Atlanta Regional Commission Strategies for Safe Streets

The Challenges:
Data, populations, policy, & action

- Where do high-frequency, concentrated crashes occur?
- Where do low-frequency, wide-distributed crashes occur?
- Who is most effected by transportation risks?
- What actions lead to effective outcomes?

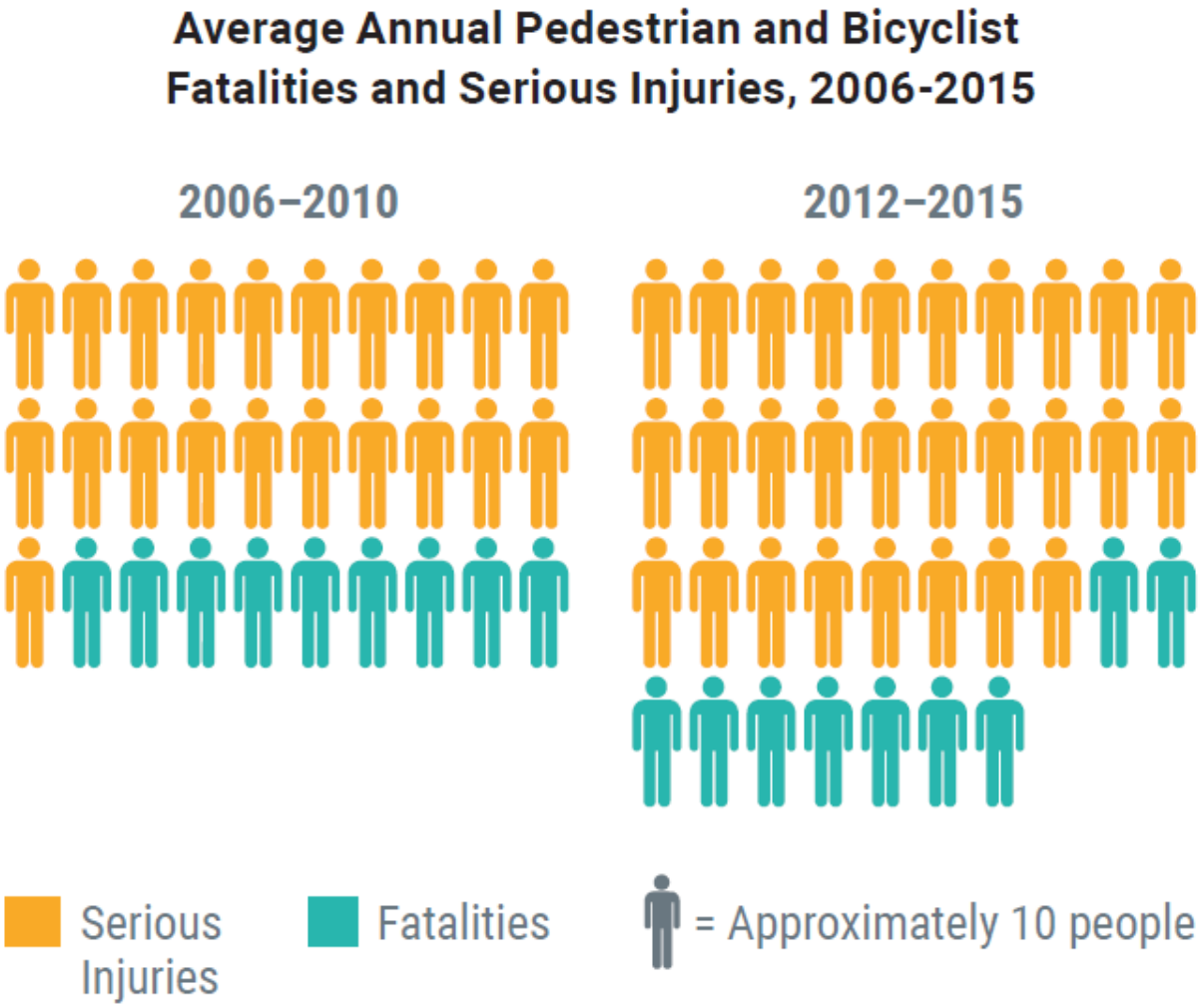
The Approach:
Build “safe systems” via systemic action

CONVENTIONAL APPROACH	vs	VISION ZERO
Traffic deaths are inevitable		Traffic deaths are preventable
Perfect human behavior		Integrate human failing in approach
Prevent collisions		Prevent fatal and severe crashes
Individual responsibility		Systems approach
Saving lives is expensive		Saving lives is not expensive

Case Study:

Safety Trends for Walking, Bicycling, & Transit Access

The Trend:
Increasing injuries & fatalities



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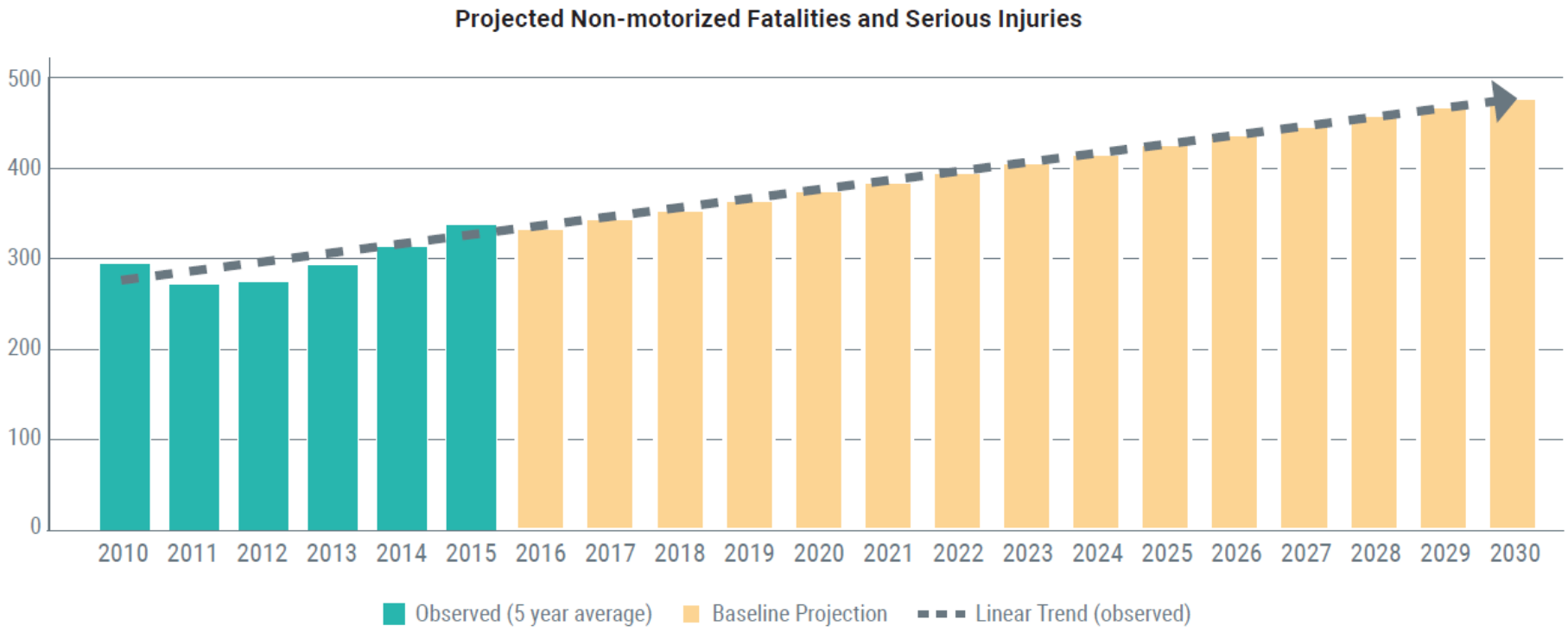
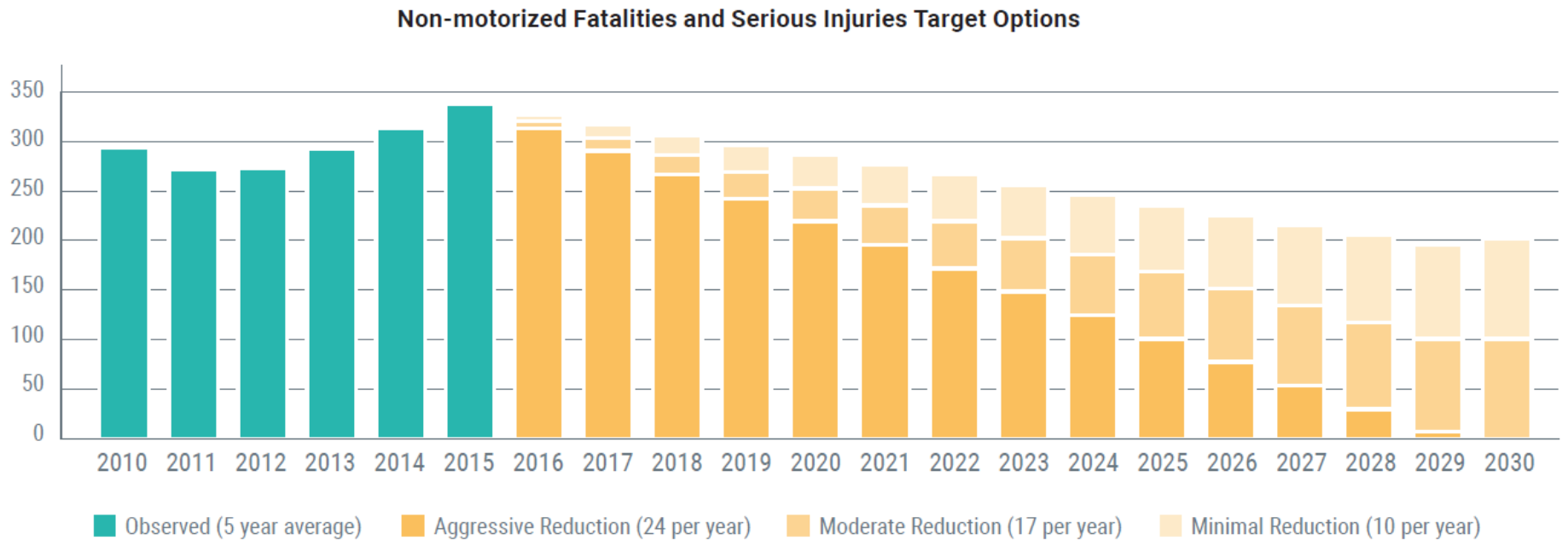


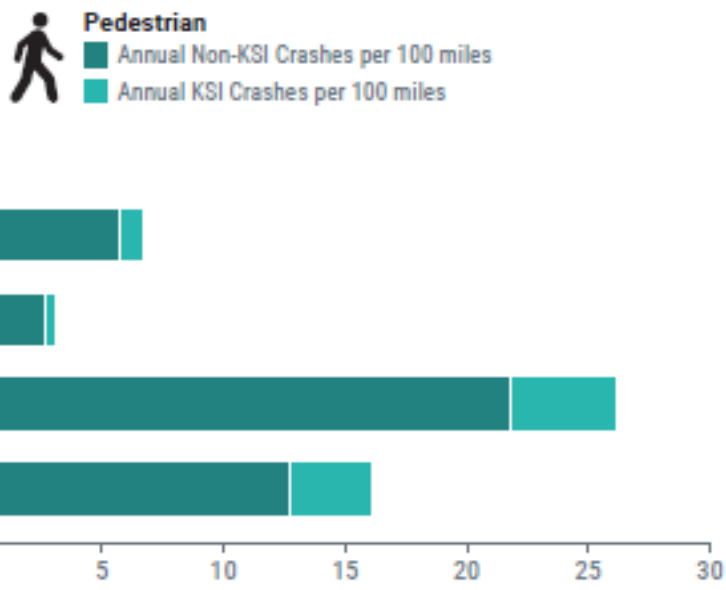
Possible Targets:
Opportunities to decrease injuries over time

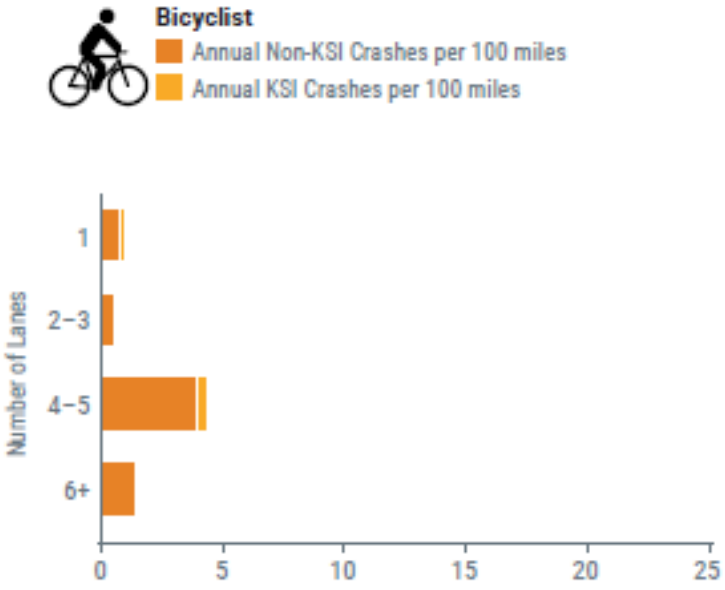


Risks in the System:
Data from crash records & locations

Annual Non-KSI and KSI Crashes per 100 Miles by NUMBER OF LANES

Streets with four or more lanes have significantly higher numbers of crashes per mile compared to streets with fewer than four lanes.





The Elements of Risk:
Identifying factors in crash records & locations

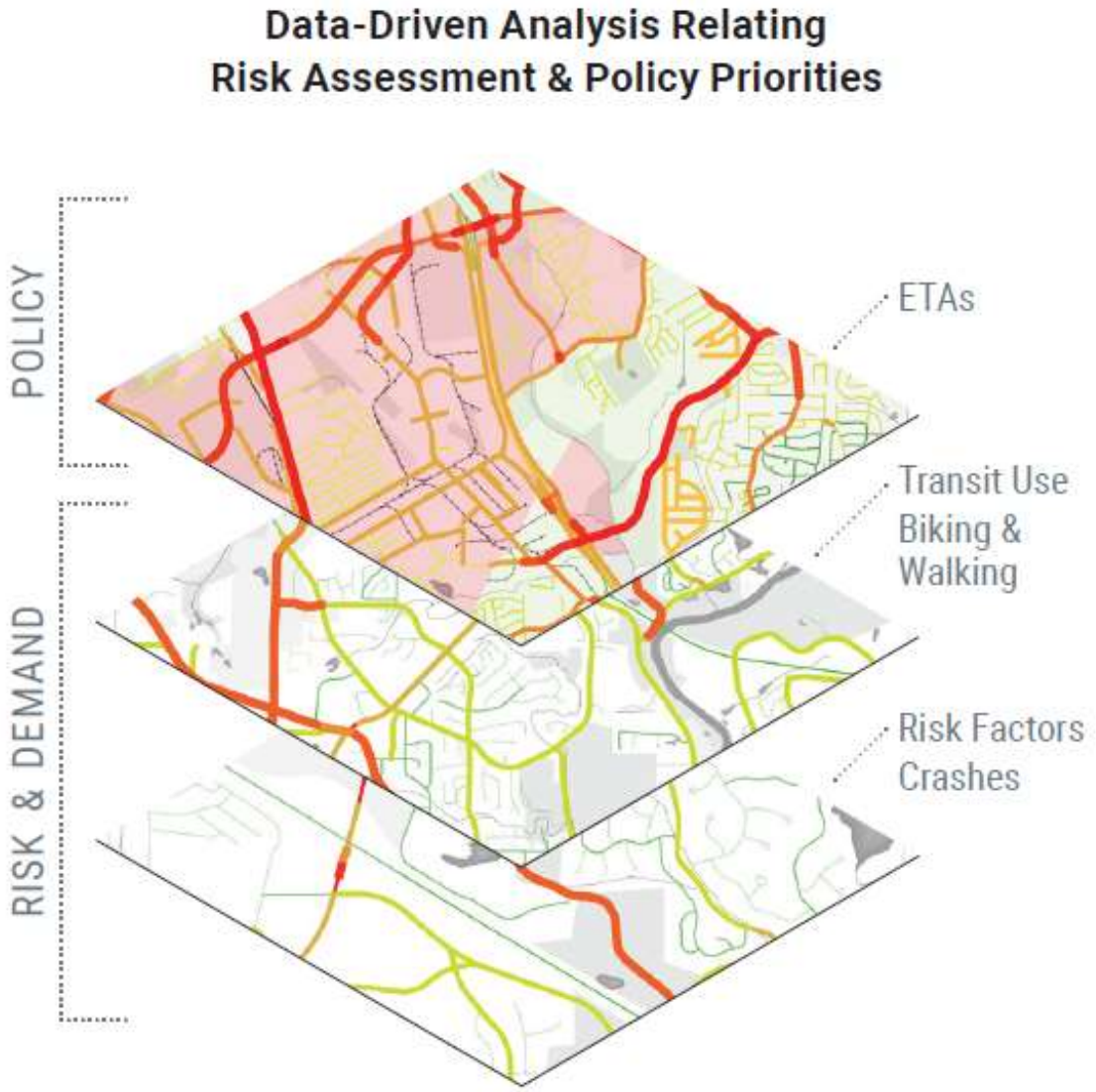
Speed: Well over half of pedestrian and bike crashes occur on streets with speed limits at or above 35mph

Number of Lanes: Streets with four or more lanes have a significantly higher number of crashes per mile

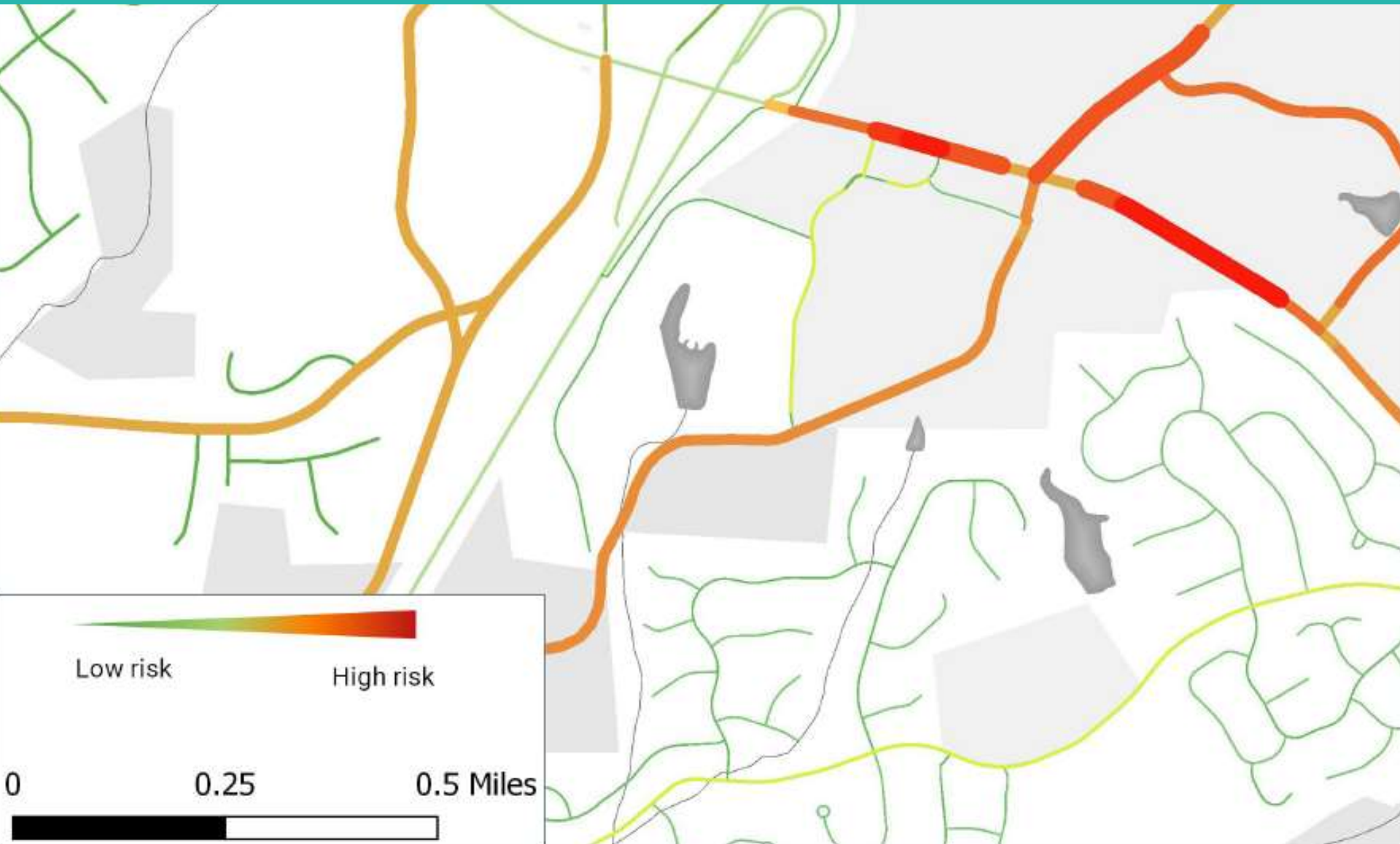
Lighting: Crashes after dark disproportionately result in severe outcomes, especially for pedestrians where there is no street lighting

Crosswalks: Missing or inadequate crosswalks and sidewalks leave pedestrians vulnerable to being hit.

The Elements of Risk:
Assessing factors in transportation system



The Elements of Risk:
Assessing locations in transportation network



Effective Solutions:

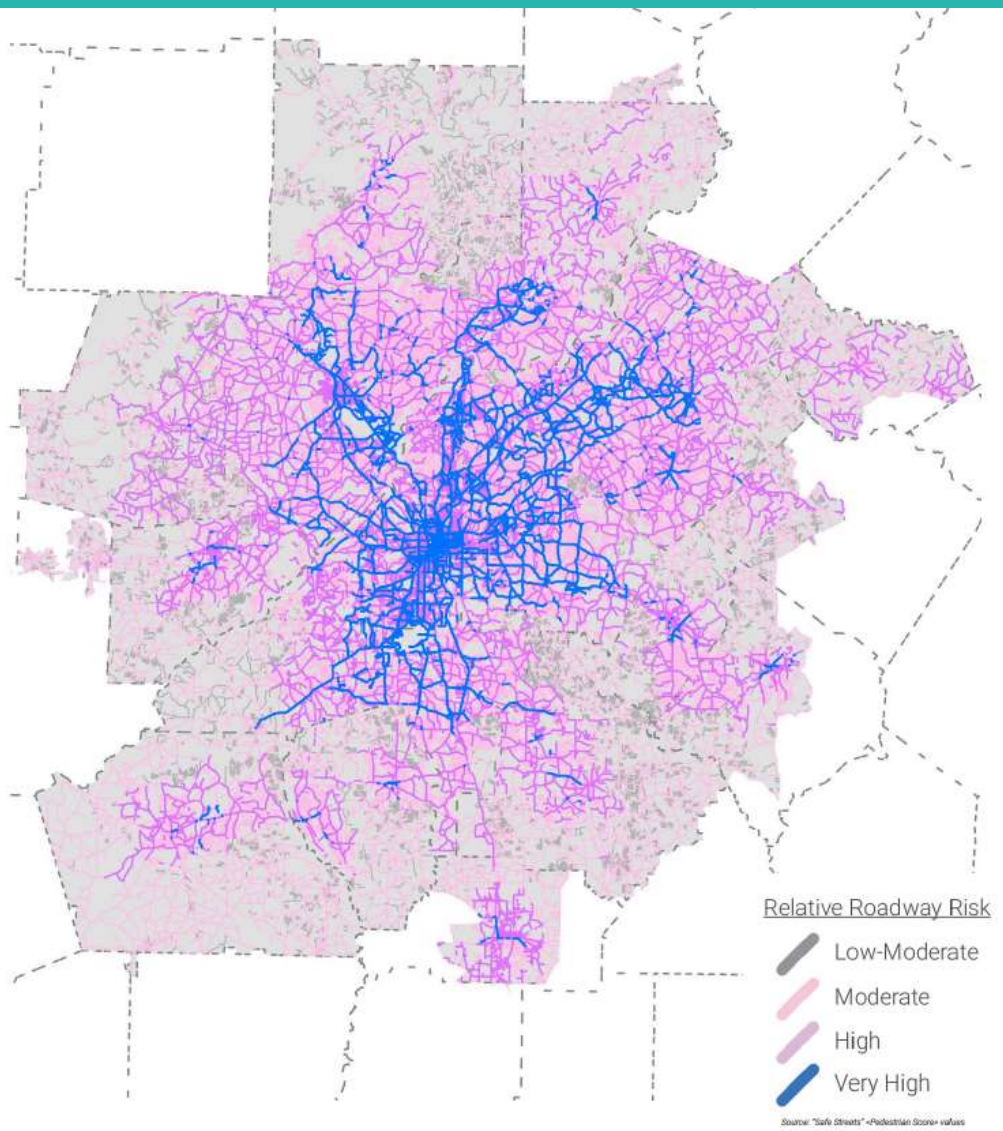
Complete Street Elements For Safer Streets

The Distribution of Risk:
Demographics, community form, & transit

The key elements needed for an active community are **highly mixed land uses**, **short connected blocks**, and **high-quality infrastructure** for pedestrian and bicycle traffic.

Sidewalks, convenient crosswalks, bicycle lanes, quality transit service, traffic calming measures, mixed-use zoning, and connected street networks facilitate active transportation and save lives.

These design elements are lacking in many parts of the region. Changes are needed in both **land use** and **transportation practices** in order to design active communities and adequate multimodal infrastructure.



The Elements of Risk:
Factors in typical locations

The Solutions:
Proven engineering tools for reducing risks

Medians and Pedestrian Crossing Islands

Pedestrian Hybrid Beacon

Road Diet

Sidewalks

Changing Speed Limits

Leading Pedestrian Interval

Rectangular Rapid Flashing Beacons

Crosswalk Visibility Enhancements

Street Lighting

Separated Bike Lanes

Neighborhood Greenway/ Bike Boulevard

Traffic Calming

The Solutions:
Providing safer walkways & crossing locations

SIDEWALKS provide safe places for people traveling by foot and by wheelchair. GDOT recommends a minimum of 5-foot-wide sidewalks, while NACTO recommends a minimum of 6 feet. AASHTO also recommends a minimum 5-6ft buffer between the sidewalk and travel lane. However, the land use context, transit, and pedestrian activity should always be considered.

CROSSWALKS provide an indication to pedestrians on where they should cross the street. They also provide motorists with an indication of where pedestrians are likely to be.

PEDESTRIAN HYBRID BEACON (PHB) is a pedestrian-activated signal that alerts drivers to pedestrians crossing the road.

The Solutions:
Providing safer bikeways & community forms

SEPARATED BIKE LANES create a safer space for bicyclists of all ages and abilities. Implementation of a bicycle facility should be conducted as an overall bicycle master plan.

STREET LEVEL LIGHTING improves visibility for all users along a corridor, but is particularly effective in high-trafficked areas.

MEDIAN AND PEDESTRIAN CROSSING ISLANDS reduce head-on motor vehicle collisions and provide a protected refuge at intersections and midblock crossings for pedestrians. They narrow the motorist's field of vision and reduce vehicle speeds.

Regional Safety Strategy:

Expanding from “small” modes to all modes

Next Steps:
Questions to frame issues & actions

Issues

- What are the long-term trends for safety in the Atlanta region?
- How do data patterns differ or coincide for various modes?
- How do road design, vehicle design, and human psychology lead to unsafe behaviors?
- How do travel patterns in the Atlanta region effect safety?
- Who is most at risk when traveling in the Atlanta region?
- How do residents and decision makers view safe transportation?

Actions

- What are the roles for ARC's policies to improve regional safety?
- How can an MPO focus multi-modal solutions on high-risk corridors?
- How can regional and local partners interact to improve safety?
- How can an MPO partner the state DOT to reduce traffic crashes?
- How does ARC need to be setting Federal safety targets?
- How does engineering interact with education and enforcement?

Next Steps: Schedule

Schedule:

- **Q3 2020:** develop project needs
- **Q4 2020:** procurement
- **Q1 2021:** project launch
- **2021-2022:** project work & public engagement
- **Q3 2022:** final deliverables

Background Research:

- RSTF = technical advisory committee
- Peer regions / communities?
- Academic research? News?