

# Smart Tire Retail

How Tire Dealers Can Increase Profits with Mobile Tire Scanning



# TABLE OF CONTENTS

- 1. Introduction ..... **3**
  
- 2. The Need for Fast and Accurate Data ..... **4**
  - Tire inspections and maintenance ..... **5**
  - Managing Tire inventories ..... **6**
  - Complying with federal tire regulations ..... **7**
  
- 3. How Mobile Data Capture Transforms Tire Retail ..... **9**
  - What is OCR and mobile data capture? ..... **10**
  - How these technologies help to:
    - Deliver Faster Turnaround Times..... **11**
    - Improve Your Tire Data Quality..... **12**
    - Provide an enhanced in-store experience ..... **13**
    - Level up your customer loyalty with a personalized service ..... **14**
    - Leverage customer data to bring them back for more..... **15**
    - Offer a consistent service at every location ..... **15**
  - What's new? Tire tread scanning for smartphones ..... **16**
  
- 4. A Real-World Look at Mobile Tire Scanning in Action ..... **16**
  - How Discount Tire Performs 5 Second Tire Inspections ..... **16**
  - How can dealerships start scanning tires?..... **17**
  
- 5. Takeaways ..... **18**
  
- 6. About Anyline..... **19**





## Introduction

Every year, Americans spend about \$20 billion replacing the tires on their passenger cars and light trucks. But how much of this translates into profit for dealerships?

The hard truth is - it's a lot less than it should be - and **a key culprit is the huge digital divide between tire retailers and the rest of the retail industry.** Inefficient paper-based processes and inaccurate data entry mean dealerships are held back every day from reaching their potential margins.

But addressing these issues does not require dealers to reinvent the wheel. In fact, **both large and small tire retailers are already digitally transforming their services** with the help of new scanning technologies that work on any standard smartphone or camera-enabled device.

In this eBook, we will discuss the biggest problems caused by data handling for tire retailers, and show how resolving these issues can bring both huge savings in operational costs, while also unlocking new revenue opportunities.

Finally we will show how mobile scanning is already transforming the tire sales process for **Discount Tire**, the largest independent tire and wheel retailer in the world.

## The Need for Fast and Accurate Data

Data is the lifeblood of any retail business. It allows stores to understand customer needs, to track product performance and to offer the right services to the right customers - when they want it.

**But while other retailers can rely on the trusty barcode for providing product information, tire dealers don't have this luxury.**

The most important product data for tire dealers is found on the tire sidewall, including the **tire DOT number**, sometimes known as the TIN, as well as the type, width, aspect ratio, construction rim or bead diameter, and service description.

But collecting this information accurately and efficiently is tedious, time-consuming and a **hotbed of human error**.

In this chapter, we identify three key areas of tire sales and service where tire data plays a pivotal role, and explain why manual data entry and paper-based processes are costing dealerships every day.





## Tire inspections and maintenance

When a vehicle rolls into the shop, technicians may run through a checklist so they can:



Check for the obvious signs of wear and tear



Check the tire pressure, balancing and wheel alignment



Understand the tire age for replacement needs



Plan for future tire maintenance

If it's a returning customer who is already on the system, this can also be an opportunity to look up the history of the tire's maintenance.

So what data is required? Typically, technicians will record the **Department of Transportation (DOT) number** for each tire, alongside the tread depth. If they are doing a full vehicle inspection or creating a new customer record, they may also record the **license plate** and **vehicle identification number (VIN)**.

This information is almost always recorded with pen and paper. Maintenance sheets are then either physically archived or given to the customer.

### The problem?

Paper maintenance records lead to inaccuracies. Also, archived sheets are often misplaced, and customers might not keep or bring back their own copy back for their next tire service or purchase.

This makes it almost impossible to keep track and reuse that data for further maintenance or commercial services.





## Managing your tire inventory

If your dealership handles a mid- to larger stock of tires, then you'll understand the challenge of tire inventory management.

It's well-known that the time between manufacturing and out-the-door sales can be quite long, and **customers will pay higher prices for newer tires**. So once stock arrives, it's essential to monitor storage time and minimize sleeping tire risks.

**To do this, many dealerships operate a FIFO or First In/First Out Flow to ensure that their merchandise keeps moving, using the tire DOT number as the reference point.**

Here again, the manual entry of tire DOTs into tire inventory systems is both time consuming, and inevitably leads to mistakes - which disrupt the entire process.

### What about using RFID chips?

RFID chips offer some benefits for tire inventory management. With the right device, workers can read tire data from the chip and connect this with their internal systems.

**However, there are 3 distinct downsides to complete dependence on RFID chip reading for tire management:**

They require costly dedicated devices to read, putting them out of the reach of many smaller dealers

RFIDs are not standard across all manufacturers, leaving a significant number of 'analog' tires in circulation.

When tires are stacked on top of each other, it's very easy to scan the 'wrong' RFID chip!

Without the right data on hand, many dealers can have tires sitting in storage lose their quality and performance over time - and most importantly - their revenue potential.





## Complying with federal tire regulations

On December 3, 2015, the US Congress passed the Fixing America's Surface Transportation Act, or [FAST Act](#). The FAST act requires independent distributors or dealers of tires to maintain records of:

- the name and address of tire purchasers and lessors, and
- information identifying the tire that was purchased or leased.

**The act also requires dealers and distributors to ensure they can securely transmit these tire records electronically to the manufacturers.**

Failure to correctly record tire data puts driver safety at risk, and could make dealers liable for fines, penalties and lawsuits.

### Driver Safety

When tires are recalled due to manufacturing issues, it's vital to have the necessary tire data on hand so that anyone who was sold the tire in question can be contacted and have their tire replaced.

According to the NHTSA, over 700 people are killed every year in the US because of tire defects.

Tires not being properly recalled are a clear and present threat to the safety of drivers, and may end up causing accidents, if not worse. And the easiest way to avoid this is by immediately registering the DOT number of all new tires on the NHTSA registration portal.



## Fines and penalties

Mistakes or errors in tire registrations can badly hurt dealer profits due to fines and penalties. In some cases, it can put the whole business in jeopardy.

The U.S. Department of Transportation recently increased the maximum amount a tire dealer or distributor can be fined if there is a violation of the Safety Act. **Fines can go up to \$22,723 if tires are not recorded, or if they are incorrectly recorded.**

## Lawsuits

Finally, if dealers and distributors fail to comply with federal regulations requiring them to register tires when sold, they expose themselves to lawsuits, and in larger cases, to class action lawsuits.

The result could be a **hefty settlement**, or **years spent in court and thousands of dollars in legal fees**, not to mention damages and interests that dealers and distributors might be ordered to pay.

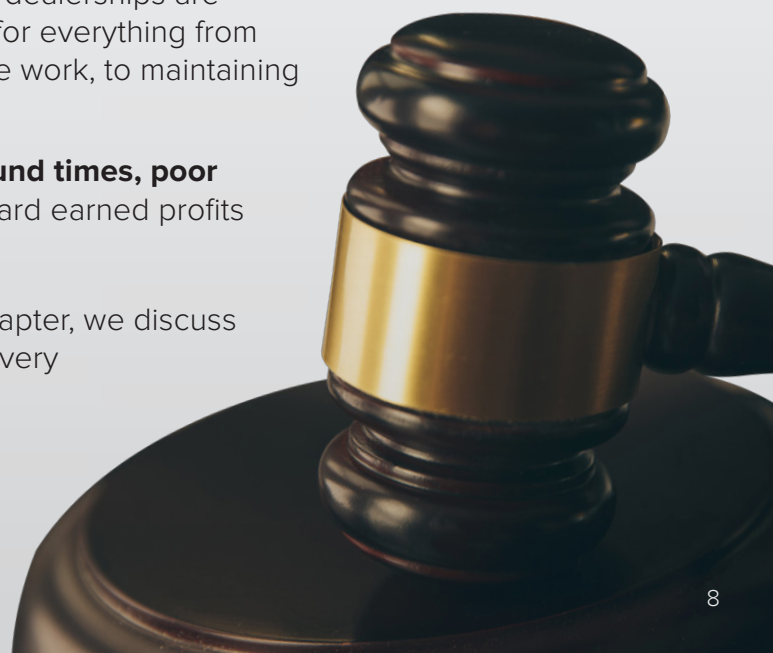
## Summary

Like all retailers, tire dealers need the best data at hand to serve their customers, control their stock and stay on the right side of the law. But until recently, there has been no easy and accurate way to digitally record tire data.

While other industries are going fully digital, tire dealerships are stuck in the past using paper-based processes for everything from registering new tires and recording maintenance work, to maintaining customer records.

The consequences are severe: **slower turnaround times, poor data quality**, and **legal risks** which take away hard earned profits from already thin margins.

But it doesn't have to be this way. In the next chapter, we discuss how new scanning technology is transforming every level of tire retail, from nationwide dealerships to mom-and-pop auto shops.





# How Mobile Data Capture Transforms Tire Retail

In the words of Madeleine Winer, the editor of Tire Review magazine, **“tire dealers go all out on those little details that make the customer experience special.”** <sup>1</sup>From fresh coffee and snacks to kids’ areas, dealerships go the extra mile to make their stores stand out against competitors.

But the challenge of digitizing tire information has meant that it’s been impossible to optimize processes, make instant data-driven decisions and offer the same level of customer personalization as other retail businesses..

Until now. With new mobile technologies such as **optical character recognition**, it has become possible to bridge the digital divide that has held dealerships back.



## What is OCR and mobile data capture?

Let's cover some quick definitions:

**Optical character recognition (OCR)** is the technology that takes images of words, characters or numbers and converts them into machine-encoded text which can be used by businesses or individuals. In the past, this tech was limited to large, single use OCR scanners used mostly for legal documents.

**Mobile data capture** brings this technology to any standard smartphone or mobile device with a camera. This lets users scan 'analog' data, like a driver's license, a vehicle license plate or a serial number, to create a digital copy.

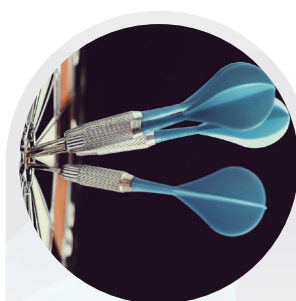
Across the tire and automotive industries, mobile data capture is already being used to scan **tire DOT numbers, vehicle identification numbers (VIN), license plates**, and much more.

The key benefits of mobile data capture is that:



### It's lightning fast

Each data point is scanned in a fraction of a second.



### It's highly accurate

Computer vision technology removes human errors.



### It's practical

It works on any mobile device or phone with a camera - even without an internet connection!



### It's easy to use

Using mobile data capture takes no training - it's as easy as taking a photo with your own cell phone!

When used by tire retailers, mobile data capture can transform everyday operations, speeding up tasks, removing errors and unlocking new revenue opportunities.



## Deliver Faster Turnaround Times

### How long does the average tire inspection take your team?

#### Be honest...

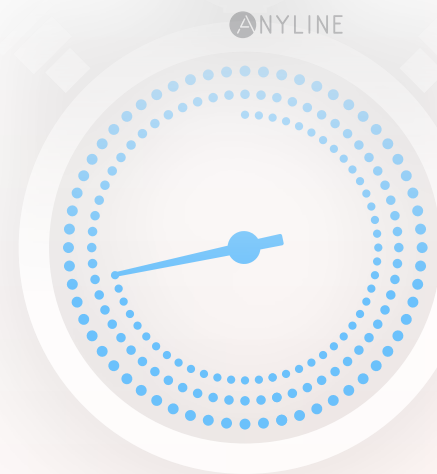
The answer is of course it depends, as multiple factors can make what should be an easy task into one that's tedious and time-consuming.

Recording the tire DOT numbers is a particular problem.

According to [NHTSA data](#):

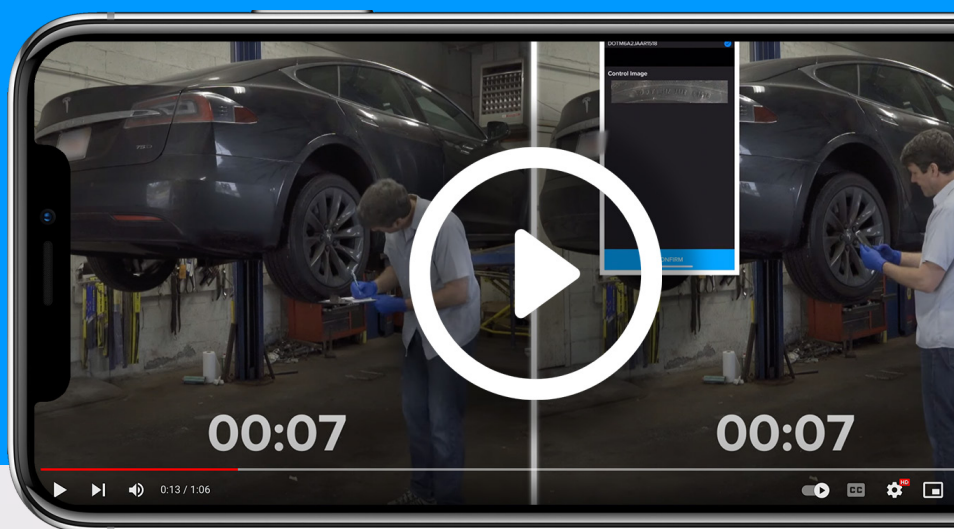
The average time needed to find and record tire DOTs from all four tires of a vehicle is **2 minutes and 43 seconds**. If the codes are facing inwards, this rises to 5 minutes and 45 seconds!

But when technicians have the right digital tools, this can be reduced to mere seconds. In fact, when **Discount Tire** changed to mobile tire scanning, they reported that it took [under 5 seconds per tire!](#)



## Don't believe us?

Watch this video to see it for yourself.



Every minute saved on tire data collection means faster turnaround times, happier customers and more vehicles serviced - all of which leave you more cash in the register at the end of the day.

## Improve Your Tire Data Quality

When tire retailers depend on paper-based processes for everything from registering new tires to recording maintenance work, it's not just a waste of time. **It's a minefield for mistakes.**

Maybe you're wondering - 'how bad can it really be?' If so, the answer will shock you. When it comes to entering tire data,

more than **40%**  
of all DOT registration  
records end up being  
invalid! <sup>3</sup>



Here's why. Firstly, tire data is not human-friendly - a long string of letters and numbers that are easily misread. Secondly, workers are often reading them under poor lighting, and the tires are often obscured by dirt, grease, dust or chalk. Lastly, they have a hundred other things to do!

As we saw in the last chapter, the results can be severe. Poor tire data quality leads to inventory mistakes, misplaced merchandise, and can result in legal fines or even lawsuits.

By equipping technicians with mobile scanning technology, [errors are eliminated](#) from these processes. Compared to the human eye, computer vision is vastly more accurate, delivering DOT reading with **over 95% precision**, even in the toughest conditions and when there is no internet connection.

Having a handle on in-store data gives you the confidence of having:





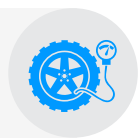
## Provide an enhanced in-store experience

Unlike some stores with a specific clientele, the customers of any tire dealer come from every walk of life - from auto aficionados to high-school grads and even grandmas.

**This means tire stores deal with a wide range of customer education.**



Some will perform most maintenance themselves, know what they need, and tell you their exact tire specs.



Less savvy customers may know very little at all about their own vehicle, coming in for more regular maintenance like tire rotation or air pressure checks - and will rely on your team to help them make the right purchase.



Whatever their experience level, each customer knows they are making a high-value purchase that will impact the safety, comfort and performance of their vehicle.

**As a result, the most valuable interactions your staff can have are those which build customer trust.**

## Tell the story behind the numbers

Using mobile data capture to scan your customers' tires will not only provide a huge 'wow factor'. **It also enables you to read 'the story' of their tires in real time** - the age, size and specs - and give the customer an informed picture of what service they need.

Here's a quick example:

With tire scanning technology on their mobile device, a technician could inform the customer that while their tires still have some tread, their age means that they are losing elasticity and delivering a poor performance - thus making the case for a replacement.

The ability to present tire information in an accessible way **helps build trust with the customer**, and shows that the advice they receive is informed by the data, rather than a sales technique.



## Level up customer loyalty with a personalized service

The success of any tire dealer depends on reputation, word-of-mouth and fostering strong customer relationships. The most effective way to deliver this is by **building a customer profile**, including the customer's name and address, vehicle and tire information.

Using [mobile data capture](#), this process can be completed within the first few minutes of the customer's first visit to your store. **Von Brady**, the Omni Channel Mobile Platform Product Manager Discount Tire, introduced this process, and said that today,

“We can now scan tire information, vehicle information, and associated customer information to create a customer profile that allows us to provide a more personal and best-in-class service experience.”

If you're interested in hearing more from Von, listen to her episode appearance on our podcast, [The Auto Tech Show!](#)



### Tire Tech is Advancing Road Safety

**Von Brady**, Omni Channel Mobile  
Product Manager at Discount Tire



## Leverage customer data to bring them back for more

So you're delivering a great customer experience at your store. Problem is, most customers will only replace their tires every two and a half to three years on average. So how can your business stay relevant between the first purchases and the next service?

### This is where in-store data capture and profile creation pays off in dividends.

Using the data gathered during a first visit and sale, dealerships can reach out to customers in a timely manner with personalized offers to encourage follow-up visits. For example, you can:



Send them reminders for their next tire rotation or air-pressure check



Offer targeted discounts around special occasions



Give them the option to instantly schedule their next appointment



## Offer a consistent service at every location

For retailers with multiple dealerships, the final advantage of an integrated mobile data capture solution is the ability to instantly share relevant data across your entire network of stores.

If customers are traveling, moving out or simply visiting another store from the same tire retail company, having data available makes it easier to create a consistent customer experience and follow service from one location to another.

Not only is this move convenient for your store associates, **customers will feel understood and at home every time they step into your stores**, strengthening their relationship and loyalty to your brand.

## What's new? Tire tread scanning for smartphones

For the first time in the industry, Anyline has developed an **optical solution** to easily measure tire tread depth. **It works by simply pointing the camera of any standard mobile device at the tire tread to be measured.** Using state-of-the-art computer vision and AI, a 3D model of each tread is created, resulting in a precise digital measurement that can be instantly stored and shared with customers.



### How it works

Using state-of-the-art AI and computer vision, **Anyline's breakthrough tire scanning solution makes it easy to accurately measure tire tread depth** – using any mobile device. It can be integrated into **workforce or consumer-facing apps** (through an API), helping you make sure that your customers are always safe on the roads.

**Scan Tire Tread** – Simply swipe your device over the tire

**View Result** – Receive your results in seconds

**Use Data** – Seamlessly integrate data into your workflow

### Why does it change the way tire tread is measured?

If the approach is basically the same – creating a 3D model of each tire in order to measure tire tread depth – the fact it uses a camera instead of a laser beam is a game changer. **Anyline tire tread scanner doesn't require a dedicated device**, but can be used on any device that is equipped with a digital camera. And that includes the smartphone everyone has in its pockets.

The solution can be integrated into workforce or consumer-facing apps, meaning that tire technicians and customers alike can start **scanning tire treads without training and receive consistent, objective results that can be shared digitally.**



# A Real-World Look at Mobile Tire Scanning in Action

For a better picture of how mobile tire reading can transform tire retail, read this compelling use case study Discount Tire the world's largest independent retailer of tires and wheels.

## How Discount Tire Performs 5 Second Tire Inspections

Every day, thousands of Americans rely on Discount Tire to provide them the very best retail experience at one of their 1,100 stores.

As an industry-leader, Discount Tire wanted to ensure their technicians had the latest technology on hand to deliver an unrivaled tire inspection process. But like most retailers, their technicians still used a pen and paper to record each DOT code and manually measured 12 different spots to understand tread depth during each inspection.

To automate these processes, Discount Tire partnered with Anyline and Zebra Technologies to develop an **industry-first tire inspection mobile computing solution**. Now, Discount Tire technicians can complete an assessment typically in under five seconds per tire.

Technicians simply swipe each tire to check for tread depth and scan the DOT code with the tool's camera in real-time, enabling them to assist more customers, reduce wait times, and provide a more positive customer experience.

***"We pride ourselves on delivering customers the highest quality tire service and products to help keep them safe on the road. Our new tire inspection solution is a game-changer for our people and will help further our assurance to our customers that we are taking care of their safety by providing the best possible service and most accurate tire readings."***

*Tom Williams,  
Chief Experience Officer, Discount Tire*

**DISCOUNT**  
**TIRE**



## How can dealerships start scanning tires?

Starting a new digitization project can seem daunting, but getting started with mobile data capture is remarkably fast. Here are the options for tire dealerships.

### Large tire store chains and franchises

If your organization is aiming to add mobile scanning into its existing software infrastructure, the best first step is to request a 30-day [free trial](#) of our software development kit (SDK). With this, you will be able to quickly test out the technical capabilities of OCR for your needs.

Our SDK is designed to work on any camera-enabled device, including Android, iOS and UWP, as well as popular platforms like Xamarin, React-Native, UWP, and Cordova.

### Independent dealerships

For smaller and medium sized tire stores who want to benefit from mobile data capture, but lack the IT infrastructure to develop a whole new system - there are also great options available!

Anyline has partnered with ATEQ TPMS Tools to offer tire DOT scanning, alongside license plate and vehicle identification number (VIN) scanning on their latest [ATEQ TPMS devices](#).



Reset TPMS



Program



Diagnostics



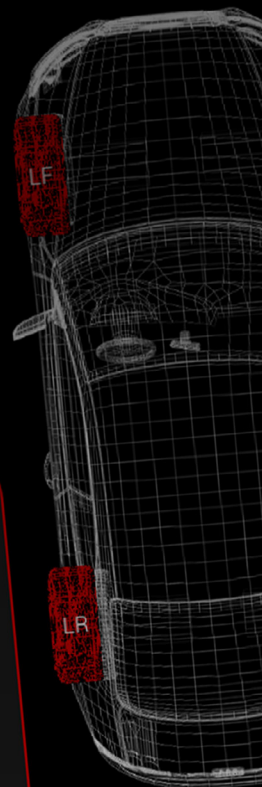
Tire Management



Report



Support



## Ready to get started?

If your dealership could benefit from mobile data capture for tires, VINs, license plates and more, [contact us today](#) and set up a call with our experts!



# Takeaways

## There is still a huge digital divide between tire retailers and the rest of the retail industry

While others can rely on barcodes for everything, the data tire dealers need to provide the best service are **tire DOT numbers, vehicle identification numbers (VINs), license plates** and other hard-to-capture data

## Tire dealers need a faster and more accurate solution for capturing tire data

From tire inspections and services, to inventory management and mandatory tire registrations with the NHTSA, tire dealerships need to have a tight handle on their data - but current processes mean they are held back

## Manual data collection is a hotbed of human error

When technicians have to enter this data manually, it results in **slower turnaround times, poor data quality, and legal risks** from incorrect tire registration. All of these issues take resources from your teams, and siphon off profits.

## Mobile data capture is a pioneering new solution for the tire and automotive industries

Optical character recognition (OCR) has been around for over 30 years, used primarily in large fixed scanners for office work. But recent innovations in mobile technology packs this solution into the palm of your hands.

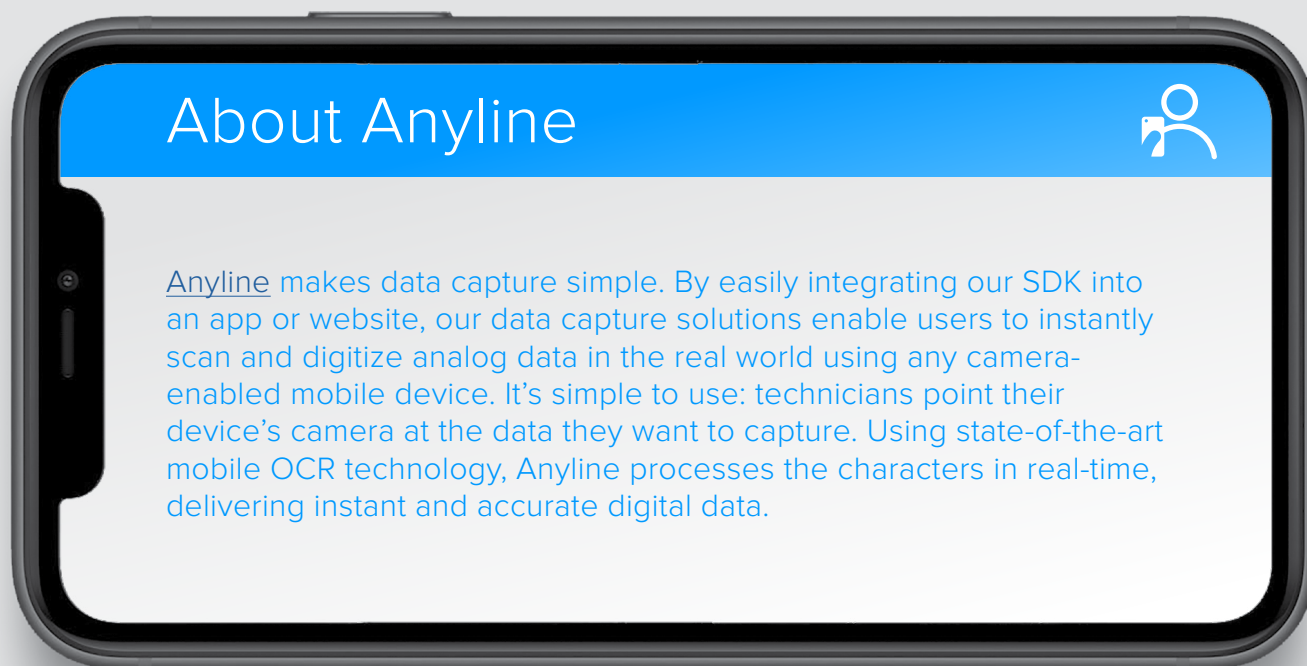
## Introducing tire scanning will turbocharge your turnaround times, improve your data quality and level up your customer service

Faster than the human eye and with far greater accuracy, mobile scanning can capture tire data in under 5 seconds, so you can service more vehicles, provide your staff with up-to-date information on each tire, and provide a personalized service to each customer.

## Using tire and vehicle data to build customer profiles delivers a quick win today, and pays dividends down the line

Customers love the 'wow' factor of seeing technicians using the latest tech in store, but the real benefit comes when you can leverage this data to follow up with personalized reminders for services, special discounts and offers - and also ensure they receive the same service at every store in your network.





## About Anyline



Anyline makes data capture simple. By easily integrating our SDK into an app or website, our data capture solutions enable users to instantly scan and digitize analog data in the real world using any camera-enabled mobile device. It's simple to use: technicians point their device's camera at the data they want to capture. Using state-of-the-art mobile OCR technology, Anyline processes the characters in real-time, delivering instant and accurate digital data.

Clients use Anyline to scan and digitize dozens of data points: from IDs and passports to barcodes and utility meters, and even license plates, tire numbers and more. Not only does Anyline deliver industry-leading performance and accuracy, it works offline, ensuring the greatest convenience and security for any use case.

Since 2013, we've been working with some of the greatest minds in machine learning to create our market-leading data capture solutions. Our technology is already used by household names, including Discount Tire, Continental, PepsiCo, E.On and Canon, as well as national governments, and the United Nations. From our bases in Vienna Austria and Boston MA, our growing and dynamic team is ready to help you digitize your processes.

## References

<sup>1</sup> Sickels, D. (2021) 'How Top Tire Dealers Manage Their Inventory.' Tire Review Magazine. 30th November. [Online] [Accessed on 7th February 2022] <https://www.tirereview.com/manage-tire-inventory/>.

<sup>2</sup> U.S. Department of Transportation National Highway Traffic Safety Administration (2019) 'REPORT TO CONGRESS: Electronic Tire Identification Study,' [Online] [Accessed on 7th February 2022] <http://www.safetyresearch.net/Library/18-3053%20Elec%20tire%20id%20study-3.pdf>

<sup>3</sup> Donehue, J. (2017) 'Staying on Top of Tire Registration FAST Act Update and Where We're Headed.' Tire Review Magazine. 1st September. [Online] [Accessed on 7th February 2022] <https://www.tirereview.com/staying-top-tire-registration-fast-act-update-headed/>.

## Imprint

Copyright & published by:

**Anyline Inc.** 31 St. James Ave 6th Fl, Boston, MA 02116, United States  
us@anyline.com

Version 1.1  
December, 2022

[www.anyline.com](http://www.anyline.com)