



AUTOMOTIVE TELEMATICS MARKET IN INDIA

INDIA'S TELEMATICS MARKET: FAST LANE AHEAD!

BRICKWORK RESEARCH
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Automotive Telematics Market in India

Coverage

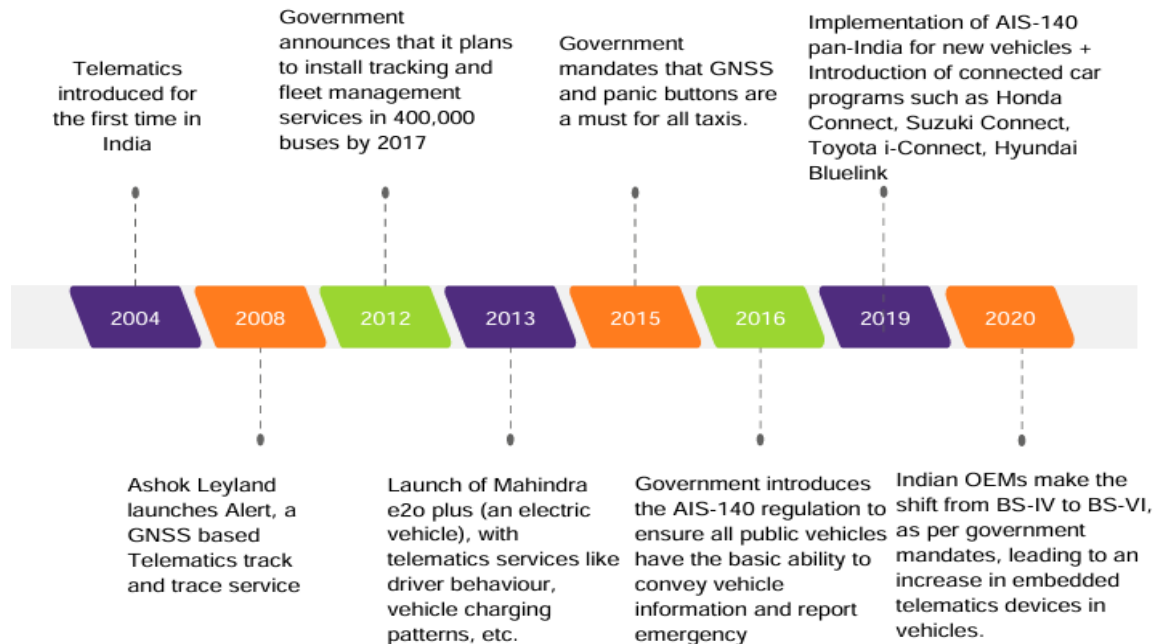
- Executive Summary
- Indian Telematics Ecosystem
- Market Overview
 - ❖ Market Size
- AIS 140 Value Chain
- Telematics in Passenger Vehicle
- Telematics in Commercial Vehicle
- Telematics in the EV industry
- Industry Trends
- Growth Drivers & Barriers
- Government Initiatives
- Key Players in the Telematics Industry
- Outlook



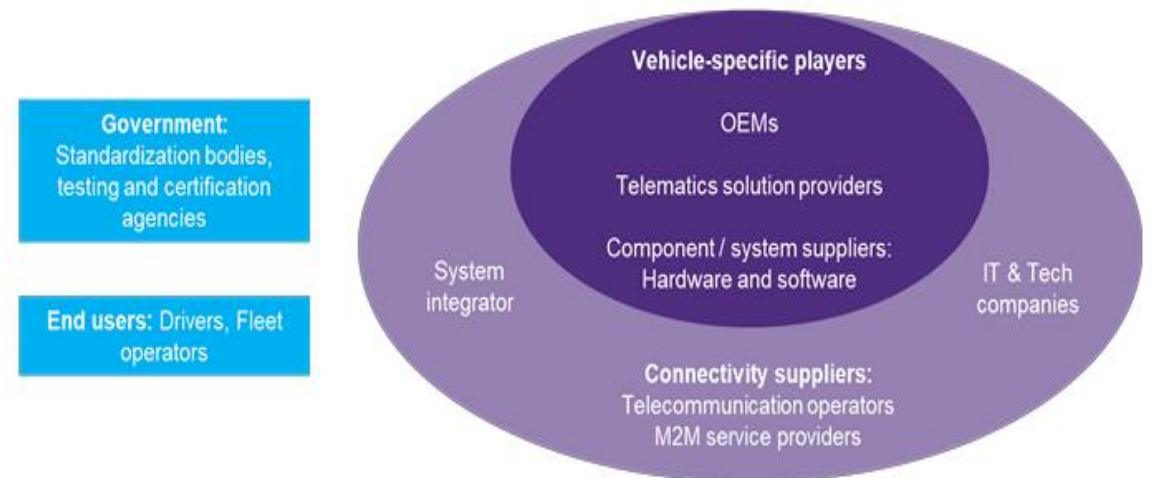
Executive Summary

- Over the past two decades, the automotive industry has experienced advancements in technology, convenience, security, digitization, and electrification through the integration of wireless communication and GNSS-based technology, known as Telematics
- The Indian telematics market is set to grow rapidly from INR 555 Crores in 2021 to INR 3796 Crores by 2026, registering 46.8% growth during the period.
- The Indian telematics market is experiencing growth due to government regulations like AIS-140 and vehicle tracking, fueled by increased awareness and adoption rates
- Telematics in passenger vehicles, currently valued at INR 106 crores, is set to rise with the growth of electric vehicles and demand for advanced connectivity
- The commercial vehicle (CV) telematics market in India, valued at INR 3.68 billion in 2021, represents approximately 66% of the total Indian market and accounts for about 0.45% of the global CV telematics market
- The rise in electric vehicles has sparked a new wave of telematics solutions tailored for EV fleets, helping fleet managers optimize operations and adapt to the unique challenges of electric vehicles
- Leading market players in telematics include iTriangle, Atlanta, TrackoBit, while leading OEMs are Ashok Leyland, Tata Motors, and Mahindra

Emergence of Telematics in India



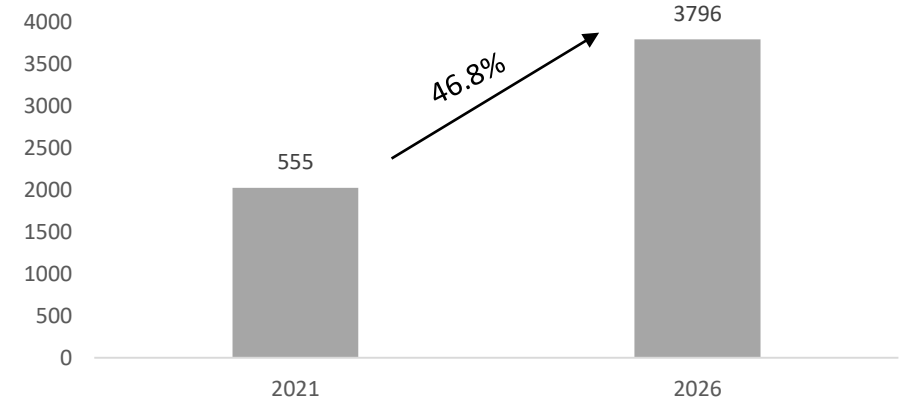
Indian Telematics Ecosystem (not exhaustive)



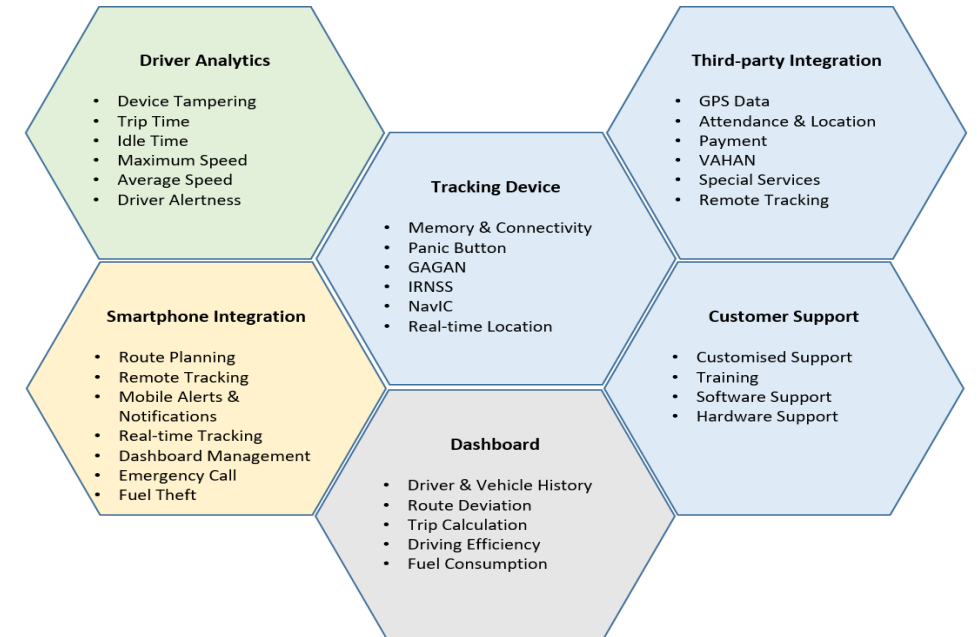
Market Overview

- India, with a population of 1.38 bn, is one of the world's fastest-growing economies. It's automotive telematics market is a nascent sector with a potential to expand quickly
- The telematics market in India is thriving due to a growing focus on building a connected ecosystem, involving stakeholders like OEMs, cloud infrastructure providers, telecom operators, and fleet owners
- The Indian telematics market is set to grow rapidly from INR 555 Crs in 2021 to INR 3796 Crs by 2026, registering 46.8% growth during the period
- Telematics applications are essential for the implementation of safety policies in the passenger vehicle, two-wheeler, and commercial vehicle segments
- The 5G technology is expected to significantly impact the automotive sector, enabling advancements in Advanced Driver Assistance Systems (ADAS) and Vehicle-to-Everything (V2X) communication
- The Indian telematics market is experiencing growth due to government regulations like AIS-140 and vehicle tracking, fueled by increased awareness and adoption rates
- Over 3.5 million Indian commercial vehicles are adopting telematics for a digital future, driven by strict regulations and OEM-driven connected solutions
- The increasing adoption of electric vehicles creates an opportunity for telematics value providers
- Leading market players in telematics include Arya Omnitalk, Pricol, iTriangle, Teltonika, Minda KPIT, and Danlaw, while leading OEMs are Ashok Leyland, Tata Motors, and Mahindra
- Emerging tech companies and mobility start-ups, including WheelsEye, Intangles, Uffizio, Fleetx, iTriangle, and Loconav, are outperforming their competitors
- The telematics industry in India is expected to continue growing due to rising demand for fleet management solutions, technological advancements, and the government's focus on digitalization and innovation

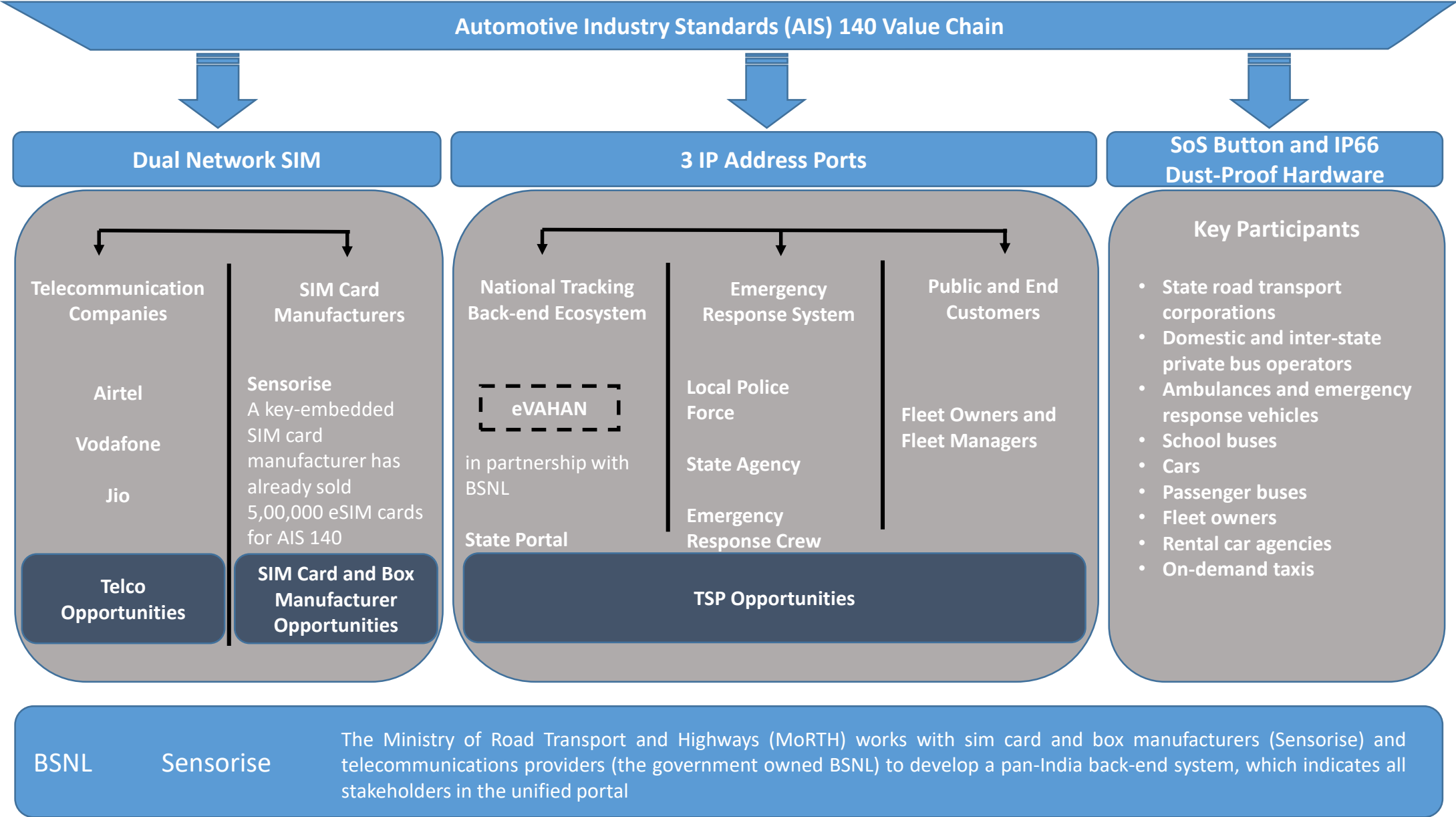
Market Size of Telematics Industry in India (INR Crore)



Telematics Device Features



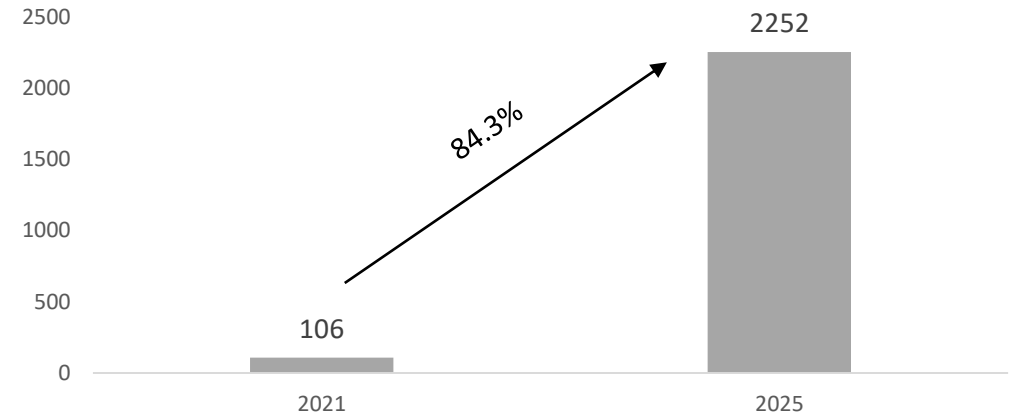
Market Overview



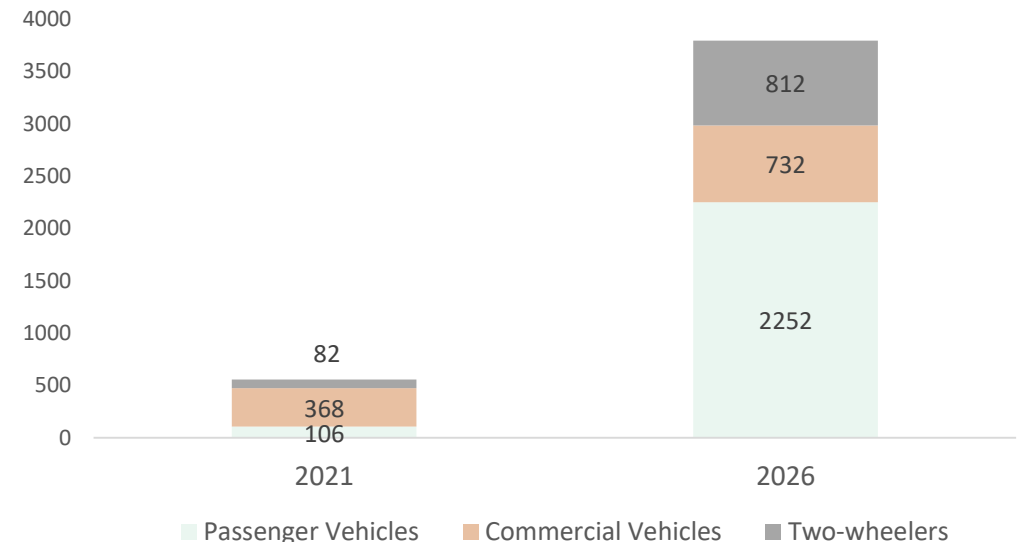
Telematics in Passenger Vehicle

- The market currently valued at INR 555 Cr. is set to grow by ~7x to ~3800 cr. by 2026, on account of increased uptake expected in passenger vehicles owing to in-vehicle personalization of features and telematics enabled services such as usage-based insurance
- Though the adoption of telematics in passenger vehicle segment is currently low, at INR 106 crores, its adoption in passenger vehicles is expected to rise significantly due to increased electric vehicle adoption and consumer demand for advanced connectivity
- Over the previous decade, basic in-car entertainment, navigation, and in-car networking (for example, via Bluetooth) have progressed significantly and are an incumbent part of PV OEM offerings
- Advanced telematics capabilities that use car sensor data, driving behavior, and vehicle-health characteristics are also growing, but they have yet to gain widespread popularity among private car owners
- The segment is picking up and expected to register the largest growth owing to consumer appetite for advanced technologies, and renewed focus of OEMs and telematics service providers to deliver the same
- Telematics personalization and ADAS L0 and L1 adoption in India improve on-road driving behavior, while OEMs realize benefits like efficient recall management, remote vehicle prognostics, diagnostics, and maintenance
- By 2025, 90% of global passenger cars will be connected and an estimated 600 million cars with embedded telematics will be on the road, with India accounting for approximately 40 million (~7%)
- Connected vehicles have embedded hardware in the Telematics Control Unit (TCU) that establishes the connection between the car and the network. Therefore, telematics fitments are more common in these vehicles due to their use cases in integration of advanced automotive offerings

Passenger Vehicles Market Outlook 2025



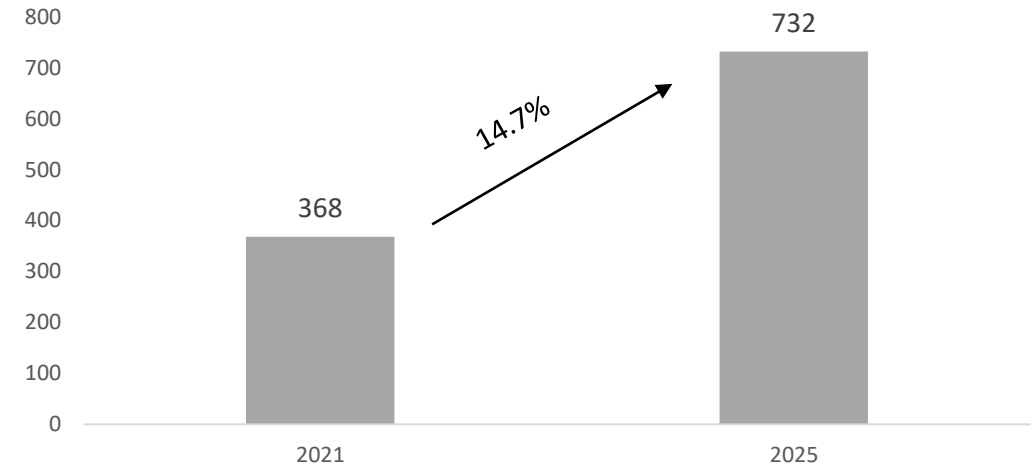
Indian Telematics Split by Category (INR Cr.)



Telematics in Commercial Vehicle

- The commercial vehicles (CV) telematics market makes up ~66% of the total Indian market and was valued at INR 3.68 bn in 2021; it constitutes ~0.45% of the global CV telematics market
- The total telematics installed base in commercial vehicles is approximately more than 2 million+ fitments with 10,19,000 AIS-140 devices uploaded (1,85,000 fitted devices) on Vahan portal. As AIS-140 mandate implementation is not done in all states, Vahan figure is less considering AIS-140 fitments carried out at OEM level
- In India, the regulatory push of AIS-140 standard for commercial vehicles has initiated the growth, which would eventually open up and facilitate other use cases
- The commercial vehicles segment presents a slightly different picture as historical growth of this segment being largely owed to regulatory support (i.e., AIS-140)
- CV telematics finds applications in various fields such as:
 - **Passenger / cargo safety and security:** Companies in perishable, hazardous, or precious cargo are investing in telematics for improved safety and risk reduction
 - **Customer relationship management:** Telematics provides an accurate view of the on-ground situation and helps manage the same by setting geofencing mechanisms in place
 - **Business services such as fleet management:** Overall better use of the fleet and driver can raise the accessibility of machinery with current resources to satisfy client requirements
- An estimated 7.42 million commercial vehicles are on Indian roads, serving various industries such as transport and logistics, oil and gas, construction, utilities, service and maintenance, retail, ecommerce and delivery. Of these, transport and logistics, oil and gas offer the highest opportunities for growth in the CV segment for telematics service providers owing to the plethora of benefits than can be derived from adoption of fleet management solutions
- Demand for telematics in the CV segment is driven by need for fuel efficiency, advancement of logistics and ecommerce in India, need for cargo and vehicle safety, rise in transit losses and policy support for enablement of safety in public transport

Commercial Vehicles Market Outlook 2025



Prominent CV OEMs offering telematics



Telematics in the EV industry

- The electric vehicle (EV) revolution is significantly impacting India's automotive industry, making significant strides in various sectors
- Telematics is a promising technology in India's mobility sector, enabling customers to access features like location, trips, health, and SOS services. Despite initial low penetration, the Indian automotive sector is moving towards this direction, with the rise of electric vehicles (EVs) expected to further increase demand for telematics
- Recently, electric vehicles are growing in number and intensity, which has led to a new wave of telematics solutions designed specifically to address the challenges of transitioning to and operating an EV fleet - electric vehicle telematics. EV telematics allows fleet managers to run more efficient fleets and adapt to the inevitable changes that are coming with electric vehicles
- Telematics adoption in passenger vehicles is expected to rise due to electric vehicle adoption and consumer demand for advanced connectivity, with in-vehicle personalization and ADAS L0 and L1 improvements contributing to the growth
- Telematics is important in the EV industry due to a few key analytic reports as below:
 - Charging Analytics and EV Energy Usage: EV manufacturers are utilizing telematics to monitor battery health, charge levels, and make necessary improvements in vehicle algorithms through continuous updates on charging time, size, and weight.
 - Fleet Management and route mapping: Battery-powered last mile delivery trucks enable field service managers to effectively manage routes, benchmark vehicle utilization, and measure cost and emissions reduction plans
 - Firmware Update: TSPs can enable firmware updates for electric vehicle software due to continuous advancements in charging algorithms and software
- Electra EV is collaborating with global providers to develop top-tier telematics products and solutions for electric mobility applications in fleet and personal mobility segments
- iTriangle is transforming India's EV rental landscape with telematics innovation, collaborating with SWYTCHD to offer accessible, reliable, and eco-friendly rentals

Benefits of Telematics for Electric Vehicles

Driving Experience: Locates nearby charging stations, pre-booking of charging spots, trip planning

Charging Analytics and EV Energy Usage: Enables real-time monitoring of charge level, battery health, battery status

Fleet Management and route mapping: Help optimize route management, vehicle utilization, monitor charge status, cost emission reduction

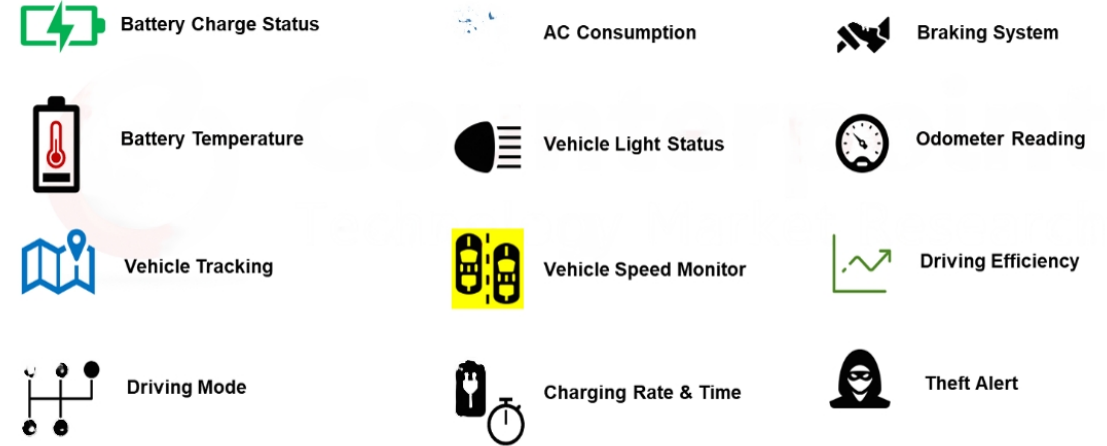
Alerts and Notifications: Monitor battery charge and alert drivers via SMS, provide real-time alerts

Firmware Update: Telematics units enable EV firmware updates via LTE connectivity, ensuring continuous improvement of charging algorithms and vehicle electronics through OTA updates

Telematics in the EV industry

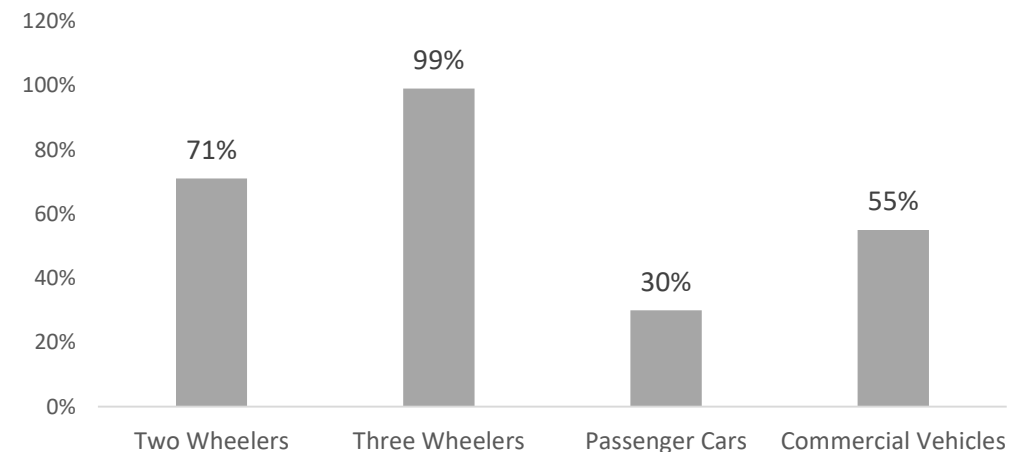
- The rising share of EVs in total vehicle sales indicates that electric is the future. By 2030, EVs are expected to make up over 53% of global vehicle sales
- As the number of EVs grows, the need for service and maintenance will also rise. Despite having fewer moving parts than internal combustion engine (ICE) vehicles—resulting in lower maintenance costs—EVs are complex electronic systems
- Beyond real-time tracking, geo-fencing, and geo-tagging, telematics in EVs can:
 - Provide information on vehicle health
 - Offer map rerouting and assist in booking slots at charging and swapping stations
 - Enable remote vehicle access and send theft alerts
 - Protect against cyber threats by deploying antivirus systems in EVs
- For 2-wheeled electric vehicles, telematics has numerous cutting-edge application, including, real-time tracking and monitoring, predictive maintenance, rider behaviour analysis, insurance, etc.
- Connected EV technology enhances safety, convenience, and entertainment by leveraging cellular data and GPS. Vehicle-to-Vehicle (V2V) communication enables vehicles to share information like speed and direction, which enhances safety and supports automated driving features
- Telematics integration with CASE (Connected, Autonomous, Shared, Electric) vehicles is set to become even more sophisticated. Advances in autonomous driving features, such as lane-keeping and adaptive cruise control, aim to increase safety and driving efficiency
- Total telematics penetration in India is projected to exceed 15% by the end of 2030. Leveraging EV telematics is crucial as EV sales in India are increasing. The demand for telematics is expected to grow significantly in the coming years

EV information available through Telematics



*List not exhaustive

Share of EV sales in India, 2030



Industry Trends

Localizing Telematics



The Indian OEMs are attempting to localize telematics systems, which will increase the market size. The automotive industry is in upheaval, and its future will be dependent on telematics technologies. Their applications will be much more widely used in future electric and networked automobiles.

Boosting Fleet Efficiency and Security with Telematics



Factors like as rising fuel prices and fuel pilferage, cargo safety concerns, an increase in accidents and thefts, and the need to optimize navigation routes have increased the demand of larger logistics transporters for better connectivity and intelligence in their vehicles. Telematics data insights applied to the entire fleet can have a significant influence on operating expenses and business efficiency.

Additional Unique Features



There are a myriad of over 50 connectivity features being offered by each leading OEM. While they have some standard offerings and mobile connectivity, some additionally offer unique features such as e-call & voice commands in MG Hector, in-car air quality monitoring in Kia Seltos, etc.

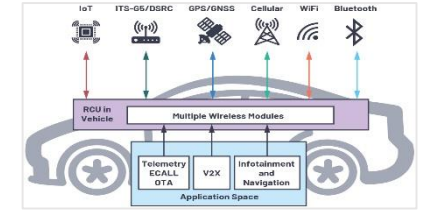
Connectivity Features in OEM Vehicles



OEMs are embracing telematics for over-the-air updates, ECU programming, prognostics, and remote diagnostics, which cut recall and service costs.

By analyzing telemetry data, they gain insights into consumer behavior and develop new technologies, enhancing the ecosystem with actionable insights and alerts through AI, ML, and IoT.

5G Advancements: Enhancing ADAS and V2X Communication



With the introduction of 5G technology, telematics is poised to make substantial advances in the automotive industry, paving the way for Advanced Driver Assistance Systems (ADAS) and Vehicle-to-Everything (V2X) communication.

V2X is the next major advancement in connected vehicle technology. It envisions a future in which cars interact with one another, hence improving road safety. For example, automobiles communicate during overtaking maneuvers, ensuring a safer driving experience by resolving blind areas.

Growth Drivers & Barriers

Drivers

Fleet Adoption and Regulations

- The Indian telematics industry is thriving due to the increasing adoption of technology by fleet owners and logistics companies, as well as government regulations like the e-way bill system and GST.

Tech and IoT Revolutionize Telematics

- Advancements in technology and IoT have revolutionized telematics solutions, enabling real-time tracking and predictive maintenance, presenting new opportunities for companies to cater to evolving Indian market needs.

Mandated Vehicle Tracking and BS-VI Impact

- Telematics solutions have gained popularity due to mandated vehicle tracking and emergency panic buttons in public transportation vehicles, enabling mass fitments and certification of multiple manufacturers. The shift to BS-VI has led to more embedded telematics fitments.

Rising adoption of Electric Vehicle

- The increasing adoption of electric vehicles across all vehicle classes is driving telematics due to the requirement for battery life, health monitoring, and charging information, which telematics fitments can provide to the user.

Lack of Standardization

- The absence of a global standard complicates data integration from different vehicles, leading to costly, non-value-added engineering. This challenge is a major obstacle to efficient fleet management and hinders the telematics industry's growth.

Lack of Driver Readiness

- The lack of driver readiness to adopt telematics can impede its implementation. In 2014, about 47% of drivers opposed monitoring via mobile devices, and 35% were against legal mandates for it. Younger drivers are more likely to embrace telematics, but the high costs may create a divide between vehicles equipped with monitoring systems and those without.

Risk of Data Theft

- Data theft is a significant concern with telematics technology. Cybercriminals could misuse collected data for insurance fraud or steal registered driver identities, tamper with details, etc. To ensure responsible use, telematics manufacturers can invest in robust fraud detection systems and identify fraud patterns, addressing both external threats and potential device tampering.

Data Management

- A key challenge in telematics is managing the vast volume of data generated by numerous vehicle sensors. This can strain infrastructure, complicating real-time storage, analysis, and impacting data accuracy.

Barriers

Government Initiatives

PLI scheme

The government of India launched the production-linked incentive (PLI) scheme for electronics industry launched under the Atmanirbhar Bharat Abhiyan. The PLI scheme empowers Indian suppliers to become global leaders in telematics solutions, allowing them to represent India at the global level. Tata Electronics is also availing the semiconductor PLI scheme to build India's first semiconductor manufacturing plant in Assam, which will start production by late 2025 or early 2026 and cater to automotive, power, electronics, and other industries

The Ministry of Road Transport and Highways (MoRTH) has introduced the AIS-140 regulation, which has made it mandatory for all existing and new public buses and commercial vehicles (CVs) to install a vehicle-tracking device and an emergency button. While considered relatively successful – the AIS 140 mandate has pushed annual growth rates in India's CV telematics market to above the 20% mark over the past couple of years. This rule took official shape only in May 2017. Since then, many device and auto-parts manufacturers have started working to develop AIS-140 issued devices, and presented them for certification.

Automotive Research Association of India (ARAI)

Driving AIS 140 Adoption with new GPS Toll System

The government's new GPS-based, road toll collection system, aimed at facilitating toll tax collection, is set for launch at the end of 2023. This will support wider adoption of AIS 140 devices by fleets. Slated to work in tandem with the eVAHAN portal and AIS 140 GPS trackers, it will aid market prospects as will standard factory fitments of AIS 140 devices into new BSVI vehicles.






The Ministry of Roadways plans to remove toll tax plazas, and instead of toll booths, the government will deduct tolls directly from vehicle owners' accounts using GPS. This move could significantly increase the demand for telematics devices, potentially accelerating market penetration, which is projected to exceed 15% by 2030.

New Toll Collection System

Safety Mandate Fuels Telematics

To enhance safety for women in taxis, the government has mandated GNSS and panic buttons in vehicles. Companies like Ola and Uber use telematics to track vehicles, monitor drivers, and manage operations. In 2017, Mahindra and Ola launched a prototype e-taxi service in Nagpur with e2o electric cars, demonstrating the viability of e-taxis and showcasing telematics' effectiveness in both electric and traditional taxis.

Key Players in the Telematics Industry

Name	Logo	Headquarter	Description	Features
iTriangle		Bangalore, Karnataka	Based in Bangalore, iTriangle is a provider of Vehicle Telematics solutions, integrating Mobility, IoT, and diagnostics across various sectors.	<ul style="list-style-type: none">• Cutting-edge GPS and telematics technology• real-time tracking, driver behavior monitoring, and vehicle diagnostics• Intuitive and easy-to-navigate dashboard
Atlanta		New Delhi	Atlanta is an established player in offering vehicle telematics solutions to a range of sectors, including construction, logistics, agriculture, and transportation	<ul style="list-style-type: none">• In-house R&D and top-tier production facility• Monitors and analyzes driver performance to enhance safety• configurable notifications for various driving events, such as speeding, harsh braking, etc.
Rosmerta		Gurugram, Haryana	Rosmerta Group is a recognized company in E-governance, transport, and road safety domain. It offers high security registration plates, smart card solutions, vehicle tracking systems and more	<ul style="list-style-type: none">• Advanced telematics and GPS technology• In-depth reports and analytics to optimize fleet performance• Mobile app that allows for real-time monitoring and management
TrackoBit		Noida, Uttar Pradesh	TrackoBit is geospatial data and telematics software company. With over 1100 cities and 1,40,000 vehicles, its solutions include real-time GPS tracking, driver behaviour monitoring, etc.	<ul style="list-style-type: none">• AI-enabled video telematics solution• Real-time automated and customizable reports• Complete visibility through advanced solutions
BlackBox		Chandigarh	Established in 2006, Blackbox has developed reliable GPS vehicle tracking systems. It assists fleet management companies in enhancing performance, streamlining operations, etc.	<ul style="list-style-type: none">• Offline vehicle management system• State-of-the-art GPS and telematics technology• Tailored solutions to address the unique needs, goals, and budget

Outlook

India's Growing Telematics Market

The telematics market in India is projected to expand in the coming years. This growth is driven by the rising adoption of telematics-enabled services in passenger vehicles, such as usage-based insurance. Factors contributing to this growth include increased automotive production and the integration of internet and artificial intelligence technologies in vehicle manufacturing.

India's GPS Tracking Mandate

India's government plans to eliminate toll plazas by 2023, implementing GPS tracking systems on vehicles to maintain smoothness and reduce congestion. The government aims to make these systems compulsory for all vehicles to prevent computer issues and improve transparency in business processes.

Tech-Driven Fleet Management Boost

GPS, mobile technology, and smartphones have significantly boosted fleet management in India, leading to telematic industries and a resolution in 2018 requiring public transportation to have six or more seats.

Next-Gen Vehicle Telematics

Companies plan to develop advanced hardware devices with 4G video capabilities and WiFi hotspots for vehicle telematics, while focusing on Big Data, dashboards, analytics, and Blockchain technology for location and vehicle data access.

Rising Telematics Adoption in EVs

The adoption of telematics in EVs is increasing due to a number of factors, including growing demand for EVs, government policies and incentives, improved user experience, etc.

** Views are personal*

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