PRESENTATION

ABOUT US

Mouse Scale is a digital startup that allows truck drivers determine axle loads, cargo weight, and weight distribution using onboard gauges and smartphone app— improving safety, efficiency, and fuel economy.

The program is intented to teach truck drivers how to use existing PSI load gauges far more effectively on the drive axles and trailer tandems, so that they can determine axle weights and the optimal tandem position themselves.

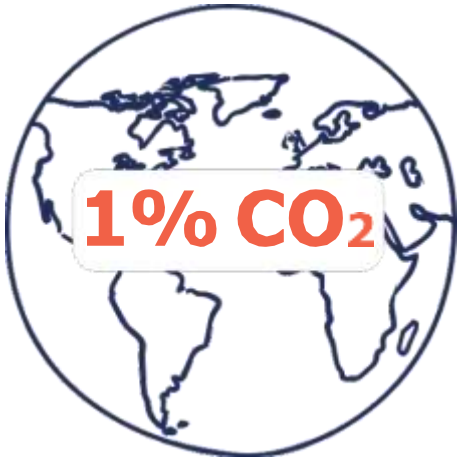
As a result,that makes driving safer,effective and less resource wasting.

The program itself gives a wider list of 25 key parametres that have not been even used in previous mathematical calculations of modern trucking industry.

All of these results are available for the truck drivers in our app in one section and at the same time.

INTRODUCTION

- We can reduce carbon dioxide emissions on the planet by more than **1%** and make it profitable for truck drivers and carriers by digitizing the load control industry.
- Valuable information is the gold of the third millennium. It seems we've found Klondike where a dry van truck can earn an additional **$2K–$20K** per year.
- A portion of the saved funds should be reinvested in installing environmentally beneficial equipment that is useful for the vehicle and maximizes fuel savings. In my opinion, it is entirely realistic to reduce fuel costs for American trucks by up to **15%.**



GOAL

- Ensure that most American trucks and trailers are equipped with high - quality, efficient equipment for resource savings.

- Essential modern equipment includes:
  - √ Onboard computers (or smartphone app for the beginning)
  - √ Load sensors for the two main air ride suspensions of the truck and trailer (or digital tire gauge for the beginning)
  - √ Tire Pressure Monitoring Systems (TPMS)
  - √ Auxiliary Power Units (APU)
  - √ A complete set of aerodynamic equipment

- The total cost of such equipment is approximately $25,000 with a lifespan of 5 years (~$5,000 per year).

- It is necessary to influence carriers through pricing strategies for load control, encouraging them to adopt this eco-friendly technology and reduce harmful emissions.

JUSTIFICATION FOR DIGITALIZATION

- **Expensive onboard or certified scales do not provide complete data for effective load control.**
  Many problems remain unresolved.
  Scales provide no more than five results, leaving drivers to control the load for free for many years.
- **Freight costs heavily depend on cargo weight, yet outdated scales still require tare weight measurements. However, no one knows when this will be necessary, and the accuracy of the pneumatic method has a significant error margin.**
- **The lack of fair compensation for load control leads to driver negligence and the loss of time, money, and fuel.**
- **As a result, many drivers unknowingly carry extra freight for free due to the inability to control its weight.**
- **Outdated scales can track only three variable parameters of a truck and trailer. They do not account for the weight distribution of diesel fuel between axles or the movement of the fifth wheel, making them ineffective in the third millennium.**
  Digitalization is inevitable. We have successfully integrated seven key variables and the necessary set of constants for trucks and trailers.
  This solution will bring load control to a new level, benefiting both drivers and carriers while also enhancing environmental safety.

ALL KEY VARIABLES OF TRUCK AND TRAILER

1.Diesel level in the tank.

2.DEF level in the tank.

3. Weight of driver and passenger.

4. Any position of the fifth wheel

5. Position of trailer tandems.

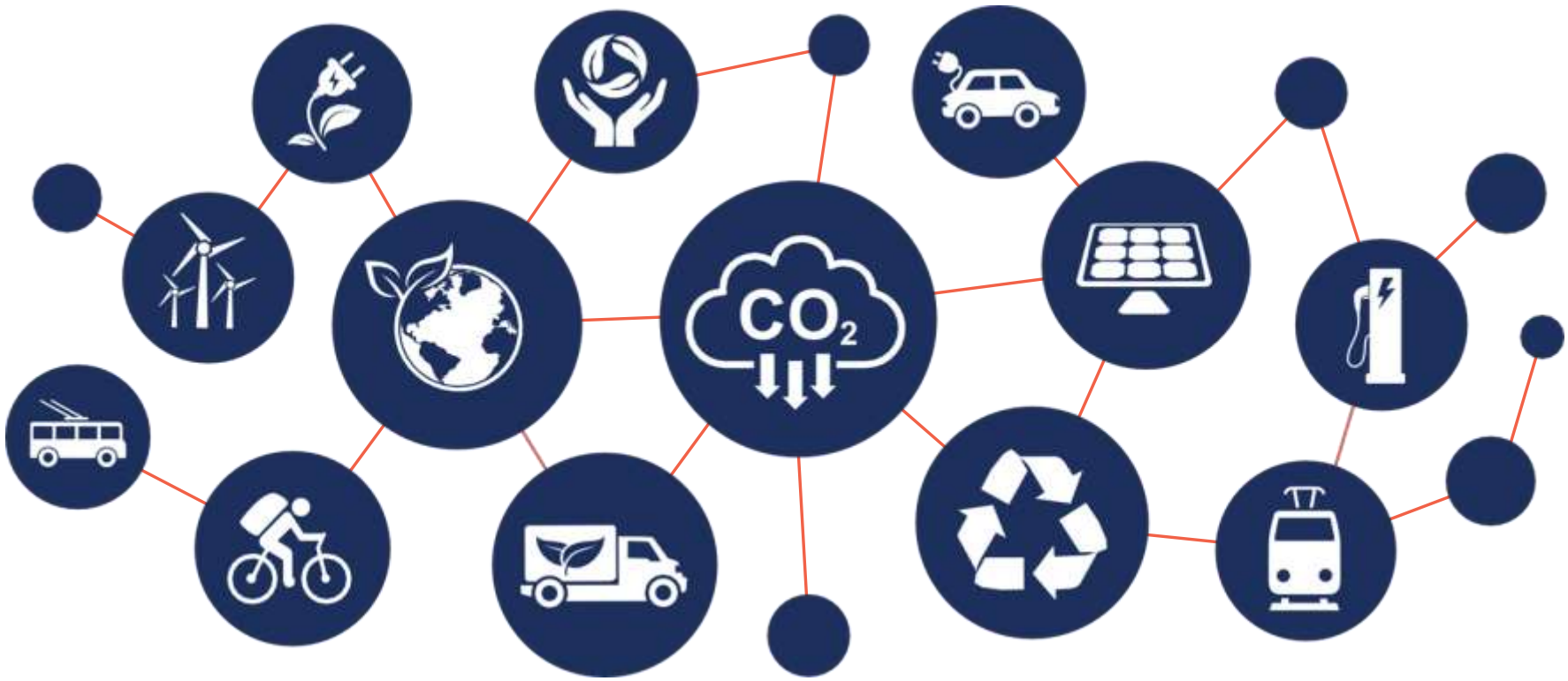
6. Load on drive axles (suspension pressure or axle weight).

7.Tandem trailer load(suspension pressure or axle weight).

Nothing else really changes in the truck and trailer, so this is a complete diagnostics. Previous scale solutions controled only a few variable parameters.

TASK – DIGITALIZING THE LOAD CONTROL INDUSTRY

- **Develop and implement the best and most user-friendly integrated measurement systems that combine:**
  - √ **Modern hardware**
  - √ **Software on onboard computers or other electronic devices**



MOUSE SCALE'S MISSION

- To free drivers and carriers from the limitations of an outdated weight control industry while improving the planet's ecology.

KEY OBJECTIVES:

√ **REDUCING EMISSIONS** (improving aerodynamics, reducing rolling resistance).

√ **OPTIMIZING LOGISTICS** (finding associated shipments, reducing unnecessary trips to truck stops for weighings, decreasing deadhead miles, and increasing the number of paid miles with cargo).

√ **SAFETY AND FAIR COMPENSATION** (optimal weight distribution to reduce accident risks).

√ **EXTENDING VEHICLE LIFESPAN** (implementing APU and TPMS to prolong the lifespan of engines, DEF systems, and tires).

CURRENT SITUATION & MARKET SCOPE

CURRENT SITUATION:

- Most trailers are not equipped with any load control technology.
- Existing scales provide limited information.
- Traditional PSI gauges are ineffective without smart software.
- Due to the lack of tandem axle load control, drivers unknowingly overload drive axles, increasing fuel consumption by 2–4%.
- Many trucks maintain an unnecessary distance from the trailer due to the lack of information about the optimal fifth-wheel position.
- The absence of an APU leads to excessive fuel consumption – 800–1,000 gallons per year.

Worldwide, there are approximately 25-30 million potential users who need to know more about their truck, trailer, and cargo weight.

APPENDIX PAGE

STAGES OF THE U.S. LOAD CONTROL INDUSTRY EVOLUTION

1. Suspension Pressure gauges – Used since their inception for overload control.
2. 1977 – CAT Scale Network – Certified truck scales improve compliance and safety.
3. 1985 – Onboard Scales – Allowed up to five load measurements, but most trailers still lack monitoring equipment.
4. 2023 – Digital Integration – Combining all key truck & trailer parameters to calculate 25 useful result. Drivers can be rewarded for professional load management and re-source savings.
5. Next 5-10 Years – Full Automation – Trucks will digitize load control and optimize logistics.
6. Future – Autonomous Trucks – Self-driving trucks will manage loads independently.

SOLUTIONS & NEW DIGITALIZATION RESULTS

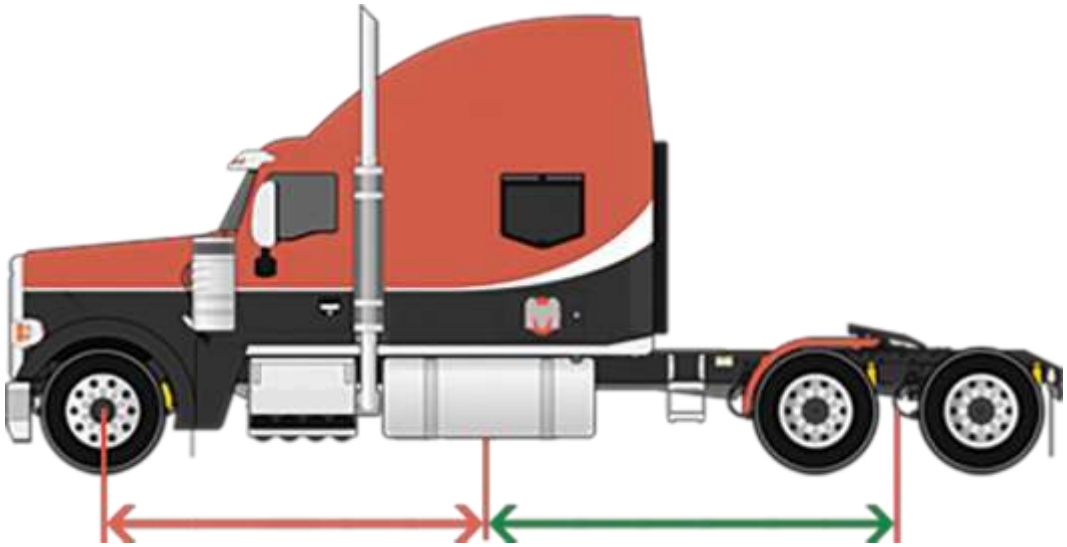
NEW DIGITAL CAPABILITIES INCLUDE:

√ Determining the cargo weight in the trailer and calculating its center of mass.

√ Analyzing the weight distribution of fuel between truck axles.

√ High-quality determination of load weight on all axles.

√ Optimizing the positioning of the fifth wheel and tandem axles to enhance safety and fuel efficiency.



EXPECTED IMPACT

ECONOMIC:

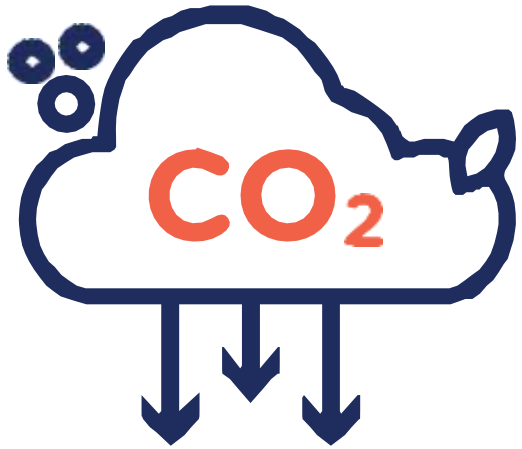
√ Reducing fuel and vehicle maintenance costs, increasing profits for carriers and drivers.

ENVIRONMENTAL:

√ Reducing CO_2 emissions, improving air quality.

OPERATIONAL:

√ Enhancing road safety, developing associated transportation, and increasing the number of paid miles with cargo.



NEXT STEPS

WHAT'S NEXT?

Basic Mouse Scale Version Available

- Mouse Scale works with any suspension pressure gauges or onboard scales, determines axle weights and optimal tandem position, provides 25 measurement results per cycle and supports permanent trailer weight tracking.
- When Mouse Scale will gather 100 thousand users in the USA, we will develop associated transportations for half-empty trucks.

Proposals for Automatic Load Control

- In a few years, we will make an automatic digitalisation by using onboard computers with an extended network of truck gauges and will design an app scanner for smartphone cameras to get an automated weight diagnostics based on truck's gauges readings.

APPENDIX 1: Mouse Scale Analysis

- Approximate formulas for weight calculations:
  - √ Drive axles: W = 4240 lb + k * P
  - √ Trailer tandems: W = 3000 lb + k * P
  - √ Here, 4240 lb and 3000 lb represent the approximate weight of the axles under suspension, which is consistent for most US trucks and dry vans.
  - √ After the initial calibration weigh-in, the app will establish an approximate dependency of suspension pressure on axle weight, allowing drivers to easily adjust load distribution.

With this approach, we provide truckers with an easy-to-use tool for weight control, bridging the gap until fully automated onboard systems become available.

BENEFITS OF DIGITIZING LOAD CONTROL

1. Fewer weigh-ins on certified scales → ~50 gallons per year.
2. Optimized trailer tandem weight distribution → reducing rolling resistance and improving fuel efficiency at 30% of loads for 2%-4% → ~100-200 gallons per year.

APPENDIX 1: Mouse Scale Analysis

3. Reduced aerodynamic drag by shortening the truck-trailer gap → ~40 gallons per year.
4. More efficient load planning and route optimization → reducing idle fuel consumption → ~100 gallons per year.
5. AI-driven deadhead reduction → 5,000 fewer deadhead miles per year → ~500 gallons saved.

Total Fuel Savings from Load Control Digitalization: ~850-900 gallons per year per truck.

BENEFITS OF ECO-FRIENDLY EQUIPMENT

6. APU installation → saving ~800-1,000 gallons of fuel per year.
7. Full aerodynamic equipment package (skirts, fairings, wheel covers) → reducing fuel consumption by 10-12% annually → ~1,700-2,000 gallons saved.
8. High-quality TPMS → extending tire lifespan, reducing rolling resistance, and optimizing inflation for fuel efficiency → ~100 gallons per year.

APPENDIX PAGE

LIST OF MOUSE SCALE RESULTS

1. Front axle weight with high accuracy.
2. Drive axle weight with accuracy comparable to expensive built-in scales.
3. Trailer tandem weight with accuracy comparable to expensive built-in scales.
4. Total weight with higher accuracy than built-in scales.
5. Cargo weight in the trailer after loading.
6. Cargo center of mass position in the trailer when tandems are in the front position.
7. Additional payload capacity of the truck without moving the fifth wheel.
8. Optimal tandem position.
9. How much truck axle weights change when the fifth wheel is moved.
10-11. Generalized information on axle weight changes when moving the fifth wheel on medium and long-wheelbase trucks.
12-13. How truck axle weights change when refueling diesel.
14. The weight resting on the fifth wheel – a highly useful intermediate result.
15. The maximum fifth wheel load that does not overload the drive axles.
16-19. Axle weights and total weight of the truck and trailer with full diesel tanks.
20. Bobtail truck weight.
21. Loaded trailer weight.
22. Empty trailer weight.
23. Bobtail truck weight with full tanks.
24-25. Pressure values corresponding to the maximum legal weight of the drive axles and trailer tandems.

APPENDIX PAGE

	Revenue/Savings Item	Amount ($)
1	Reduction in trips to certified scales (50 scale receipts, fuel)	900
2	Reduced rolling resistance of wheels (fuel savings)	500
3	Timely detection of excess cargo weight (occurs approximately once every two months)	600
4	Timely detection of improper loading	100
5	Transporting associated freight (tracking the movement of half-empty trucks and their parameters)	1,500 - 3,000
6	Reducing the unnecessary gap between truck and trailer (fuel savings)	160
7	Increasing paid miles by 5,000 (reducing deadhead miles)	10,000
8	Reduced accident risks due to better load distribution	Priceless
9	Profit from using an APU	1,000
10	Improved aerodynamics (full set of aerodynamic equipment for truck and trailer)	4,000
11	Extended tire life with TPMS	500 - 1,000
12	Fuel stop planning at cost-effective truck stops, considering the weight distribution of fuel across the axles	500
13	Total Annual Savings & Additional Revenue	$19,760 - $21,760

APPENDIX PAGE

DIGITALIZATION SEQUENCE FOR LOAD CONTROL

1. Mouse Scale – a smartphone app to determine axle weight and optimal tandem positioning using driver pressure gauges and slope-intercept formulas.
   - Estimated savings: $2,000 per truck annually.
2. Enter the market and showcase a more advanced PRO version to potential investors, integrating all seven key variable parameters of the truck and trailer.
3. Improve Mouse Scale PRO – for full weight diagnostics using fuel tank sensors and driver pressure gauges.
   - Estimated savings: $5,000 per truck annually.
4. Develop software integration with other solutions (loadboard, tablets, and GPS).
   - Focus on: reducing deadhead miles and increasing paid miles with cargo.
   - Estimated savings and profit: $15,000 per truck annually.
5. Automation – implement wireless suspension pressure sensors.
6. Cooperation with OEMs of trucks and on-board computers.
7. Encourage carriers to install APU, TPMS, and a full aerodynamic equipment set.
   - Total possible savings from digitalization and environmental equipment: up to $20,000 per year per truck.

APPENDIX PAGE

WHAT WE ARE LOOKING FOR

* Strategic pilot partners (fleets, OEMs)

* Early-stage investors to support pilot deployment and MVP development

* Industry partners to validate real-world environmental and economic impact

Investment structure and valuation are open and depend on the form of collaboration.

Where will your support go?

It will go into a development of a powerful patented technology based on affordable driver pressure gauges ($60), high-quality scalable smartphone software and pilot programs with fleets.

Why is this a great opportunity?

√ Global market – 2 million potential users in the U.S., 25-30 million worldwide

√ Software-driven value – inexpensive hardware, but software provides the key advantage

√ Fast implementation – an ideal temporary solution for most American dry van trailers, which currently lack any load monitoring equipment

What does this bring to the industry?

APPENDIX PAGE

- √ Affordable and durable hardware
- √ High accuracy of results
- √ Many practical solutions for carriers
- √ Fair rewards for drivers for professional load control
- √ Reduction of harmful emissions
- √ Savings on time, money, and fuel
- √ Efficient development of a new load control industry, replacing outdated axle weight measurement systems
- √ A fair transition of the load control industry to the fourth level – giving drivers access to all the essential data about their truck, trailer, and cargo weight
- √ Ensuring drivers receive fair compensation for resource savings

This technology can transform the market. We are open to dialogue.

APPENDIX PAGE

Truck weighing costs approximately $700 per year plus fuel.

Other invisible load control losses can cost 15 times more. Like an iceberg.

APPENDIX PAGE

SUPPORT US!

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Here you can scan our QR code to download our app for Android and iOS