IHS Markit

Automotive Advisory Services

IHS Markit Automotive Advisory
Uniquely positioned for your most complex challenges
Project Overview: LCV Market Study and Sales Forecast

ihsmarkit.com

Steven van Arsdale Senior Consultant, Automotive Advisory EMEA

Automotive Advisory

We deliver customized solutions based on unmatched combination of information, insight, and expertise

Providing an unmatched combination of information, insight, and expertise by transforming in-house and open data into knowledge and customizing scenario-based solutions to overcome your greatest strategic and operational challenges

- ✓ **Reduce risk**
- ✓ **Streamline business planning**
- ✓ **Accelerate informed decisions**

Execute **strategic multi-faceted** consulting projects

On the ground experts in over **130 offices** in **36 countries**

Team members with extensive **automotive industry backgrounds**

Partner to more than **80%** of the **Global Fortune 500** & **95%** of the **OEMs and suppliers**

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Automotive Advisory – Our Global Practice Areas

We help you navigate uncertainty and provide a lasting impact on your long-term performance

Technology & Mobility

Combining industry-experience and strategic-insights with technology-databases and diverse industry contacts to benchmark, analyze, and forecast the critical enablers and solutions in the rapidly-developing automotive technology landscape

Compliance & Powertrain Studies

Providing a scenario-based outlook into global electrified-powertrain rollout while identifying business impacts, mitigation strategies and response approaches with tailored assessment of a comprehensive set of compliance influencers

Sales / Volume / Market Planning

Providing in-depth, custom scenario planning and insights to vet and support market strategies as a proven business partner of major global OEMs

OEM Sales and Marketing

Driving significant ROI helping OEMs and NSCs on high-spend, high-impact sales and competitive positioning efforts leveraging a full range of proprietary automotive data assets

Dealer Network Planning

Delivering cutting edge value through innovation and efficiencies as global network planning and optimization partner of OEMs and NSCs

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Automotive Advisory – Data sources

IHS Markit analyst teams maintain expertise and forecasts in critical vehicle, powertrain, and component areas, which we integrate into our customized advisory projects wherever relevant

Light Vehicle Sales Forecasts

Delivers insight on sales volume, market demand, segment growth, and competitive dynamics

Light Vehicle Production Forecasts

Gives OEMs and suppliers the ability to size and identify new opportunities, defend against competitors, and optimize current programs, capacity, and business performance

Light Vehicle Powertrain Forecasts

Deliver industry-leading analysis for current and future powertrains and advanced propulsion technologies combined with CO_2/Fuel Economy forecasts

Components and Technology Systems Forecasts

Provides insight into the market trend of components and component-systems, covering powertrain, thermal, electronics, interior, digital-interfaces, and ADAS

Medium and Heavy Commercial Vehicle Forecasts

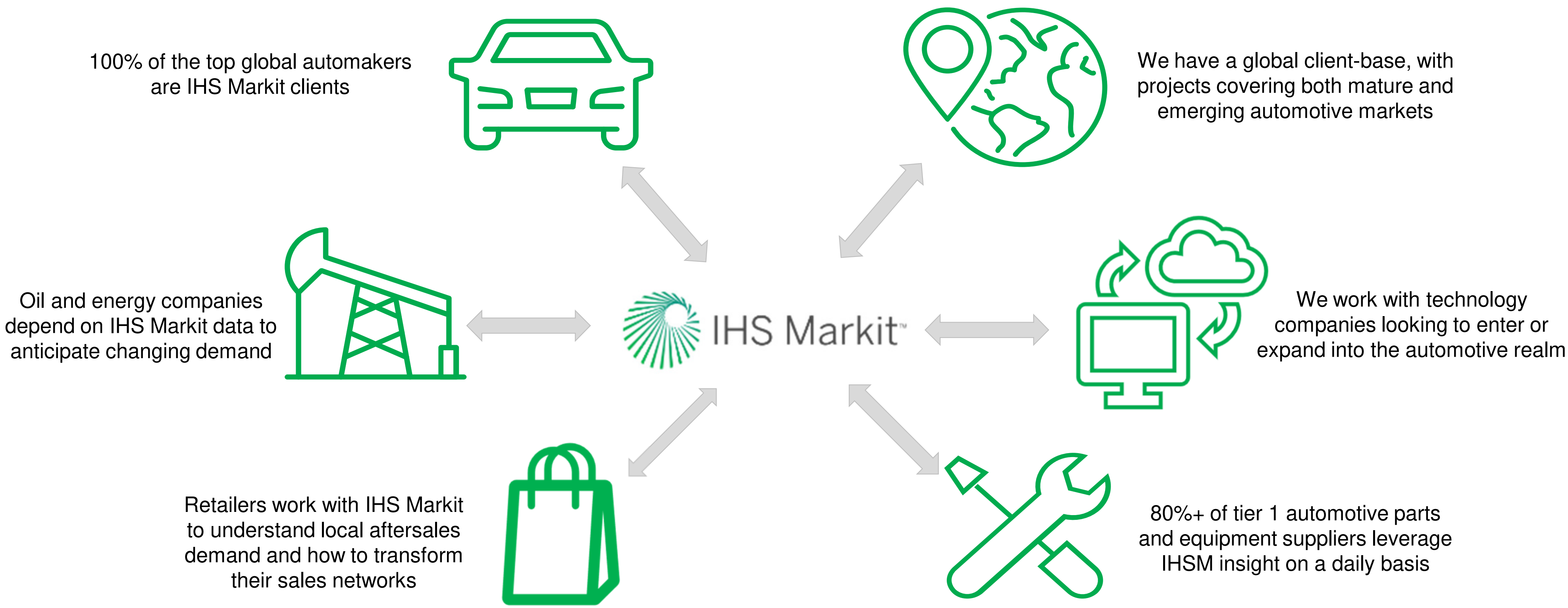
Sales and production insight by manufacturer, segment, and plant

New & Used Vehicle Registrations/ VIO Data

Data is available at micro levels of detail (i.e. make, model, engine)

Automotive Advisory – leveraging our extensive Industry relationships

We support a broad range of clients who through daily interactions provide ongoing insights and feedback



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Automotive Advisory – What we do

We are positioned to handle a diverse range of strategic projects across the automotive domain

OEMs | Suppliers | Tech Companies | Financial Institutions

Competitor Analysis and Benchmarking

Market-Analysis and Market-Entry Strategies

Supply value-chain assessment

Regional and country-level market studies

Technology sector evaluation and implementation strategies

Scenario forecasts for specific markets and segments

Customized databases and forecasts

Evaluating future trends around:

- Industry
- Markets
- Technology
- Competition
- Business-models
- Regulations

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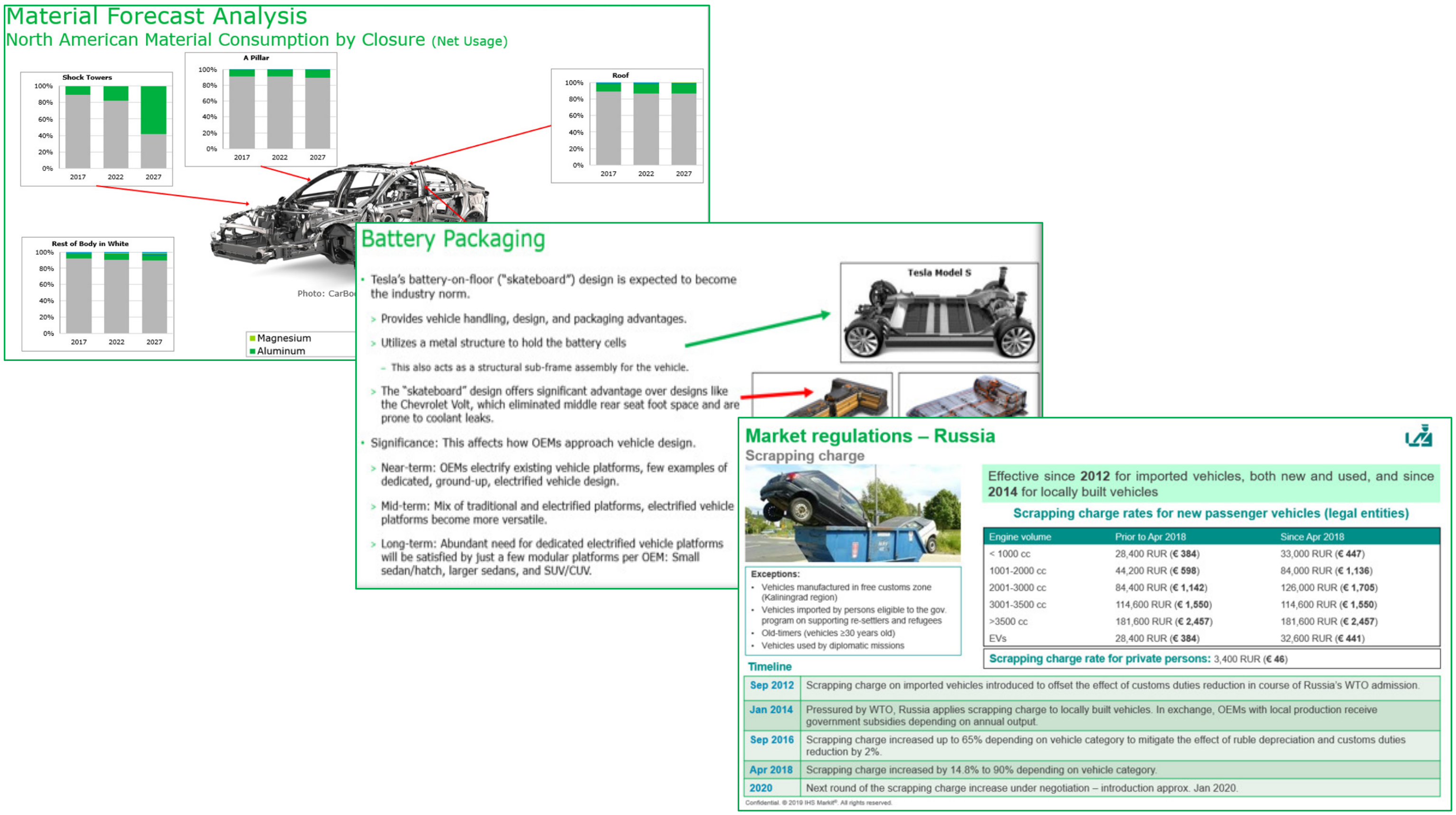

Evaluating future trends around:

- Industry
- Markets
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LCV Market Study and Sales Forecast

Recent OEM-oriented Projects – LCV Market Study and Sales Forecast

European LCV market analysis with a special focus on the electrification trend

New

Light Commercial Vehicle Market Study and Sales Forecast

EU30 aggregated forecast covering markets such as Germany, France, Spain and Poland; looking at product strategies and electrification

Key Question(s)

- What is powertrain of choice for LCVs and what will be the share of electrified powertrains in the future?
- What are the obstacles to pricing of eLCVs and when will the TCO breakeven point be reached eLCVs?
- What is the potential threat from new players and entrants?
- How will electrification be different for passenger vehicles and commercial vehicles?

IHS Markit Automotive Advisory's unique-approach

We begin by doing a market and OEM specific deep dive analysis, looking at:

- **Country specific CO2 regulations, city bans, charging infrastructure development and government support** – complete market framework
- **Current and future OEM product offerings based on IHS Markit production and sales data** – CO2 compliance check to evaluate assumptions
- **TCO analysis** – evaluating when BEV parity will be reached, depending on country specific parameters
- **Use cases review** – impacting the electrification potential by sector and segment

Target Groups

- OEM Product Management and Product-Planning teams
- OEM Sales Planning Teams
- LCV Tier 1 and Tier 2 Suppliers

Updates

- Project piloted in Q1/2020, update potential to examine additional markets or special topics

Sales by Powertrain Scenario Forecast – Methodology

The forecast combines both a top down and bottom up approach for transparency, flexibility and traceability

1. IHS Markit Data & Forecasts

- Registration & price / volume data
- Production, powertrain & sales forecasts (incl. outages)

2. Economic & Topline Factors

- GDP
- Unemployment rate
- Consumer confidence index
- Oil price / fuel price
- Segment shifts

3. Top Down Factors

3.1. Market Regulation

- Emission & consumption targets
- State & city specifics
- Taxation & incentives

3.2. Market Structure

- Segment & price brackets
- Urban vs. rural / LCV use assessment
- Fleet relevance

3.3. Technology Trend

- Battery energy density (vs weight & cost)
- Charging / fueling technologies (Charging bottlenecks)

3.4. Battery Supply

- OEM supply chain integration, partnerships & risks (bottleneck)

Light Commercial Vehicles Scenario Forecast Process

4.1. OEM Strategies

- Assessment of powertrain / electrification strategies per OEM
- Global OEM footprint
- Compliance partnerships

4.2. OEM Portfolios

- Assessment of vehicle & powertrain / electrification portfolio per OEM
- Launch timings & portfolio complexity

4.3. xEV Positioning

- Segment & body type
- Driving range & performance options
- Pricing

4.4. TCO Comparison

- Initial cost
- Running cost
- Residual value

4. Bottom Up Factors

5. Compliance Assessment

- Alternative regulation assumption?
- Forecast of OEMs towards regulation compliance?

6. Scenario Forecast

- LCV market development scenarios
- Vehicle Sales by Powertrain Scenario Forecast (incl. background documentations & expert discussions)

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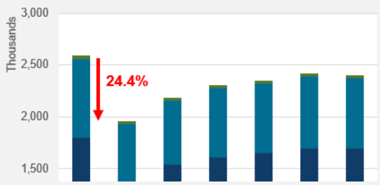
Findings of Interest – LCV Market Study and Sales Forecast

A significant shift towards greener transportation is underway in the commercial sector

Findings of Interest



COVID-19

- There will be an impact on the total LCV topline for the next few years

eLCV

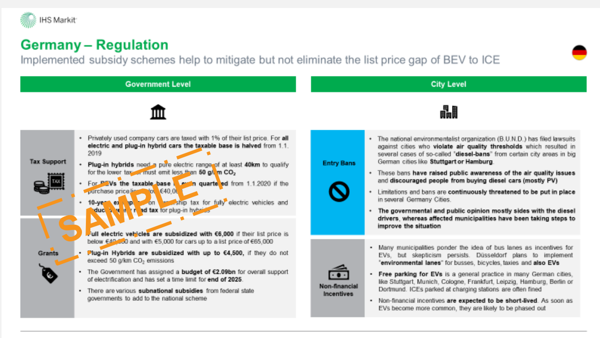
- Is the preferred powertrain option for city usage and smaller LCVs
- The current AER of eLCVs is already sufficient for a range of use cases
- Private consumers still require a longer AER and lower upfront cost

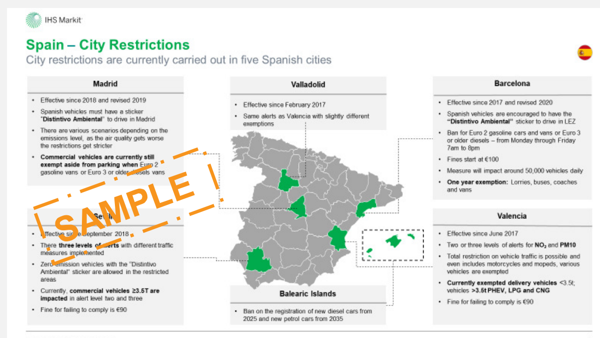
Fuel Cell

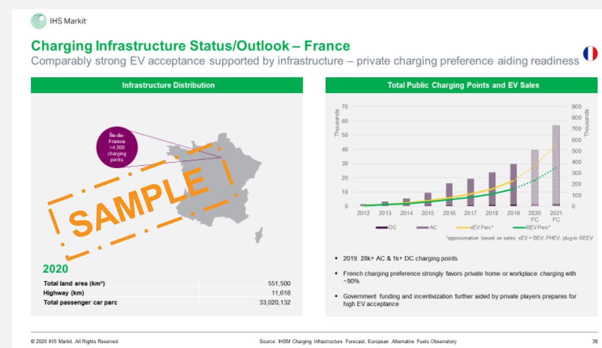
- Long-term prospects in the larger LCV segments, especially for applications where payload and a long range are critical

Market Framework

- Many countries are looking to reduce local emissions
- LCVs are often neglected when it comes to national support schemes and regional ones are often not sufficient to kickstart the trend on a large scale
- Regional projects and test-runs for eLCV are ongoing to prove the viability of various use cases and learn from the experience
- Market readiness for eLCVs varies greatly between countries







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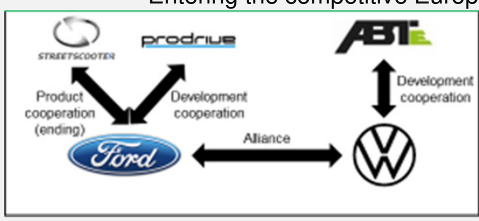
Findings of Interest – LCV Market Study and Sales Forecast

A significant shift towards greener transportation is underway in the commercial sector

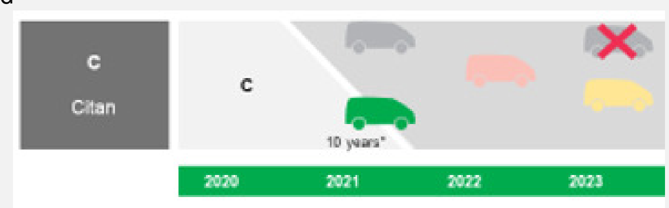
Findings of Interest

OEM Strategies

- OEMs working to create partnerships with various logistic and delivery firms
- Many traditional OEMs are making conservative and low-cost investments, using existing passenger car electric motors and battery components
- Both foreign OEMs and new startups are preparing to enter the European LCV market
- New players with purpose-built dedicated eLCVs, are looking to shake up the traditional LCV market and are only focused on electrified powertrains
- Entering the competitive European LCV market, however, is not without many challenges for a new brand



- In January 2019, Ford and VW formed a global alliance, with LCV development being a major part of the cooperation
- Both brands will maintain distinct brand characteristics and some shared manufacturing
- They will join forces on EV future in house development using expertise from current and upcoming PC BEVs
- ABT and Prodrive are seen as temporary partners until next generation products launch. IHSM expects this because the volumes will increase significantly.



MHEV

- Important solution for reducing CO_2, especially in high traffic urban environments
- Cost effective solution for countries with an upfront or yearly CO_2 based taxation
- High potential in lower segments, possibility to replace some diesel LCVs with petrol MHEV

TCO

- CO_2 compliance is not the major driver of electrification in the LCV market in the short term
- Depending on the use case and government incentives, the eLCV breakeven point is quickly approaching, especially in lower segments

Market Consolidation

- Many OEMs are working together on LCV development with partnerships or alliances

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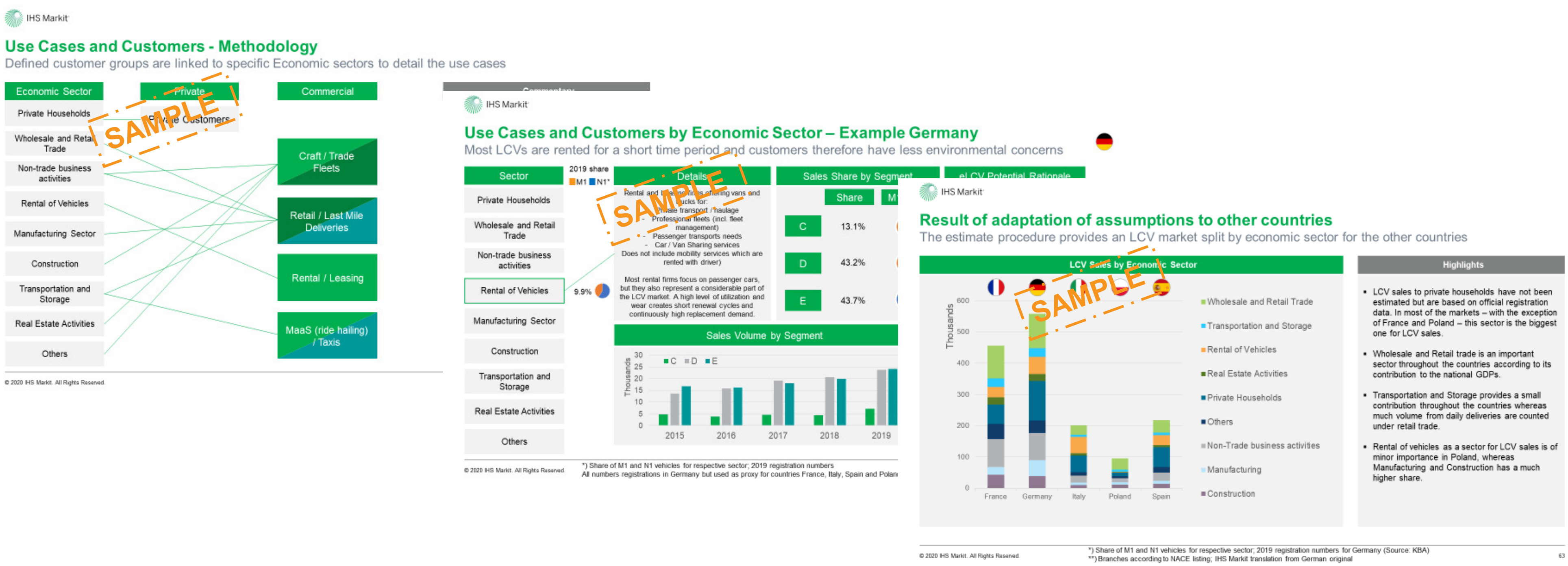
Use Case Analysis



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Sales by Powertrain Scenario Forecast

The Standard Vehicle Sales Forecast identifies some but not all BEVs via nameplate or platform

The sales by Powertrain Scenario Forecast provides a breakdown to Fuel Type and PSD for selected markets

IHS Markit Light Vehicle Sales Forecast*

Brand / Model

SPRINTER

Bodytype

Generation

Sales by Powertrain Scenario Forecast

Fuel Type

- Gasoline
- Electric
- Diesel
- Hydrogen

Propulsion System

- ICE
- Plugin-Hybrid
- Mild-Hybrid
- Battery Electric
- Full-Hybrid
- Fuel Cell

Countries

* Exemplary illustration Mercedes-Benz Sprinter, Image source: Mercedes-Benz

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Service Sample

Example of the Renault Kangoo Van in France

Sample Excel Dataset (2019 - 2031)

Deliver fields

Delivery includes dataset in Excel and complete analysis shown above in PowerPoint

- Sales Market
- Sales Parent
- Sales Brand
- Sales Model
- Platform
- IHS Markit Segmentation
- **Custom Client Segmentation**
- Off Type
- Bodytype
- Fuel Type
- Propulsion System Design
- 2019 – 2031

Sales Market	Sales Parent	Sales Brand	Sales Model	Platform	IHSM Segment	Off Type	Bodytype	Fuel Type	Propulsion System Design	CY 2019	CY 2020	CY 2021	CY 2022
France	Renault-Nissan-Mitsubishi	Renault	Kangoo / Kangoo Passenger	C	C	CV	Van	Diesel	ICE	38388	22297	2729	0
France	Renault-Nissan-Mitsubishi	Renault	Kangoo / Kangoo Passenger	C	C	CV	Van	Electric	BEV	3806	3358	716	0
France	Renault-Nissan-Mitsubishi	Renault	Kangoo / Kangoo Passenger	C	C	CV	Van	Gas	ICE	2375	1398	44	0
France	Renault-Nissan-Mitsubishi	Renault	Kangoo / Kangoo Passenger	C	C	PV	Van	Diesel	ICE	6211	5175	657	0
France	Renault-Nissan-Mitsubishi	Renault	Kangoo / Kangoo Passenger	C	C	PV	Van	Gas	ICE	20	17	1	0
France	Renault-Nissan-Mitsubishi	Renault	Kangoo / Kangoo Passenger	CMF-C/D	C	CV	Van	Diesel	ICE	0	0	25038	26897
France	Renault-Nissan-Mitsubishi	Renault	Kangoo / Kangoo Passenger	CMF-C/D	C	CV	Van	Diesel	Mild hybrid	0	0	0	0
France	Renault-Nissan-Mitsubishi	Renault	Kangoo / Kangoo Passenger	CMF-C/D	C	CV	Van	Electric	BEV	0	0	4379	6096
France	Renault-Nissan-Mitsubishi	Renault	Kangoo / Kangoo Passenger	CMF-C/D	C	CV	Van	Gas	Full Hybrid	0	0	0	2155
France	Renault-Nissan-Mitsubishi	Renault	Kangoo / Kangoo Passenger	CMF-C/D	C	CV	Van	Gas	ICE	0	0	1306	1499
France	Renault-Nissan-Mitsubishi	Renault	Kangoo / Kangoo Passenger	CMF-C/D	C	CV	Van	Gas	Mild hybrid	0	0	0	0
France	Renault-Nissan-Mitsubishi	Renault	Kangoo / Kangoo Passenger	CMF-C/D	C	PV	Van	Diesel	ICE	0	571	7493	7171
France	Renault-Nissan-Mitsubishi	Renault	Kangoo / Kangoo Passenger	CMF-C/D	C	PV	Van	Diesel	Mild hybrid	0	0	0	0
France	Renault-Nissan-Mitsubishi	Renault	Kangoo / Kangoo Passenger	CMF-C/D	C	PV	Van	Electric	BEV	0	0	727	882
France	Renault-Nissan-Mitsubishi	Renault	Kangoo / Kangoo Passenger	CMF-C/D	C	PV	Van	Gas	Full Hybrid	0	0	0	471
France	Renault-Nissan-Mitsubishi	Renault	Kangoo / Kangoo Passenger	CMF-C/D	C	PV	Van	Gas	ICE	0	92	872	887
France	Renault-Nissan-Mitsubishi	Renault	Kangoo / Kangoo Passenger	CMF-C/D	C	PV	Van	Gas	Mild hybrid	0	0	0	0

We are happy to disucss the LCV service in more detail, discuss pricing and answer any questions you might have.

We look forward to hearing from you.

Contacts for questions or further details:

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