



BIS Research
Emerging Technology Market Intelligence

Mobility



Topics Covered

▪ **Mobility Industry**

- **Key Structural Elements**
- **Impact of COVID-19**
- **Emerging Technologies**
- **Patent Landscape**
- **Key Developments**

▪ **BIS Research – Mobility Portfolio and Experience**

- **Connected Vehicles**
- **Autonomous Vehicles**
- **Shared Vehicles**
- **Electric Vehicles**
- **Auto Parts & Electronics**

▪ **BIS Research – Mobility Domain**

- **Thought Leadership**
- **Strategic Questions Answered**
- **Testimonials**



Connected Vehicles

- Infotainment
- Telematics
- V2X
- Memory & Storage
- Services



Mobility



Auto Parts & Electronics

- Lighting
- Sensors
- Aftermarket
- Regenerative & Storage
- Engine and ICE Vehicle Components

Autonomous Vehicles

- Sensor & Equipment
- Processors
- Development Software



Shared Vehicles

- Business Models
- Robo Taxis
- Micromobility

Electric Vehicles

- Energy Materials & Batteries
- Charging
- Electronics
- Performance Accelerating Products





Decreased Automotive Production and Consumer Demand

Lockdowns forced the shutdown of manufacturing facilities as well as disrupted the supply chain. Also, shift in trend toward remote working, as well as lower purchasing capability negatively impacted the demand.



Electrification Remains a Priority

Electric vehicle sales maintain their position, thus increasing their penetration in an otherwise negatively impacted automotive market.



Rising Focus on Autonomy to Become Future Ready

Dependence on drivers in the shared vehicle ecosystem hit the industry hard due to COVID-19. Companies will push autonomy in vehicles to be able to easily navigate through similar situations in the future.



Connectivity to Play an Important Role in the Automotive Business

Remote monitoring of fleets through telematics has become increasingly important due to COVID-19. Similarly, integration of health-related features in the infotainment and navigation is set to witness an upsurge.



Sustainable Power Sources

Goal:

Reduction and eventual elimination of greenhouse emissions.

Solutions:

- Battery electric vehicles
- Fuel cell electric vehicles
- Hybrids and plug-in hybrids
- Bio-fuels and energy re-use



Increased Vehicle Safety

Goal:

Reducing accidents, ensuring passenger and pedestrian safety

Solutions:

- Driver assist features
- Self-driving vehicles
- V2X communication



On-Demand Mobility

Goal:

Access to different modes of mobility without the need or ownership

Solutions:

- Mobility-as-a-Service
- Micromobility
- Robo taxi
- Hyperloop



User Friendly Driver Experience

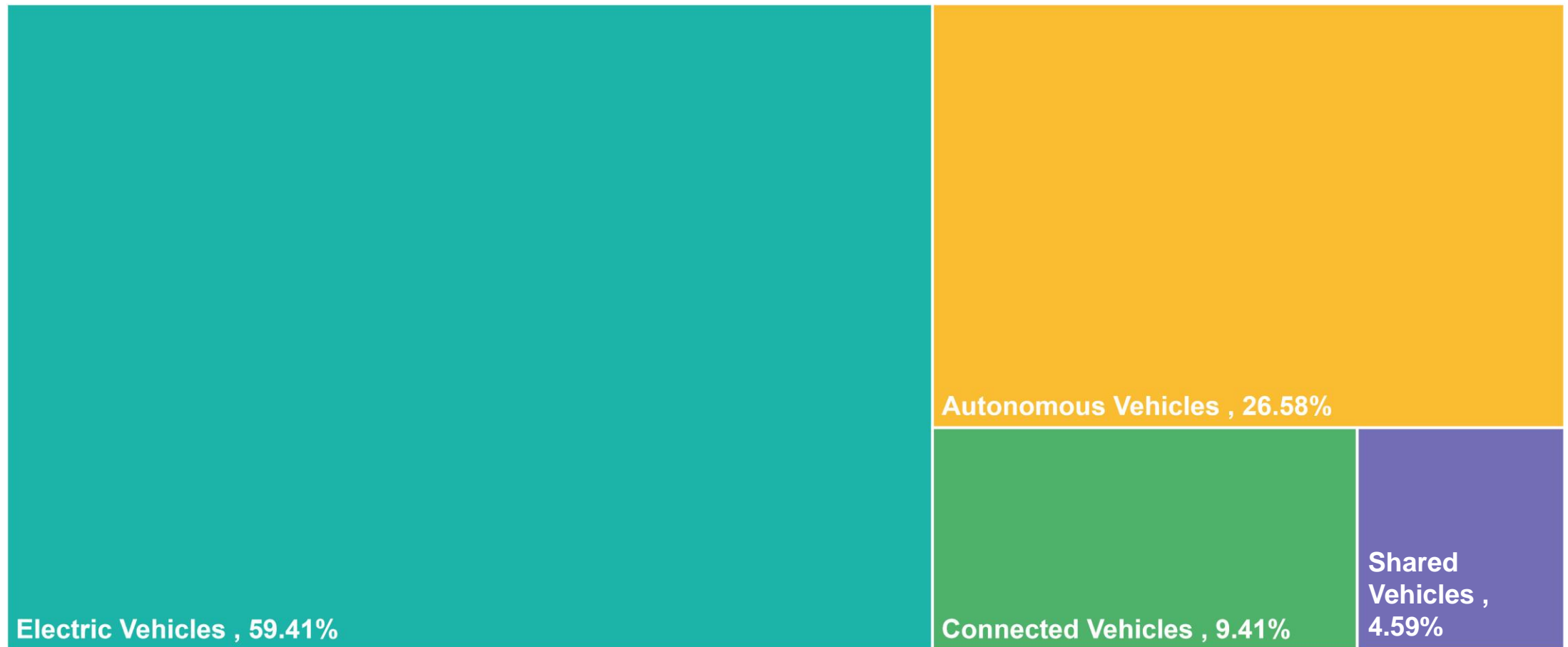
Goal:

Allow vehicles to become more interactive with its passengers, infrastructure, and owners.

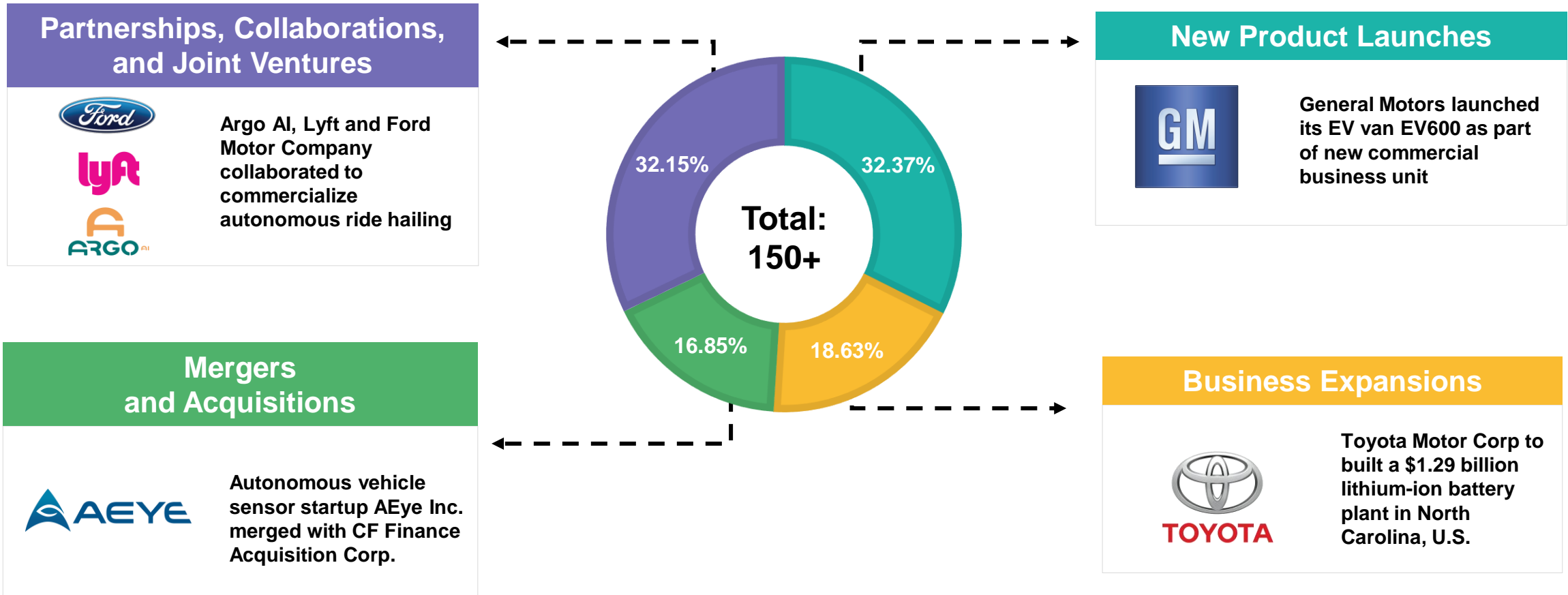
Solutions:

- V2X communication
- Intelligent transportation system
- Infotainment & Telematics

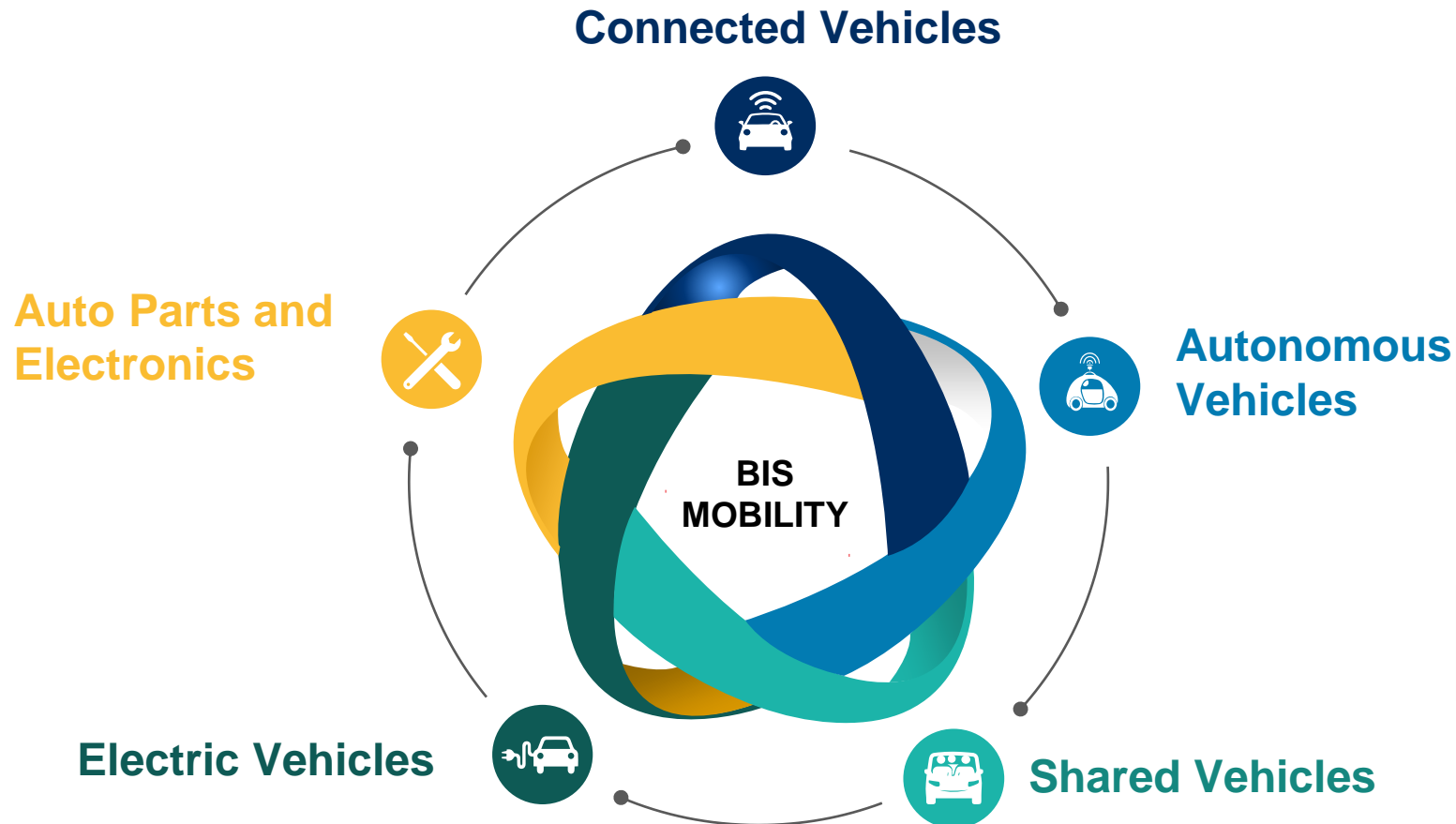
Total Patents for Emerging Mobility Technologies: 104,300+ (2010 Onwards)



Source: BIS Research Analysis



Source: BIS Research Analysis



Customers

200+

Areas Covered

25+

SKUs Published

110+

Primary Interviews*

600+

**Note: Primary Interviews are estimated based on average interviews done per report in the past*

Connected Vehicles

Driver:

- Stringent Government Rules and Regulations Regarding Vehicular and Passenger Safety
- Growing Demand for IoT and 5G Communication for Vehicle Connectivity

Opportunity:

- Growing Popularity of Telematics-based Insurance and Fleet Management
- Rising Demand for Advance Cybersecurity Solutions with Increase in Level of Autonomy

Autonomous Vehicles

Driver:

- Growing Autonomy and Sensor Adoption
- Increasing Technological Developments and Advancements in ADAS Systems

Opportunity:

- Tech manufacturers entering autonomous processors business segment
- Wide Ranging Opportunities for Luxury Cars with ADAS features in Emerging Economies

Shared Vehicles

Driver:

- Increasing Need for Decreasing Air Pollution and Transportation Costs
- Need for Efficient Transportation System for Short Distances

Opportunity:

- Paradigm Shift From Private Car Ownership to Shared Mobility

Electric Vehicles

Driver:

- Low Cost of Ownership and Low Noise Emissions from Electric Vehicles as compared to Internal Combustion Engine Vehicles
- Rising Concern Toward the Environment

Opportunity:

- Emergence of Smart Sensors in Electric Vehicles

Source: BIS Research Analysis

CONNECTED VEHICLES

The ability to track, monitor, and analyze vehicle data while enabling communication between a vehicle and everything in and around it, is essential to ensure that the “Software-driven Vehicle” of the future becomes a reality. BIS Research tracks and analyzes various technologies that enable data exchange, storage, as well as communication in a vehicle

OUR COVERAGE

- Infotainment hardware & software
- Telematics hardware, software, and services
- V2X hardware
- Cloud based software
- Artificial intelligence hardware and software
- Cybersecurity
- Insurance and data monetization means
- Smart vehicle components





CONNECTED VEHICLES



Published Titles

- [In-Cabin Automotive AI Market](#)
- [Telematics Insurance Market](#)
- [Automotive Cloud Market](#)
- [Off-Highway Vehicle Telematics Market Report](#)
- [Commercial Vehicle Telematics Market](#)
- [Global Automotive V2X Market](#)
- [Global Automotive Cybersecurity Market](#)
- [Global Memory Market For Connected And Autonomous Vehicle](#)
- [Global Electric Vehicle \(EV\) ECU Market](#)
- [Global Automotive Intelligent Tire And Sensor Market](#)



Upcoming Titles

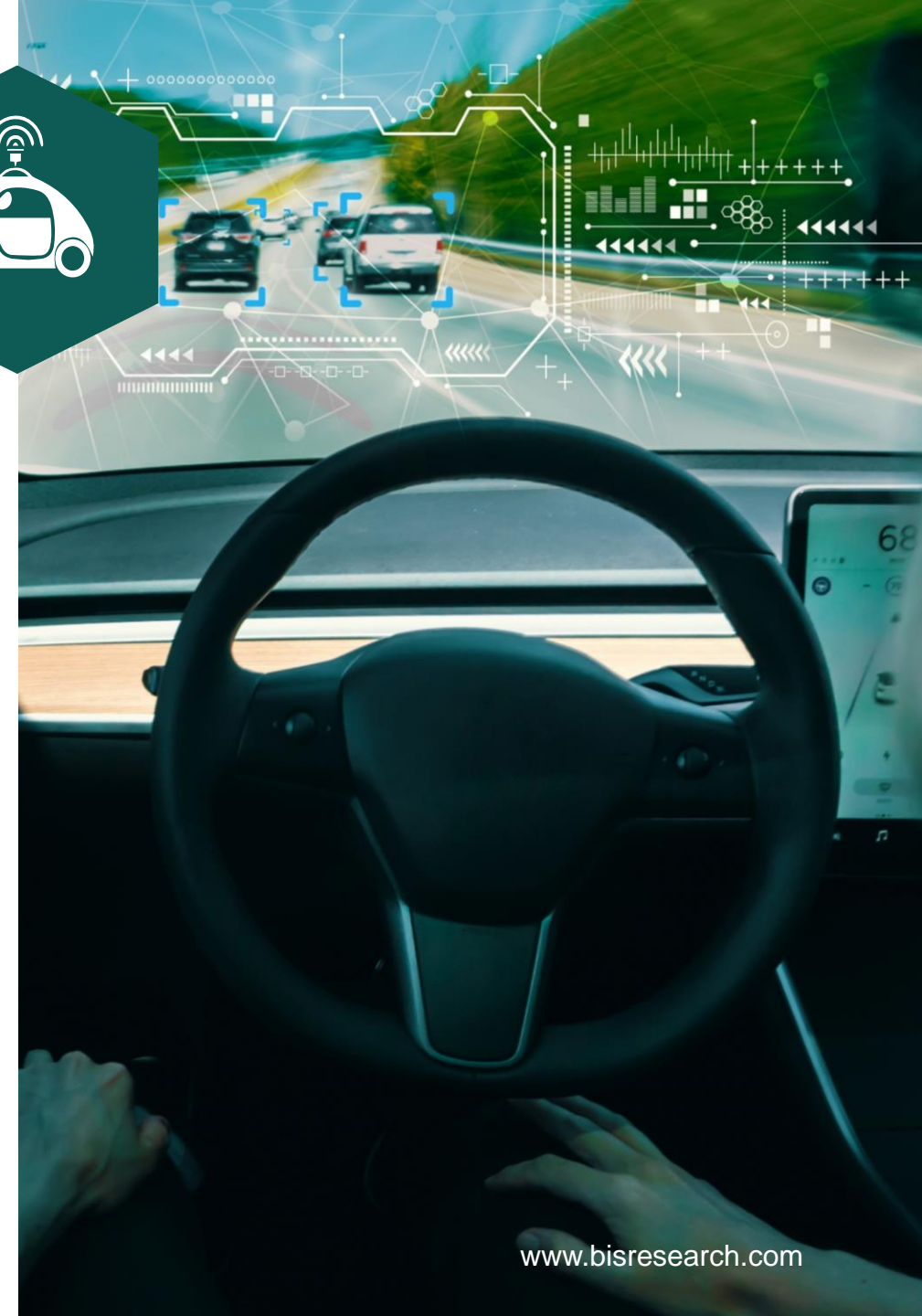
- Vehicle Commerce (In-vehicle Payments)
- Next-generation Automotive Cabin Interior Market

AUTONOMOUS VEHICLES

Decrease reliance on drivers for the safety of passengers, traffic, and the vehicle. Technologies to improve the vision, sensing, as well as computation of scenarios have been evolving and BIS Research keeps tabs on the key components as well as software / service offerings that play an integral role in making ADAS and autonomous vehicles a reality.

OUR COVERAGE

- Vehicle markets
- Sensor components
- Processing software
- Development software
- Levels of autonomy





AUTONOMOUS VEHICLES



Published Titles

- [ADAS And Autonomous Sensor Maintenance Equipment Market](#)
- [Global ADAS And Autonomous Driving Component Market](#)
- [Global Autonomous Vehicle Processor Market](#)
- [Autonomous Vehicle Simulation Solution Market](#)
- [Global Vision And Navigation System Market For Autonomous Vehicle](#)
- [Global Hi-Tech Paints And Coatings Market For Autonomous Vehicles](#)
- [Global Memory Market For Connected And Autonomous Vehicle](#)
- [Global Autonomous Drone Wireless Charging And Infrastructure Market](#)
- [Automotive LiDAR Market](#)



Upcoming Titles

- Autonomous Vehicle and Infrastructure Paints and Coatings Market
- Autonomous Last Mile Delivery Market

SHARED VEHICLES

Avoiding full ownership of vehicles and instead utilizing mobility-as-a-service to fulfill customer's demands. BIS Research keeps tabs on the evolving business models while analyzing the additional layer of service providers that are establishing their presence between the OEMs and the consumers.

OUR COVERAGE

- Business models
- Infrastructure components
- Robotaxis
- Micromobility





SHARED VEHICLES



Published Titles

- [Micro Mobility Market](#)
- [Global Robotaxi Market](#)
- [Mobility-as-a-Service \(MaaS\) Global Study 2025](#)
- [Global Superfast Transport System Market](#)
- [Global Traffic Jam Assist Systems Market](#)
- [Global Intelligent Transportation Systems Market](#)



Upcoming Titles

- [Micro Mobility – Update](#)
- [Mobility-as-a-Service \(MaaS\) – Update](#)

ELECTRIC VEHICLES

Regulatory bodies have been pushing the automotive industry to reduce its contribution to the global GHG emissions. However, to bring EVs at par with ICE vehicles, several alterations are being made to the core propulsion technology and to the ancillary features. BIS Research targets the potential revenue pockets that the electric era presents to various stakeholders in the automotive supply chain.

OUR COVERAGE

- Vehicle markets
- Battery and fuel cell technology
- Battery materials
- Charging infrastructure
- Electronic components
- Fluids and lubricants
- Materials and components for improving performance
- Development software





ELECTRIC VEHICLES



Published Titles

- [Wiring Harnesses And Connectors For Electric Vehicles Market](#)
- [Solar Panel Market For Electric Vehicles And Chargers](#)
- [Acoustic And Thermal Insulation Market For Electric Vehicles](#)
- [Electric Vehicle Brake Pads Market](#)
- [Electric Vehicle \(EV\) Testing, Inspection, And Certification](#)
- [Electric Vehicle \(EV\) Battery Housing Market](#)
- [Electric Vehicle Fast-Charging System Market](#)
- [Lightweight Materials for Electric Vehicles Market](#)
- [Electric All-Terrain Vehicle \(ATV\) And Utility-Terrain Vehicle \(UTV\) Market](#)
- [Electric Vehicle Sensors Market Report](#)
- [Global Structural Adhesives, Sealants, and Thermal Materials for EV Market](#)



Upcoming Titles

- Tire Market for Electric Vehicles
- Structural Adhesives, Sealants, and Thermal Materials for EV Batteries - Update
- Electric All-Terrain Vehicle (ATV) and Utility-Terrain Vehicle (UTV) - Update
- Electric Vehicle Fast Charging System - Update
- Electric Vehicle Motors Market

AUTO PARTS / ELECTRONICS

General as well as electronic components are becoming increasingly important in ensuring sustainability, safety, and efficiency of vehicles in general. BIS Research conducts deep-dive research in this area to identify potentially attractive business areas for companies while helping them lay out informed strategies.

OUR COVERAGE

- Sensors
- Lighting
- Memory components
- Fuel efficiency enhancers
- Aftermarket products





AUTO PARTS / ELECTRONICS



Published Titles

- [PP Compound Market for Automotive Industry](#)
- [Next-Generation Automotive Lighting Market](#)
- [Automotive Camera Market](#)
- [Thermal Imaging Market For Mobility Industry](#)
- [Automotive Smart Tire Market](#)
- [Global Automotive Sensor Market](#)
- [Global Electric Vehicle \(EV\) ECU Market](#)
- [Global On-Board Charger Market](#)
- [Global Automotive MEMS Sensor Market](#)
- [Global Automotive Supercapacitor Market](#)
- [Global Automotive Cabin Air Quality Sensor Market](#)



Upcoming Titles

- Automotive Inverter Market – Update
- Silicon Sealants for Sensors Market



Webinar/Event

- [Big Data in Future of Mobility](#)
- [Inside the EV Batteries of Tomorrow](#)



Analyst Note/Whitepaper

- [Autonomous Last Mile Delivery](#)
- [Are EVs equipped enough to overthrow the dominance of vehicles based on ICE?](#)
- [The Emerging Autonomous Vehicle Ecosystem: Who will be the new players and how can they win?](#)
- [Securing the Future of Mobility - Cybersecurity in the Age of Connected Vehicles](#)
- [The Electric Vehicle Era - Game Plan for Stakeholders At-Risk](#)
- [THE N.E.E.D. CONCEPT - Bringing E-Mobility at par With ICE Vehicles](#)
- [Will Self-Driving Vehicles be a Reality By 2025?](#)



News Blog

- [Connected Vehicles - Are They a Blessing or a Nuisance for the Society!](#)
- [Inside the Industry: Repositioning Automotive Cybersecurity in the Post-COVID Scenario](#)
- [Shift in the Requirement of Fluids & Lubricants in the Automotive Industry due to the Drift Toward an All-Electric Era](#)
- [Last-Mile Connectivity Boosting the Growth of Micro-Mobility](#)
- [Geely's Newly Launched Satellite Manufacturing Hub to Enhance Communication for Autonomous and Connected Vehicles](#)



Media Citation

- [Making Electric Vehicles Quieter](#)
- [eBikeGo to launch its EV service training program, train specialists for electric vehicles](#)
- [How e-vehicles Could Restore Indian Fintech Business](#)
- [How to put EVs on the fast track](#)
- [Can You Trust Your Connected Car?](#)
- [Mahindra Electric Mobility plans a global journey, unveils a new brand](#)

Key Customers



Companies



PORSCHE



arm



BAIN & COMPANY



SONY



SIEMENS



Qualcomm

DELPHI

WABCO



Honeywell

Visteon

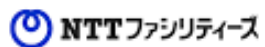
Key Customers

Companies



Key Customers

Companies



1

How will the electric vehicle revolution impact the business for fluids and lubricants in the automotive industry?

2

How will the demand for Lidars be impacted due to the increasing adoption of ADAS and autonomous vehicles?

3

With COVID-19 hitting the automotive industry, how will the telematics market be impacted for off-highway vehicles?



4

How has the electrification progressed in the ATV and UTV markets globally, specifically in North America? What should be the Go-to-Market Strategy for a start-up in the U.S. e-ATV Market?

5

How is the lithium-ion battery industry shifting from graphite anodes? Which applications should be targeted by different types of next-generation anode material manufacturers?

6

With EVs becoming increasingly prominent in Europe and China, how should traditional ECU and semiconductor suppliers change their strategy to cater to the market?

Key Research Sources for Mobility Assignments

Data Sources

Primary Data Sources

Original Equipment Manufacturers

Tier 1 Suppliers

Tier 2 Suppliers

Consortiums and Associations

Component and Technology Providers

System Integrators

Academia and Research

Secondary Data Sources

Associations

Publications by associations that promote the relevant technology;
For Instance,

- National Highway Traffic Safety Administration (NHTSA)
- Society of Manufacturers of Electric Vehicles (SMEV)
- European Automobile Manufacturers Association (ACEA)

Government Publications

Publications by government bodies that release regulatory notes as well as a country's position in developing/adopting a particular technology;

- For Instance,
- Department of Energy (DoE)
 - International Energy Agency (IEA)
 - Ministry of Road Transport & Highways (MoRTH)

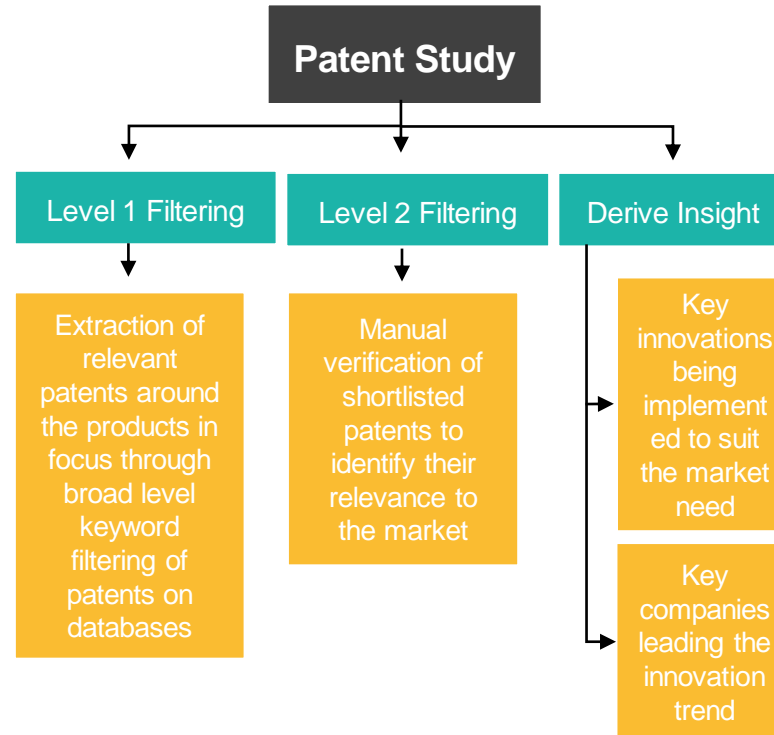
Annual Reports and Investor Presentation

Publications by companies regarding their revenue breakdowns as well as industry data

Articles and Press Releases

News as well as updates on recent developments over the internet

Patents



Patent Study to Identify Technological Trends and Company-Level Innovation Focus Areas

Insight Monk

insight Monk
... deep expertise

InsightMonk, the global deep-technology ecosystem, helps businesses and individuals accelerate technology discovery, business evaluation, and innovation planning. The ecosystem empowers enterprises, startups, and individuals to improve their deep-tech research capabilities by offering crowdsourced innovative thinking and solutions from the world's smartest individuals in a timely, cost-effective, and secure manner. It also gives the expert a valuable opportunity to contribute to path-breaking projects, impact the future of society, grow their market equity, and gain extra rewards for their expertise.

Company, Industry, and Market Specific Insights



BIS Research's in-depth interview (IDI) capabilities provided actionable recommendations that enabled our teams to construct a business case that was eventually funded. Team members from BIS were highly flexible and responsive to requests even when asked quite late in the engagement. Interim reports were shared in timely fashion which helped us to review study outcome, course correct and reach our goals. A very thorough and detailed final report helped to derive insights easily."

Anand Venkataraman, Ph.D.
R&D Excellence Consultant
ZS



The research was provided quickly and our team appreciated the thoughtful / robust approach applied to the Global Robotaxi Market Analysis. The work provided a good sanity check vs. how we are projecting future impacts on product types, applications, and potential impact of COVID-19. While we do not typically purchase many third party reports we would consider using BIS again in the future.

Vice President of Strategy & Corporate Development at Motional



Ingeteam



Working with the BIS Team was very useful for clarifying our strategy and taking important decision for our company. We purchased a very complete study about electric vehicle fast chargers. It was a very complete analysis full of statistics and forecast divided by several aspects. We appreciated also that all of these tables with the data were copied also in a excel file, so it was very easy to take the information and use in our internal analysis. In spite of the report was very complete, we miss some information and they sent to us in a separate file. Finally, we had very interesting interview commenting the information and updating that with the last geopolitical events.
Excellent experience.”

**Electric Vehicle Chargers BU Director
Ingeteam Power Technology, S.A.**



Our experience at Potential Motors working with BIS Research has been great. The information that they were able to provide in their market report was valuable in helping us to better understand the market. Beyond this as we dove into the report we had further questions about how they actually collected the data and made their projections. They were willing to allow us to speak with their team to help us ask the questions needed so that we could better understand the assumptions made to give them their projections.”

**CEO,
Potential Motors**



To BIS Research colleagues,

I am writing to express my appreciation to BIS Research.

While working as a consultant in early career, I want to grow as fast as possible in terms of understanding how companies work and how business world works, commercial due diligence work seems to be a very good practice for someone with those goals in mind.

Having worked on my first couple of CDD projects (Health Care and Mobility), I came across BIS Research reports when I was in the need of quickly getting to know one specific industry. It not only has important market size data, competitor information that we always put in our final report, but also it gives us several different angles to look at one industry, this is very important as consultants are expected to give un-biased perspectives.

What makes the reports extraordinary was that they have very valuable market dynamics insights, for multiple occasions, I was able to detect insightful information then later on conducting deep dive studies by ourselves and the result becomes one of the core discussion points for our project, with the client.

Overall, my teams as well as my clients are happy with all the detailed quantitative data as well as insightful qualitative information, but beyond, these reports do not only act as a tool to obtain information but also, it is driving the consultants' working directions at a given project. Our analysis are acceptable by the clients, hugely thanks to BIS Research.

So I would like to say "thank you very much" for being so helpful in both my job and my career growth, keep the good work up and I look forward to reading your upcoming reports!

Mutian Li,
Associate, EY-Parthenon

Growth Awaits You...
Reach out

Thank You



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