

PANEL MEMBER

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WORKHORSE™

Electrify & Optimize Every Last Mile

Introducing the Workhorse family
of zero-emission vehicles and
technology.

Workhorse Presentation to Maryland Department
of Transportation, Connected and
Automated Vehicles (CAV)



sales@workhorse.com
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Workhorse

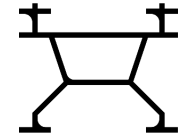
Our mission is to pioneer the transition to **zero-emission commercial vehicles.**



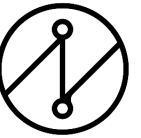
We create **purpose-built** solutions that make electric mobility more **cost-effective, reliable, and revolutionary.**



Trucks



Drones



Electrification

All-electric delivery vehicles are **clean** and cost up to **60% less** to operate than ICE trucks and vans.

Did you know?

Medium and heavy-duty trucks make up only 5% of vehicles on the road, but account for 24% of U.S. transportation emissions.

Source: C2ES.org





Headquarters
Sharonville, Ohio

Engineering & Design
Wixom, Michigan

Workhorse Factory
Union City, Indiana

Workhorse Aero
Mason, Ohio

Purpose-Built in America's Heartland



Accelerating Change

300+ Years of Automotive and Trucking Industry Experience

“We’ve assembled a team of experienced, capable leaders in critical positions to strengthen our operational, supply chain, and technical capabilities.”

**- Rick Dauch
CEO, Workhorse Group**



<p>Richard “Rick” Dauch Chief Executive Officer 25+ years of automotive industry experience. Past experience: Delphi Technologies</p>	<p>Robert “Bob” Ginnan Chief Financial Officer 20+ years of senior finance and leadership experience. Past experience: Family RV Group</p>	<p>Josh Anderson Chief Technology Officer 20+ years veteran of EV and HEV commercial vehicle space. Past experience: Desch Systems</p>	<p>Jim Harrington Chief Administrative Officer, Gen Counsel 25+ years of Business, Legal, Accounting & HR experience. Past experience: Tenneco, Delphi</p>	<p>Gregory Ackerson Chief Accounting Officer and Corp. Controller 15+ years of experience in accounting, auditing and finance. Past experience: BDO USA LLP</p>	<p>Kerry Roraff Chief Human Resources Officer 20+ years of experience in the automotive, information technology and telecommunications industries. Past experience: HARMAN</p>	<p>Jeff Mowry Chief Information Officer Extensive experience in IT Leadership, Business Process, Technology Management, IT Strategy Past experience: Lordstown Motors, AAM</p>	<p>Stan March VP, Corp. Development & Communications Extensive experience in M&A activities, public affairs, investor relations and corporate communications Past experience: Landis+Gyr</p>
<p>Ryan Gaul President, Commercial Vehicles 20 years of automotive industry experience. Past experience: Gentherm</p>	<p>John Graber President, Workhorse Aero Extensive public and private aerospace industry experience. Past experience: Global Aviation Holdings</p>	<p>Kelly Kiger VP, Commercial Vehicle Sales 20+ years of automotive sales leadership experience. Past experience: Mack Trucks, Volvo Trucks</p>	<p>George Petropoulos VP, Commercial Vehicle Government Sales 20+ years of fleet sales experience. Past Experience: REV Group, Harley-Davidson</p>	<p>Dave Bjerke VP, Product Development Extensive experience in both the automotive OEM and Tier 1 levels. Past experience: Triad Services Group</p>	<p>Brad Hartzel VP, Manufacturing 20+ years of manufacturing experience in the Tier One Automotive Supplier sector. Past experience: American Axle and Manufacturing</p>	<p>Jim Peters VP, Supply Chain & Procurement Extensive experience in automotive OEM and Tier 1 levels. Past experience: American Axle and Manufacturing</p>	<p>Ben Drake VP, Government Affairs Public and private sector experience in resilience and emerging technology policy. Past experience: Department of Defense</p>



OUR PRODUCTS

Step Up to Electric Delivery



Contract manufacturing agreement signed with TROPOS for final assembly at the Workhorse Ranch.

	W4 CC Cab Chassis	W750 Step Van	W56 Step Van*
	Available Now	Available Now	Available Late 2023
Class/Range	Class 4 rated 150-mile range	Class 4 rated 150-mile range	Class 6 rated, 150-mile range Strip Chassis & Cab Chassis (2024)
Battery Size/Voltage	118 kWh LFP 576v	118 kWh LFP 576v	210 kWh LFP 690v
Payload Capacity (lb.)	7,000	5,000	Best in Class EV 10,000
Curb Weight/GVWR (lb.)	7,300/14,330	9,300/14,300	13,000/23,000
Cargo Capacity (cu. ft.)		750	1,000
Mileage/Efficiency	.77 kWh/mi 1.3 kWh/mi 48 MPGe	.77 kWh/mi 1.3 kWh/mi 48 MPGe	1.3-1.5 kWh/mi 26.4-30.8 MPGe
Charging	Level 2 at 11 kW/~11 hrs. Level 3 at 61 kW/3-4 hrs.	Level 2 at 11 kW/~11 hrs. Level 3 at 61 kW/3-4 hrs.	Level 2 at 20 kW/~12 hrs. Level 3 at 100 kW/3-4 hrs.



* Final product model estimates may vary.



On the Road Now,
Helping Businesses

350+ vehicles on the road across
Workhorse's existing and emerging
vehicle portfolio.

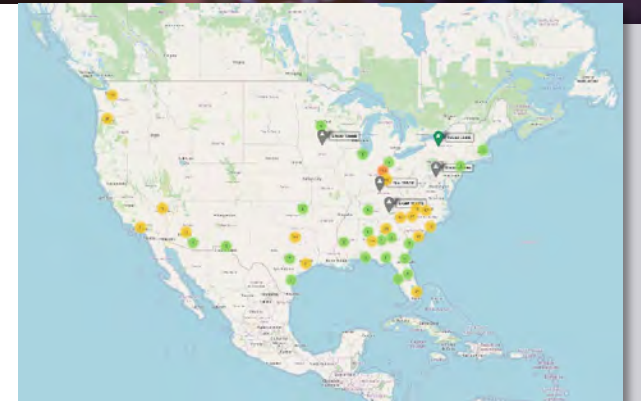
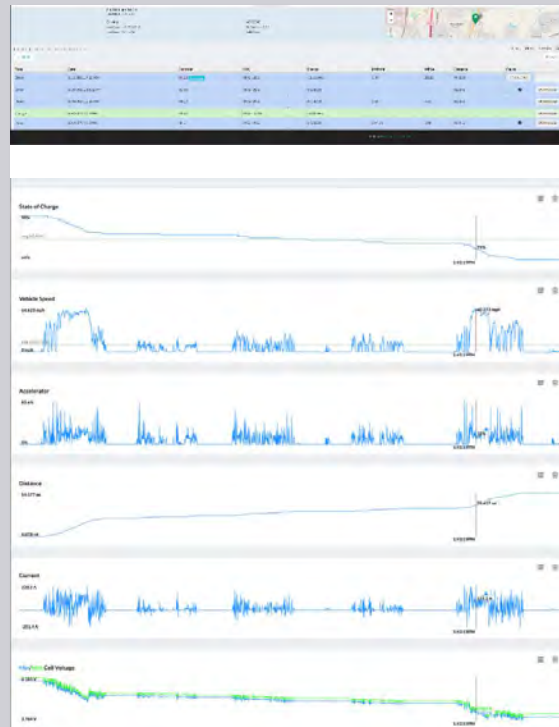


9,000,000+ Miles Driven



Metron Vehicle Telematics

- Watch a vehicle live, or check historical trips
- Check trip aggregate data and graphical data
- SOC, Speed, Distance, Energy Used, Battery Temps, Battery Voltages, Battery Current, Estimated Range, Estimated Time to Charge Complete
- Customize graphs displayed
- Over 2,500 variables tracked



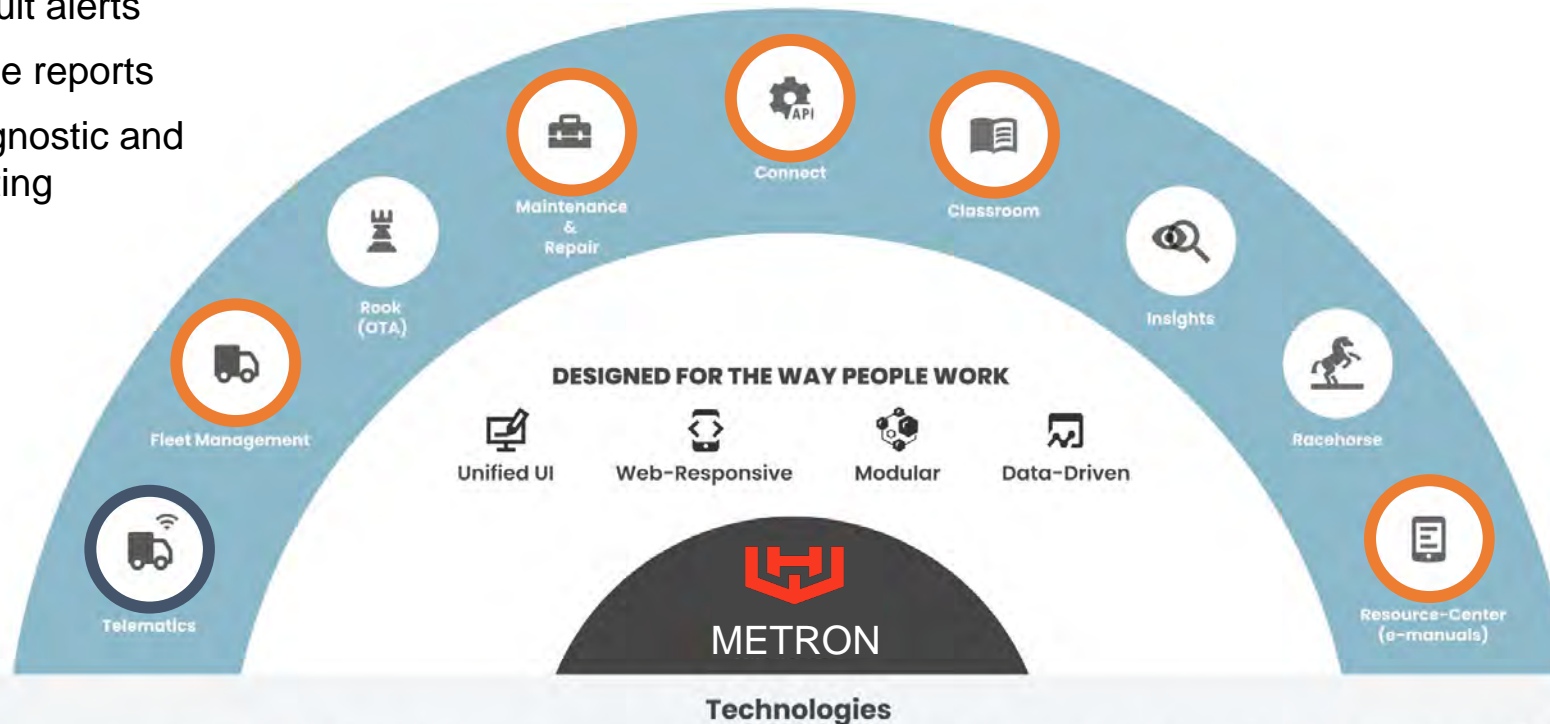
Metron 2.0 Overview

Today:

- Vehicle performance and location tracking
- Remote vehicle updates
- Real time fault alerts
- Customizable reports
- Remote diagnostic and troubleshooting

Tomorrow into 2024:

- Fleet management suite to help customers optimize their vehicles
- Maintenance tracking database and interface portal linked to work tickets and parts system
- Connection interface to bridge to compatible fleet and inventory systems
- A complete virtual learning environment with tools to instruct, measure, and provide feedback
- An online documentation database linked to other uses and packages



Infrastructure Challenge?



US DoT EV Alternative Fuel Corridors

- Currently 160,000 EV chargers in the US
- 1.2M needed by 2027
- Over 2M needed by 2033

Source: electrek.com



Fleet electrification for independent contractors and operators

- Last-mile package delivery service for FedEx Ground
- Five CL 4 EV units in the delivery fleet & expanding
- Reviewing options to establish second location in an incentive-based state
- White Paper on ICE-to-EV transition & business case



Workhorse Aero

Purpose-built sUAS

- Safe, reliable, all-electric, mission customizable quadcopter
- Carries 6 pounds up to 10 miles with a winch or servo
- Capable of flying ISR for 45 minutes at 20 knots
- Eight granted patents, 16 pending
- Awarded two USDA LiDAR programs and state-level UTM grant in Michigan
- AUVSI Green UAS certification in progress; Started FAA type certification in 2020
- Metron Air (patent pending), Software-as-a-Service (SAAS), supports
- Beyond Visual Line of Sight (BVLOS) operations
- Simultaneous Multi sUAS operations

NDAA/Blue UAS compliant / AUVSI Green UAS certification in progress



WA4-100 Horsefly Aircraft



WA4-200 Falcon Aircraft

Humanitarian Aid and Logistics Operations (HALO)
Safe, Reliable, >10 lbs. payload, 10-mile range
Ruggedized construction for austere conditions

Aero Product Highlights

Building to Aerospace Standards

The ultimate electric last-mile delivery vehicle

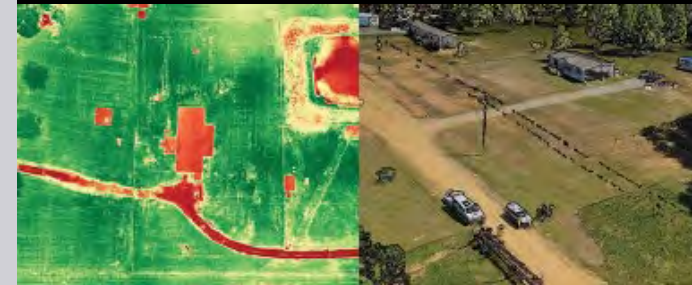
Package Delivery: Changing How the World Delivers



Truck Integration

Precise Delivery System

Dynamic Data Collection: Make Informed, Rapid Decisions



Multispectral Cameras

LiDAR Sensors

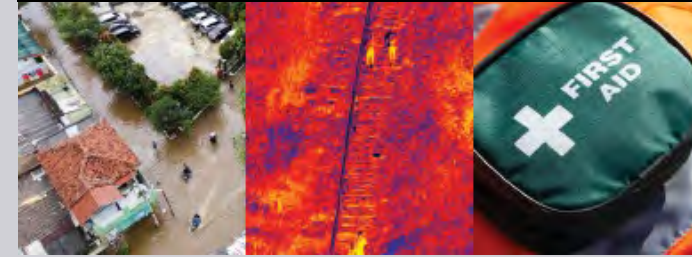
Flight Control: Simple, Scalable Flight Control



User-friendly flight planning

Define safety-compliant no-fly and recovery zones

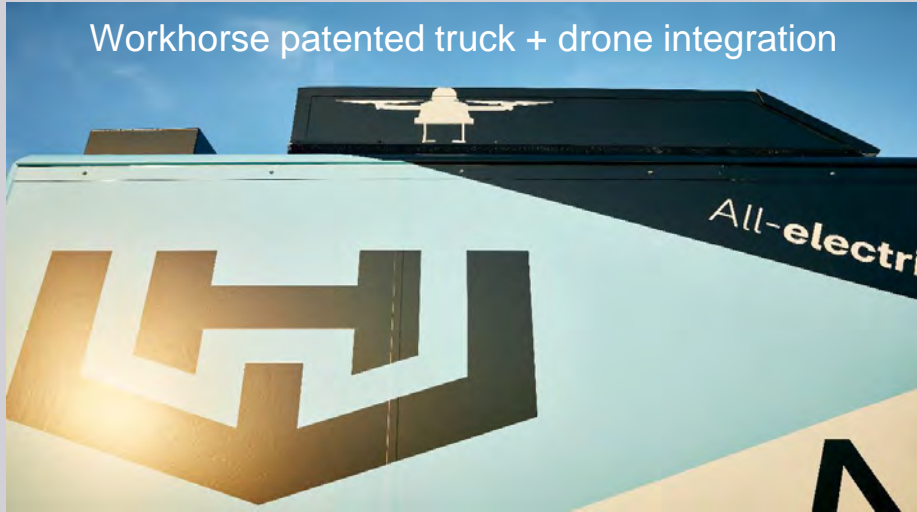
Disaster Relief: Humanitarian Assistance Logistics Operations (HALO)



Natural Disasters • Search & Rescue • Medical



Workhorse Aero in Practice



WORKHORSE™

Let's Talk:

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