Deadly Blind Spots
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

NHTSA Data for 2013
PEDESTRIANS & CYCLISTS KILLED ANNUALLY by TRANSIT BUSES

Source: Fatality Analysis Reporting System (FARS) – 2010-14
TRAFFIC ENGINEERING
DISTRACTED PEDESTRIANS

Smartphone Dependency

DISTRACTED PEDESTRIANS
SCHEDULE PRESSURES
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
 ✓ 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

- Regular angle lens camera view (shaded)
- Wide angle lens camera view (light)
- Flat surface mirror view (darker)
- Convex surface mirror view (dark)
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
The Solution: Total Integration

MIRRORS + CAMERAS + SENSORS
OUR VISION.
ZERO BLIND SPOTS.