



ON-CAR TIRE & WHEEL DIAGNOSTICS

A BETTER DRIVE THROUGH BETTER DATA

The first diagnostic platform that detects tire and wheel problems in real time, at speed, without removing the wheel.



EXECUTIVE SUMMARY

We are creating a new category in automotive diagnostics.

Real-time detection of tire and wheel problems, at speed, with the wheel still on the car.

> Breakthrough product

NVH Auto enters commercial production in 2026, validated in real-world testing today.

> Built for adoption

An intuitive Red Light / Green Light interface requires almost no technician training.

> Defensible moat

14 issued patents protect the hardware, software, and method through the 2040s.

> Recurring revenue

Devices, subscriptions, per-use fees, and data inside a \$264B global market.

HQ ADVANTAGE

Headquartered in Coatesville, PA, within a Qualified Opportunity Zone and Keystone Innovation Zone for meaningful tax and capital advantages.

A costly, invisible problem we solve at the source.

PROBLEM

Billions lost every year

High-speed tire and wheel vibrations are invisible to conventional off-car equipment. The result is warranty claims, returns, and wasted labor across a **\$264B** global tire market. In the U.S. alone, faulty tires drive **11,000+ accidents** and **700+ deaths** annually.

SOLUTION

Diagnose on the car, in motion

Our patented device attaches to any wheel in seconds, stays secure at highway speeds, and streams real-time data to the cloud and a mobile device. Technicians find and fix issues in minutes, **without removing the wheel.**

RESULT

Fewer claims. Lower cost. Safer cars.

A new recurring-revenue model for service providers and manufacturers, in a market that sells **260 million** replacement tires every year.

INDUSTRY NUMBERS

A \$264B market with a quantified safety failure.

MARKET SCALE

260M

replacement tires purchased annually

\$264B

global tire sales in 2021
(2.35B units)

50-75+

mph optimal speed for vibration recording

COST OF INACTION

700+

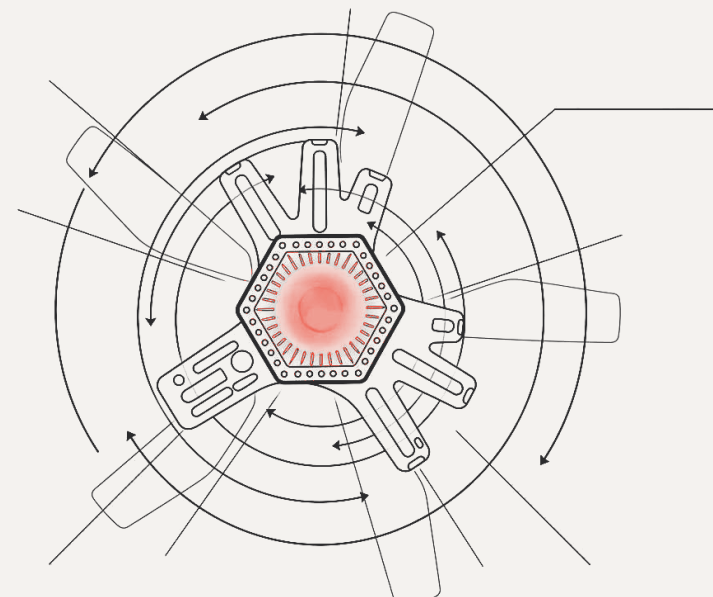
U.S. deaths per year tied to tire defects

11,000+

accidents per year caused by faulty tires

9%

of accidents with pre-crash tire issues



INTELLECTUAL PROPERTY

14 issued patents protect the category through the 2040s.

- Defensible leadership in tire and wheel diagnostics
- Exclusivity across hardware, software, and method
- Protection into the 2040s, with applications still growing

More than a single product. A protected platform for recurring revenue in a \$264B market.

ALL 14 ISSUED PATENTS

➤ US 10,969,292 B2

➤ US 11,480,491 B1

➤ US 11,731,673 B1

➤ US 11,988,573 B1

➤ US 12,181,368 B1

➤ US 12,422,328 B2

➤ US 12,462,617 B2

➤ US 11,287,348 B2

➤ US 11,656,156 B1

➤ US 11,982,586 B2

➤ US 12,145,639 B2

➤ US 12,332,136 B2

➤ US 12,439,393 B2

➤ US 12,618,747 B2



THE HARDWARE

A device so simple it needs almost no training.

Attaches in seconds. **Green** confirms the tire is within tolerance. **Red** identifies the exact wheel with a problem. No guesswork, faster service, fewer warranty claims.

- **Fast adoption.** Minimal technician training required.
- **Clear savings.** Cuts labor and warranty expense at scale.
- **Gateway product.** Anchors subscription and per-use revenue.

GEN 1 · TODAY

Red / Green wheel identification

GEN 2 · NEXT

Adds mass & angle of imbalance for precise correction

The software turns each diagnosis into recurring revenue.

NOW

The Red / Green interface tells technicians exactly which tire needs service, on any mobile device. That translates directly into lower labor cost, fewer warranty claims, and higher satisfaction.

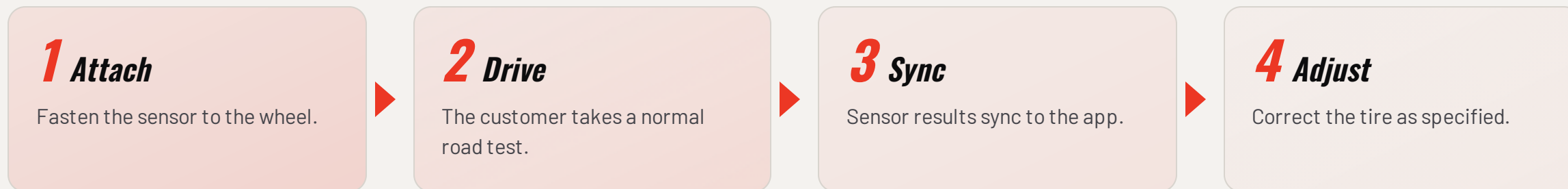
NEXT

A cloud ecosystem aggregating millions of diagnostic events, unlocking predictive analytics, benchmarking, and fleet-level insight.

FOUR REVENUE STREAMS

- ***Annual subscriptions***: predictable, high-retention recurring revenue
- ***Per-use fees***: scales as device utilization grows
- ***Data monetization***: aggregated diagnostics create value for OEMs, insurers, and fleets
- ***Upgrades & add-ons***: new modules deepen reliance and expand spend

Four steps from attach to fix.



GEN 1

Red / Green wheel identification

GEN 2

Adds angle & mass identification

No competitor matches our on-car capability today.

CAPABILITY	NVH Auto	Static Balancer	Dynamic Balancer	Dynamic Bal. w/ Road Force	Pico System
CURRENT FEATURES, AVAILABLE NOW					
On-Car Lateral Runout Detection	YES	-	-	-	N/A
Actual Vehicle Road Force Applied (On-Car)	YES	-	-	-	N/A
On-Car Imbalance Detection (30-110 MPH)	YES	-	-	-	N/A
On-Car Tire Eccentricity Detection	YES	-	-	-	N/A
Wheels Not Removed from Vehicle	YES	-	-	-	N/A
Minimal Technician Experience Required	YES	YES	-	-	N/A
Technician Time Reduced to Minutes	YES	-	-	-	N/A
Vehicle Driven by Owner	YES	-	-	-	N/A
UNDER DEVELOPMENT					
On-Car Imbalance Solution (Angle + Mass, High Speed)	IN DEV	-	-	-	N/A
On-Car Radial Force Variation (RFV) Solution	IN DEV	-	-	-	N/A
On-Car Tire Eccentricity Solution	IN DEV	-	-	-	N/A
FUTURE DEVELOPMENT					
Wireless, Cloud-Based Solution	FUTURE	-	-	-	N/A
Significant Data Collection Opportunity	FUTURE	-	-	-	N/A
Complete Wireless NVH System	FUTURE	-	-	-	-
Brake / Rotor Warp & Degradation Detection	FUTURE	-	-	-	Limited
Engine or Suspension-Induced NVH Detection	FUTURE	-	-	-	YES
Adaptive AI Vehicle Simulation	FUTURE	-	-	-	-
Multi-Component Wireless Diagnostic System	FUTURE	-	-	-	-
Vehicle Cornering & Performance Tracking	FUTURE	-	-	-	-
Dynamic Natural Frequency Identification	FUTURE	-	-	-	-
Other Rotor-Balancing (Rail, Aircraft, Industrial)	FUTURE	-	-	-	Limited

We will not just compete with the market. We will redefine it.

TARGET MARKET SEGMENTS

Multiple adoption pathways into a **\$264B** market.

➤ ***Car Manufacturers***

Reduce warranty claims and service cost while raising ride quality and satisfaction scores.

Lower cost, protected brand

➤ ***OEMs***

Validate wheel and tire performance on the assembly line and in aftersales.

Fewer returns, stronger reliability

➤ ***National & Regional Retailers***

Add a fast, credible on-car check to every service bay.

Efficiency & recurring revenue

➤ ***Local Auto Repair Shops***

Offer quick, credible diagnostics that build trust and loyalty.

Level the field vs. large chains

➤ ***Online Tire Retailers***

Partner with NVH-enabled shops to guarantee a verified, smoother ride.

Differentiate with trusted installs

➤ ***Specialized Balancing Services***

Precision diagnostics for motorsport, fleet, and premium work.

Edge with advanced capability

THE BOTTOM LINE

A **\$264B+** market with adoption pathways from high-volume manufacturers and retailers down to local shops, online channels, and specialists.

Four stacking revenue streams, most of them recurring.

A one-time device sale opens three recurring streams that compound across the installed base.

ENTRY

Devices

Direct sale and wholesale distribution of the physical device.

RECURRING

Software

Annual subscription licenses tied to the platform.

RECURRING

Price Per Use

Small transaction fees that build annual recurring revenue.

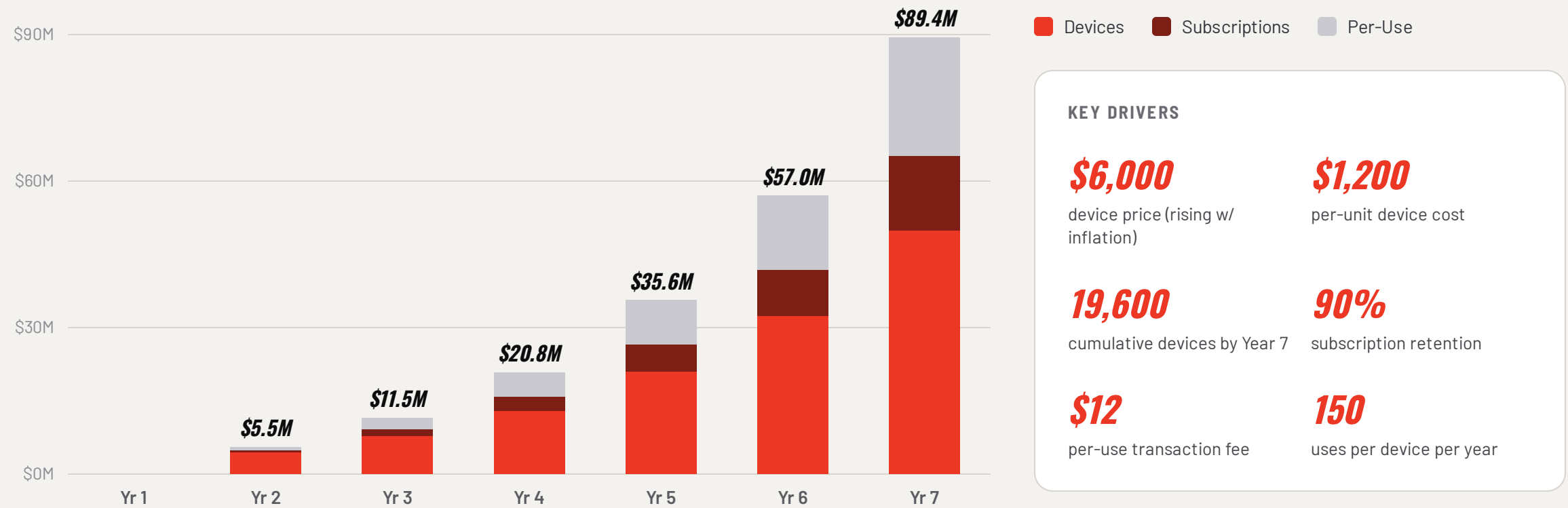
RECURRING

Data

Aggregated diagnostics analyzed and sold to improve performance and repair across the industry.

REVENUE PROJECTIONS

A clear path to ~\$89M in annual revenue by Year 7.



Growth steepens as recurring streams stack on the installed base; by the later years, subscriptions and per-use, not hardware, drive the curve.

Independent analysis values the IP alone at \$35M to \$45M.

Approach

- **Scope.** Hardware patents plus developed software, valued separately.
- **Method.** MPEEM, relief-from-royalty, discounted cash flow.
- **Assumptions.** Pre-revenue, commercialization 2025+, protection to ~2040, WACC 43% (pre-revenue risk rate).

Valuation Results

Hardware Patents

\$16.5M to \$20.7M

Software IP

\$18.1M to \$23.4M

Combined IP Value

\$34.6M to \$44.1M

Key Drivers of Value

- **Strong IP.** 14 granted patents, protection through ~2040.
- **Market demand.** OEM and peer discussions signal high interest.
- **Low technical risk.** Prototypes validated, software operational.
- **Recurring model.** Devices, subscriptions, per-use fees.

Risks & Considerations

- **Commercialization.** Adoption speed, retention, execution.
- **Funding.** Additional capital required to reach production.
- **Sensitivity.** Value moves with adoption assumptions.

THE TEAM

200+ years of engineering behind the IP.

A core team of industry experts, engineers, and operations and marketing specialists who have built and shipped for decades.

This IP is not luck. It is pattern recognition from people who have taken 100+ products to market.

156

years in the auto,
truck, and NVH
industry

208

years of
professional
engineering
experience

529

professional papers
and articles
published

118

products developed
or taken to market

99

U.S. and
international
patents and
pending

16

degrees:
undergraduate,
master's, and Ph.D.

LEADERSHIP

The people behind the platform.



**Tom
Brennan**



MANAGING PARTNER



**Eric
Canfield**



DIRECTOR OF PRODUCT



**Lawrence
Baird**



DIRECTOR OF OPERATIONS



**David
Petr**



DIRECTOR OF MARKETING



**Robert
Alston**



RESEARCH SCIENTIST



**Dave
Fenimore**



PHYSICS SPECIALIST



**Thomas
Buchanan, Ph.D.**



MECHANICAL DESIGN ENGINEER



**Stephen
Buchanan**



MECHANICAL DESIGN ENGINEER



A BETTER DRIVE THROUGH BETTER DATA



First mover, protected by 14 patents, with a recurring-revenue model in a \$264B market.

nvhtechnology.com

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