Dealer Stock Checks

An Overview of Current and Emerging Technologies for Floor Plan Audits

Choosing the Right Self-Audit Technology

The debate around the most effective way for funders to audit dealership assets has moved on rapidly in recent years. Proponents of funder-resourced manual audits have dwindled to a handful, with deliberation now switching to what is the most appropriate methodology, and supporting technology, to facilitate effective dealer self-auditing of financed stock.

In this guide, we'll examine current and emerging options and weigh up the pros and cons of each.

Death of the Funder Audit

After many years of manual funder audits being the norm in the auto finance sector, the move away from these has been welcomed by all parties. Funders no longer need to provide trained resources to visit far-flung dealer sites, benefitting from the associated time, cost, and emissions savings involved. In addition, dealers are spared the disruption to customer sales and service that these visits inevitably bring.

Along with reducing cost and distraction from daily business, dealer self-audits allow for greater frequency of vehicle stock appraisals and, therefore, provide more accurate and timely data on which to make future funding decisions.

While placing floorplan audit responsibility in the hands of dealerships has delivered many advantages, it has also highlighted the limitations of manual, paper-based audit regimes and accelerated the switch to more robust, technology-based methodologies.

Paper Trailing Off

Paper-based asset tracking simply does not work in the fast-paced car market that exists today. With rapid stock turnover and multiple sales channels (both human and digital) relying on up-to-date inventory information, any system that requires written data capture and subsequent input to the dealer management system is soon going to prove inadequate.

Add to this the lack of scalability, the inevitable impact of human error in data collection and input, and the heightened opportunities for mismanagement and fraud, and it's clear that few funders would accept a paper-based process for dealer self-audits.

Technology Steps In

A wide range of technology-based solutions has been brought to market to bridge the gulf between funders' desire to allow dealers to self-audit and the inadequacies of the traditional, manual approach. Many have been adopted from other industry sectors, particularly those dealing with extensive, fast-moving inventories such as warehousing and delivery services.

Each of these has advantages and disadvantages, particularly when applied to the unique challenges of the auto industry.

We'll take some time to look at the key technologies and assess whether these provide the right features and benefits for today's market.

Barcode / QR Code Scanning

At the most basic level of vehicle audit digitisation, we find barcodes and, the more recent development, QR codes. Familiar to everyone, from an asset audit perspective, they simply provide a unique identifying tag (sticker) that can be applied to an asset and scanned using an inexpensive dedicated reader or a smart mobile device.

One limitation of this type of asset identification is that the amount of information that can be held within the code is minimal. For this reason, audit systems tend to be based on sequentially numbered, pre-printed stickers containing no specific information about the vehicle to which it is applied.

What barcodes and QR codes provide is a quick and straightforward method of identifying which assets are physically in stock – though they may not capture other data such as the time and location of the scan. In addition, QR codes have the advantage of an in-built error correction feature, which means that even if quite heavily damaged or soiled, they have a high chance of still being readable, unlike traditional barcodes.

The most significant issue with this straightforward methodology is the intrinsic question of whether the coded sticker has been applied to the correct, or indeed any, asset. If the process of applying the code itself is not audited, it can easily be gamed.

RFID and NFC

A step further up the audit technology ladder brings us to the use of Radio Frequency Identification (RFID) and Near Field Communication (NFC) equipment. These systems use a scanning device to communicate with tags applied to assets using different types of radio waves. While RFID can pick up tags four to five meters away, NFC readers can only communicate across a few centimetres. For this reason, RFID technology is often used in large-scale warehousing, where hundreds of stored items can be scanned in a single sweep of the device.

Hardware costs for implementing RFID / NCF asset audit systems vary enormously depending on requirements. For long-distance RFID readers, it's possible to pay several thousand pounds, whereas NCF scans can be carried out using any suitably equipped mobile device.

There are also additional costs for consumables such as stickers or more hardwearing re-usable tags. Therefore, it's essential to assess requirements for these consumables based on factors such as the length of time the tag will be applied, the environmental conditions it will be exposed to, and the degree of wear it might suffer.

Audit technologies based on NFC or RFID often incorporate the collection of additional data such as time and location stamping, and the tags themselves are capable of storing far more data about the asset than barcodes or QRs. However, the processes for allocating them to assets and for subsequent auditing tends to be very similar:

- The dealer is provided with a supply of stickers or tags, each with a unique code; these are then attached to newly acquired vehicles sequentially.
- A mobile device app (for NFC-based technologies) or dedicated handheld scanner (for RFID-based systems) is used to scan the sticker and allocate it to the correct vehicle in the dealer's database.
- During auditing, the sticker is scanned, and the app records this as proof that the asset is present.

As with barcodes and QRs, this process relies entirely on the tag being placed on, allocated to, and remaining on the correct asset for the duration of its time in stock. The potential issues around errors, security and deliberate misuse similarly apply.

Imaging Solutions

One way to circumvent the inadequacies of 'tagging' assets used in each of the audit methodologies described above is to make the vehicle itself the 'scannable' item.

Advanced digital audit solutions use imaging technology to identify physical assets at a precise time and location using the vehicle's unique VIN (Vehicle Identification Number). The process is as follows:

- An image of the vehicle's VIN is taken using an app on a mobile device.
- Character recognition software then matches this to the vehicle's VIN in the dealer's database.
- Location and time stamps are automatically applied to the audit record.
- Additional images can also be recorded to identify the condition of the vehicle and highlight any damage.

The obvious advantages of this type of solution are eliminating the need for stickers or tags and removing any risk of accidental or deliberate misallocation.

Using the asset's VIN as an identifier increases the level of certainty within the audit process immeasurably. There are several additional benefits to this methodology:

- No preparation of the vehicle is required prior to audit; the VIN is always present and easily located.
- As with manual, paper-based audits, the system can record and highlight any assets unexpectedly found at a particular location.
- NFC-based solution providers often suggest that scans should be augmented with an image of the sticker next to the VIN to verify that it has been placed on the correct asset. Image-based solutions remove the requirement for the sticker entirely.

Future-Proofing

When choosing a digital solution, it's always wise to assess its likely longevity and whether it has the capacity to support emerging technologies. In the auto finance audit sector, there is one technology proving to be game-changing – vehicle connectivity.

The growing connectivity of devices in both industrial and consumer contexts means that the Internet of Things (IoT) is fast becoming one of the richest and most significant sources of data for decision-makers. Whether this is connected items of plant across a manufacturing business or the smart devices that are gradually filling our everyday lives, the IoT will provide unprecedented insight into how both businesses and individuals behave.

From a vehicle audit perspective, connectivity means accessing the asset's onboard data and automatically append this to vehicle records within the dealer's database. In addition to the data currently recorded by digital audit solutions, this could include mileage, service records, emissions performance, collision reports, and a wide range of information about the car's specification.

The only real downside to this technology is that it requires power to the vehicle's onboard systems and either physical or wireless access to it – imagine a vehicle being transported in a shipping container with its battery disconnected to visualise the unlikely scenario of it becoming 'invisible'.

There are two main methodologies for accessing this data:

- Using a device plugged into the vehicle's OBD-II port that can be wirelessly connected to a device running the audit software.
- Connecting directly to the vehicle's engine control unit (ECU) and other systems via its own wireless internet connection.

While both approaches deliver the same robust and comprehensive data, the latter provides greater operational efficiency and does not require additional expensive hardware items. Advanced solutions are already available in the market that allow this information to be used to augment audit data.

Summary of Technology Solutions

	Paper List	Barcode	RFID	NFC	Dongle (OBD-II)	Embedded IoT	Image
Low Cost	✓	✓	✗	✗	✗	✓	✓
No Consumables Required	✓	✗	✗	✗	✗	✓	✓
No Prep of Asset Required Prior to Audit	✓	✗	✗	✗	✗	✗	✓
Unexpected Asset Compatibility	✓	✗	✗	✗	✗	✗	✓
Multi User Compatible	✗	✓	✓	✓	✓	✓	✓
Fast Audit	✗	✓	✓	✓	✓	✓	✓
Provides Tangible Evidence of Asset	✗	✗	✗	✗	✓	✓	✓
Provides Time Stamp	✗	?	✓	✓	✓	✓	✓
Provides Geolocation	✗	✗	✓	✓	✓	✓	✓
Fraud Detection	✗	✗	✓	✓	✓	✓	✓
Requires No Power from Asset	✓	✓	✓	✓	✗	✗	✓
Scalable	✗	✓	✓	✓	✓	✓	✓
Works Offline	✓	✓	✓	?	✗	✗	✓
Dealer Self Audit Compatible	✗	✗	?	?	✓	✓	✓

Conclusion

While there will be no single audit methodology that fulfills every funder's requirements, there are some key considerations in finding the best solution. These include:

- How robust is the audit process, and does it provide firm evidence of the existence and location of every asset?
- What vulnerabilities exist that could be exploited by unscrupulous individuals?
- What additional information does the solution provide to augment the audit data?
- What costs (both hardware and software) are involved, and what other technologies need to be implemented?
- Is the solution capable of evolving as new technologies emerge?

CheckVentory

CheckVentory Audit is the funder solution for monitoring funded stock portfolios across dealer groups.

Via a sophisticated digital platform, CheckVentory Audit goes beyond providing an accurate and up-to-date view of dealerships' portfolios; it actively assists in identifying those dealer groups that provide the greatest opportunities for growth, as well as highlighting potential risk issues.

Find out more at www.checkventory.com