This presentation and any accompanying oral statements (together, this “Presentation”) contain forward-looking statements. All statements other than statements of historical fact contained in this letter, including statements as to future results of operations and financial position of TuSimple Holdings Inc. and its subsidiaries (the “Company”), planned products and services by the Company or any of its subsidiaries, business strategy and plans of the Company or any of its subsidiaries, launch dates of products or services in the United States or in any other territory, the commencement date of the Company’s Driver Out Pilot Program, expected safety benefits of the Company’s autonomous semi-trucks, objectives of management for future operations of the Company, market size and growth opportunities in various global territories, competitive position and technological and market trends in various global territories, statements regarding a transaction at a subsidiary level for the Company’s Asia-Pacific-focused business, are forward-looking statements. Forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified. In some cases, you can identify forward-looking statements by terms such as “will,” “expect,” “plan,” “anticipate,” “intend,” “target,” “project,” “predict,” “potential,” “explore” or “continue” or the negative of these terms or other similar words. The Company has based these forward-looking statements largely on its current expectations and assumptions and on information available as of the date of this letter. The Company assumes no obligation to update any forward-looking statements after the date of this letter, except as required by law.

The forward-looking statements contained in this Presentation are subject to known and unknown risks, uncertainties, assumptions and other factors that may cause actual results or outcomes to be materially different from any future results or outcomes expressed or implied by the forward-looking statements. These risks, uncertainties, assumptions and other factors include, but are not limited to, those related to autonomous driving being an emerging technology, the Company’s limited operating history in a new market, the regulations governing autonomous vehicles, the Company’s dependence on its senior management team, reliance on third-party suppliers, potential product liability or warranty claims and the protection of the Company’s intellectual property, which may be more difficult to protect in China than in the U.S. Moreover, the Company operates in a competitive and rapidly changing environment, and new risks may emerge from time to time. You should not put undue reliance on any forward-looking statements. Forward-looking statements should not be read as a guarantee of future performance or results and will not necessarily be accurate indications of the times at, or by, which such performance or results will be achieved, if at all. It is not possible for the Company to predict all risks, nor can the Company assess the impact of all factors on its business or the markets in which it operates or the extent to which any factor, or combination of factors, may cause actual results or outcomes to differ materially from those contained in any forward-looking statements the Company may make.

You should carefully consider the foregoing factors and the other risks and uncertainties described under the caption “Risk Factors” in the Quarterly Report on Form 10-Q for the quarter ended March 31, 2022, filed with the Securities and Exchange Commission (the “SEC”) on May 4, 2022, and the Company’s other filings with the SEC. These SEC filings identify and address other important risks and uncertainties that could cause actual events and results to differ materially from those contained in the forward-looking statements. This Presentation also contains estimates, forecasts and other statistical data relating to market size and growth and other industry data. These data involve several assumptions and limitations, and you are cautioned not to give undue weight to such estimates. The Company has not independently verified the statistical and other industry data generated by independent parties and contained in this Presentation and, accordingly, it cannot guarantee their accuracy or completeness. In addition, assumptions and estimates of the Company’s future performance and the future performance of the markets in which the Company competes are necessarily subject to a high degree of uncertainty and risk due to a variety of factors. These and other factors could cause results or outcomes to differ materially from those expressed in the estimates. The Company has not reconciled its expectations for non-GAAP financial measures largely on its current expectations and assumptions and on information available as of the date of this letter, except as required by law.

The Company believes these non-GAAP measures provide meaningful information to assist investors in understanding financial results and assessing prospects for future performance as they provide a better baseline for analyzing the ongoing performance of its business by excluding items that may not be indicative of core operating results. Because non-GAAP financial measures are not standardized, it may not be possible to compare these measures with other companies’ non-GAAP measures having the same or similar names. Thus, the Company’s non-GAAP measures should be considered in addition to, not as a substitute for, or in isolation from, the Company’s GAAP results.

The Company encourages investors and others to review its financial information in its entirety, not to rely on any single financial measure, and to view its non-GAAP measures in conjunction with GAAP financial measures.
Agenda

01 Welcome & Strategy Update
   Xiaodi Hou

02 AFN & Regulatory Update
   Jim Mullen

03 Fireside Chat: TuSimple & Werner
   Jim Mullen, Derek Leathers

04 China Market Update
   Pat Dillon

05 Technology Deep Dive
   Xiaodi Hou, Vince Verna, Ersin Yumer, and Adrian Thompson

06 TRATON Update
   Pat Dillon

07 Path to Commercialization
   Xiaodi Hou, Pat Dillon

08 Financial Update
   Pat Dillon

09 Closing Remarks
   Xiaodi Hou
Welcome
Welcome & Strategy Update

Xiaodi Hou
Co-Founder and CEO
Through our Autonomous Freight Network (AFN), TuSimple is committed to bringing **safe, fuel-efficient & low-cost freight capacity** to market combining the best L4 autonomous technology, hardware and go-to-market strategy.
Our Progress Thus Far

Founded by Dr. Xiaodi Hou and Mo Chen

Received strategic investment from NVIDIA

Began autonomous freight operations with UPS and USPS

Launched Autonomous Freight Network

Announced global partnership to develop autonomous trucks with TRATON

Completed over 160,000 autonomous miles for UPS

Autonomous Domain Controller partnership with NVIDIA


Broke 10 world records as computer vision world champions

First to demonstrate fully autonomous truck runs on surface streets and highways

Demonstrated ~70 miles, 0 disengagement terminal-to-terminal run on CBS 60 minutes

First to announce partnership to co-develop autonomous trucks with Navistar

First publicly listed autonomous trucking company. Raised $1Bn in net proceeds in traditional IPO

First to demonstrate driver out fully autonomous truck runs on open public roads

7,475 reservations from blue chip partners across entire freight ecosystem

1. UPS North American Air Freight (NAAF).
2. As of March 31, 2022.
Market Leading Development
U.S. Truck Freight Market: $4tn

Global E-Commerce: $3.5tn

Global Automotive: $2.8tn

$800bn

U.S. Truck Freight Market

- ~80% of total U.S. freight market
- 3% CAGR from 1990-2018
- ~2.3mm Class 8 semi-trucks
- ~175bn miles driven, annually

1. American Trucking Association (ATA).
Massive TAM Opportunity With Secular Growth Drivers

Truck freight volumes in the U.S. are concentrated along a small number of corridors. Nearly 80% of truck freight goods hauled in the U.S. are moved via 10% of the nation's trade corridors. Our current AFN routes alone have an estimated ~$10-13bn of potential freight revenue.

- Dallas–Houston ~ $3-4bn

Note: Analysis based on data from FHWA and ATA.
Industry Challenges Today Accelerates Adoption

Safety
94% of all accidents are due to human error\(^1\)

Driver Shortage
Current driver shortage of 80,000; expected to double by 2030\(^2\)

Cost
Driver costs account for ~45% of per-mile operating costs\(^3\)

Environment
Medium and heavy-duty trucks contribute to 24% of annual US transportation greenhouse gas emissions\(^4\)

---

3. American Transportation Research Institute, as of November 2021.
The Elements of AV Trucking Commercialization

**Safety**
*Driver Out Capability*

**Efficiency**
*Improved Unit Economics*

**Scale**
*Mass Production & Deployment*
Clear Global Leader in Autonomous Trucking Technology

First and only fully autonomous driver out semi-truck runs on open public roads
- Highest number of road miles across autonomous trucking players

We believe we have the most advanced L4 production semi-truck program
- Longest standing global OEM partnerships with TRATON and Navistar since 2020

Comprehensive Autonomous Freight Network
- Broadest and deepest integration of autonomous technology with blue chip partners
Best-In-Class Hardware Partnerships

- Steering
  - ZF
- Powertrain
  - Cummins
- Brakes
  - KNORR BREMSE
- Sensors
  - Sony
- Co-development of the Autonomous Domain Controller (ADC)
  - NVIDIA
  - One Stop Solution
    - Automotive-grade sensor interface
    - High Performance Computing
    - Redundant and Diagnostic Functions

- Tires
  - Goodyear
Two Complementary Business Models

**TuSimple Capacity**
- Use purpose-built L4 autonomous semi-trucks operated by TuSimple to access AFN

**$ / mile Freight Rate**
- Capital Light Method
- Uses Shared Capacity
- Leverages Shared AFN Terminals

**Carrier-Owned Capacity**
- Purchase purpose-built L4 autonomous semi-trucks through OEM and subscribe to TuSimple Path to access AFN

**$ / mile Subscription Fee**
- Upfront Investment with Payback Period < 1 year
- Controls Own Capacity
- Uses Own Terminals

**Freight Users**

**Customer Value Prop.**

Customers have Flexibility to Select Different Business Models and Benefit from Lower Overall Freight Cost
Network-Based Approach Designed to Accelerate Flywheel Effect

1. Better user experience – reliability, sustainability and lower cost – attracts customers

2. More terminals and routes

3. More autonomous trucks added to network

4. More capacity, coverage, density and efficiency

Speed to Market and Scalable AFN Infrastructure Builds an Attractive and Defensible Business Model
TuSimple’s Technology and Mission are Highly Aligned with ESG Principles

**Environmental Studies and Recognition**
- 13% fuel savings
- 10% increased fuel efficiency

**Social Workforce Diversity (U.S.)**
- 66% Ethnic Minority
- 22% Female

**Safety**
- Developed safety framework for Driver Out
- Significant safety advantages uncovered through Geotab telematics study

**Community Partnerships**
- 2 workforce training programs developed
- More than 2.7 million meals donated to date
- 1st AT sponsor for Truckers Against Trafficking

**Governance Board of Directors**
- 80% Independent
- 80.0% of Russell 3000 directors are independent

- 20% Ethnic Minority
- 21.0% of Russell 3000 directors are ethnic minorities

- 40% Female
- 24.4% of Russell 3000 directors are female

---

1. U.S. workforce diversity metrics as of 31 March 2022.
2. Statistics regarding our board look to the board’s nominees and assume that they are elected at our 2022 annual meeting of stockholders.
3. “Corporate Governance by the Numbers,” June 30, 2020, EY Center for Board Matters.
Experienced and Diverse Board

Dr. Xiaodi Hou
Chair of the Board

tu Caltech

Brad Buss
Lead Independent Director
Chair of Audit Committee

Karen C. Francis
Independent Director

Michelle Sterling
Chair of Compensation Committee

digital turbine Qualcomm

Reed Werner
Chair of Government Security Committee

EY Center for Board Matters.
1. “Corporate Governance by the Numbers,” June 30, 2020, EY Center for Board Matters.

Note: Board of directors and statistics regarding our board look to the board’s nominees and assume that they are elected at our 2022 annual meeting of stockholders.
Autonomous Freight Network & Regulatory Update

Jim Mullen
Chief Administrative & Legal Officer
Building Deep Relationships with Our Partners

We are focused on long-term lane adoption and deployment planning to allow for rapid scaling once implemented.

**Parcel**
- Completed over 200,000 autonomous miles of paid freight haulage over the past three years for UPS NAFF

**Carrier**
- Integrated with Werner roadside assistance services to prepare for driverless operations

**Rail**
- Expanding our ODD to incorporate intermodal containers & chassis

**Shipper**
- Delivered watermelons from AZ to OK, illustrating AV trucking’s ability to deliver fresher food faster

**3PL**
- Loadsmith reserved 350 trucks, a strategic component of their mission to address the driver shortage in the US

---

Building substantial relationships and true partnerships centered on adoption, integration, and scaling AV trucks in our customer’s fleets

Pulling forward hurdles that need to be addressed before AV trucks can be operationalized on their network
- Launching and landing pads
- Roadside assist service options
- Fleet management integration for remote monitoring
- Tender loads directly through web services
- Terminal/yard management automation
AFN Expansion: Growing our Terminal Footprint

In preparation for our new driverless lanes and expansion of AV testing we are growing our terminal footprint.

“What we’re doing is automating the repetitive task of the middle mile and creating more first- and last-mile jobs so that drivers can be home nightly and be present in their families’ lives but still go out and do very well for themselves financially without having to be an irregular route, over-the-road trucker.”

– Brett Suma, CEO

TuSimple Terminals
Major base of operation to develop the technology and commercialize with centralized maintenance

Customer Terminals
Points of origin and destination where we pick up and deliver freight
26 States Explicitly Allow Driver Out AV Operations

There is No State or Federal Rule Prohibiting Driver Out AV

AFN Network Expansion Plans

Current Freight Routes
Future Expansion Routes

Regulatory Landscape

Allow Driver Out AV
Allow Driver In AV
In Progress

44 states
Allow Driver In AV
26 states
Allow Driver Out AV
50 states
Cohesive AV operations framework laid out in US DOT 4.0 AV Regulations

1. Map represents AFN operations as of 31 March 2022.

Investor Day 2022
TuSimple is the Leader in AV Trucking

AV Trucking is a Difficult and Complex Problem and TuSimple has a Focused and Fulsome Approach to Solving this Problem

We Believe that No One has Technology as Advanced as Us, Measured by Our Achievements

Our Technological Lead De-risks our Path to Commercialization and Will Build a Highly Attractive and Defensible Business
Fireside Chat: TuSimple & Werner Enterprises

Jim Mullen
Chief Administrative & Legal Officer, TuSimple

Derek Leathers
Chairman & CEO, Werner Enterprises
China Market Update

Pat Dillon
Chief Financial Officer
TuSimple China at a Glance

- **400+** R&D professionals
- **270+** Issued Patents
- **500,000+** miles L4 Road Test Mileage in China
- **~25** Trucks in L4 Fleet
- **1,000** meter Perception Capability

Best-in-Class Hardware Partnerships

- NVIDIA
- FOTON
- TRATON
- ZF
Go-to-Market Strategy

Massive Market Opportunity

- **$1.3 Trillion**
  Estimated China Road Freight Market in 2030

- **6% CAGR**

- **$750 Billion**
  China Road Freight Market in 2020

Product Offerings

- **L2+ Driver-In ADAS in Collaboration with NVIDIA**
  Building upon partnership with NVIDIA to provide integrated software and hardware for ADAS solutions for the China market

- **L4 Autonomous Freight Network**
  Build Autonomous Freight Network on the most concentrated shipping routes in China and provide autonomous freight capacity as a service

---

1. Industry research.
Commercialization Roadmap

By 2023:
L2+ Driver-in ADAS Solution: Offer software & hardware full-stack solutions to OEMs

By 2025:
Build the first L4 autonomous truck freight route around the "Donghai Bridge" in Shanghai and expand the network to other core hubs

2025–2030:
Expand the AFN to Pearl River Delta and Bohai Sea economic regions

After 2030:
Scale up to build the National AFN
Shanghai Deepwater Port Project

Project principal:
SIPG (Operator of public terminals in the Port of Shanghai)

Project Overview:
- World's Largest Container Port
- 20,000 Daily Freight Trips
- Complex Port Environment
- Only AV Company with Permits to Operate¹

¹ Excluding state-owned entities.
Technology Deep Dive

Xiaodi Hou
Co-Founder and CEO

Vince Verna
VP, Hardware

Ersin Yumer
VP, Algorithm

Adrian Thompson
VP, Systems & Safety Engineering
We strongly believe there is only one path to achieve autonomy.
Main Driving Capabilities of the Autonomous System

- Easy to understand
- Richer features give the truck significant level of capability and reliability

Advanced Feature Set is **Step 1** for Driver Out
Redundancies

Be prepared for rare cases!

- What if there is a failure?
  - Driver-in: disengagement!
  - Driver-out: a mitigation plan designed into the system itself
- Redundancy = Hardware + Software
Validation

Validation is the purpose, simulation or road tests are means

- Hypothesize possible failures of the system
- Test that the redundancy is implemented
- Validate the system:
  - Engine, steering, braking
  - Power, in-vehicle network
  - Sensor, server
  - OS, algorithm

Validation is Step 3 for Driver Out
Driver Out

Talk is cheap, show the evidence

- The key is to remove the reliance on human driver
  - Not every single disengagement is important, but some are
  - We will not compromise safety

- How to prove that you’re ready? DRIVER OUT

Driver Out Operation Is the Key Proofpoint on the Path to Commercialization
Cost Efficiency

Autonomy technology does not come for free

- One-time cost
- Recurring cost
  - Equipment maintenance
  - Map update, tele-operation, etc.

Autonomy Cost Must Be Optimized to Have Market Acceptance
Cost Efficiency

Autonomy Cost Must Be Optimized to Have Market Acceptance
Feature: Advanced Planning

“A superior pilot uses his superior judgment to avoid situations which require the use of his superior skill”

- Frank Borman, Retired NASA Astronaut
From Maneuvers to Mini-Maneuvers

**Maneuver:**
- Braking, accelerating
- Making turns
- Lane changing and yielding

**Mini-Maneuver:**
- Defensive driving to avoid risks
- Road etiquette compliance
- Subtle driving techniques that improve efficiency

Design Philosophy: Minimize High Risk Driving Scenarios
Safety Shift

Scenario: Adjacent vehicle invades our lane

Why Is This Hard?

- Complexity of all traffic scenarios
- Fine-grained perception of scene & actors
  Precise vehicle control
Safety Shift

Lane bias and deceleration to create space

Parallel 0.31m, 69 mph

Speed Limit 75 MPH 64.2 mph
Safety Shift
Handling Aggressive Cut-in

**Scenario:** Avoid collision without overbraking

**Why Is This Hard?**

- Predicting cut-in vehicle distance
- Predicting cut-in vehicle speed
- Maintain safe distance
- No braking overreaction
Handling Aggressive Cut-in

Reducing speed to allow close cut-in by another vehicle

- Parallel: 0.8 m, 66 mph
- Front: 7 m, 69 mph

Speed Limit: 65 MPH

63.8 mph

detect car
Handling Aggressive Cut-in
**Scenario:** Proactively seek safest travel lane

**Why Is This Hard?**

- Predict future unsafe merging events by others
- Predict where opening will emerge
- Real-time decision in complex traffic
- Interactive negotiation with other vehicles
Proactive Lane Change

Lane change to avoid dangerous merge by another vehicle

Target front 32m 66mph

Speed Limit 75 MPH 63.9 mph Left Change
Proactive Lane Change
Feature: Advanced Control

Surpassing human level maneuvering
Driving a Truck is Challenging

- Wide body
- Gear shifting latency
- Trailer weight
- Turning radius

Unique Design Challenges for Autonomous Trucking
A Glance at TuSimple’s Control Performance

The Goal of Autonomy is to Surpass Human-level Maneuvering

Avg. Lane Centering Accuracy
8 inches (2.4x better than human)

Avg. Stopping Accuracy
8 inches

Note: All data collection and analysis based on trucks with trailers containing real-world cargo.
Competitive Advantage #1: Advanced Interfaces

Necessary for Driver Out

<table>
<thead>
<tr>
<th>Limited Autonomy</th>
<th>Driver-Out Capable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic torque control functionality</td>
<td>Fully-integrated torque control</td>
</tr>
<tr>
<td>Limited steering redundancy</td>
<td>Fully integrated redundancy</td>
</tr>
<tr>
<td>Low performance autonomous braking</td>
<td>Smooth, precise, and redundant</td>
</tr>
</tbody>
</table>

TuSimple is Paving the Way with Tier 1 Suppliers

Release Dates


A TuSimple innovation that’s now an industry standard

Current TuSimple Engagement

Remote reverse, neutral, drive
Precise real-time diagnostics
Cooperative redundancy
High reliability drive-by-wire
ASIL D certified

Fuel optimization
Cummins and TuSimple are Defining the Future of Autonomous Drivetrain
Competitive Advantage #2: Algorithm Breakthrough

From Passive To Predictive Control

- Predictive Control
  - Massive control dynamics modeling
  - TuSimple's autonomous driver → vehicle handling “intuition”
  - Improved safety and fuel efficiency
Fuel Efficiency

Advanced driving technique to improve fuel economy without compromising safety

Momentum is captured while driving downhill

Increased momentum assists upcoming hill climb

Speed is allowed to fall below target before the crest of the hill, with the knowledge that momentum will be captured again on the next downhill

Speed limit and traffic laws are adhered to
Feature:
Advanced Perception
Sensors

Camera

LiDAR

Radar
Understanding Perception

How does the truck “see”?

- Cameras, LiDARs, and radars
- Deep learning perception algorithms
- Both powerful & robust
Multi-Level Perception: Pixels

Case Study
Multi-Level Perception: Objects

Case Study
Multi-Level Perception: Scenes

https://vimeo.com/706252233
Pass: tusimple123

Scene-level Perception: Construction Zone
Case Study: Detecting Pedestrians on the Road
Camera Perception

Case Study
Unknown Objects

[Image of a simulation showing a vehicle on a road with a pedestrian in the foreground marked by a green circle. The text 'Target front: 448m; 65mph' is visible.]

Case Study
Occupancy Grids

https://vimeo.com/705912462
Pass: tusimple123

Pedestrian Detection: Occupancy Grid
Generalization: Roadside Cars
Redundancy: Hardware Ruggedization

Vince Verna
VP, Hardware
Driver Out Requires Hardware Ruggedization

Standard OEM Truck Platform Hardware Failures

**Autonomy Hardware**
- Cameras, LiDARs, Radars
- Compute Unit

**Chassis Components**
- Steering, Braking

**Electrical**
- Power, Networks, Signals

Standard OEM Platform Hardware is Not Driver Out Ready
Improving the OEM Truck Platform

Hardware Engineering: Systematically improving a platform truck’s capability

Mechanical Engineering

- Perception Housing

Electrical Engineering

- Electronic Control Units

Testing

- Vibration Table

TuSimple’s Hardware Team Apply Their Automotive Expertise to Improving Our Partners’ Truck Platforms
Network Communication “CAN Bus” Ruggedization

The CAN Bus can be subject to failures like:

- Short circuits
- Broken wires
- Corrupted data

Example of a CAN fault to the brake controller

TuSimple Identified CAN Improved Reliability Requirements
TuSimple’s solution

CAN Bus Distribution Board

Robust board-to-board connectors

Spare CAN connections for testing and R&D

Improved Hardware Integrity Reduces CAN Faults and Improves System Diagnostics
Power Ruggedization

Power Loss is a severe fault

- Preventing power loss prevents system shut down

Standard OEM Architectures Lack the Redundancy and Safety Required for AV Systems
Power Ruggedization (cont.)

TuSimple's solution
In-house designed power electronics

TuSimple's Proprietary Power Electronics Protect Against Power Loss
Hardware Validation

Design verification of components before they are installed on trucks
Components must pass vehicle testing standards before install

- CISPR 12
- CISPR 25
- ISO 11451-2
- ISO 12103-1
- ISO 22241-1
- ISO 26262
- SAE J1455
- DR100159-05
- ISO16750-1
- …

V-Development process
Increases our confidence in components at every step before they are put on the truck

Vehicle Testing
System Testing
Subsystem Testing
Component Testing

Hardware is Validated to Rigorous Automotive and Commercial Vehicle Standards
Hardware Validation of the Power Bridge (PBR)

Progressive testing sequence

Component Testing

Each Level of Testing Must Be Passed Before Progressing to the Next Higher Level
Hardware Validation of the Power Bridge (PBR)

Progressive testing sequence

Component Testing → Subsystem Testing

Each Level of Testing Must Be Passed Before Progressing to the Next Higher Level
Hardware Validation of the Power Bridge (PBR)

Progressive testing sequence

Component Testing → Subsystem Testing → System Testing

Each Level of Testing Must Be Passed Before Progressing to the Next Higher Level
Hardware Validation of the Power Bridge (PBR)

Progressive testing sequence

Component Testing → Subsystem Testing → System Testing → Vehicle Testing

Each Level of Testing Must Be Passed Before Progressing to the Next Higher Level
Hardware Validation - Vehicle Testing Examples

Data driven validation

**Process**
- Issue Triage
- Problem Solving
- Change Control

**Example 1**
- CAN Network Communication Errors: Caused disengagements
  - Root Cause: Resistor termination
  - Change Control: Electrical parts re-designed & released for future builds

**Current Hardware Cost Per Mile**
- 2% Hardware Cost Per Mile Reduction

Robust Issue Tracking and Problem Resolution Leads to Increased Reliability and Lower Cost Per Mile
Hardware Validation - Vehicle Testing Examples

Data driven validation

**Process**
- Issue Triage
- Problem Solving
- Change Control

**Example 1**
- **CAN Network Communication Errors:** Caused disengagements
  - **Root Cause:** Resistor termination
  - **Change Control:** Electrical parts re-designed & released for future builds

**Example 2**
- **LiDAR Arm Weld Failure**
  - **Root Cause:** Incomplete weld penetration
  - **Change Control:** New weldment process, parts & supplier

**Current Hardware Cost Per Mile**
- **Example 1:** 2% Hardware Cost Per Mile Reduction
- **Example 2:** 1% Hardware Cost Per Mile Reduction

Robust Issue Tracking and Problem Resolution Leads to Increased Reliability and Lower Cost Per Mile
Hardware Validation - Vehicle Testing Examples

Data driven validation

Process

Issue Triage

Problem Solving

Change Control

Current Hardware Cost Per Mile

100's of Issues Triaged Per Quarter

Turned into Dozens of Projects

$ of Cost Per Mile Reduction

Continuous reliability improvements and cost reductions!

Robust Issue Tracking and Problem Resolution Leads to Increased Reliability and Lower Cost Per Mile
Knowledge Transfer from Retrofit to Production Truck

**Ruggedization**

- Autonomy Hardware
- Chassis Components
- Electrical

TuSimple Provides All Key Learning and Ruggedization to Our OEM Partners
Validation: Simulation

Ersin Yumer
VP, Algorithm
1,000

simulation miles for 1 road test mile*

*average for year 2022
Let's Watch a Truck Drive...
Not Every Mile Driven is the Same

**Boring miles**
- No dynamic objects
- No interactions
- Only minor steering/control action is needed
- Driving on a straight line

**Interesting miles**
- Other dynamic objects
  - Vehicles
  - Vulnerable road users (pedestrians, bikes, …)
- Precise steering and control needs (lane change, merge, …)
- Driving on curved roads, through intersections, …

At TuSimple, we Focus our Simulation Efforts on Leveraging “**Interesting Miles**”
1,000

simulation miles for 1 road test mile*

*average for year 2022
TuSimple Simulation Ecosystem

Driving Data → Sim from Real → Regeneration

- ReSim
- Planning Sim
- Meta Sim

Product/Safety Requirements → Sim Craft

- Auto Triage
- Manual Triage
TuSimple Simulation Ecosystem

Driving Data → Sim from Real → Regeneration

Product/Safety Requirements → Sim Craft

ReSim → Auto Triage → Manual Triage

Planning Sim → Meta Sim
TuSimple Simulation Ecosystem

Driving Data → Sim from Real → Regeneration

Product/Safety Requirements → Sim Craft

- ReSim
- Planning Sim
- Meta Sim

→ Auto Triage → Manual Triage
TuSimple Simulation Ecosystem

- Driving Data
  - Sim from Real
    - Product/Safety Requirements
      - Sim Craft
    - Regeneration
      - ReSim
      - Planning Sim
      - Meta Sim
  - Auto Triage
  - Manual Triage
Regeneration: Before
Case Study: A Typical Merge Example
TuSimple Simulation Ecosystem

Driving Data → Sim from Real → Regeneration

Product/Safety Requirements → Sim Craft

ReSim
Planning Sim
Meta Sim
Auto Triage → Manual Triage
TuSimple Simulation Ecosystem

Driving Data → Sim from Real → Regeneration

Product/Safety Requirements → Sim Craft

ReSim

Planning Sim

Meta Sim

Auto Triage → Manual Triage
Resim: Step 1 – Regeneration (New Perception Results)
Resim: Step 2 – Simulation with New Perception Results
Another Typical Case: Pedestrians on the Shoulder
Resim: Simulation with Existing Perception Results
TuSimple Simulation Ecosystem

- Driving Data → Sim from Real → Regeneration
  - ReSim
  - Planning Sim
  - Meta Sim
  - Auto Triage → Manual Triage
- Product/Safety Requirements → Sim Craft
TuSimple Simulation Ecosystem

Driving Data → Sim from Real → Regeneration

Product/Safety Requirements → Sim Craft

ReGen

Planning Sim

Meta Sim

Auto Triage → Manual Triage
Properties of a scenario from requirement:
1. EGO merges into the highway in front of a truck
2. NCD close cuts in front of EGO from two lanes over
3. NCD exits from ramp immediately following the cut in
TuSimple Simulation Ecosystem

- Driving Data
- Sim from Real
- Regeneration
  - ReSim
  - Planning Sim
  - Meta Sim
- Auto Triage
- Manual Triage

Product/Safety Requirements
- Sim Craft
TuSimple Simulation Ecosystem

- Driving Data
- Product/Safety Requirements

- Sim from Real

- Regeneration
  - ReSim
  - Planning Sim
  - Meta Sim

- Auto Triage
- Manual Triage
TuSimple Simulation Ecosystem

Driving Data ➔ Sim from Real ➔ Regeneration

Product/Safety Requirements ➔ Sim Craft ➔

ReSim ➔ Auto Triage
Planning Sim ➔ Manual Triage
Meta Sim
TuSimple Simulation Ecosystem

- Driving Data
- Sim Craft
- Product/Safety Requirements
- Sim from Real
- Regeneration
- ReSim
- Planning Sim
- Meta Sim
- Auto Triage
- Manual Triage
Safety Case: Virtual Runs

Rapid virtual ADS experience in addition to road tests to build validation confidence

- 10M+ miles per 24h in simulation
- Auto event candidate detection:
  - 100% recall of critical cases
- Auto-triage:
  - High confidence results for 90+% cases
- Manual-triage for:
  - Low confidence score during auto-triage
  - Random sampling from the rest
Validation: Systems Safety

Adrian Thompson
VP, Systems & Safety Engineering
Safety for Class 8 Trucks is a Unique Challenge

AV Trucks Need Higher Standards

- 80,000 lbs fully loaded
- Hundreds of meters to stop
- Jack-knife risk
- Highway speeds
- Dynamic traffic and bad actors
- Steep grade surfaces
- Cross-winds and weather

Must Design for Safety from the Ground Up
TuSimple’s Safety Approach is Holistic

Not just about the AV Truck

- Entire AV operation must be safe

Covers:

- Base truck platform
- Autonomous Driving System (ADS)
- Remote monitoring network
- Maintenance and “Pre-Flight” checks
- Safety Culture

TuSimple’s Approach Provides a Holistic and Consistent Safety Viewpoint
TuSimple Aims to Solve Lack of Unified Standards

There isn’t a standard that adequately covers safety for Autonomous Trucking. This required us to take the best practices of adjacent industries combined to create our own safety framework.
TuSimple Safety Framework

Combining all safety practices results in the TuSimple Safety Framework. Meeting the safety performance measures in this framework proves readiness for Driver Out operations.

TuSimple Safety Framework

- **Reliability** (robust design)
- **Fail-Safe** (functional safety)
- **Sufficient** (safety of the intended function)
- **Proven** (substantive safety)

TuSimple Safety Framework Sets the Standard for Autonomous Trucking
Hierarchical Validation

We prove safety standards are met at the component, subsystem, system, and full-solution levels. We do not integrate elements unless each one is individually proven to meet safety standards.

Component Testing  Subsystem Testing  System Testing  Vehicle Testing

Multi-level Validation Increases Safety Performance
Improved Safety Through “Adversarial Testing”

An independent team conducts adversarial testing to find weaknesses in the solution and holds the rest of the company accountable to fix them.

"Adversarial Testing" Hardens the Solution Against Unforeseen Weaknesses
Fail-Safe Case Study 1: Redundant Steering

**Source:** Failure Modes Effects Analysis

**Goal:** Maintain Directional Control During a Failure

**Challenge:** Redundant steering control needed for safety

**Key Requirements:**
- Safe steering handoff @ 65 mph
- Transfer control within 6 feet of travel (~60ms)

Highly Responsive Safety Critical Steering Redundancy in Every TuSimple Truck
Fail-Safe Case Study 2: Redundant Localization

Source: Fault Tree Analysis

Goal: Precise Position and Orientation tracking throughout the mission

Challenge: Sparse landmarks, visual indicators, and GPS signals vary throughout the current I-10 route in Arizona

Key Requirements:
- Capable of operating on a subset of signal
- Mandated triple redundant localization & pose

Triple Redundant Localization and Pose in Every TuSimple Truck
TuSimple’s Commitment to Safety

**TuSimple: sets the standard for Class 8 Level 4 Autonomy**
- Holistic and comprehensive Safety Case Framework

**TuSimple has built a world-class Systems & Safety Engineering organization**
- Independent and rigorous verification process

**Safety Case continuously updated**
- TuSimple continuously updates its Driver Out safety case based on relevant emerging standards, frameworks, or regulations

TuSimple Delivers a World-class Safety Solution for Autonomous Trucking
TRATON Partnership Update

Pat Dillon
Chief Financial Officer
“At Navistar, we are excited to continue building our partnership with TuSimple to develop the world's first autonomous semi-truck. We believe our collaboration will make freight transportation safer, more environmentally friendly and more cost efficient.”

- Srini Gowda
Vice President - Autonomous Vehicles, Navistar
TuSimple & Navistar Partnership
Navistar Production Progress Update

**Bill of Materials**
- H1 2022
  - Significant progress on setting the bill of materials
  - Overall vehicle architecture and components agreed
  - Detailed supplier selection work underway

**Production Facility**
- H1 2022
  - Selected Escobedo, Mexico as the site for production
  - World class production facility with subassembly lines for Navistar’s own production lines

**Production-Intent Prototype Vehicles**
- 2024
  - Production-intent prototype semi-trucks expected in 2024
  - Expect prototypes to be utilized for pre-production testing and revenue-generating TuSimple capacity operations

**Fully Integrated Vehicles**
- 2025
  - Fully integrated production semi-trucks expected in 2025
  - Will announce exact date of Start of Production at a later date

**Carrier-owned Capacity**
- 2026
  - Business model requires a production truck that is sellable to customers
  - First significant Carrier-owned Capacity revenue expected in 2026

---

**Latest Agreed Upon Timeline**

- United States

---

**H1 2022**
- United States
TRATON Europe Partnership

**Partnership Summary**
- Announced in September 2020
- TRATON selected for its global reach which allows for rapid scaling & adoption
- The Scania brand is highly respected in European & Asian markets
- Developing first L4 autonomous hub-to-hub truck freight route

**Near-term Milestones**
- Completion of L4 hub-to-hub route in Sweden
- Additional Driver Out projects across Europe
- Production agreement for purpose-built truck under Scania brand
- Go-to-Market strategy finalization, including pricing structure
Driver Out and Path to Commercialization

Xiaodi Hou
Co-Founder and CEO

Pat Dillon
Chief Financial Officer
The Path to Commercializing AV Technology

**Safety:** Ability to Operate Driverless Runs Safely on Open Public Roads

*Accomplished Starting 2021 with Certain Precautions*

**Efficiency:** Ruggedization of Our Technology and Hardware to Increase Productivity

*Near-term Focus*

**Scale:** Production Truck Program to Scale to 1,000s and 10,000s of Trucks

*Development Underway*
The Path to Commercializing AV Technology

Safety
Accomplished Starting 2021 with Certain Precautions

Efficiency
Near-term Focus

Scale
Development Underway

Commercialization Planned by 2023
Requires Efficiency Improvement

What does Commercialization Mean?

1. Market Freight Rates for Service

2. Continuous Operations on Real Freight Lanes and Meet or Exceed Customer Requirement for Level of Service

3. Improve Driver Out Operating Cost per Mile with Clear Line of Sight to Parity with Human-Operated Trucks
The Evolution of TuSimple Driver Out Operations

- **2021**: Driver Out Testing
- **2022**: Driver Out Commercial Runs
- **2023**: Competitive with Human Operation
- **2024**: Significant Cost Advantage
- **2025**: Full AFN Rollout
- **2026**: Full AFN Rollout

- **Number of Driver Out Trucks**
  - 2021: ~10
  - 2022: 10's
  - 2023: 100's
  - 2024: 1,000's

- **Truck Type**
  - 2021: Retrofit
  - 2022: Prototype
  - 2023: Fully Integrated Vehicles

- **Business Model**
  - 2021: TuSimple Capacity
  - 2022: Carrier-Owned Capacity

- **Drivers Out**
  - 2021: "Safety"
  - 2022: Initial Commercialization "Efficiency"
  - 2023: Full AFN Rollout "Scale"
Initially Focused on High-Value, Dense Freight Routes

Initial Driver Out Commercial Operations Routes

- Hauling real customer freight, building upon our existing announcements to haul driverless freight for Union Pacific
- Systematically adding routes based on customer demand and lane density

Expertise and Efficiency Built Through Initial Driver Out Commercial Operations Help Scaling with Purpose-built Production Trucks
How Do You Measure Efficiency?

Human-Operated Truck Baseline

Cost of Operation:
~$2.50 / Mile\(^1\)

Vs.

Driver Out AV Truck Costs

- All Ongoing Operating Costs for AV Operations
- True Development Costs

---

\(^1\) Estimate based on data from ATRI and NPTC.
# A Comparison of the Operating Cost Structure

## Human Operations vs. AV Operations

### Human Driver
- Fuel
- Maintenance
- Vehicle

### AV Driver
- Fuel
- Maintenance
- AV Vehicle
- Virtual Driver

### AV Cost Elements
- Insurance
- Tolls
- Permits
- ~10% fuel economy improvement
- Base vehicle maintenance
- AV hardware maintenance
- Calibration & AV rescue
- Base vehicle
- Sensors, compute, cabling, electrical
- Data transmission and storage
- Remote monitoring and oversight
- Mapping maintenance

**Note:** Does not include any expected terminal costs, drayage costs, development costs, and non-cash accounting costs (e.g., depreciation and amortization).

**Note:** Illustrative bars - not to scale
**Driver Out is the Starting Point on Path to Commercialization**

<table>
<thead>
<tr>
<th>AV Trucking</th>
<th>Robotaxi</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Driverless</strong></td>
<td>tu simple</td>
</tr>
<tr>
<td></td>
<td>No Teleoperation</td>
</tr>
<tr>
<td><strong>Safety Driver</strong></td>
<td>Aurora</td>
</tr>
<tr>
<td></td>
<td>Waymo VIA</td>
</tr>
</tbody>
</table>

**Note:** Based on Company disclosure.

- More Complex Vehicle
  - More Defined ODD
- Less Complex Vehicle
  - More Expansive ODD
Driver Out: Evolution from Today to Initial Commercialization

**Today**
- Chase Van
- Autonomous Truck
- Survey Vehicle
- Night Operations
- Limited Availability
- High Maintenance and Calibration Need
- Arizona Freight Routes Only

**End of 2023**
- No Support Vehicles
- Autonomous Truck
- Day and Night Operations
- Expanded Availability to Support Customer Freight
- Improved Hardware
- Arizona and Texas Freight Routes
- Significant Cost Reduction
Survey Vehicle and Chase Van provide no remote control nor environmental influence.

Removing the Survey Vehicle and Chase Van reduces the Cost per Mile by 70%+. 
Driver Out for Commercial Operations

Removing Support Vehicles

Remove Chase Van:
- Increased reliability of hardware
- Roadside assistance program
- Vehicle oversight command center

Replacing Survey Vehicle:
- Truck density on routes
- Full suite of MRC capabilities
- Collaborative mapping
Minimal Risk Condition (MRC)

Configuration:

- Unsafe conditions detected
- Identify MRC zone
- Safely pull over and stop
Minimal Risk Condition
Estimated Path to Improve Our Unit Economics

Cost per Mile Evolution

1. Based on ATRI and National Private Truck Council data adjusted for current fuel cost environment.
**Cost per Mile Elements**

**Support Vehicle Cost**

- **Cost Structure Elements**
  - **Support Vehicle Cost**
    - Support vehicle, equipment, personnel, and fuel cost removed before Initial Commercial Operations through full suite of MRC capabilities and more robust hardware
    - Support vehicle daily cost for 160 miles of operation is \(~\$4,400\)
  
  - **Virtual Driver Cost**
  - **Vehicle Cost**
  - **Operating Cost**

**Cost per Mile Evolution ($/mile)**

- **Operating Cost**
  - 2-3

- **Vehicle Cost**
  - 2-4

- **Virtual Driver Cost**
  - 4-6

- **Support Vehicle Cost**
  - \(~27\)
  - 2.50-3
  - 1.50-2
  - 0.75-1

**Estimated Initial Driver Out Commercial Operations**

- 0.75-1.25

**Estimated Scale Operations**

- 0.40-0.50

**Illustrative Driver Out Operational Costs**

- \(~$35-40\)

- \(~$5-6\)
Cost per Mile Elements

Virtual Driver Cost

Cost per Mile Evolution ($/mile)

<table>
<thead>
<tr>
<th>Cost Structure Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support Vehicle Cost</td>
</tr>
<tr>
<td>Virtual Driver Cost</td>
</tr>
<tr>
<td>Vehicle Cost</td>
</tr>
<tr>
<td>Operating Cost</td>
</tr>
</tbody>
</table>

- Support Vehicle Cost
  - Mapping maintenance cost decreases as individual truck utilization and network density increases
  - Data storage and transmission cost (per mile basis) decreases
  - Remote monitoring cost decreases as truck utilization increases

- Virtual Driver Cost
  - ~27
  - 4-6

- Vehicle Cost
  - 2-3
  - 2-4

- Operating Cost
  - 2.50-3
  - 1.50-2
  - 0.75-1
  - ~$1.50
  - 0.75-1.25
  - 0.40-0.50

All Incremental Relative to Human Operations

Illustrative Driver Out Operational Costs

Estimated Initial Driver Out Commercial Operations

Estimated Scale Operations

$35-$40

5-6
Cost per Mile Elements

**Vehicle Cost**

- **Support Vehicle Cost**
  - Vehicle cost decreases as utilization increases
  - Significant reduction in AV-related hardware cost through automotive grade components and global procurement process

- **Virtual Driver Cost**

- **Operating Cost**

Cost per Mile Evolution ($/mile)

<table>
<thead>
<tr>
<th>Element</th>
<th>Illustrative Driver Out Operational Costs</th>
<th>Estimated Initial Driver Out Commercial Operations</th>
<th>Estimated Scale Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Cost</td>
<td>2-3</td>
<td>1.50-2</td>
<td>0.75-1</td>
</tr>
<tr>
<td>Vehicle Cost</td>
<td>2-4</td>
<td>2.50-3</td>
<td>0.75-1.25</td>
</tr>
<tr>
<td>Virtual Driver Cost</td>
<td>4-6</td>
<td>$5-6</td>
<td>~$1.50</td>
</tr>
<tr>
<td>Support Vehicle Cost</td>
<td>~27</td>
<td>0.75-1</td>
<td>0.40-0.50</td>
</tr>
</tbody>
</table>

~$35-40

**Cost Structure Elements**

1. Adjusted for scale
2. Excludes insurance, real estate, and depreciation
3. Includes software licensing, training, commissioning
4. Includes state and federal funding, grants, and rebates

<table>
<thead>
<tr>
<th>Cost Element</th>
<th>Cost Per Mile Evolution ($/mile)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support Vehicle Cost</td>
<td>~$35-40</td>
</tr>
<tr>
<td>Virtual Driver Cost</td>
<td>5-6</td>
</tr>
<tr>
<td>Vehicle Cost</td>
<td>2-4</td>
</tr>
<tr>
<td>Operating Cost</td>
<td>2-3</td>
</tr>
</tbody>
</table>
Vehicle Cost Reduction Detail

Driver Out Vehicle Cost — Today

Purpose-built Autonomous Domain Controller Co-developed with NVIDIA

Automotive Grade Components for Braking, Steering, LiDAR and Electrical

Economies of Scale from OEM Global Procurement Process

Estimated Production Truck Vehicle Cost

~50% Reduction
Cost per Mile Elements

Other Operating Costs

Cost per Mile Evolution ($/mile)

- Operating Cost
  - 2-3

- Vehicle Cost
  - 2-4

- Virtual Driver Cost
  - 4-6

- Support Vehicle Cost
  - ~27

Illustrative Driver Out Operational Costs

Estimated Initial Driver Out Commercial Operations

Estimated Scale Operations

$35-40

$5-6

$5-6

$50-3

0.75-1

0.75-1.25

0.40-0.50

0.15

Cost Structure Elements

- Support Vehicle Cost
- Virtual Driver Cost
- Vehicle Cost

- Operating Cost
  - Constant through Evolution
    - Permits & Licenses (per mile basis)
    - Tolls (per mile basis)
    - $4.10/gallon fuel cost with ~10% improvement in fuel efficiency over human driven operations
  - Insurance per mile costs reduced as truck utilization increases
  - Repairs and Maintenance per mile cost reduces as truck utilization increases, and production grade hardware component cost reduces and reliability increases
  - Calibration and Rescue costs decreases as miles between rescues / calibration events increase

Estimated Initial Commercial Operations

Estimated Scale Operations

~$1.50
## Tracking Commercialization Progress

<table>
<thead>
<tr>
<th>Section</th>
<th>Update Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routes</td>
<td>Regular Update</td>
</tr>
<tr>
<td>Fleet Size of Driver Out Trucks</td>
<td>Regular Update</td>
</tr>
<tr>
<td>Customer Participation in Driver Out Freight</td>
<td>Updates on Ad-Hoc Basis</td>
</tr>
<tr>
<td>Generations of Hardware</td>
<td>Updates on Key Milestones on Ad-Hoc Basis</td>
</tr>
<tr>
<td>Operational Cost per Mile Metrics</td>
<td>Annually at the End of 2022 and End of 2023</td>
</tr>
</tbody>
</table>
Financial Update

Pat Dillon
Chief Financial Officer
Complementary Business Models

United States

United States

Europe

Europe

China

China

TAM$^1$

$800bn$

$400bn$

$750bn$

Go-to-Market

- TuSimple Capacity
- Carrier-Owned Capacity

- Technology License
- Capital Light
- Principal Network Responsibility with TRATON

- ADAS Solutions
- TuSimple Capacity
- Carrier-Owned Capacity

1. Industry research.
### Illustrative U.S. Unit Economics – At Scale

#### Potential Annual Revenue for TuSimple per Truck

<table>
<thead>
<tr>
<th>Miles Per Year</th>
<th>TuSimple Capacity</th>
<th>Annual Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>150K–225K</td>
<td>$2.25–2.50 per Mile</td>
<td>$337K–562K</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TuSimple Capacity</td>
</tr>
<tr>
<td></td>
<td>$0.45–0.65 per Mile</td>
<td>$67K–146K</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Carrier-Owned Capacity</td>
</tr>
</tbody>
</table>

#### Potential Savings for Carriers per Truck

<table>
<thead>
<tr>
<th>Lifetime Miles</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>750K–1.1mm</td>
<td>$1.9–2.8mm</td>
</tr>
<tr>
<td></td>
<td>Total Cost</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Human Operated Rate per Mile</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>~$2.50</td>
<td>$1.9–2.8mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Potential Net Savings per Mile</th>
<th>Potential Net Total Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.35–0.55</td>
<td>$262K–619K</td>
</tr>
</tbody>
</table>

1. Assumes five-year life of truck.
2. Assumes cost of driver as $1.00 per mile; does not incorporate incremental capex associated with higher purchase price of Navistar / TuSimple L4 truck.
Significant Network Scaling

Average Target Trucks on AFN

- **U.S.**
  - 2026: 2,000-2,500
  - 2028: 7-8x
  - 2030: 50,000-55,000

- **Rest of World**
  - 2026: 1,300-1,700
  - 2028: 15,000-18,000
  - 2030: 40,000-45,000

Mix of Trucks by Business Model on U.S. AFN

- **TuSimple Capacity**
- **Carrier-Owned Capacity**
Long Term Revenue Targets

Target Revenue

- **40% Gross Margin**
- **35% Adj. EBITDA Margin**

<table>
<thead>
<tr>
<th>Year</th>
<th>Approx. U.S., EU, and China Market Penetration</th>
<th>Approx. U.S. Market Penetration</th>
</tr>
</thead>
<tbody>
<tr>
<td>2026</td>
<td>&lt;0.1%</td>
<td>0.1%</td>
</tr>
<tr>
<td>2028</td>
<td>0.2%</td>
<td>0.3%</td>
</tr>
<tr>
<td>2030</td>
<td>0.5%</td>
<td>1.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>U.S.</th>
<th>Rest of World</th>
</tr>
</thead>
<tbody>
<tr>
<td>2026</td>
<td>$0.5-0.8bn</td>
<td>$0.3-0.5bn</td>
</tr>
<tr>
<td>2028</td>
<td>$3.0-4.0bn</td>
<td>$2.0-2.7bn</td>
</tr>
<tr>
<td>2030</td>
<td>$10.0-12.0bn</td>
<td>$7.0-8.5bn</td>
</tr>
</tbody>
</table>

3-4x
5-6x
Closing Remarks

Xiaodi Hou
Co-Founder and CEO
Takeaways

TuSimple Is the AV Technology Leader

- Focused approach on trucking since 2015
- First to develop a “Driver Out” framework

TuSimple Is at the 2nd Episode of the Trilogy

- Rapidly reducing cost of “Driver Out” operations
- Re-applying our “Driver Out” framework to new ODDs
Takeaways

**Speed**
- 1st to safe driver out & commercial viability
- 1st mover advantage

**Scale**
- Scalable & cost-efficient technology
- Strong margin profile

**Network**
- Full AFN with deep customer integration
- Highly defensible long-term business model