

ARC TRANSPORTATION
COORDINATING COMMITTEE (TCC)

ARC's Regional Safety Strategy

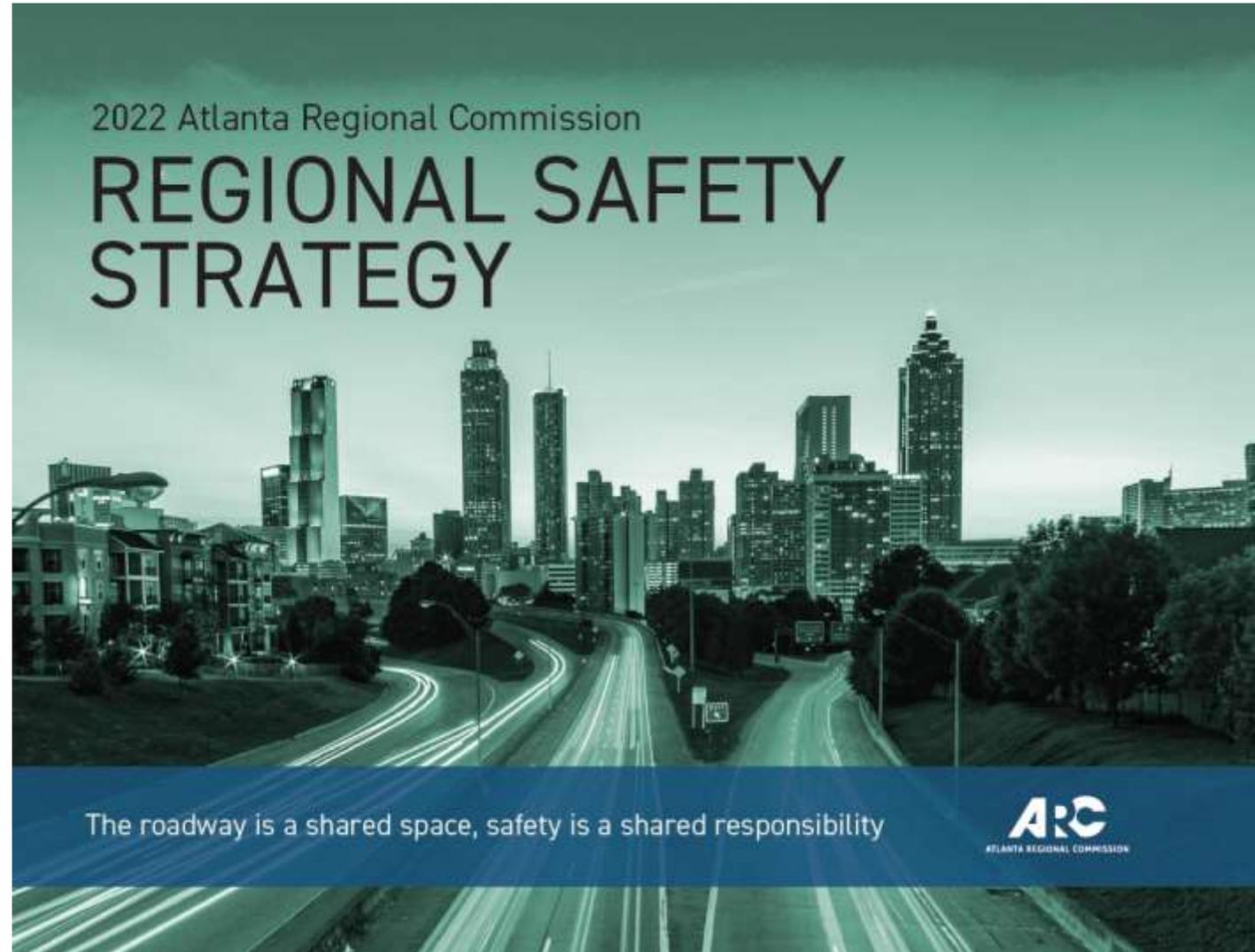
November 4, 2022



What is the Regional Safety Strategy?

Regional safety plan to help ARC and its partners proactively achieve safety goals and build a safe transportation system for all users in the Atlanta region:

- Advances safety in a unified way
- Shifts towards more proactive approach, rather than reacting to past trends
- Address rising severe crash trends and maximize impact of increased funding



Project Team

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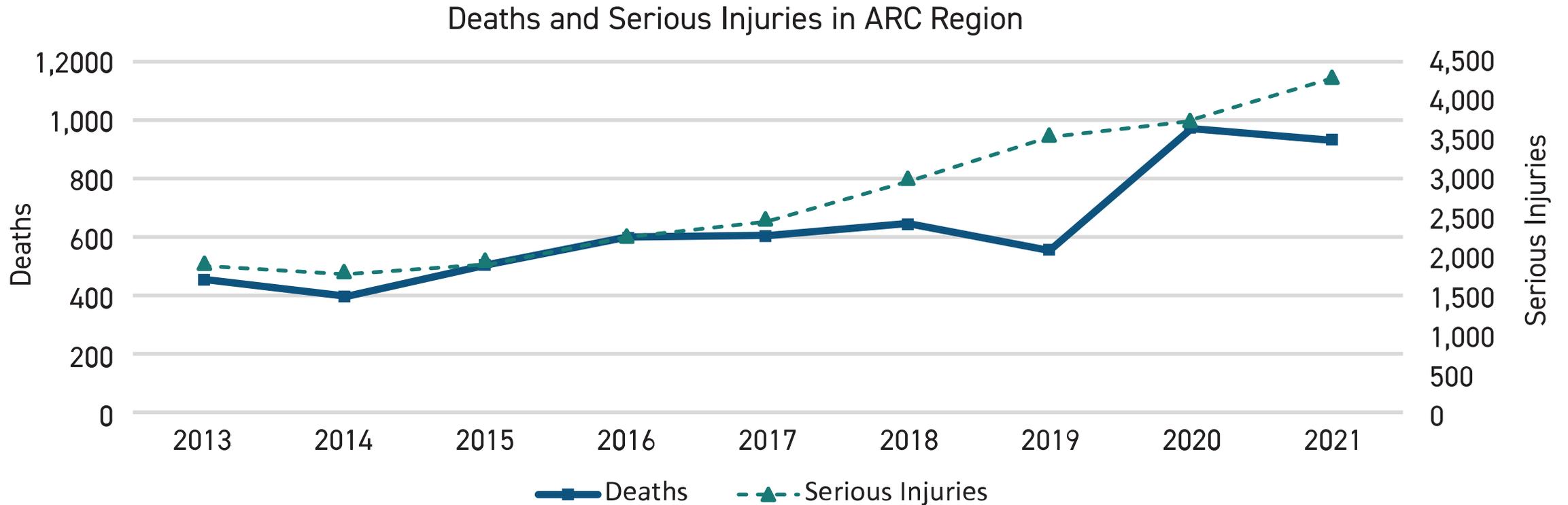
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What are the Regional Safety Issues?



- There are 230,000+ total crashes in the Atlanta region every year! Roughly 600 people die and more than 3,000 people are seriously injured.

The goal is **ZERO deaths** and **serious injuries** on public roads in the Atlanta region.

Vision Zero Goals

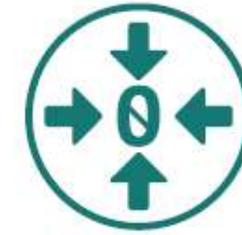
- Reaffirmation of Vision Zero goal
- ARC will adopt a 5% reduction goal each year for all safety targets.



A comprehensive, data-informed approach.

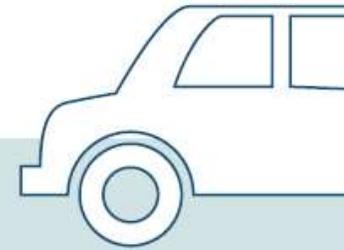
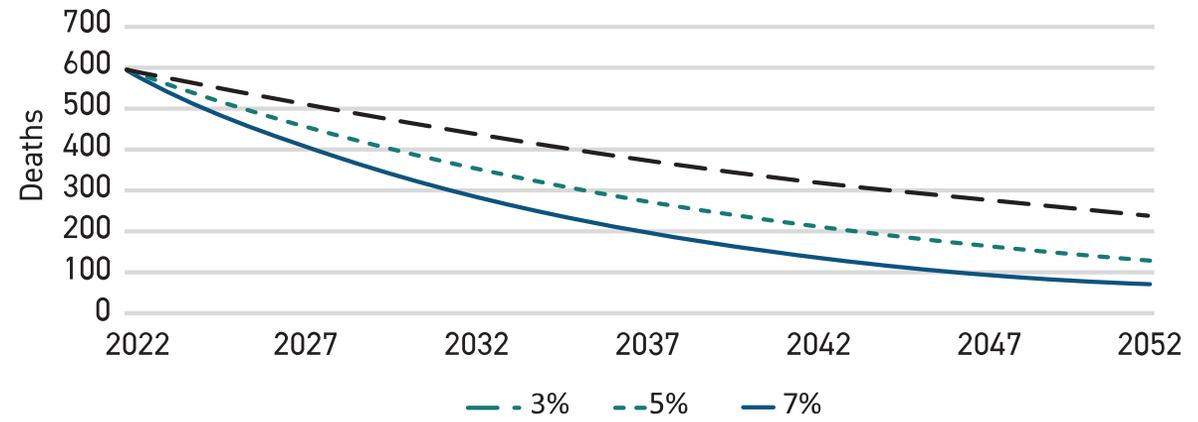


Steady incremental investments guided by Safe System principles.



Targeted and coordinated efforts from all safety stakeholders throughout the region.

Vision Zero Projections: Deaths



The road is a **shared space**; safety is a **shared responsibility**.

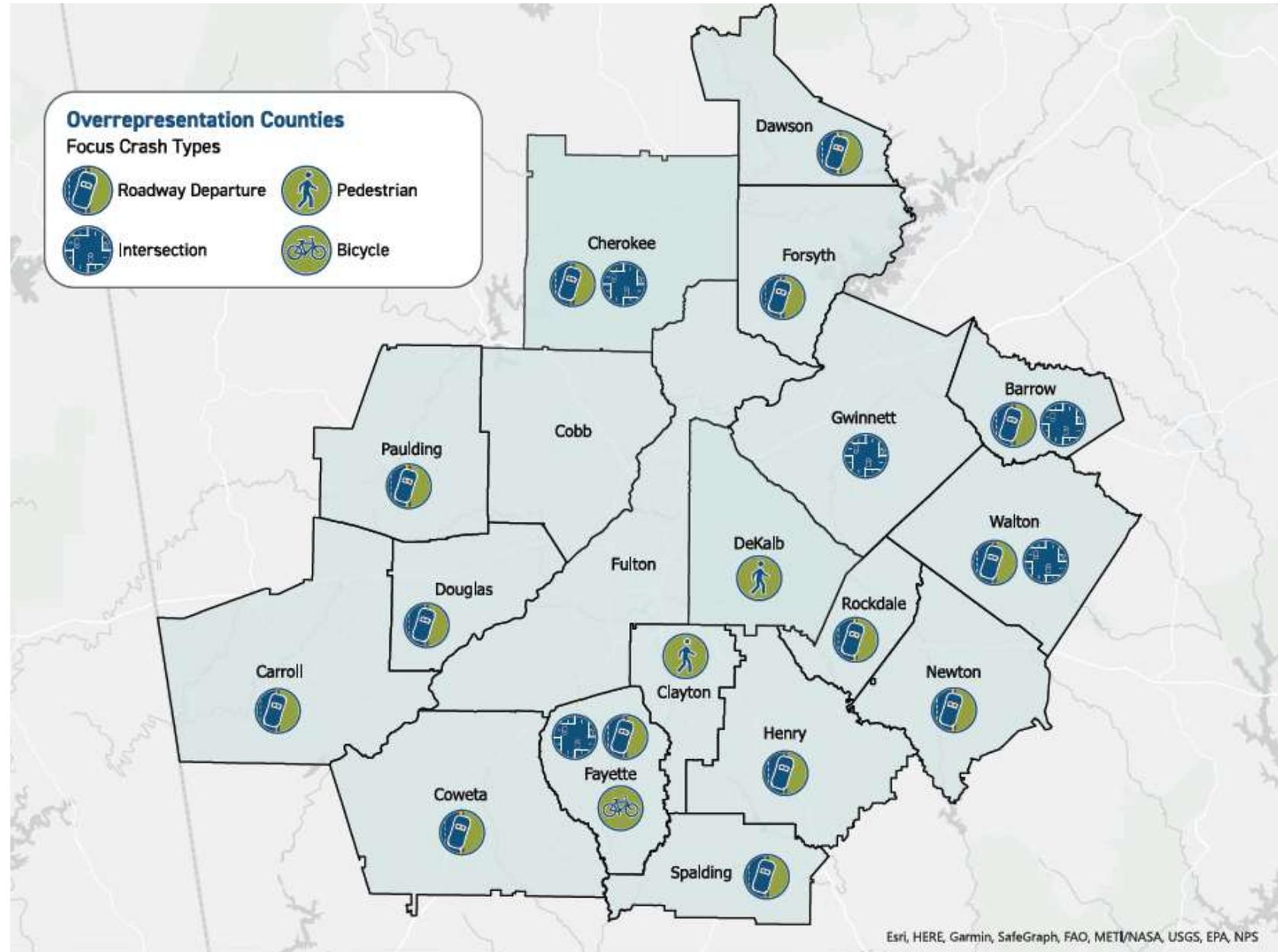
Intentional, targeted, and coordinated action is needed to move toward zero deaths and serious injuries.

What are the Regional Safety Issues?

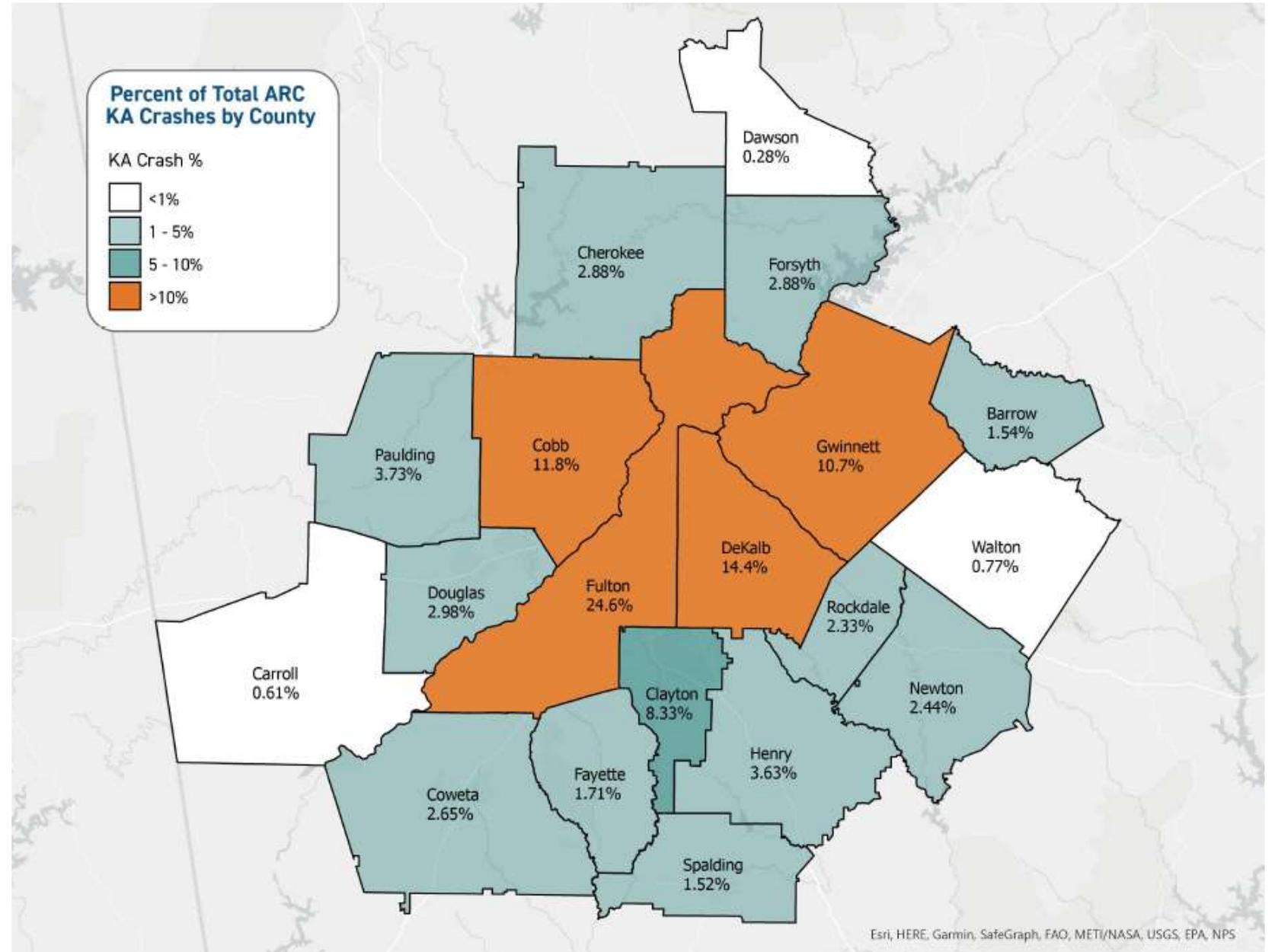
- **Focus crash types:** what crash types are most prevalent in severe crashes?
- **Focus facility types:** where are severe crashes most prevalent?
- **Risk factors:** what characteristics are over-represented in severe crashes?



Where are the Regional Safety Issues?



Where are the Regional Safety Issues?



Where are the Regional Safety Issues?

Intersection Risk Factors

Risk Factors	Values Associated with Increased Risk
Functional class	Urban other principal arterials Urban minor arterials Urban major collectors
Ownership	GDOT
Operating speed	35+ mph on arterial streets 30+ mph on collector and local roads
Observed speed	Larger differences between speed limit and average observed speed
Community context	Lower intensity development
Traffic control	Signalized intersections on principal arterials Uncontrolled or unsignalized intersections on minor arterials and major collectors



Where are the Regional Safety Issues?

Roadway Departure Risk Factors

Risk Factors	Values Associated with Increased Risk
Functional class	Urban interstates Rural minor arterials Rural major collectors
Ownership	GDOT
Traffic volume	5,000 - 15,000 vehicles per day
Posted Speed	45+ mph on arterial streets 35+ mph on collector roads
Community context	Rural areas and lower intensity development



Where are the Regional Safety Issues?

Pedestrian Risk Factors

Risk Factors	Values Associated with Increased Risk
Functional class	Urban other principal arterials Urban minor arterials
Ownership	GDOT
Traffic volume	9,000+ vehicles per day
Number of lanes	4+ lanes
Posted speed	35+ mph
Community context	Urbanized areas, high population densities, higher intensity development, and high frequency bus service
Socioeconomic status	Lower average income, higher proportion of population that represents minority and non-white race and ethnicity
Environmental justice score	7+



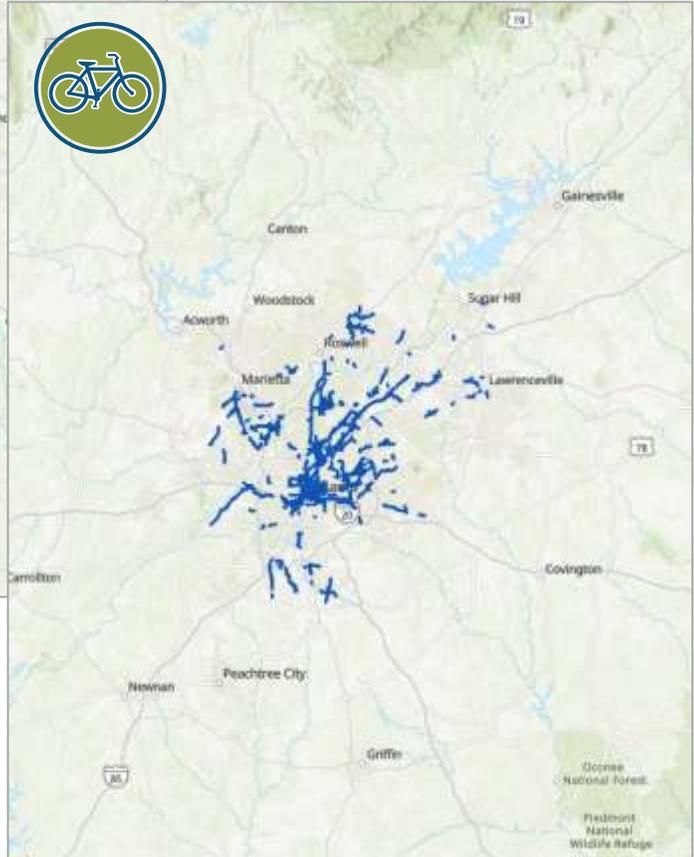
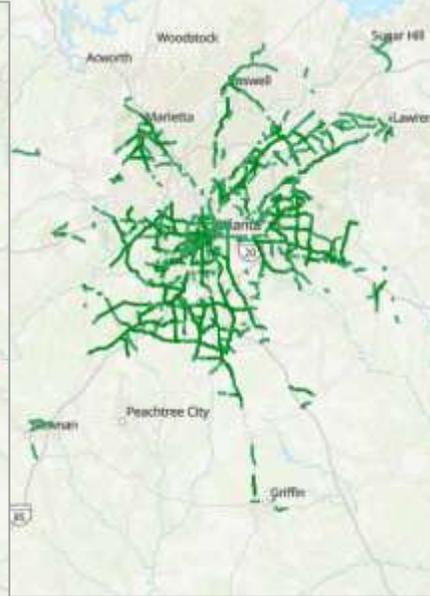
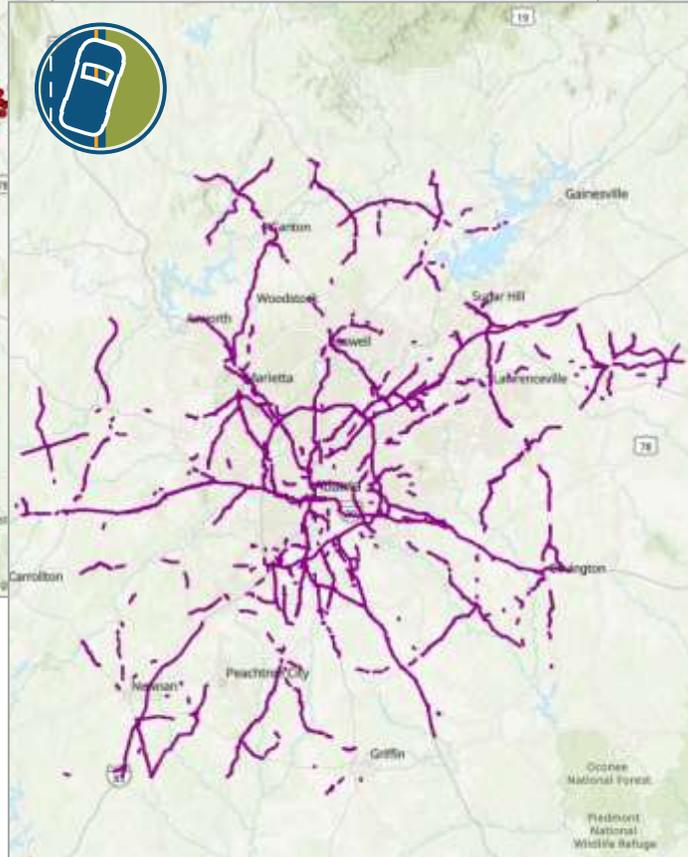
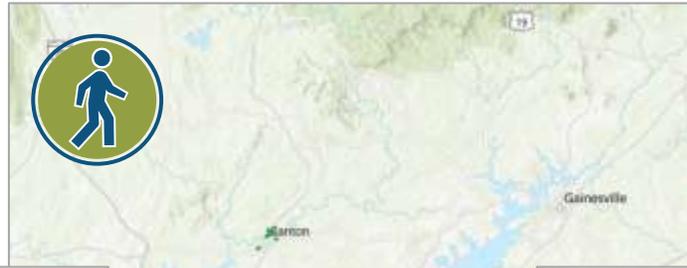
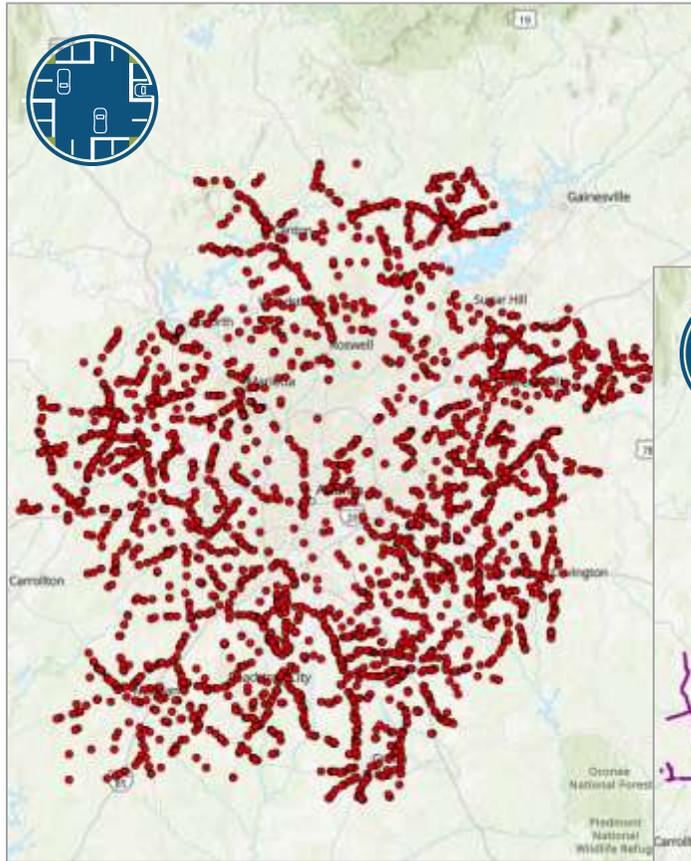
Where are the Regional Safety Issues?

Bicycle Risk Factors

Risk Factors	Values Associated with Increased Risk
Functional class	Urban minor arterials Urban major collectors
Ownership	City County
Traffic volume	20,000+ vehicles per day for GDOT arterials (does not apply to city and county roads)
Number of lanes	2-lane city and county roads 2- or 4-lane GDOT arterials
Community context	Urbanized areas, high population and employment densities, higher intensity development, and high frequency bus service
Socioeconomic status	Bottom 20% of median household incomes and higher median incomes, particularly in tracts with a high population density
Induced demand	Presence of multiuse paths or marked bike lanes



Where are the Regional Safety Issues?



Regional Focus vs. Local Focus

Regional components

serve as coordinated approach for ARC and partners to:

- Shift to proactive approach
- Develop regional goals/plans
- Establish/monitor safety performance targets
- Evaluate/prioritize projects
- Allocate funds

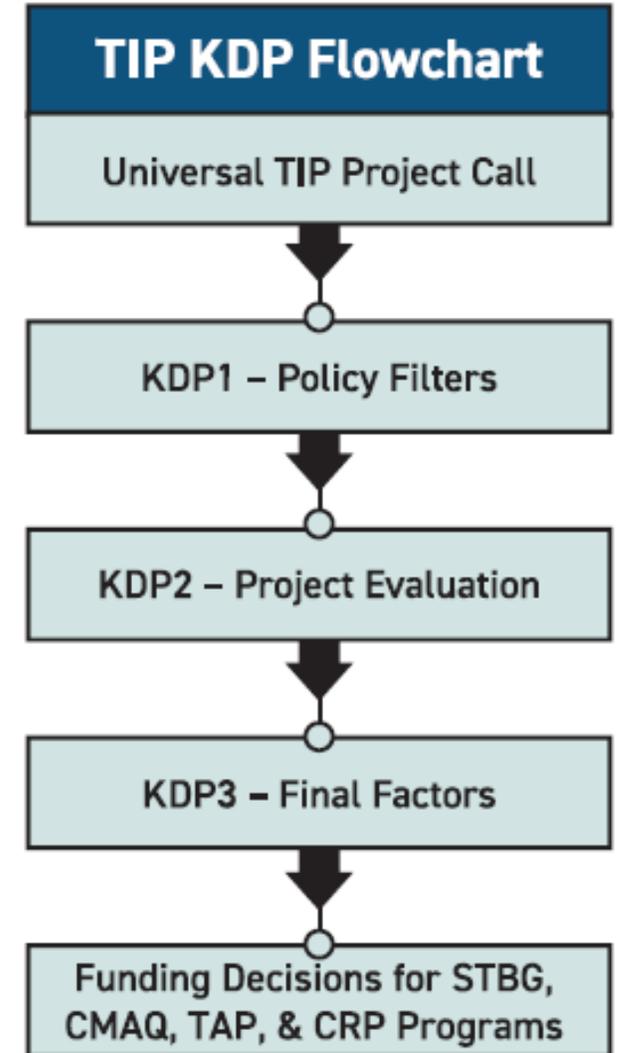


Local components serve as guidance for local agencies to:

- Improve safety in their communities
- Integrate safety in project planning and development
- Identify safety issues proactively
- Address safety issues with proven safety countermeasures
- Prioritize projects and strategies for funding and implementation

ARC Policy Updates

- Deeper analysis during TIP project evaluation
 - Especially for roadway projects
- More ability to guide regional plans and collaborate with local government
 - E.g., RTP, CTPs, LCIs
- Develop Priority Safety Corridors
- *Potentially develop regional project priority list*



Roadway Analysis Updates

- Roadway Expansion and TSM&O projects have the most potential to positively or negatively affect safety.
- A safety Benefit-Cost analysis will be conducted during TIP project evaluations.

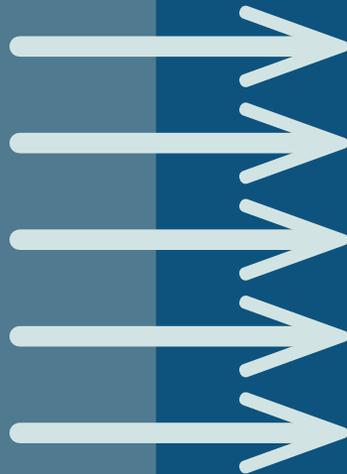
CRASH SEVERITY	CRASH COST
K: fatal	\$16,374,467
A: suspected serious injury	\$988,918
B: suspected minor injury	\$326,938
C: possible injury	\$184,435
O: property damage only	\$18,816

778 deaths in 2021 = \$12.7 billion

Changing our Processes and Practices

Traditional approach

Prevent crashes
Improve human behavior
Control speeding
Individuals are responsible
React based on crash history



Safe System approach

Prevent death and serious injuries
Design for human mistakes/limitations
Reduce system kinetic energy
Share responsibility
Proactively identify and address risks

Roadway Safety Management Process

A comprehensive approach to safety includes both reactive and proactive components

- **Site-specific (crash-based) is reactive**
 - Addresses sites based on crashes
 - Crash history
 - Predicted future crashes
- **Systemic (risk-based) is proactive**
 - Addresses sites based on risk factors
 - Roadway characteristics
 - Community context



PLANNING

Identify problems: collect, manage, and analyze data to identify opportunities to improve safety.

Develop countermeasures: develop targeted strategies to address crash contributing factors.

Prioritize projects: develop a balanced portfolio of projects that maximizes return on investment.



IMPLEMENTATION

Implement safety projects: design projects, identify funding sources, allocate resources, program projects, and develop a plan to evaluate investments.

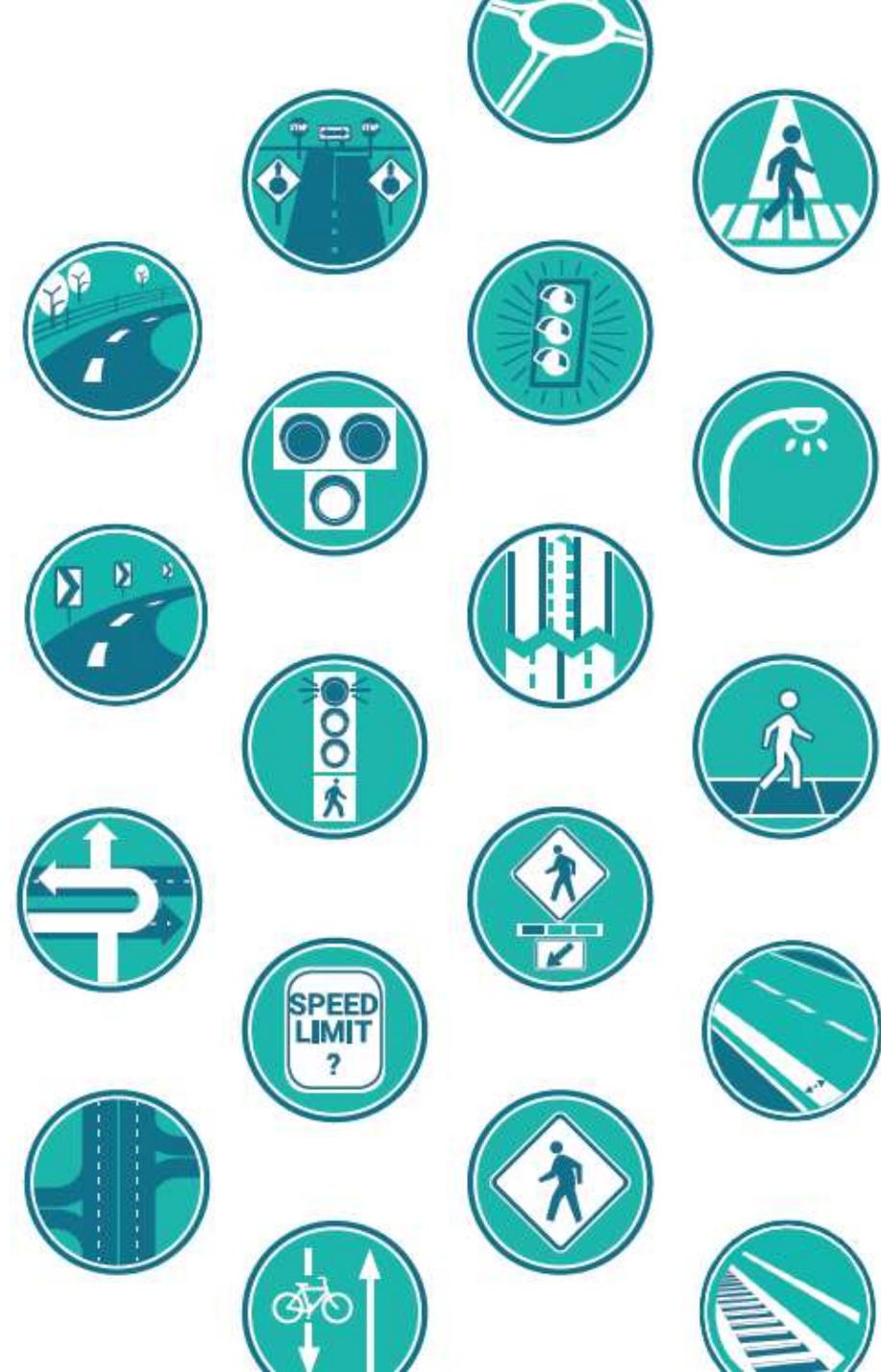


EVALUATION

Estimate effectiveness of projects and programs: perform project-, countermeasure-, and program-level evaluations to understand the safety performance and cost-effectiveness of investments and to inform future decisions.

Proven Safety Countermeasures

- ARC promotes FHWA's Proven Safety Countermeasures to enhance safety for all road users
- Local agencies can:
 - Implement proven safety countermeasures to address site-specific safety issues
 - Incorporate proven safety countermeasures in projects to proactively address systemic safety issues
- Keys to countermeasure selection:
 - Target underlying crash patterns and risk factors
 - Recognize diverse issues and unique community needs
 - Consider equity and community feedback



- **High-risk** scenarios

- Used risk factors to identify specific locations
- Created generic visualization of high-risk scenarios

- **Low-risk** scenarios

- Identified proven safety countermeasures
- Focus on select countermeasures in each scenario



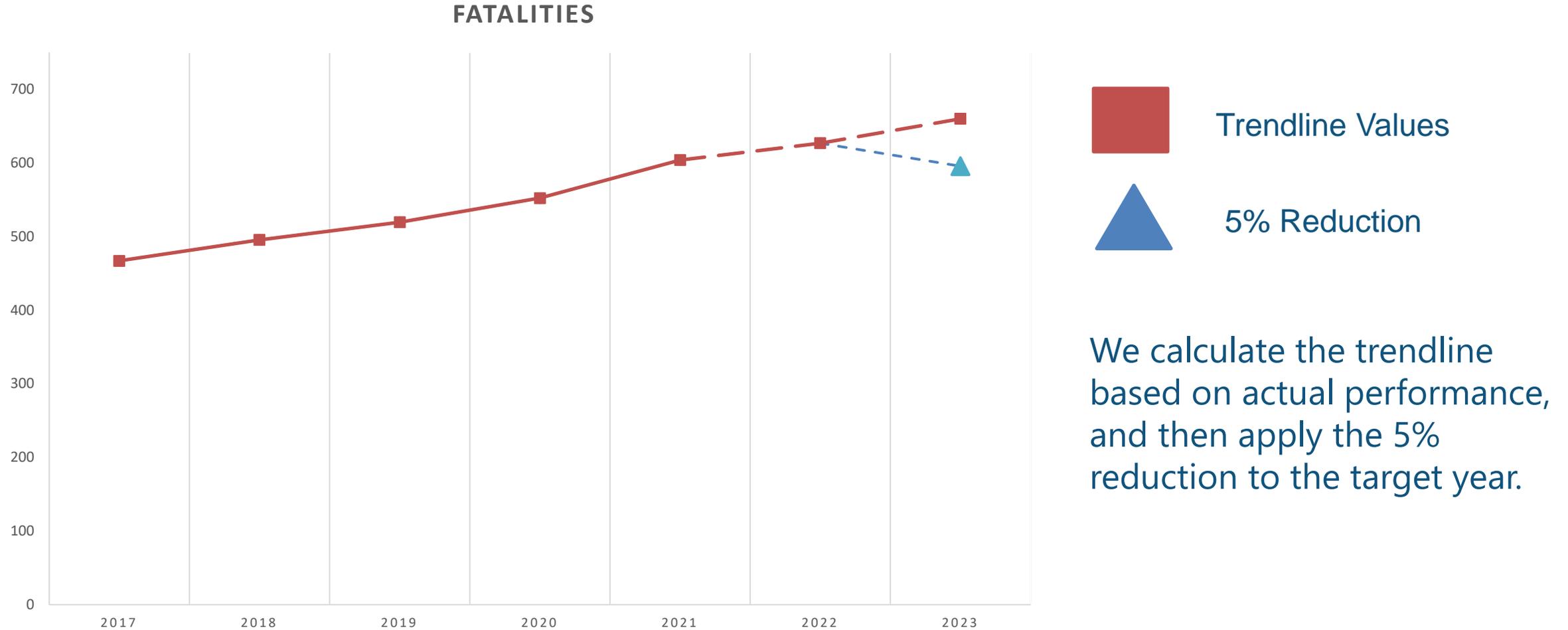
2023 Safety Targets

Performance Criteria	2023 Statewide Target	2023 ARC Target
Fatalities	1,680	595
Serious Injuries	8,966	2,719
Fatality Rate	1.360	0.998
Serious Injury Rate	7.697	4.557
Non-Motorized Fatalities and Serious Injuries	802	393

*These ARC targets represent:

- Crash & traffic data from just MPO region
- 5% reduction across the line from previous year

Fatality Target Example



Questions



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Resolution for Adoption:

The Atlanta Regional Commission's **Regional Safety Strategy** (RSS) is a safety action plan that establishes a regional approach to eliminating fatal and serious injury crashes that is data-informed, pro-active, and aggressive. The **RSS** offers guidance for regional funding priorities and local decision making, identifying high risk roadways, and infrastructure solutions to address safety issues.

Federal legislation and rulemaking under the Infrastructure Investment and Jobs Act (IIJA) requires performance management targets that encourage state DOTs and MPOs to focus the use of federal transportation funds on projects which address national transportation safety goals. The ARC board has directed staff to investigate the causes and locations of fatalities and injuries within the metropolitan region and recommend an appropriate course of action for the agency to follow in improving safety outcomes in our transportation system for all users, with the long-term goal of eliminating in fatalities and serious injuries.

The **RSS** expands previous regional plans by determining regional safety focus areas, establishing a Vision Zero goal within a Safe System framework, promoting evidence-based countermeasures, providing guidance on determining future federal performance targets, and informing regional funding priorities.