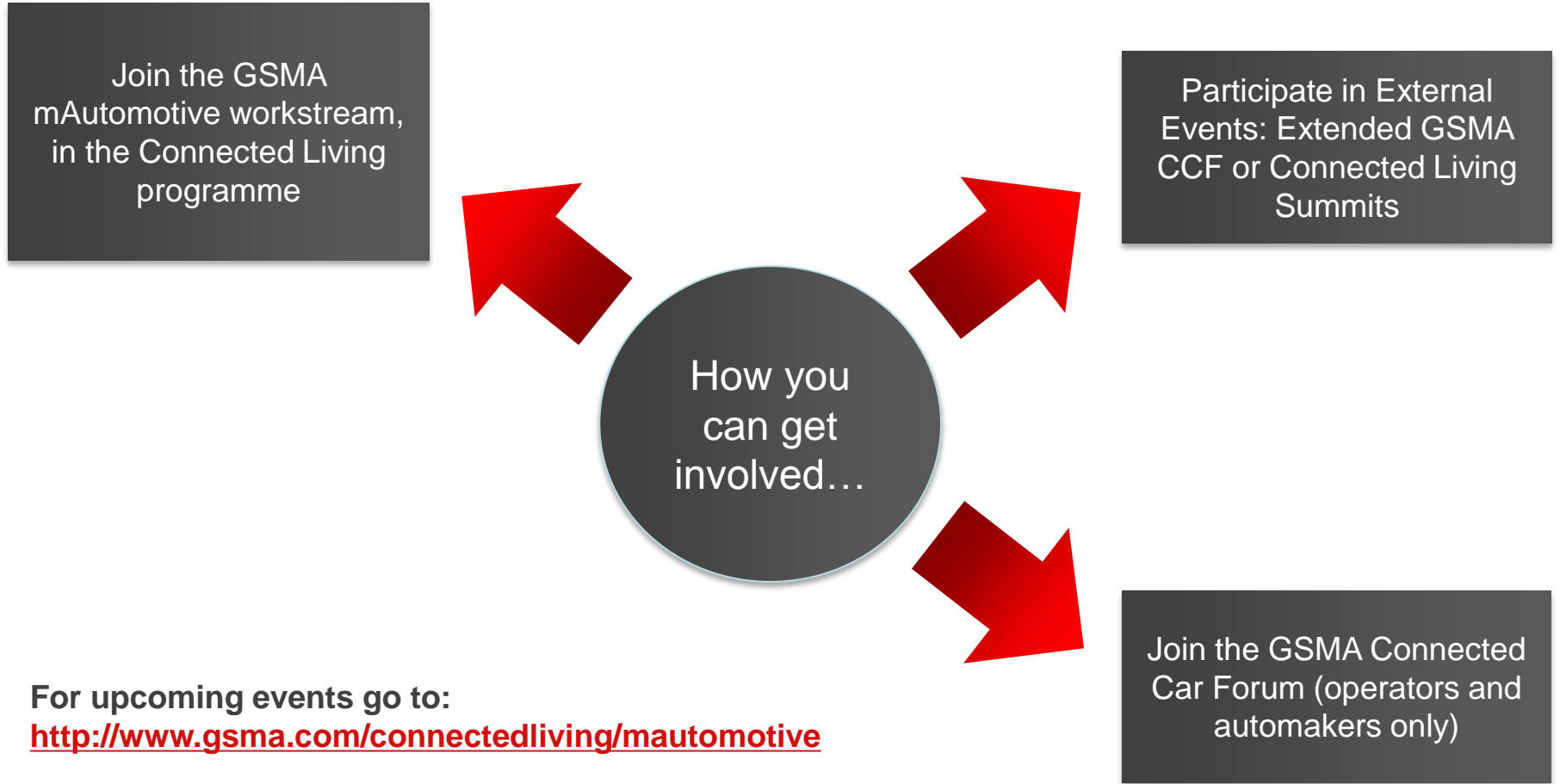
MNOs

OEMs

European Commission

CEN, ETSI

Join the GSMA CCF – a unique forum



For upcoming events go to:
<http://www.gsma.com/connectedliving/mautomotive>

■ mAutomotive Position Papers:

- Connected Car Forecast Next Five Years
- Split Charging & Revenue Management Capabilities for Connected Car Services
- Connecting Cars: Bring your Own Device – Tethering Challenges
- Connecting Cars: the Technology Roadmap
- 2025 Every Car Connected: Forecasting the Growth and Opportunity
- Connected Cars: Business Model Innovation

■ Guidelines:

- Tethering challenges and interoperability requirements for PAN / DUN

■ Case Studies:

- BMW – China Unicom Connected Drive
- Nissan Leaf

■ Regulatory Updates

■ mAutomotive Tracker (within the Connected Living Tracker)

<http://www.gsma.com/connectedliving/mautomotive>





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For more information: www.gsma.com/connectedliving/mautomotive
or contact: mautomotive@gsma.com

Partner Logo

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