

# Mobileye

## What Is It & How It Works

Austin, TX #269

January 8, 2016

Presented By: John Guignon



# What Factors Cause **Preventable** Accidents / Collisions / Passenger Injuries & Employee Injuries

Accidents, Collisions, Passenger Injuries and Employee Injuries are caused by one or more of the following factors:

## ✓ **Failure To Pay Attention**

- Example – Looking Down At Your MDT
- Example – Not Continuously Scanning Roadway

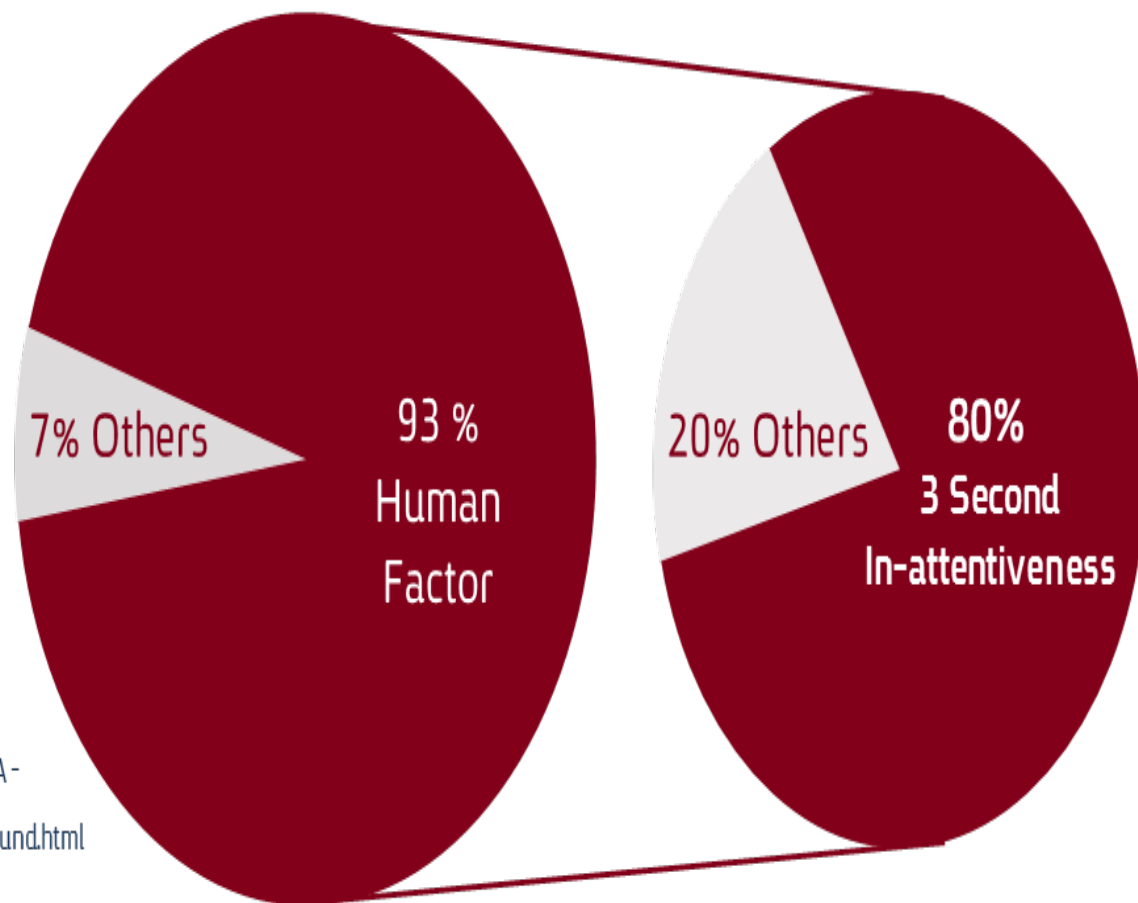
## ✓ **Exceeding Performance Capabilities**

- Example – Fatigue

## ✓ **Engaging In Unsafe Acts or Unsafe Behaviours**

- Example – Running A Red Traffic Light or Rolling Stop
- Example – Improper Following Distance
- Example – Backing Without G.O.A.L.

The human factor is responsible for 93% of collisions



Sources: VTRC - Virginia Transportation Research Council NHTSA - [www.nhtsa.dot.gov/people/injury/research/UDAsshort rpt/background.html](http://www.nhtsa.dot.gov/people/injury/research/UDAsshort rpt/background.html)

- In an effort to reduce vehicle collisions & pedestrian/bicycle accidents that are caused by unsafe acts and unsafe behaviours, MV Transportation has deployed Mobileye.
- Currently, MV Transportation has deployed 433 Mobileye units. An additional 5,000 units are slated to be deployed by December 2017.





# Philadelphia Division #078

## Year over Year Safety Performance

### ❖ Key Performance Indicators – Pre vs. Post Mobileye Deployment (11/01/2014)

- ❑ Total Accident Frequency Rate (PAFR) = **11.61% improvement**
- ❑ Preventable Accident Frequency Rate (PAFR) = **19.37% improvement**
- ❑ Employee Injury Frequency Rates (PAFR) = **12.71% improvement**
- ❑ DriveCam Performance – post Mobileye deployment
  - **2.60% reduction** in scored DriveCam events
  - **18.05% reduction** in Following Too Close events
  - **59.72% reduction** in Pedestrian events
  - **35% reduction** in Not Scanning Intersection events

- Mobileye - Is the global pioneer and leader in the development of collision avoidance and autonomous driving systems based on artificial vision technology.
- Unparalleled Accuracy –  
Optimizes complex algorithms.  
Mobileye's Forward Collision Warning algorithms have demonstrated 99.99% accuracy.









# Mobileye Pedestrian Collision Warning









# Mobileye Lane Departure Warning









FWD -0.06

LAT 0.09



TIME -10.00

51 MPH 82 km/h GPS

## Mobileye Headway Monitoring & Warning











# Mobileye Forward Collision Warning













FWD 0.01

LAT 0.00



TIME -10.00

0 MPH 0 km/h GPS





FWD 0.13

LAT 0.14



TIME -10.00

27 MPH 43 km/h GPS



FWD 0.07

LAT -0.03

TIME -10.00

29 MPH 47 km/h GPS



FWD -0.01

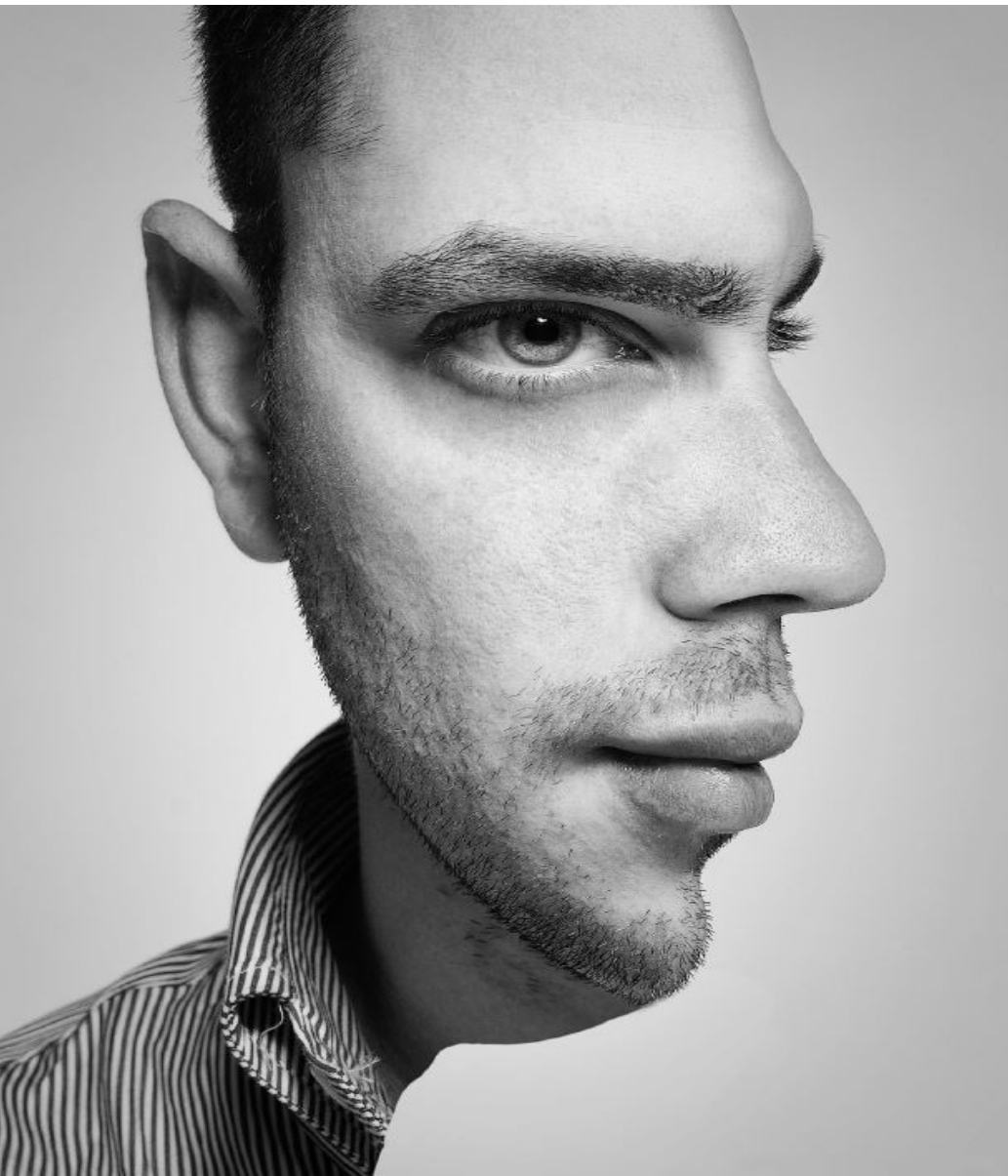
LAT -0.04

TIME -10.00

9 MPH 14 km/h GPS



# Awareness



## OPTICAL ILLUSION



Things aren't always  
as they **first** appear.

Am I looking **at you**,  
Or **away from you**?

When you drive your  
**bus**, take the time to  
look **twice**, and then again.