FROST & SULLIVAN

AUTOMOTIVE SUPPLIER INDUSTRY GENERAL OVERVIEW

The Disruptive Trends in OE and Aftermarket

IX. AFTERMARKET CONFERENCE

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Presented by

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Vehicles are Changing …

AGEING VEHICLES

LONGER SERVICE INTERVALS

COMPLEXITY OF SERVCE

ALTERNATIVE MOBILITY OPTIONS DECREASING MILES DRIVEN

CONNECTED & AUTONOMOUS VEHICLES

ALTERNATIVE POWERTRAIN VEHICLES

TECHNICIAN SKILL GAP SERVICE INEFFICIENCY

So are Customer Expectations in Ownership …

Convenience is Key

Digital Expectations

Seamless Journey

Personalised Experience

Options beyond Ownership

Mega Trends Impacting Automotive Aftermarket in Future

Traditional aftermarket to face strong headwinds due to the changing nature of cars; industry should move away from “parts & service” to “aftersales vehicle management”

AUTONOMOUS VEHICLES

60-80%
of vehicle parc
in North America to have
ADAS/Autonomous
capabilities by 2025

Up to 20%-30%
reduction in collision
repair business by 2030

ELECTRIC VEHICLES

6-9m BEVs
in EU car parc by 2025

5.5-7m BEVs
in US car parc by 2025

~95%
reduction in number
of moving par;

CONNECTED VEHICLES

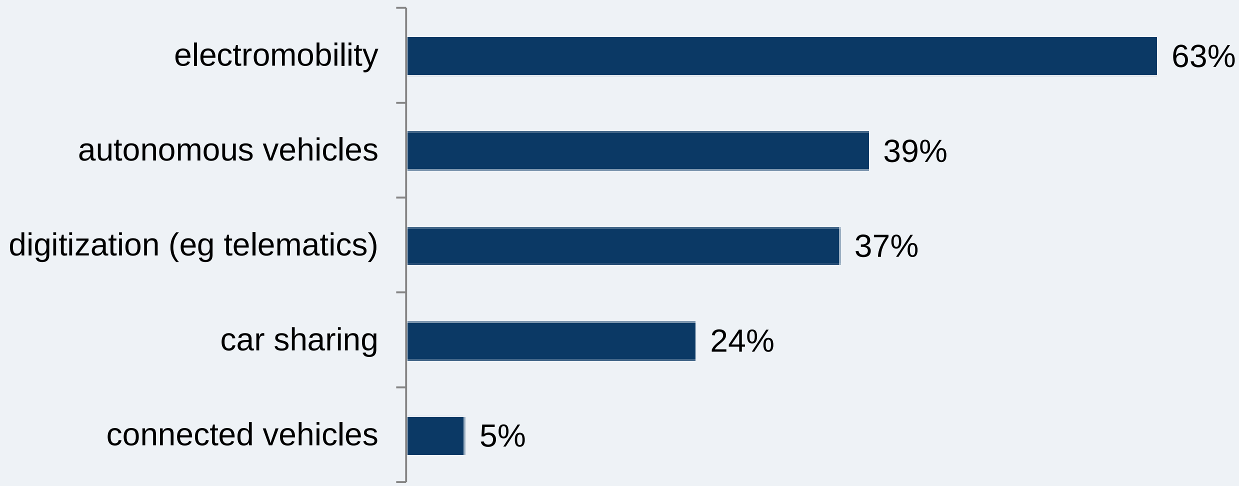
40-50% Penetration
in Europe (Parc)

55-57% Penetration
in North America (Parc)

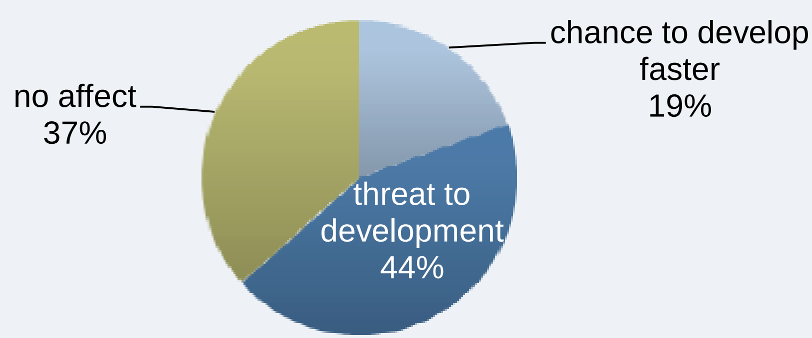
$10-15b Telematics
$18-20b Feature on Demand
10-20% Warranty Cost
15-20% Repair Time
CUSTOMER LOYALTY

Amid Government Impetus, Automotive Parts Manufacturers in Poland are Jittery about Electromobility – Joint Research conducted by the SDCM and Frost & Sullivan

Which of the mega trends will change the most trade market and services in the automotive industry?



The rapid development of electromobility for your company is:



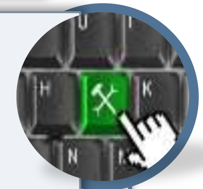
Aftersales 3.0 — Key Impact Areas and Trends

Convergence of business models from various impact areas will create the strongest value propositions for customers in the future.

1 Channels

- eCommerce
- Marketplaces
- Aggregators
- In-vehicle Sales

2 Technology

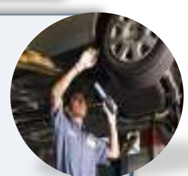


- Telematics / Connected Car
- 3-D Printing
- Augmented Reality
- Big Data
- In-store Technology

3 Service

- Subscription
- Remote
- Mobile/express
- Participatory
- Predictive

4 Geography



- Urban Store Formats
- Glocalization (Expansion to BRIC markets)

5 Customers

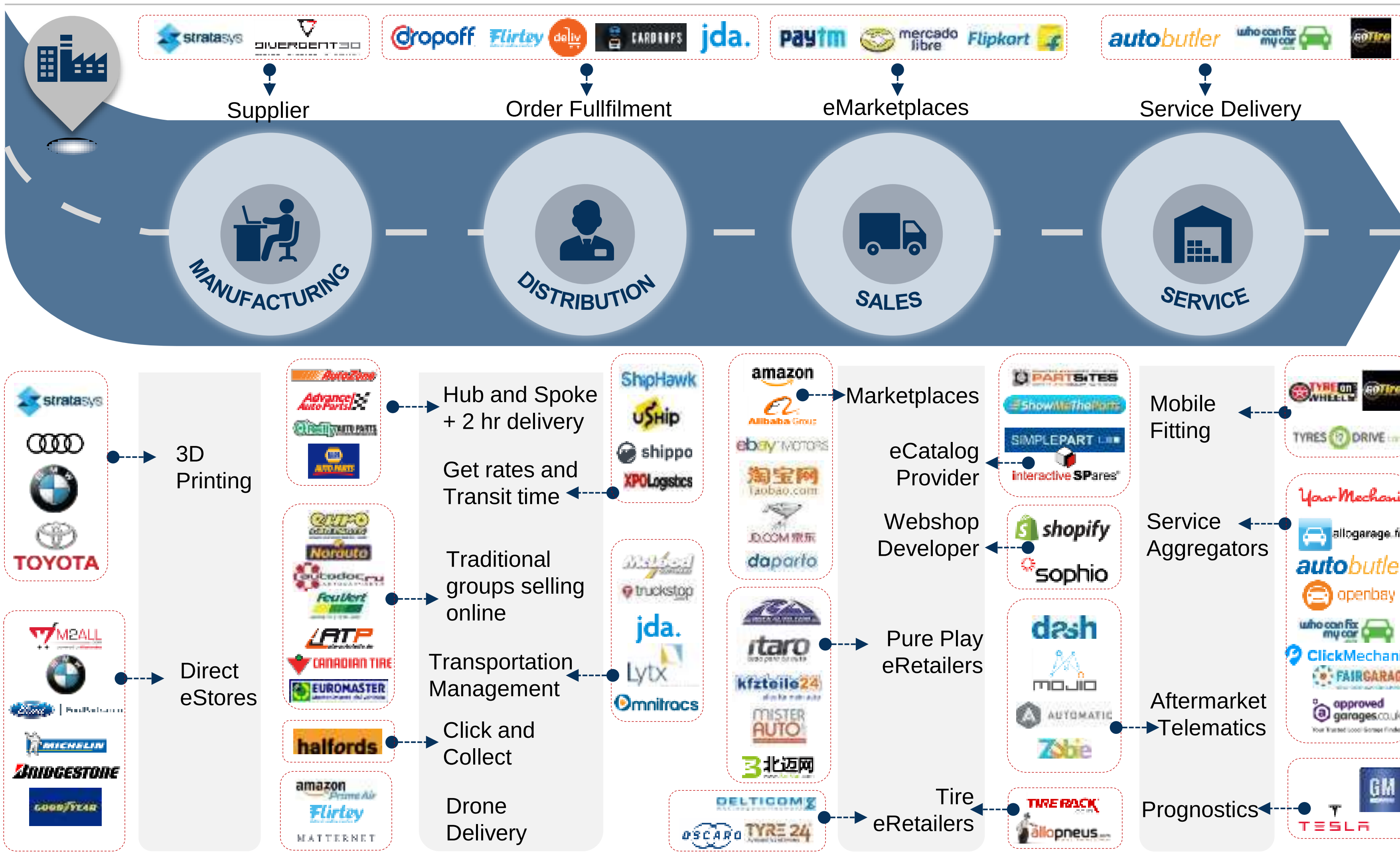
- B2B (for eRetailers)
- Women Drivers
- Gen Y

6 Products

- Electronics/ software
- Private Labels / Economy Parts / All Makes
- Service contracts / loyalty

Transformation in Automotive Aftermarket

Digitization will continue to play a key role in evolving automotive aftersales at multiple levels



Source: Frost & Sullivan

Windows of Opportunity—Global Automotive Aftermarket eRetailing

Chinese Market Potential

Revenue to be $6.40 Billion by 2020

Driven by fast-growing VIO and high levels of adoption of digital channels

Key Companies: Alibaba.com, Taobao, JD.com, TMall

B2B eCommerce

20–25% of eRetailer sales to be to B2B customers by 2022

Fast-growing DIFM demand to drive online channel penetration in B2B segment

Key Companies: Yakarouler, Tyres24, Delticom, Amazon.com, eBay Motors

Service Aggregation

Uberization of service shops to be the next big wave

Digitization and Big Data likely to drive service aggregation popularity

Key Companies: whocanfixmycar.com, Autobutler, Openbay.com

DIY Products (such as tires) and Accessories

Online sales penetration to cross 10%* by 2022

These fast-moving categories to keep DIY segment revenues coming

Key Companies: Private Labels, Lubricant Manufacturers

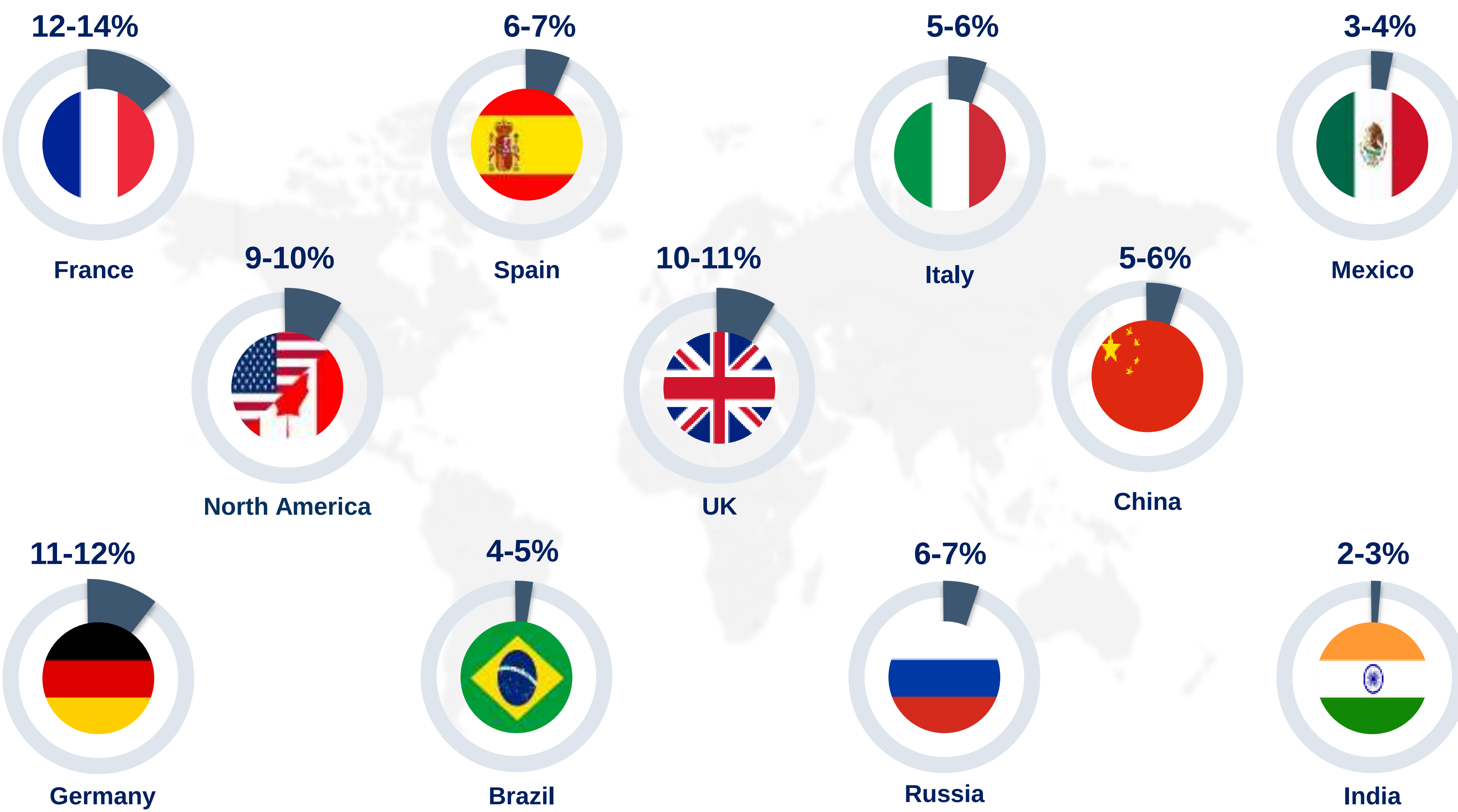
High Opportunity → **Low Opportunity**

*For select product categories in North America and Western EU

Aftermarket eRetailing Penetration by 2022

North America and Western Europe will continue to lead in eRetailing penetration levels globally by 2022.

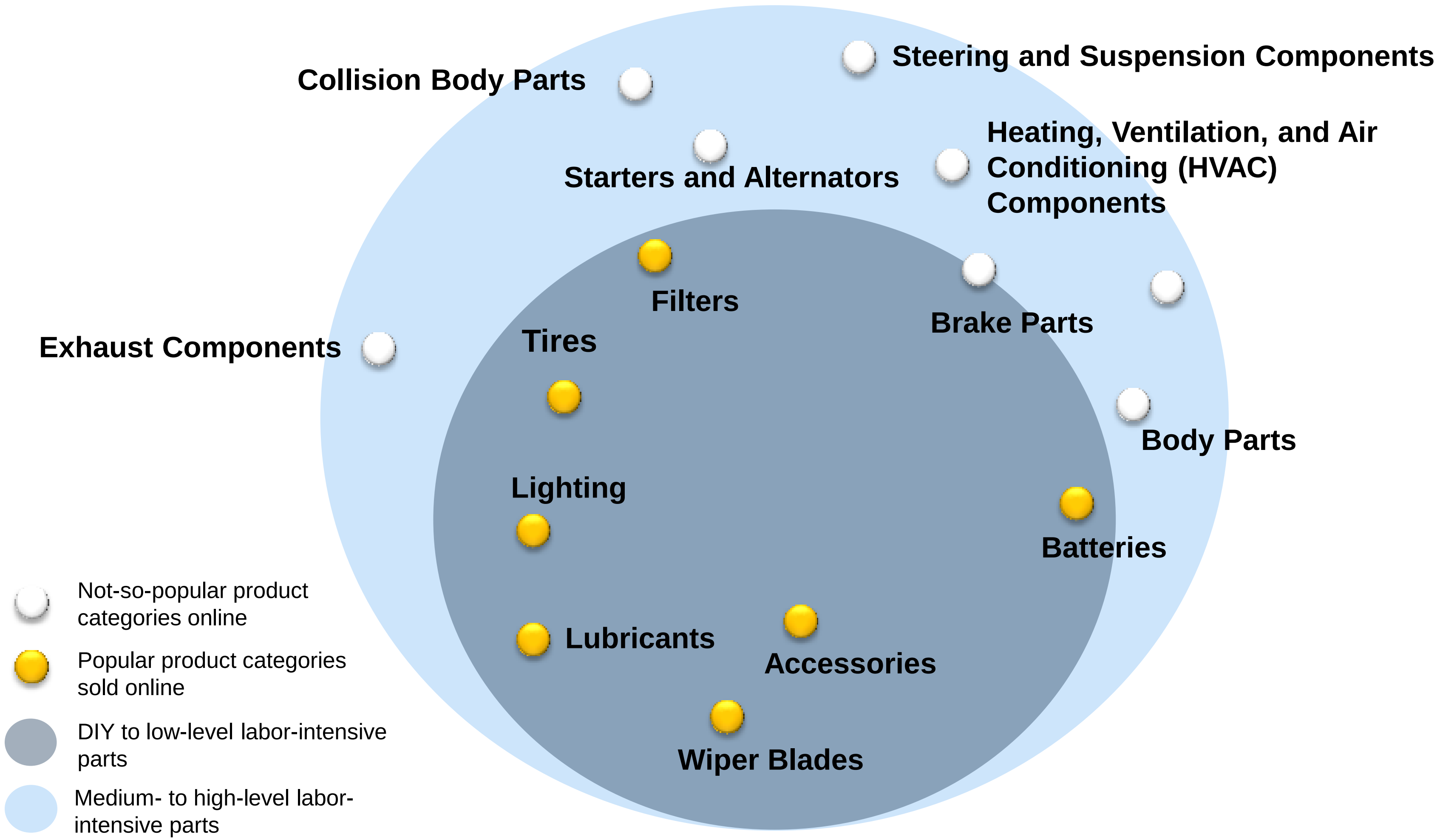
eRetailing in Automotive Aftermarket: eRetailing Penetration Level, Global, 2022



Parts Preference Map by Category

While Do-it-yourself (DIY) components and accessories are most popular online, the market for DIFM replacement part categories will grow, as sellers adopt smarter fulfillment models for customers

eRetailing in Automotive Aftermarket: Parts Preference Scenario, Global, 2016



Competitors such as Amazon are creating end-to-end vehicle management solutions for vehicle owners

Lifestyle Mangement

All Products (Specialty/day-to-day)

All Products (Specialty/day-to-day)

All Products (Specialty/day-to-day)

Automotive Ownership Management

Vehicle Sales

Car catalogues and virtual garages

Used car and new car sales

VR, AR showrooms

B2C Parts Sales

Online stores

Subscription delivery services

In-vehicle personlized sales

B2B Parts Sales

Dedicated online platform

Physical distribution presence

Diagnostic tool integration

Service Management

Service network and home installation

Predictive services, sales

Virtual assistant (repair /purchase advice)

● Current Strategy ● Future Strategy

Source: Frost & Sullivan

Market Share of OES by Country – EU5

The OES channel is expected to lose market share in all countries; losses in Germany and France are likely to be lower when compared to other countries.

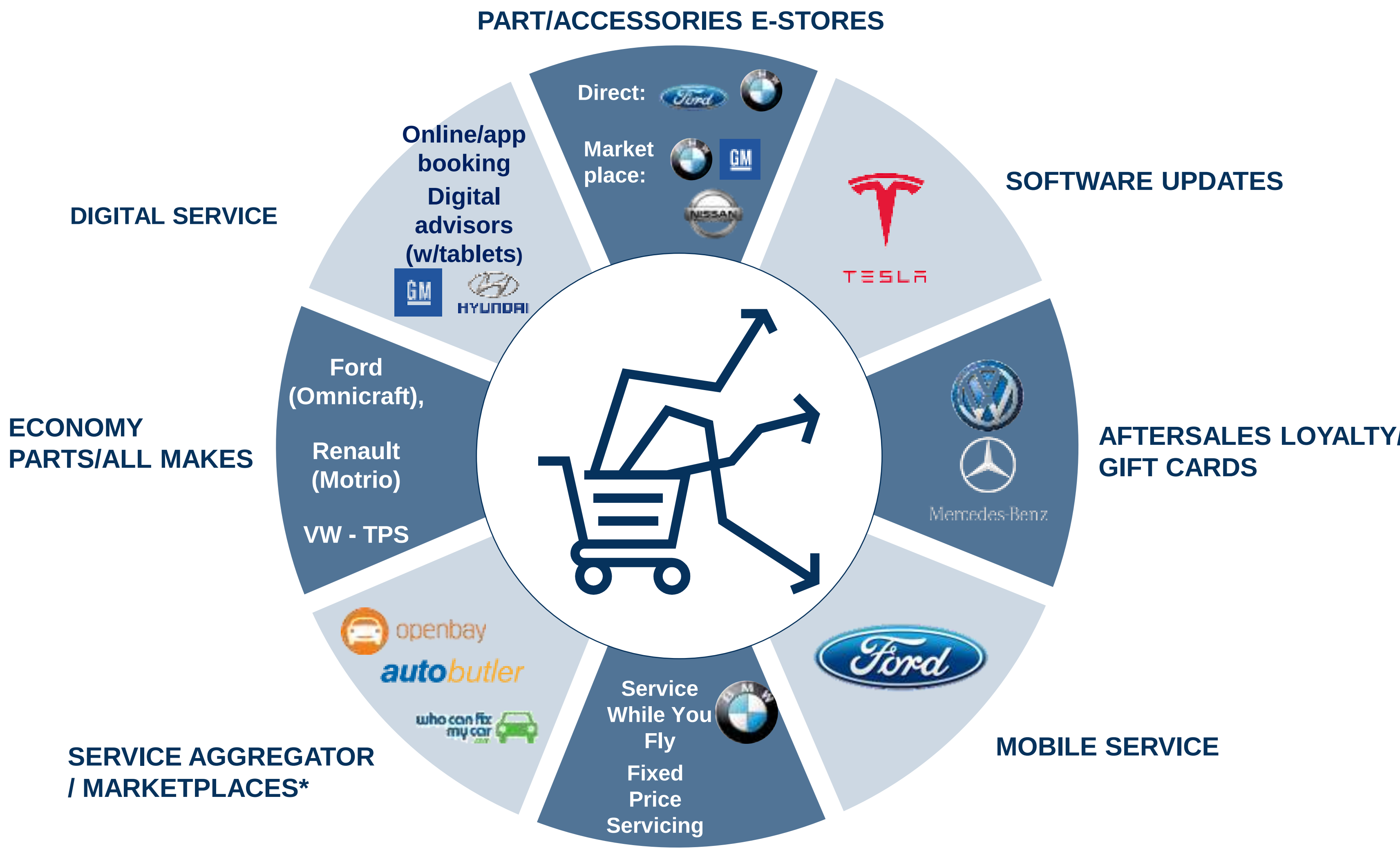
Strategic Analysis of the OES Channel: Country Outlook, Europe, 2015 and 2022

OES Share (%) and Revenue in €B in 2015		OES Share (%) and Revenue in €B in 2022		Key Areas of Impact
24.8%	€ 4.01	21.3%	€ 3.98	• Brexit could slow new vehicle sales ↓ • OEM telematics penetration ↑ • Service aggregation tie-ups ↑
34.9%	€ 5.68	33.5%	€ 6.15	• Strength of franchised and authorised networks ↑ • Ageing vehicles ↓ • High DIY activity ↓
40.5%	€ 9.05	39.1%	€ 10.01	• High OES channel loyalty ↑ • Strong DIFM market ↑ • Ageing vehicles ↓ • Impact of eCommerce ↓
24.7%	€ 2.83	21.2%	€ 2.74	• Low OES channel loyalty ↓ • Strong DIY market ↓ • Highest in ageing vehicles ↓
31.8%	€ 6.01	28.3%	€ 5.99	• Average vehicle age is 10 years, the 2nd-highest in the top 5 European markets ↓

↑ increase in OES channel share ↓ decrease in OES channel share

Source: Frost & Sullivan

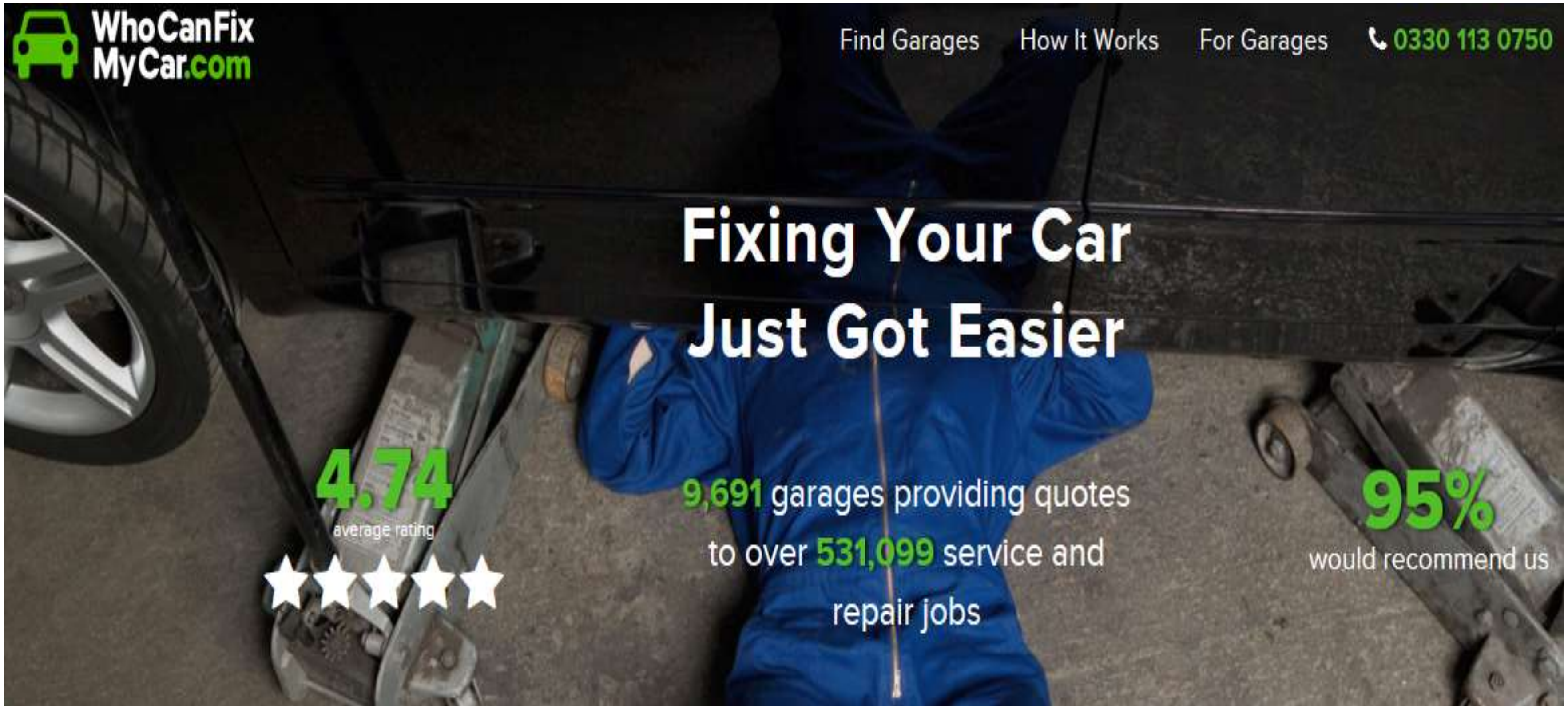
OEM Adoption of New Business Models and Trends: Exhibits



*PSA invested in Autobutler.dk in 2015
Openbay and whocanfixmycar is popular among most OEM dealerships

What is Service Aggregation?
Exhibit: WhoCanFixMyCar.com

Connects car owners with IAM garages and dealerships. 500 Ford dealers joined the website, Shell selling lubricants + offering access to specialized technical support



Service Aggregation / Marketplace Platforms – Global Footprint

Service aggregators and marketplaces are partnering with both traditional service providers (e.g. OEMs) as well as industry disruptors such as Uber, eBay

WhoCanFixMyCar.com (UK):

- Tiered commission plans as per subscription package
- Ford, Toyota, Renault, KIA, BMW, Lexus

Others include Click Mechanic, Approved Garages, Repairanycar.com

autobutler

- Tiered commission plans as per subscription package
- PSA

Others include Fair Garage (Germany), AutoScout24(Germany), Allogarage (France), iDGARAGES (France), MonMécanicien (France), Reparamiauto (Spain)

openbay (US):

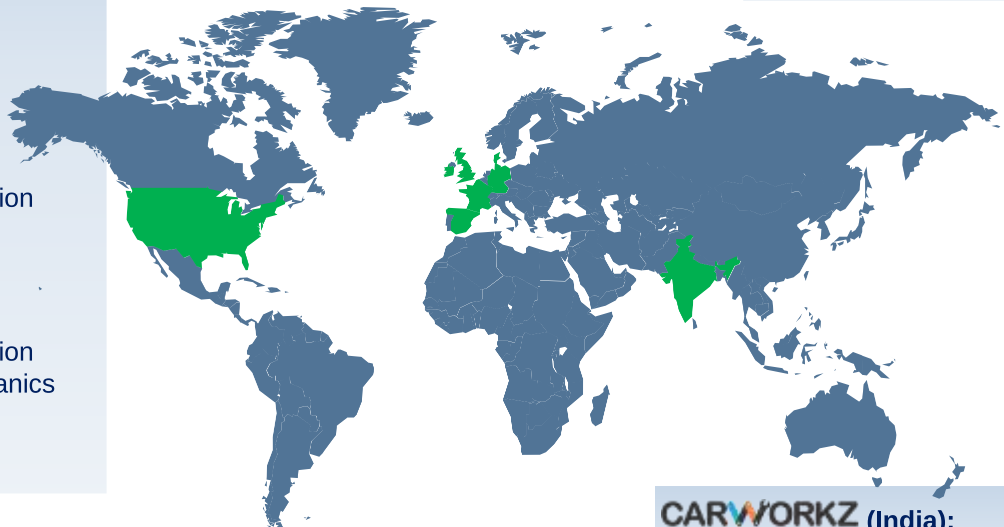
- Flat commission on transaction
- Subscription Fee
- eBay

REPAIR PAL (US):

- Commission on transaction
- Subscription Fee

YourMechanic (US):

- Commission on transaction from Independent mechanics
- Majors accounts include Uber and Lyft



CARWORKZ by Mahindra (India):

- Flat commission on transaction
- Mahindra & Mahindra

Others include Cartisan, MeriCar and CarXpert

Business Model **Major Partnerships**

Note: Autobutler is based out of Copenhagen, Denmark

Source: Frost & Sullivan

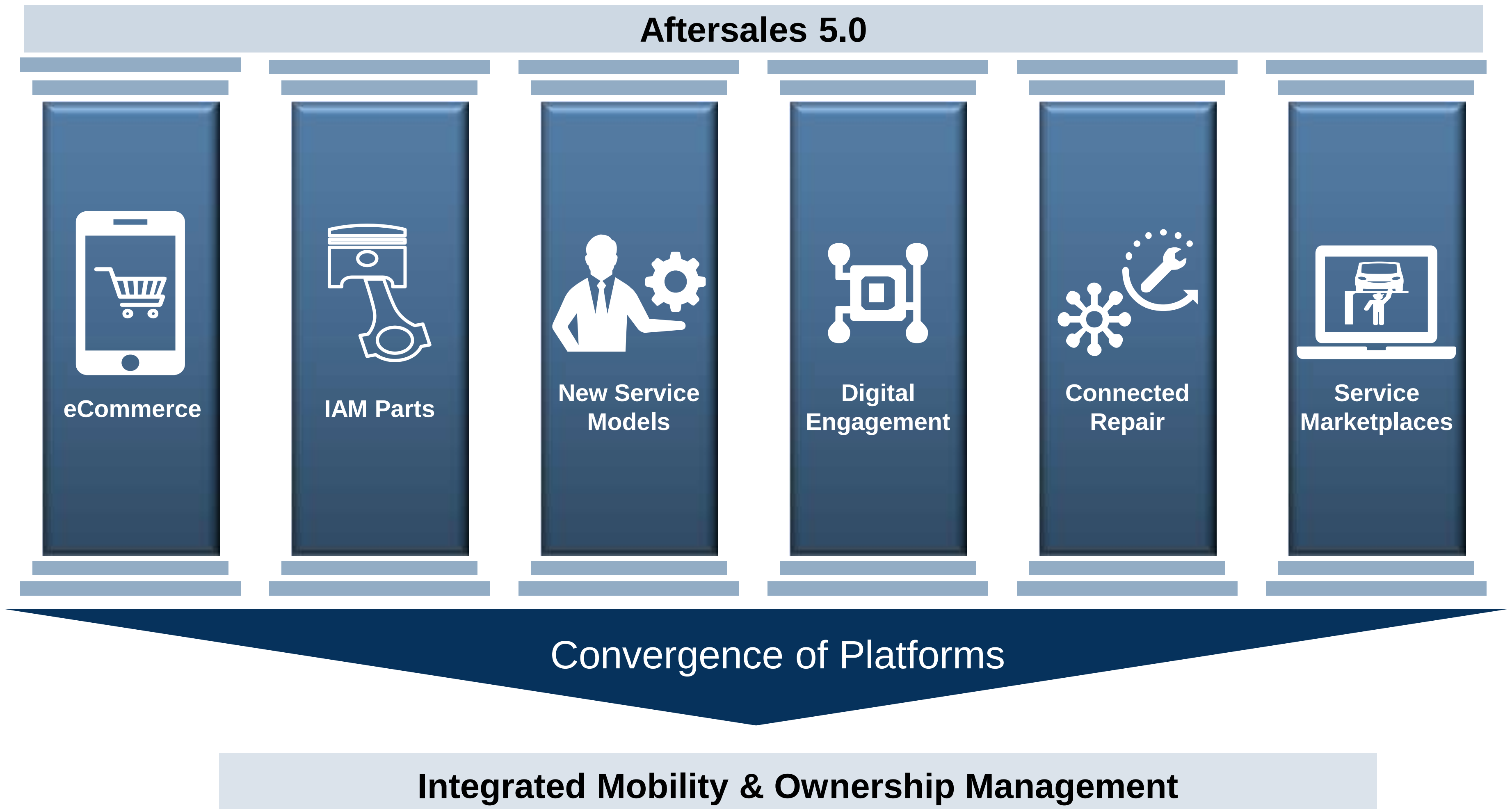
Uberization of Vehicle Service – From Closed to Open

The service aggregator or marketplace model opens customers to more choices in real-time while increasing access for service providers

Source: Frost & Sullivan

The Future — OEM Aftersales 5.0

OEMs will move away from siloed platforms to create a single, comprehensive digitized platform with multiple touchpoints to serve all customer service and other aftersales needs



Source: Frost & Sullivan

Who is Frost & Sullivan?

Who is Frost & Sullivan?

Leading Market Intelligence & Business Advisory Firm with a dedicate team of consultants in 43 locations globally, including **<u>Istanbul, Turkey</u>**

43 Offices Around the World

Over 50 years of Experience

250,000+ Clients Worldwide

Dedicated Industry Focus – Covering 12 Sectors

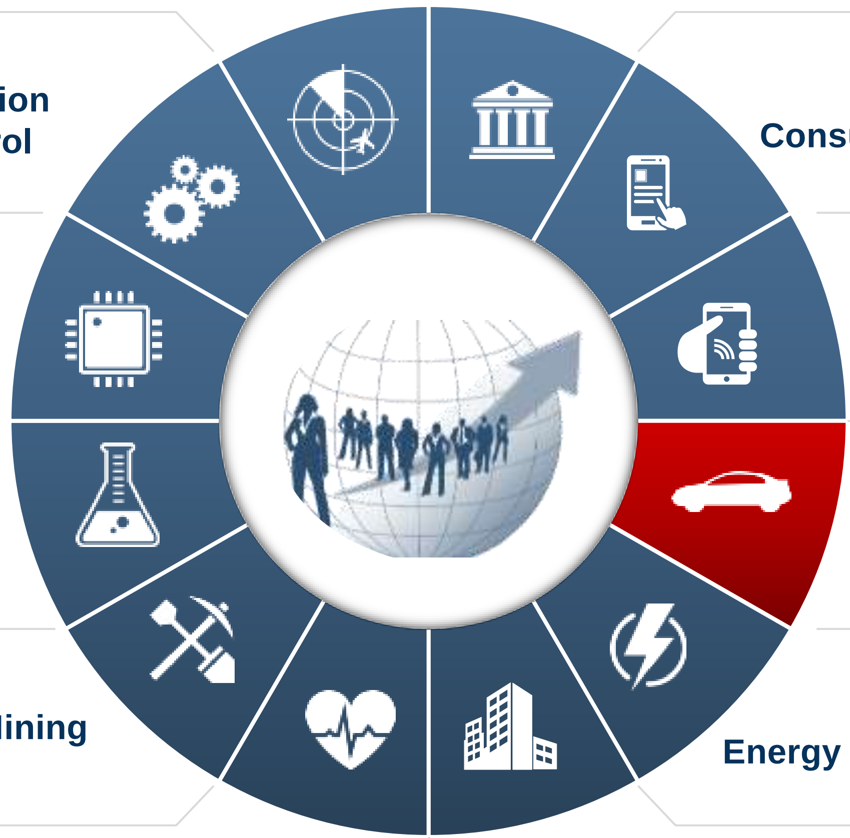
What we offer

3 Tier Growth System

- **Market Intelligence/ Research**
- **Business Advisory/ Consulting**
- **Growth Implementation**

Our Industry Coverage

We are working within and across our verticals to converging our global expertise to deliver for our clients



Aerospace and Defense

Infrastructure

Industrial Automation and Process Control

Consumer Technologies

Electronics and Security

Information & Communication Technologies

Chemicals, Materials and Food

Mobility ***(Automotive & Transportation)***

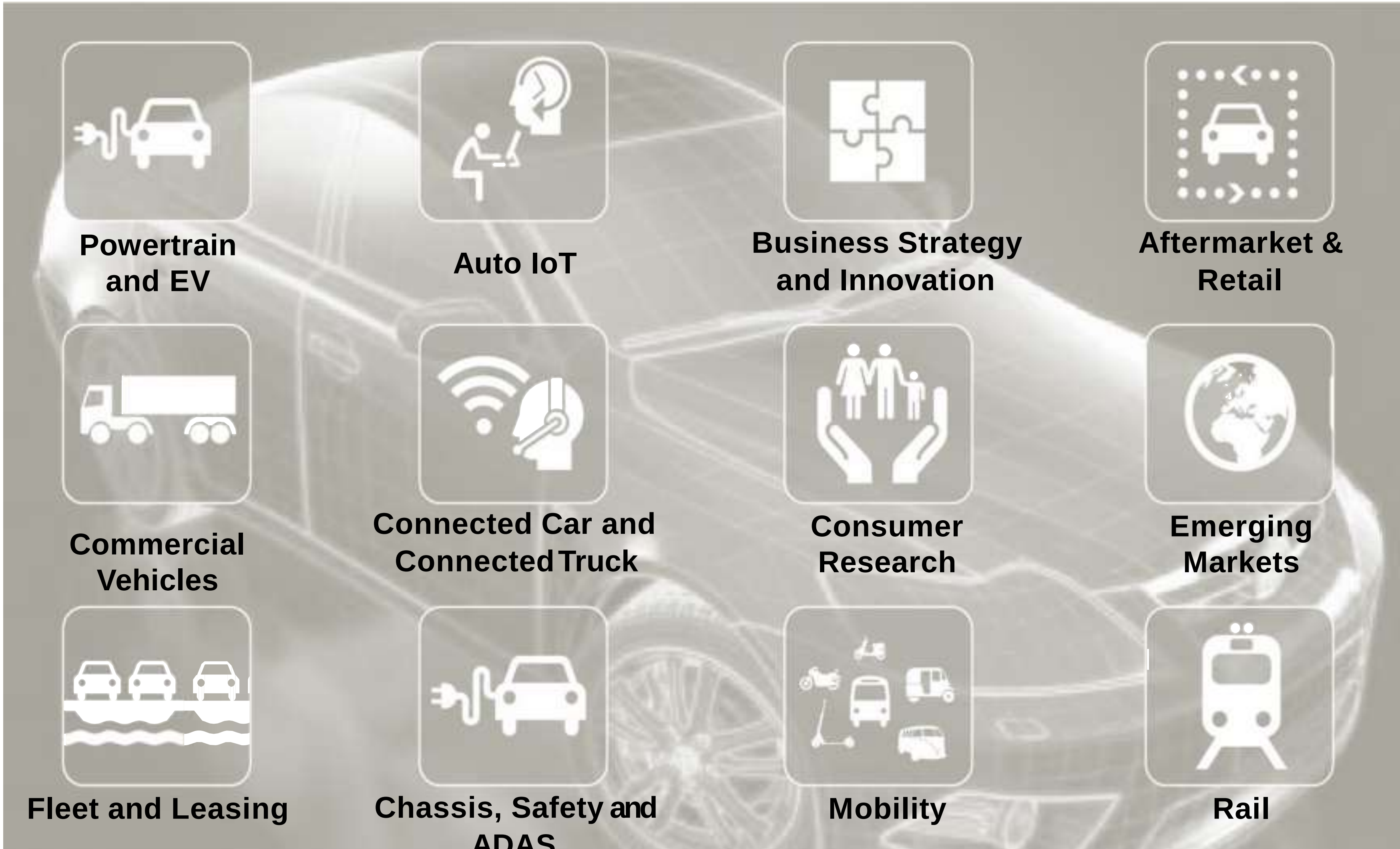
Minerals and Mining

Energy and Power Systems

Healthcare

Environment and Building Technologies

Frost & Sullivan's 12 Mobility Industry Focused Global Research Programs



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