

THE NEED FOR AUTONOMOUS TRUCKING

\$4 TRILLION GLOBAL TRUCK FREIGHT MARKET⁽¹⁾

\$800 billion U.S. truck freight market⁽²⁾ | ~3 million Class 8 semi-trucks⁽³⁾ | +70% of all freight in the US transported by trucks⁽⁴⁾

INCREASED DEMAND FROM E-COMMERCE TRENDS FACED WITH A GROWING SHORTAGE OF DRIVERS & SAFETY ISSUES

Diminishing Supply

- ATA estimates a **shortage of 80,000 drivers**, which is estimated to increase to 160,000 by 2030⁽⁵⁾
- **Driver turnover** is long-standing industry problem

Increasing Demand

- Rising **e-commerce penetration** into retail
- Trends such as **same or next day shipping**

Safety and Insurance Constraints

- **40% increase in fatalities** involving semi-trucks from 2009-2019⁽⁶⁾
- **Insurance premiums** are rising at **5% CAGR**⁽⁷⁾

THE AUTONOMOUS TRUCKING OPPORTUNITY

- ✓ **Reduced costs: Labor makes up ~43% of per mile cost structure**
- ✓ **Middle-mile well-suited for L4 autonomy**
- ✓ **10% of the nation's trade corridors account for moving nearly 80% of all transported goods**

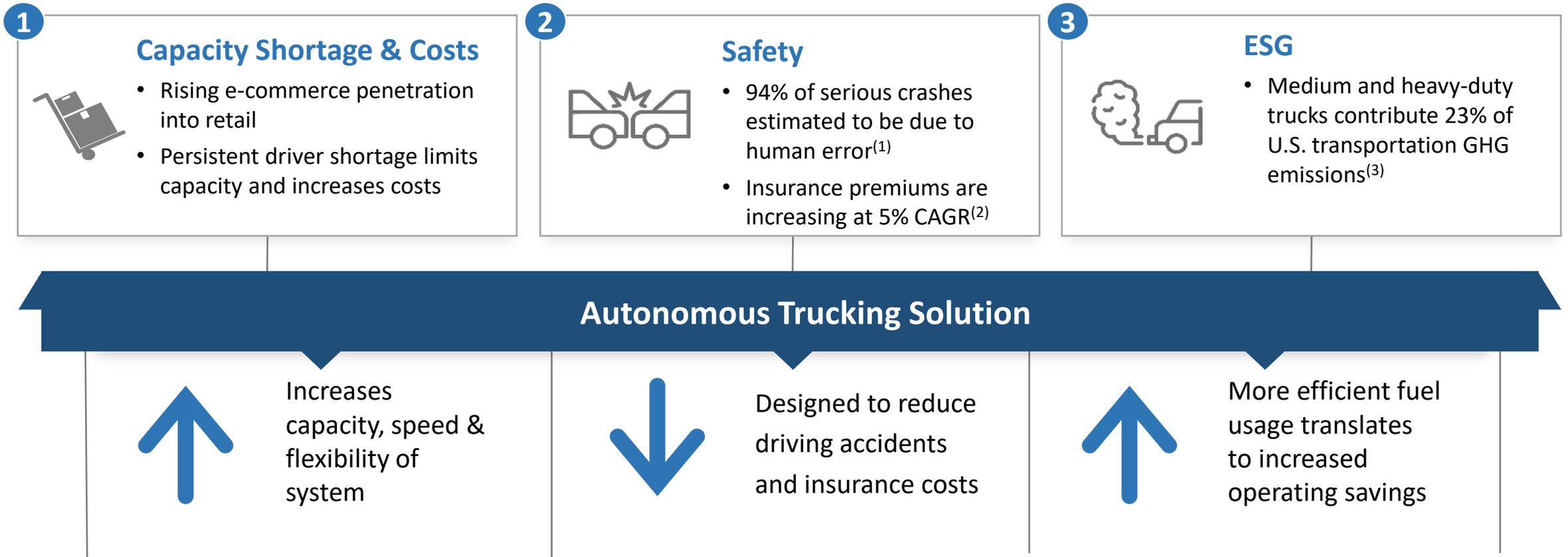
BENEFITS OF AUTONOMOUS TRUCKS

AVs Have Potential Economic & Societal Benefits

“The safety benefits of automated vehicles are paramount. Automated vehicles’ potential to save lives and reduce injuries is rooted in one critical and tragic fact: 94% of serious crashes are due to human error.” - NHTSA

Autonomous Technology Will Likely Improve Traffic Congestion

“Roads filled with automated vehicles could also cooperate to smooth traffic flow and reduce traffic congestion. Americans spent an estimated 6.9 billion hours in traffic delays in 2014, cutting into time at work or with family, increasing fuel costs and vehicle emission.” - NHTSA



1. NHTSA. 2. ATRI. 3. EPA.

