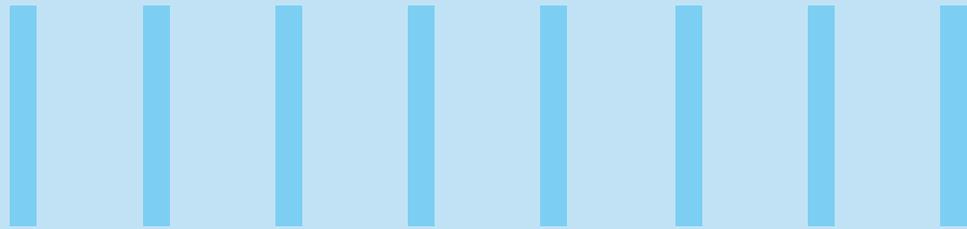




COST-EFFECTIVE INVENTORY AUDITING FOR AUTO OEMS



Managing vehicle inventory has always been a significant challenge within the automotive industry. As an area that involves nearly every party along the automotive value chain, vehicle inventory has a complex cost structure.

On the one hand, automotive dealers prefer to relay these costs to the OEM while the OEM looks for ways to transfer these costs to the vendors. OEMs also try to mitigate cost through just in time (JIT) or just in sequence (JIS) manufacturing. Vendors, on the other hand, are always concerned about demand. This process is cyclical and, consequently, contracts and agreements are constantly updated.

Thus, managing the costs of vehicle inventory is crucial but challenging owing to the difficulty in identifying the various costs involved.

What is inventory audit cost?

One of these above-mentioned costs is the inventory audit cost. Typically, automotive dealerships enter into agreements with an OEM's captive financial arm whereby they can use working capital to procure vehicles. While this might seem like a win-win situation for the manufacturer and retailer, it is, however, not always the case. This is because all inventory must be audited.

Visibility into dealership transactions is important for management decisions, brand image and market investments. In fact, the frequency of inventory auditing is one of the compliance checks that OEMs enforce on their dealers to ensure smooth functioning. However, most auditing processes are manual and require significant personnel and resources, thus leading to higher costs.

This challenge is compounded for dealers that use distributed storage (more than one location) to keep their vehicles. These vehicles can be either new or used and, based on this, different documents will need to be verified. These documents include the manufacturer's statement of origin (MSO), title, invoice, etc. Moreover, each vehicle status needs to be tracked, for example, if vehicles are shifted to third-party facilities for body work (as in the case of truck trailers). Such third-party storage facilities must also be audited.

The types of vehicles can include passenger cars, trucks, or auction vehicles. The above-mentioned documentation is needed for each of these. Finally, there are different types of audits and processes

depending on the market such as book audits, physical audits, dealer/bank takeover audits, etc.

With so much complexity, it is evident that the cost of manual auditing rises as inventory increases.

How an efficient inventory auditing solution can streamline operations

An inventory audit management solution uses technology to manage inventory and audit vehicles periodically. All vehicular information is captured, giving dealers key insights for informed decision-making. Such a solution should help dealers and OEMs perform several tasks such as:

- **Inventory management** – Barcode readers/RFID tags can capture information about the vehicle's condition after a physical examination. This data can be linked with relevant documents and stored within the wholesale or dealer management system. This information capture must be done for all vehicles – floored, non-floored or in transit. Further, OEM and dealerships can reconcile inventory for a satisfactory audit. Dealers can even perform self-reconciliation with such a solution.
- **Storage location capture** – Details of all dealer storage locations can be digitally captured and verified. Dealers or OEMs can fence and label the locations for easy recognition and navigation.
- **Real-time tracking** – All vehicle identification numbers (VINs) can be

captured and tracked in real-time.

This is possible with an RFID-enabled handheld scanner or a telematics-based module that transmits real-time data about the vehicle's location.

- **Audit management** – Pre-built options can help OEMs choose what type of auditing they want done such as physical, book, dealership takeover, bank takeover, etc. These reports can be notified and linked with dealer credit for future decision-making. Moreover, these ensure compliance by emphasizing the need for pre-approvals in case there are any deviations from the standard auditing process.
- **Risk assessment** – An algorithm can be developed to track VIN and location history. This can be compared with a dealer's historical audit data to uncover patterns for risk assessment. AI tools can enable such pattern analysis and fraud management.
- **Document management** – Such a solution can digitize document information like title, owner, invoice, etc., and feed this data into the content management system.
- **Dealership management** – OEMs can manage roles and responsibilities for each dealer through structured dealership onboarding. This module can support authentication and authorization using single sign-on (if needed). It will also allow dealers to negotiate and manage their payment cycles.

The role of technology

Different technologies can power the above capabilities. Geo-fencing can tag and encircle dealership locations, making them visible to the auditors. This greatly simplifies auditing since any geotagged vehicle located within the fence need not be audited. Additionally, the threshold for the geotag can be defined based on the market. Through telematics, OEMs can track the location and status of their vehicles in real-time. This along with

geo-fencing will enable remote auditing, improve audit performance and reduce costs.

Artificial intelligence and machine learning algorithms can be applied for a smoother auditing experience. Here, floorplan management is the key. Once an audit is scheduled, an algorithm will eliminate all the geo-tagged vehicles within the fence where telematics is not enabled.

All vehicles that have been searched and identified through telematics within the fence are also eliminated from the audit list. This will leave only a handful of vehicles (or maybe even none) to audit physically.

In the future, such technology-enabled inventory auditing solutions can help OEMs and dealerships slash time, cost and effort spent on auditing while giving them valuable insights into their inventory.



Conclusion

With digital adoption, every industry is moving towards lean processes. Inventory management in the automotive industry can benefit from technology-driven auditing solutions that reduce the need for extensive manpower resources. Such a solution can slash auditing costs while enabling real-time inventory tracking and accurate risk estimation per dealership per market. Based on the dealership activities, the system can rate dealers, monitor auditing frequency and manage remote audits. It can also provide visibility in case of fraud/malpractice. Through technology, OEMs can reimagine processes and people, make dealer transactions transparent and enable informed decision-making.



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