SAFE FLEET
Bus & Rail

Deadly Blind Spots

SPECIALTY MANUFACTURING
SEON
PRETORIA
TRANSPEC

2,489 ANNUAL AT-FAULT BUS CRASHES

Florida DOT: 2010 Report on Evaluation of Camera-based systems to reduce transit bus side collisions


38,000 injuries
in one year
5612
NJTRANSIT
301
NHTSA Data for 2013

42

PEDESTRIANS & CYCLISTS

KILLED ANNUALLY by

TRANSIT BUSES

Source: Fatality Analysis Reporting System (FARS) – 2010-14


THE
PERFECT
STORM
of
CHALLENGES

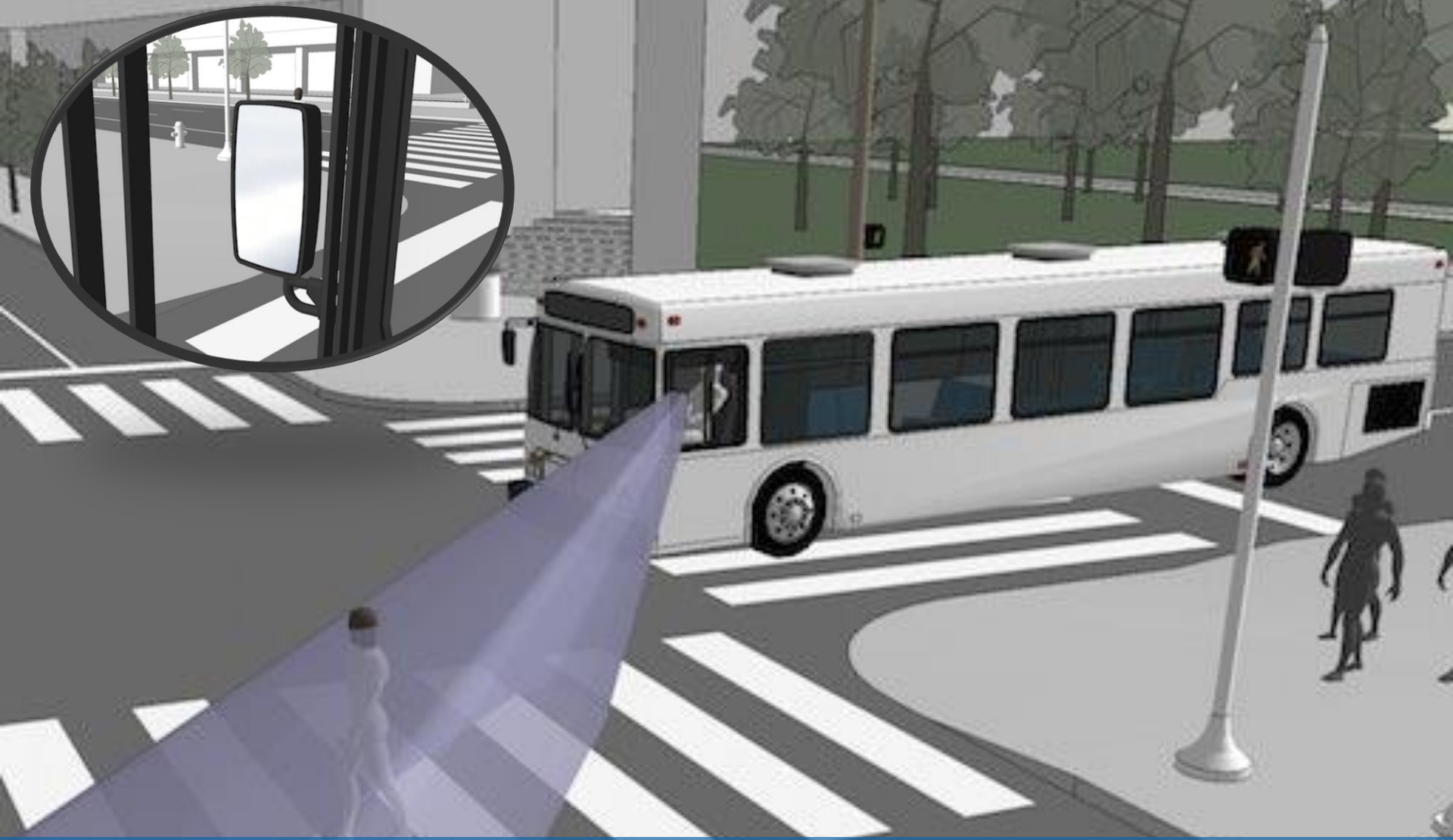
URBAN CONGESTION

TRAFFIC ENGINEERING


Smartphone
Dependency
Pokémon
GO
DISTRACTED PEDESTRIANS

DRIVER DISTRACTION

SCHEDULE PRESSURES



BUS BLIND SPOTS


NHTSA
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
Federal Transit Administration
ATU
CONSENSUS:
ACCIDENTS ARE
PREVENTABLE

"We should be looking at changes that **give operators the best visibility**... we should also be looking at **advanced technologies** that have the potential for **exponentially increasing pedestrian protection**."

Dr. Mark Rosekind
Administrator, NHTSA

"It has to happen today. We need the **technology to compensate for the blind spots** on the bus. ."

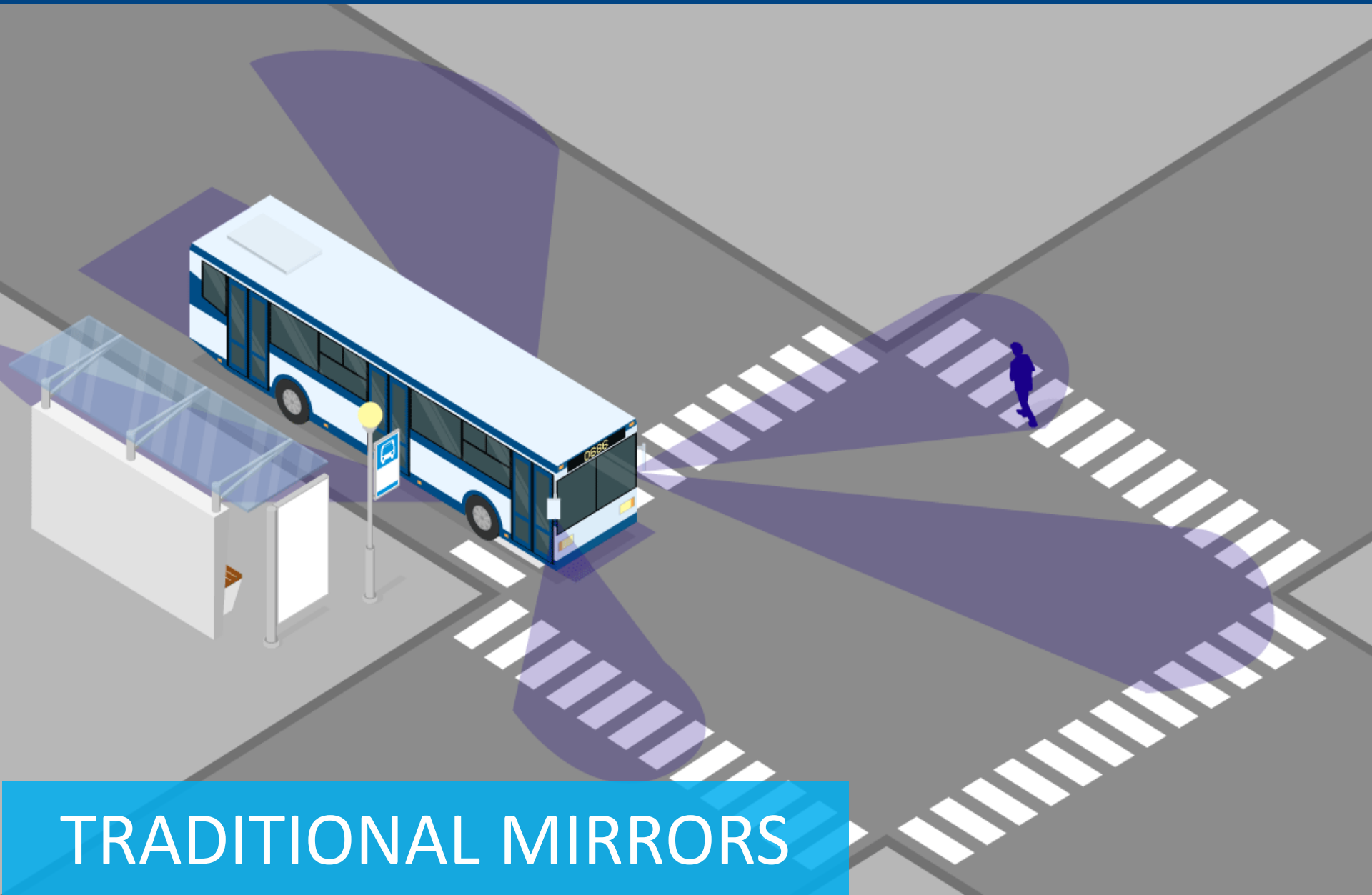
J.P. Patafio
Transport Workers Union Local 100

VISION ZERO

- ✓ Street design
- ✓ Enforcement
- ✓ Outreach
- ✓ Legislation
- ✓ Campaigns

GOAL: ZERO LIVES LOST

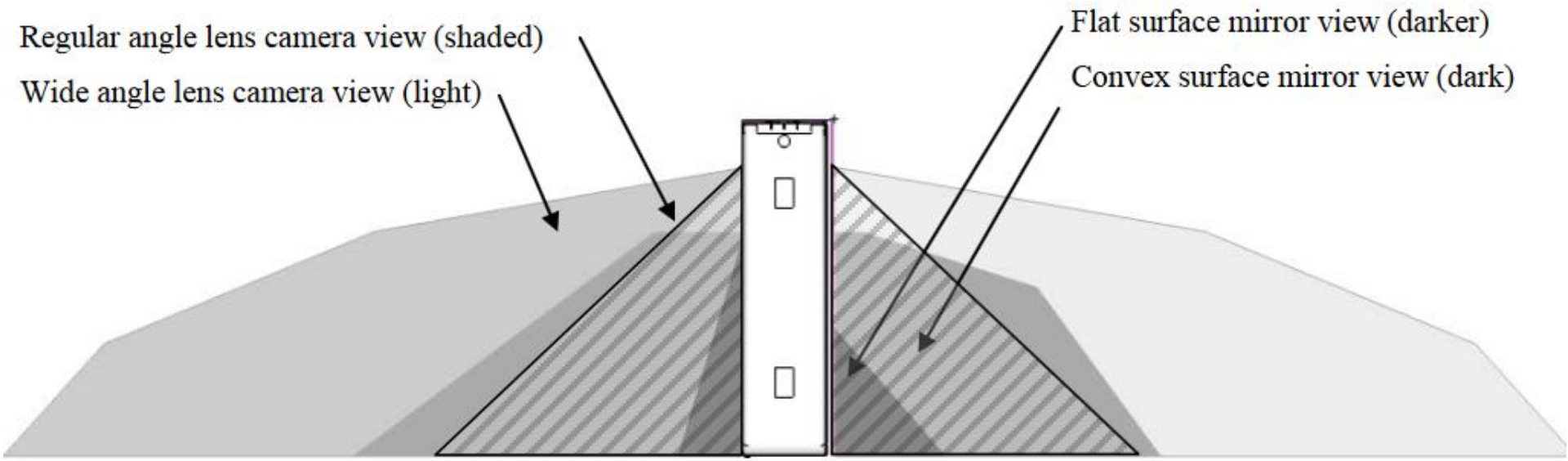
Common Bus Blind Spots



TRADITIONAL MIRRORS

Mirror vs. Camera Views

Coverage Comparison



Side views: Mirrors vs. Cameras

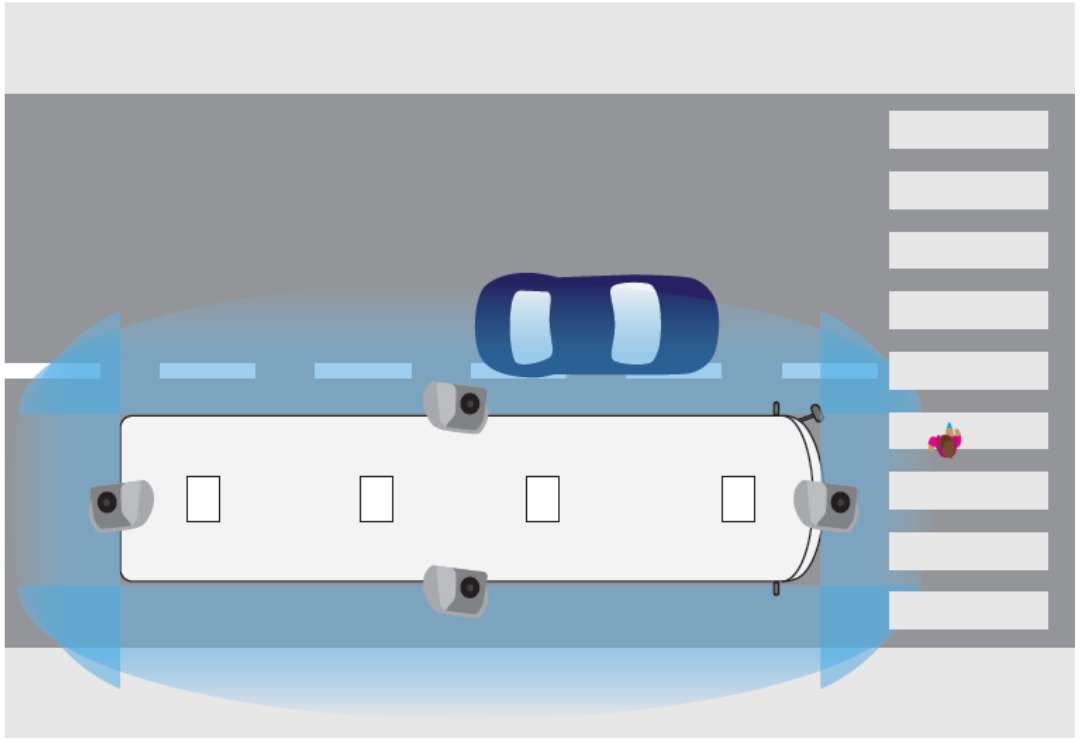
2010 FDOT STUDY CONCLUSION

- "Camera-based systems can significantly reduce bus blind spots over mirror and sensor-based systems."

45-63%

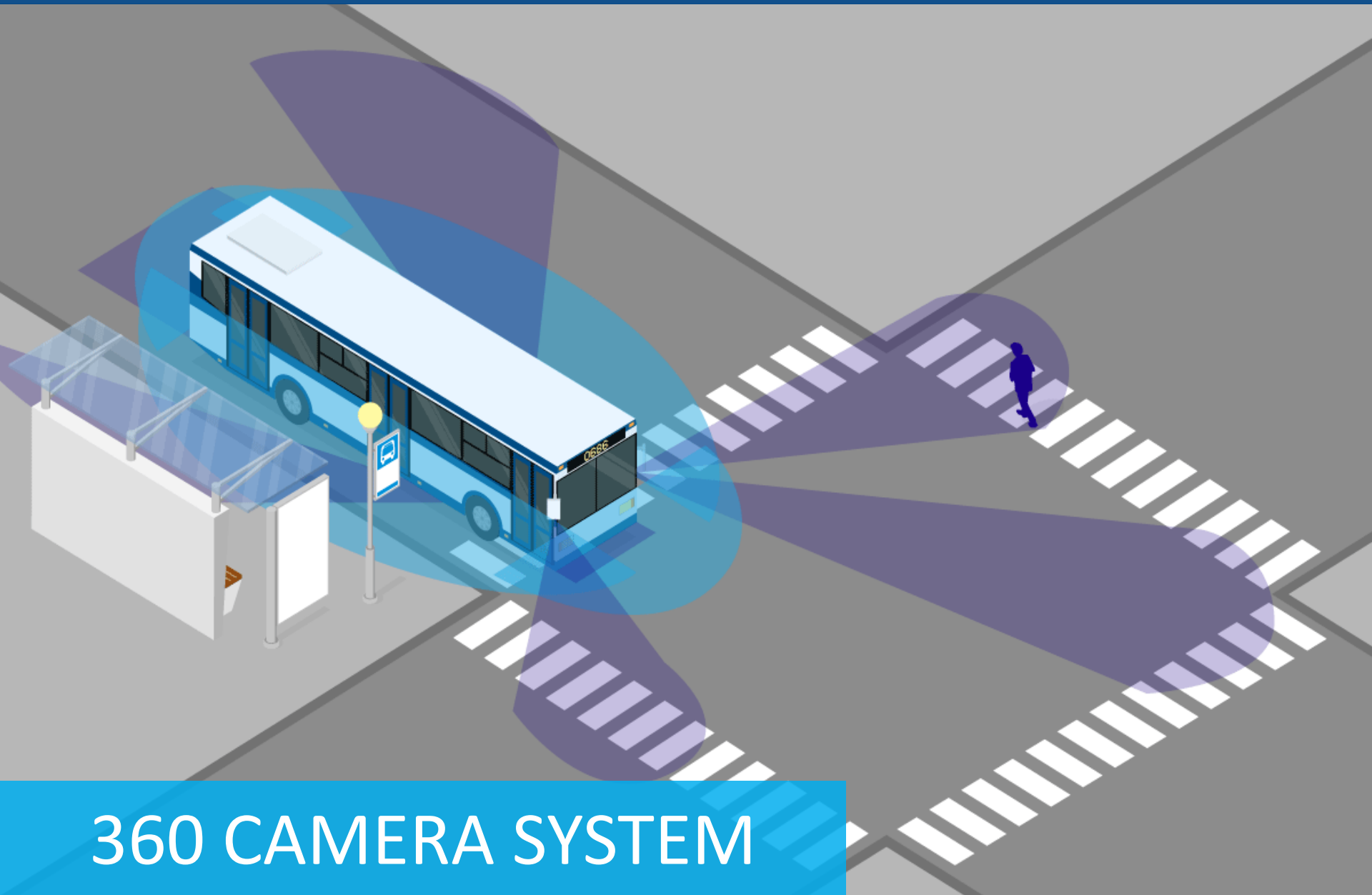
VISIBILITY IMPROVEMENT

360 Camera Systems



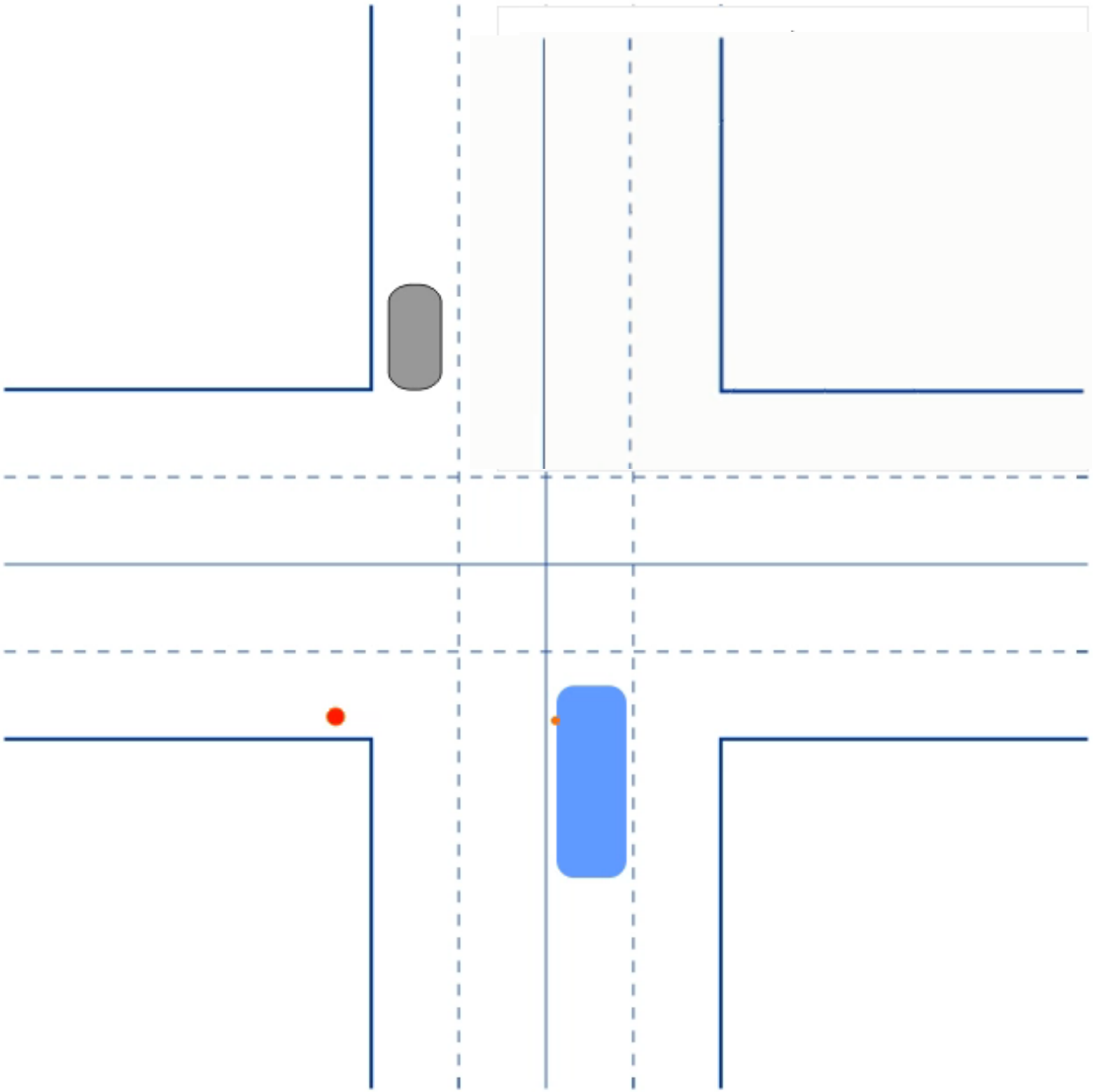
4 cameras blended & stitched into a single bird's eye view

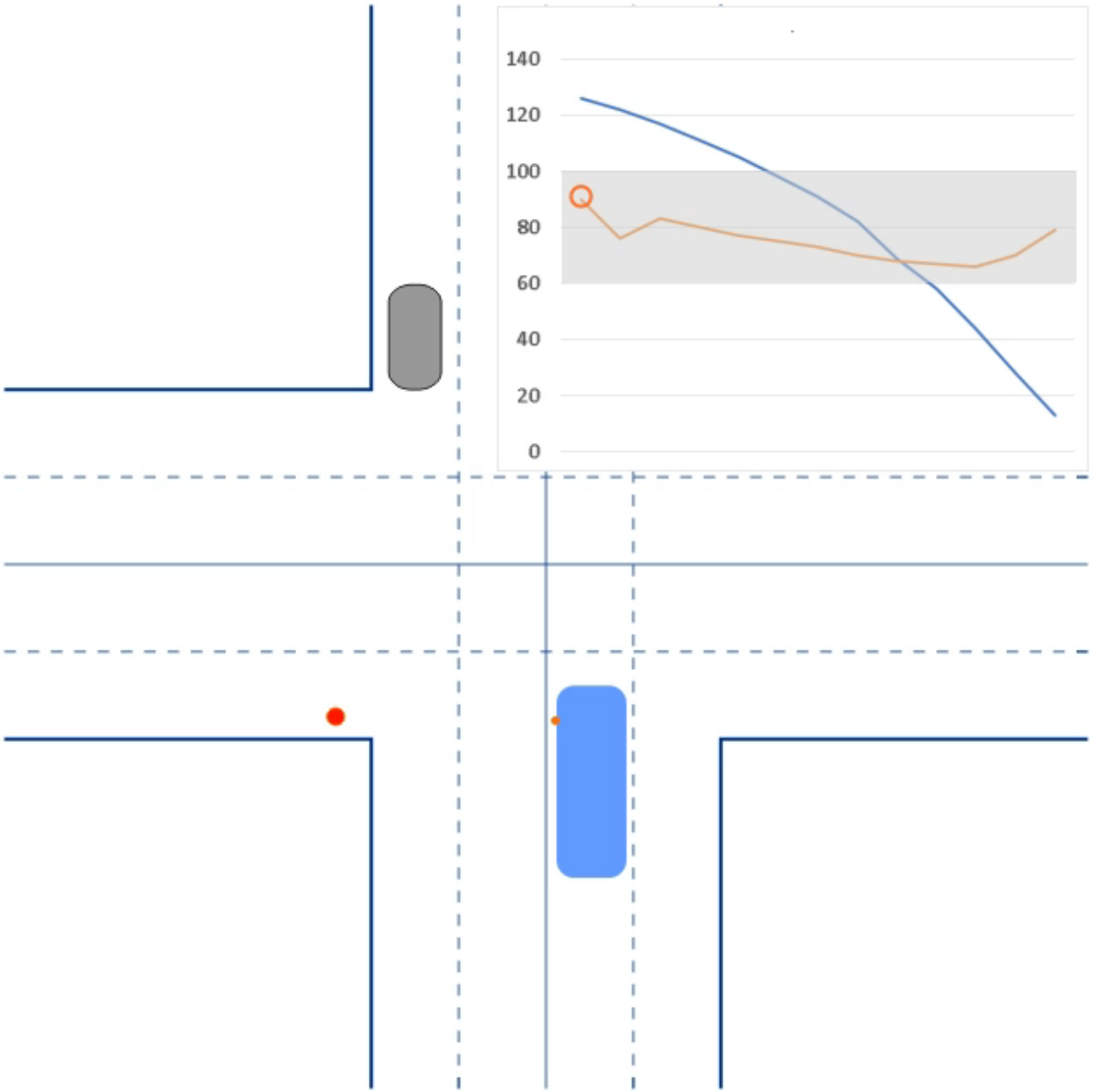
Common Bus Blind Spots



360 CAMERA SYSTEM


19 Pedestrians Hidden
by the Pillar and Mirror




140
120
100
80
60
40
20
0

The Solution:
Total Integration

MIRRORS CAMERAS SENSORS

SAFE FLEET
Bus & Rail

OUR VISION.

ZERO BLIND SPOTS.