

Overview of Traffic Safety

Driving is critical for many; however, motor vehicle crashes are a leading cause of death in the U.S. This white paper focuses on traffic safety in the Baltimore region and how the Baltimore Regional Transportation Board (BRTB) and its members are working to improve traffic safety.

Crashes between vehicles have become more severe due to riskier behaviors exhibited by drivers. Safety experts commonly believed that more cars on the roadway was a contributor to the number and severity of crashes. However, during the pandemic, when fewer cars were on the road and more people were home, those that were traveling were exhibiting significantly higher speeds, higher rates of impairment, and other behaviors such as not using a seatbelt. The unfortunate result was an increase in fatalities from 2019 to 2020.

Planning for Safety

As the Metropolitan Planning Organization (MPO) for the Baltimore region, the BRTB is focused on safety planning. It is critical to the Long Range Transportation Plan (LRTP) because almost all safety projects and programs take several years to bring about change. In addition to the LRTP, the Transportation Improvement Program (TIP), a short range program focusing on projects funded over the next four fiscal years, incorporates safety evaluation criteria.

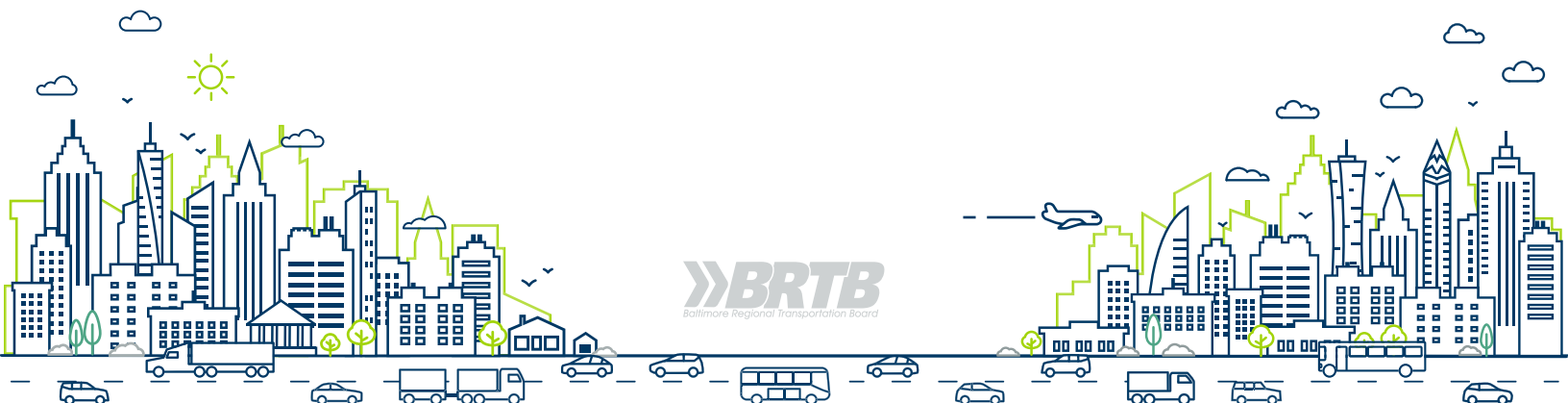
The BRTB and its jurisdictions have focused further on non-motorist safety. The Bicycle and Pedestrian Advisory Group (BPAG) is a BRTB subcommittee that focuses on creating a more walkable and bikeable region.

Many jurisdictions have also implemented Complete Streets policies, meaning roads are designed and operated to prioritize safety, comfort, and access to destinations for all people using the transportation network.

Equity is a critical component of transportation safety and has become a clear focus through safety planning.

The implementation of local Strategic Highway Safety Plans (SHSP) is another planning tool that fosters collaboration among agencies focused on safety. Utilizing an SHSP means that multiple organizations work together collaboratively to improve traffic safety. This process increases camaraderie and trust across organizations. The possibilities for sharing resources through such collaborations are endless. The collaborative SHSP approach brings about combinations of countermeasures that improve safety more effectively than any single countermeasure could alone.

The upcoming LRTP, *Resilience 2050*, demonstrates the high priority placed on safety through the regional goals and strategies and the project scoring methodology. Improving System Safety is one of the nine goals for the region. In addition, all candidate projects submitted for *Resilience 2050* will be scored based on their inclusion of countermeasures addressing non-motorist safety, speeding, and impaired or distracted driving.





Safety in the Baltimore Region

The Baltimore region accounts for approximately half of Maryland's traffic safety issues. Non-motorist safety, speeding, and impaired driving are major issues, with each accounting for disproportionately high shares of fatalities in Maryland and the Baltimore region.

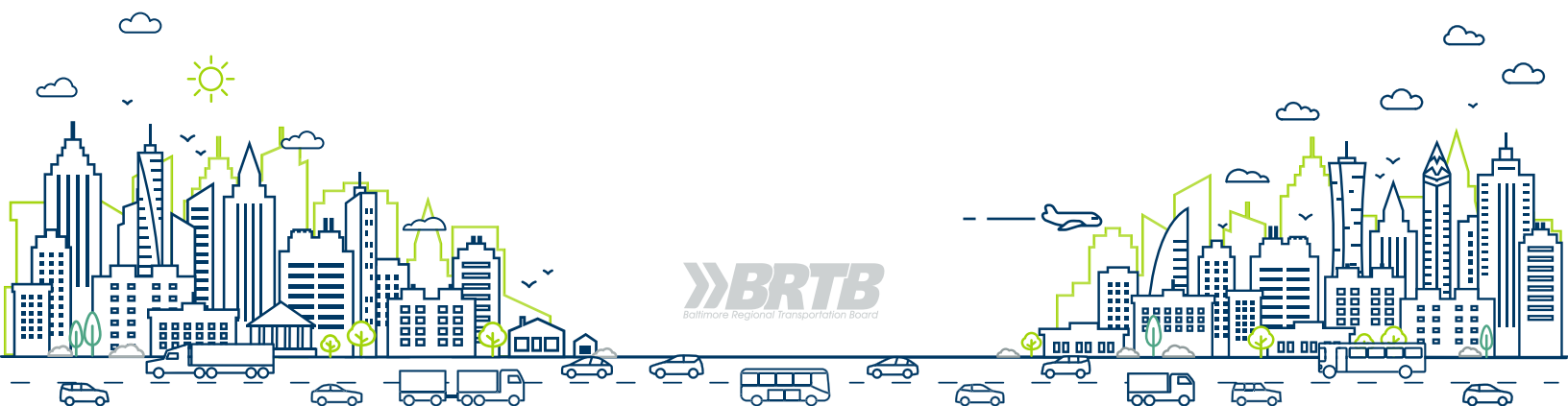
Safe System Approach

The Safe System Approach (SSA) is focused on reducing roadway fatalities and serious injuries to zero. The SSA takes a holistic view of the roadway network and the interactions among roads, speeds, vehicles, and road users. BMC's proposed FY 2023 UPWP includes a project focused on further utilizing the SSA.

Safety is becoming more ingrained in the project selection process and development of *Resilience 2050*. However, the development of *Resilience 2050* is also coming at a time of increasing uncertainty due to the COVID-19 pandemic and associated emergence of traffic safety trends that have been unexpected by practitioners for many decades. It is vital that *Resilience 2050* and future plans account for these and future traffic safety trends. Safety is and will continue to be a primary focus of departments of transportation, metropolitan planning organizations, highway safety offices, health care practitioners, and educational outreach partners.

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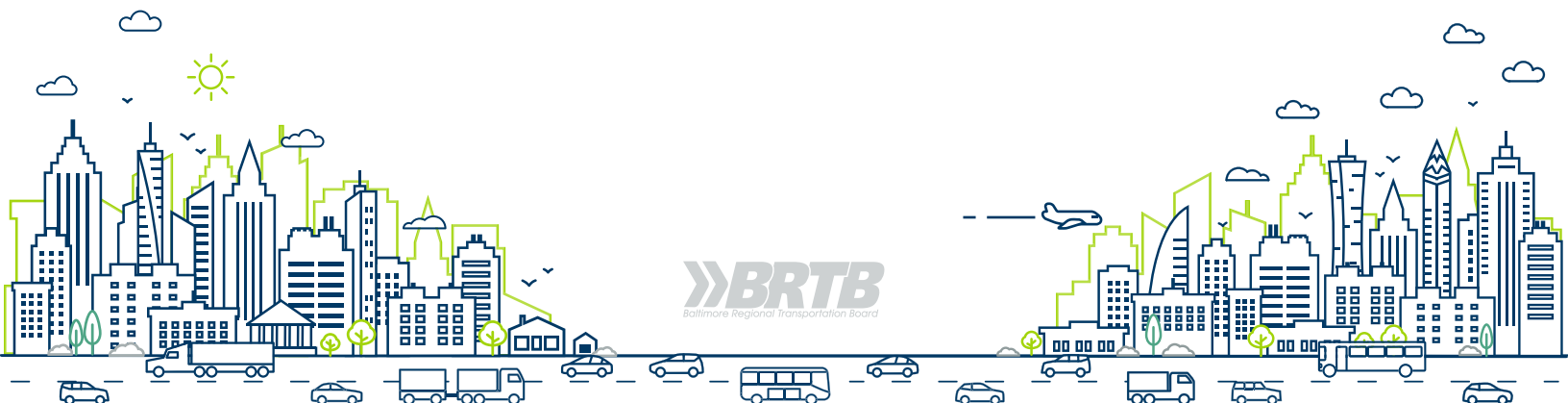
Traffic Safety White Paper

Driving is critical for many people throughout life, first as a rite of passage and ultimately as a means of independence. Bicycling and walking are other common and inexpensive ways to travel while also enjoying fresh air and nature. However, motor vehicle crashes, including those involving bicyclists and pedestrians, are also a leading cause of death in the U.S. (CDC, 2020). In 2020, nine of the ten leading causes of death remained the same as in 2019. The top leading cause was heart disease, followed by cancer. COVID-19, newly added as a cause of death in 2020, became the third leading cause of death, moving unintentional injuries to the fourth leading cause after being third for many years (NCHS, 2021). This white paper focuses on traffic safety in the Baltimore region, including a summary of data and trends, how the Baltimore Regional Transportation Board (BRTB) and its members are working to improve traffic safety, and how traffic safety is addressed in the upcoming Long Range Transportation Plan, *Resilience 2050*.

Cars became widely available in the early 20th century. Since that time roads have been built and cities have been designed to support vehicles. The integration of non-motorists as a focus of roadway design is fairly recent. Designing roadways for the safety of all users is incredibly important since a crash involving a motor vehicle and a non-motorist will almost always result in an injury due to the lack of physical protection around non-motorists (NHTSA, 2021).

Crashes between vehicles have also become more severe and deadly due to riskier behaviors exhibited by drivers. This has particularly been the case during the COVID-19 pandemic. A recent study of clinical data from Pennsylvania found that, compared to preceding years, crash incidence decreased 10% under stay-at-home measures with no change in mortality rate. The study also found that the severity of injuries increased during the pandemic. In areas where the number of crashes decreased, there was a 16% increase in crash injury severity (Kaufman, 2021).

There are many disciplines focused on protecting road users and working to make the transportation system as safe as possible. Those experts include engineers, planners, law enforcement, public health



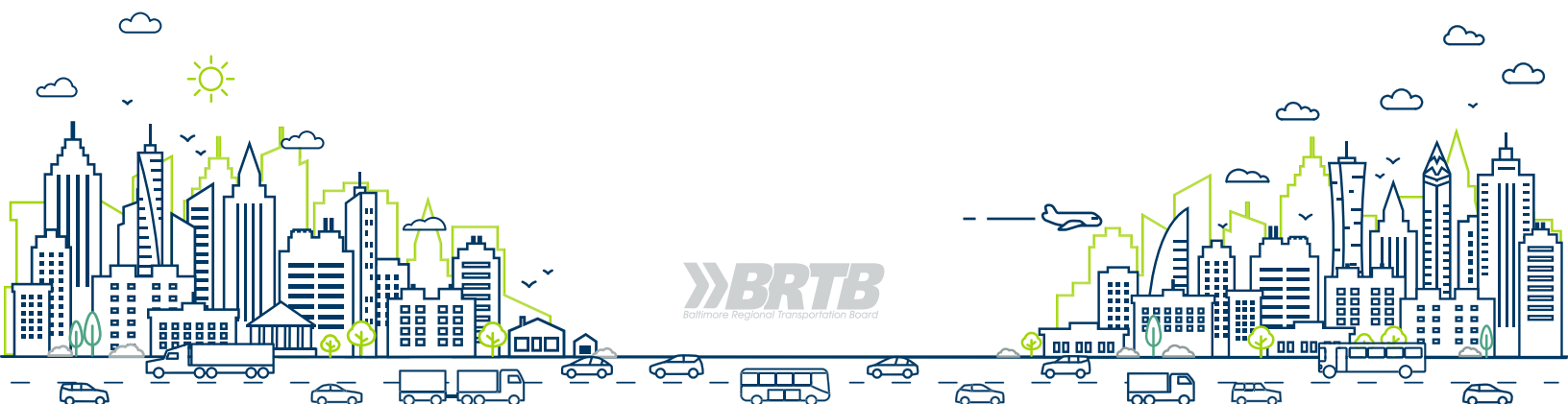
practitioners, epidemiologists, first responders, road maintenance workers, and vehicle manufacturers. As new ideas are formed, the trends in traffic crashes, injuries, and fatalities are examined to determine both the need for an intervention or improvement and the level of safety provided by it. To this end, the U.S. Department of Transportation (USDOT) has several agencies focusing on different modes of roadway transportation: National Highway Traffic Safety Administration (NHTSA), Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and the Federal Motor Carrier Safety Administration (FMCSA). Those agencies monitor crash, injury, and fatality trends nationwide and support programs at the state, local, and tribal levels to reduce those incidents.

This paper uses a number of different terms related to traffic safety. Some basic definitions related to traffic safety are included below:

- Crash (NCSA, 2021): A motor vehicle traffic crash is defined as an incident that involved one or more motor vehicles in transport that originated on a public trafficway, such as a road or highway. Crashes that occurred on private property, including parking lots and driveways, are excluded.
- Level of Injury (NHTSA, 2017):
 - Serious injury: A serious injury is generally defined as an incapacitating injury or any injury, other than a fatal injury, that prevents the injured person from walking, driving, or normally continuing the activities the person was capable of performing before the injury occurred.
 - Suspected serious injury: A suspected serious injury is any injury other than a fatality which results in injuries such as severe lacerations, broken or distorted extremities (arm or leg), unconsciousness or paralysis.
- Non-motorist (FHWA, 2016): Federal regulations define non-motorists as transportation system users who are not in or on traditional motor vehicles on public roadways. Examples include bicyclists, pedestrians, wheelchair users, and scooter riders.
- Vehicle Miles Traveled (VMT) (MDOT SHA, 2020): VMT is defined as the number of vehicles times the distance traversed along the system and is calculated for various roadway classifications on a local, regional, state, and national level. For example, if 20 cars traveled 10 miles, VMT would be $20 \times 10 = 200$ vehicle miles traveled.

Planning for Safety

As the Metropolitan Planning Organization (MPO) for the Baltimore region, the BRTB is focused on understanding the causes of crashes and identifying safety countermeasures. Safety planning is critical to the Long Range Transportation Plan (LRTP) because almost all safety projects and programs take



several years to bring about change. Roadway countermeasures may take years to be approved and completed, while behavioral interventions may take years to change the culture and behavior of road users. To this end, utilizing the 20+ year life cycle of the LRTP allows the BRTB to review historical trends, identify areas of need for safety projects, implement those programs, and evaluate the effectiveness of the interventions after society has adjusted.

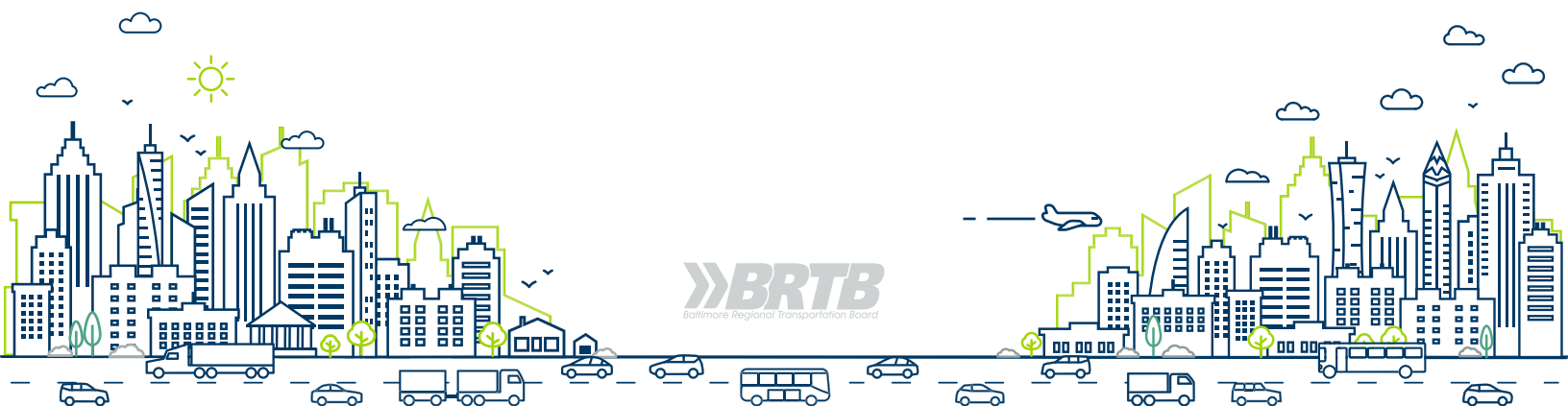
State of the Region

The most recent crash, injury and fatality figures for the Baltimore region and the state of Maryland are included in figure 1.

Figure 1. Crash, Injury, and Fatality Statistics in the Baltimore Region and Maryland

| BALTIMORE REGION | 2016 | 2017 | 2018 | 2019 | 2020 |
|--|---------|---------|---------|---------|--------|
| Crashes | 67,640 | 61,608 | 62,403 | 60,670 | 50,559 |
| Fatalities | 228 | 238 | 222 | 208 | 248 |
| Serious Injuries | 1,432 | 1,684 | 1,575 | 1,509 | 1,409 |
| Total Injuries | 25,824 | 26,374 | 26,022 | 25,292 | 19,591 |
| Vehicle Miles Traveled (millions) | 27,358 | 27,731 | 27,688 | 27,844 | 23,318 |
| Non-motorist fatalities and serious injuries | 342 | 366 | 363 | 343 | 331 |
| MARYLAND | 2016 | 2017 | 2018 | 2019 | 2020 |
| Crashes | 120,278 | 115,438 | 118,043 | 115,967 | 95,507 |
| Fatalities | 522 | 558 | 512 | 535 | 573 |
| Serious Injuries | 3,167 | 3,347 | 3,233 | 3,122 | 2,718 |
| Total Injuries | 50,921 | 51,391 | 50,011 | 48,663 | 36,754 |
| Vehicle Miles Traveled (millions) | 58,974 | 59,892 | 59,629 | 60,136 | 50,592 |
| Non-motorist fatalities and serious injuries | 609 | 685 | 663 | 640 | 574 |

Federal regulations require MPOs to set targets for and track several different performance measures. These measures help the region to track progress towards achieving roadway safety goals. The performance measures include fatalities, serious injuries, non-motorist fatalities, and non-motorist



serious injuries. Of the performance measures that the USDOT uses to monitor trends, the region has shown an increase in fatalities in 2020 and a decrease in other areas. Figures 2, 3, and 4 show these trends.

Figure 2. Fatalities in the Baltimore Region and Maryland

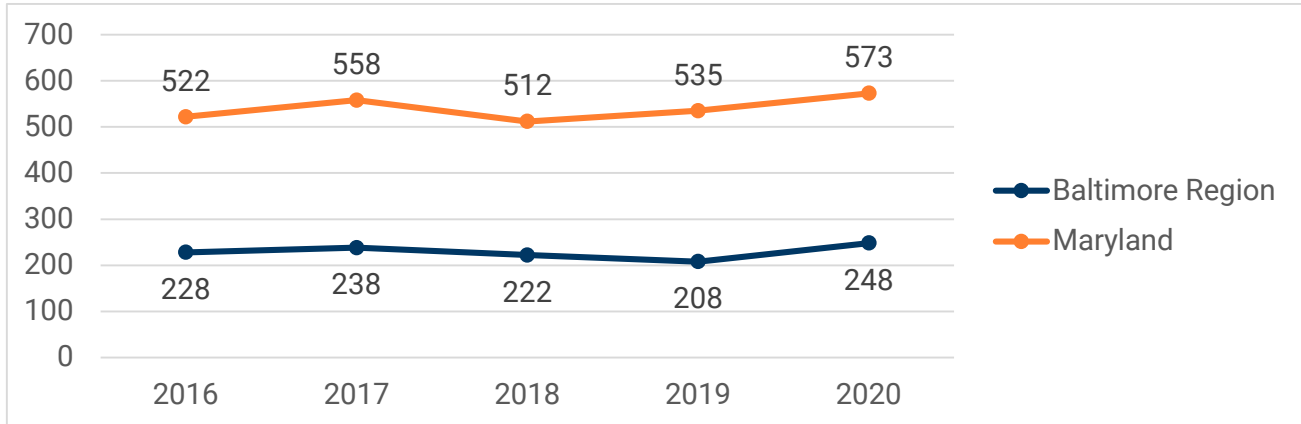


Figure 3. Serious Injuries in the Baltimore Region and Maryland

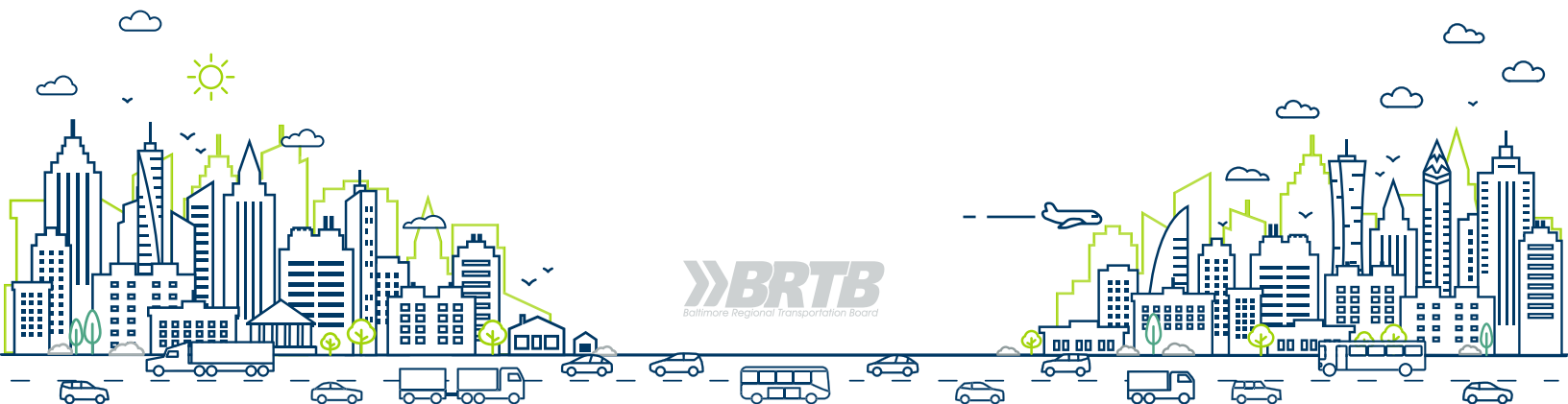
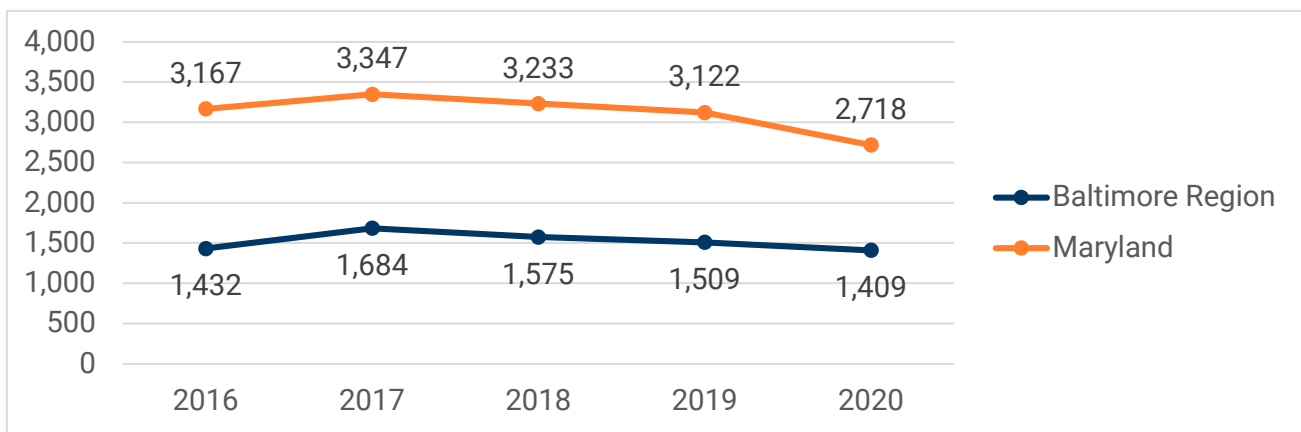
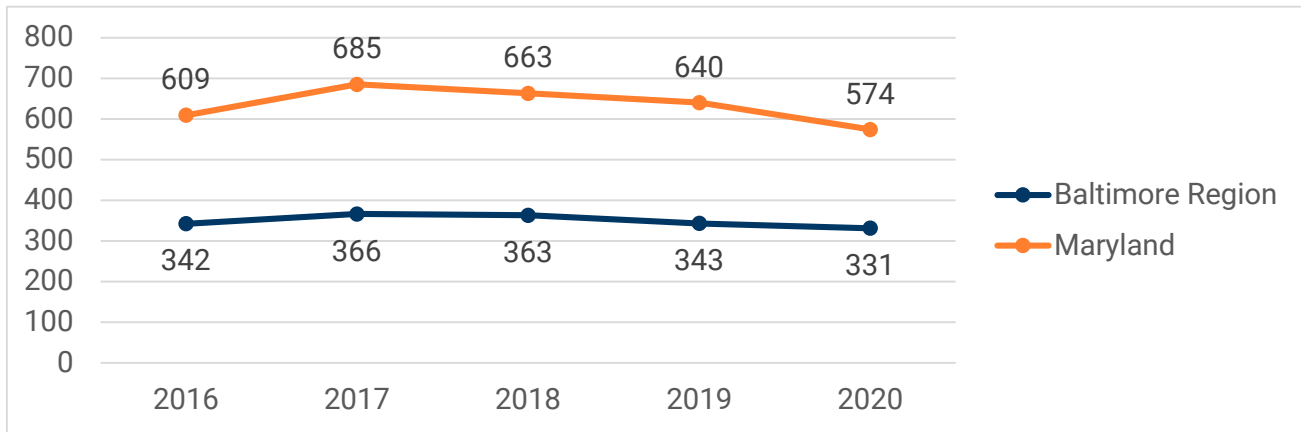
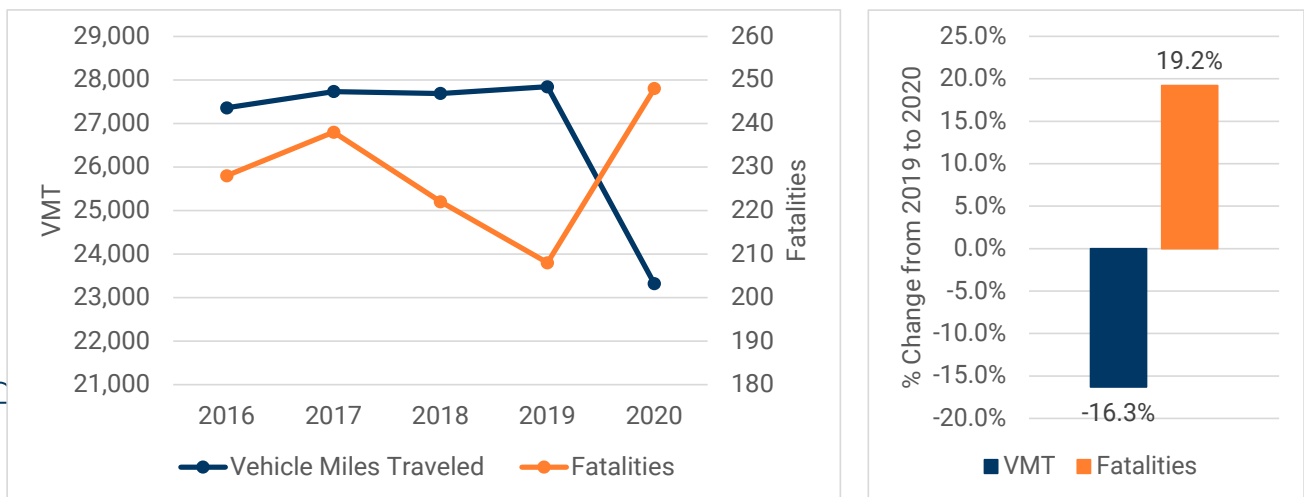


Figure 4. Non-motorist Fatalities and Serious Injuries in the Baltimore Region and Maryland

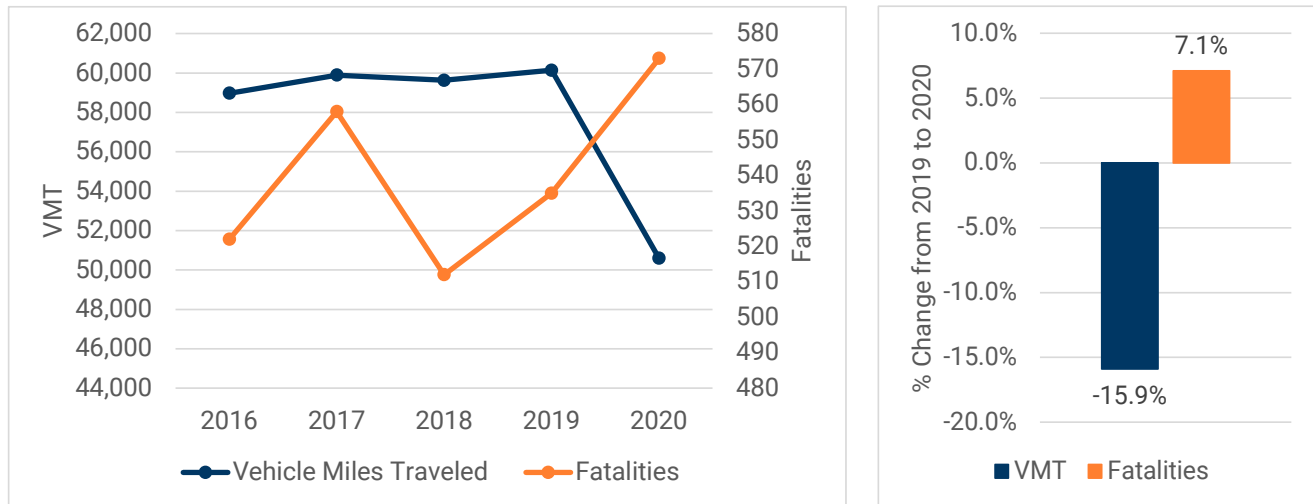


Prior to the pandemic, roadway safety experts commonly believed that having more cars on the roadway was a major contributor to the number and severity of crashes. As a result, it was believed that reducing the number of cars on the roadway would reduce the burden of injury from traffic crashes. However, the recent safer-at-home and quarantine regulations associated with the COVID-19 pandemic have shown this not to be the case. During 2020, vehicle miles traveled decreased significantly nationwide and in the Baltimore region. At the same time, in contrast, there was a rise in traffic crash fatalities. While the number of crashes and injuries did decline in 2020, fatalities increased. Figures 5-8 show the decrease in VMT and increase in fatalities in the Baltimore region and state of Maryland. In the Baltimore region, VMT decreased by 16.3% from 2019 to 2020. Despite the decrease in VMT, fatalities in the Baltimore region rose by 19.2%. Statewide VMT decreased by 15.9% while fatalities increased by 7.1% over the same period.

Figures 5 and 6. Vehicle Miles Traveled and Fatalities in the Baltimore Region



Figures 7 and 8. Vehicle Miles Traveled and Fatalities in Maryland

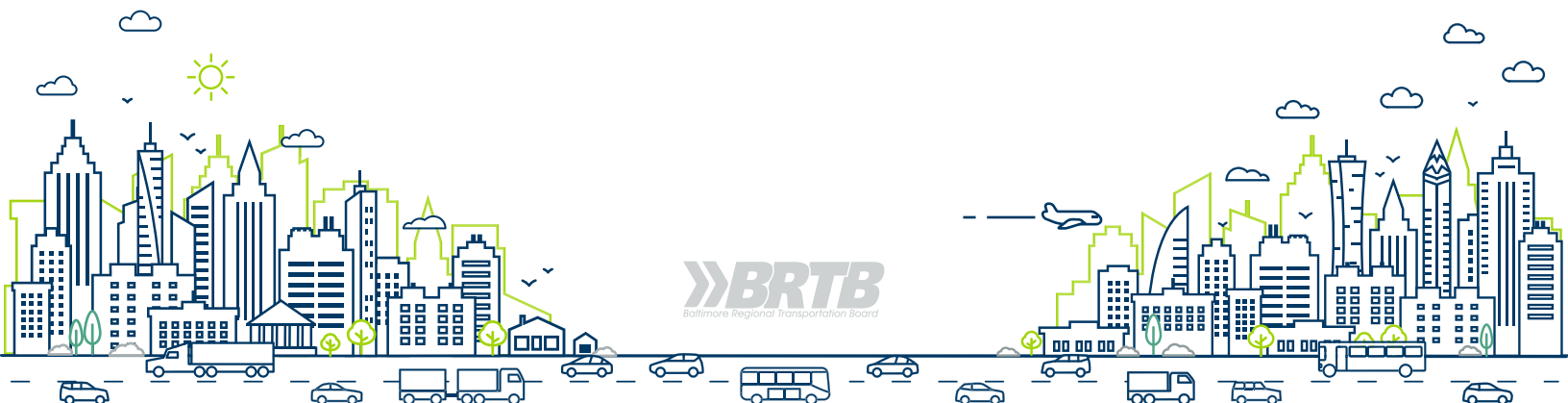


This data shows that the commonly held belief of fewer cars = lower exposure = fewer fatalities may not be true. Riskier driving has emerged as an explanation for the increase in fatalities. During those many months when fewer cars were on the road and more people were home, those that were traveling were exhibiting significantly higher speeds, higher rates of impairment by alcohol or drugs, and other risky behaviors such as not using a seatbelt. Those three behaviors (speeding, impaired driving, and not using a seatbelt) have been identified as the top contributors to the majority of traffic fatalities in Maryland. It is understandable that the number of fatalities increased given that all three behaviors increased during the pandemic.

BRTB Planning

Safety for all users has been and continues to be a top priority for the BRTB, the Maryland Department of Transportation (MDOT), and partners. To that end, safety has been integrated into many programs and plans at the BRTB. In addition to the LRTP, the BRTB is responsible for updating and approving a short-term program of transportation improvements known as the Transportation Improvement Program (TIP). The TIP includes all transportation projects requesting federal funds over the next four fiscal years. Both the LRTP and the TIP include project evaluation criteria related to safety.

The BRTB and its seven member jurisdictions have focused further on non-motorist safety, specifically pedestrians and bicyclists. The Bicycle and Pedestrian Advisory Group (BPAG) is a BRTB subcommittee that focuses on creating a more walkable and bikeable region by:



- Providing grants to the BRTB member jurisdictions
- Developing tools and data to assist in the expansion of safer sidewalks, crosswalks, bike lanes, shared-use paths, and more
- Collaborating with federal, state, and local agencies
- Promoting safe biking and walking in the region for all ages and abilities through events such as Bike to Work and Safe Routes to School

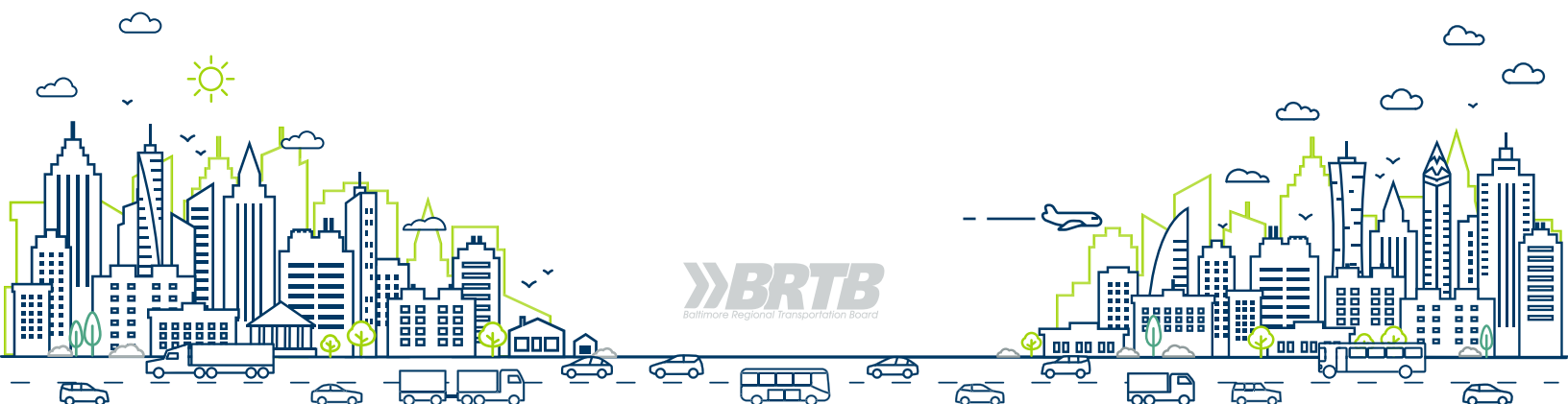
Many jurisdictions have also implemented Complete Streets manuals and changes to design and planning processes. Complete Streets (BCDOT, 2021) are designed and operated to prioritize safety, comfort, and access to destinations for all people who use the street, especially people who have experienced systemic underinvestment or whose needs have not been met through a traditional transportation approach, including older adults, people living with disabilities, people who cannot afford or do not have access to a car, and Black, Indigenous American, and Hispanic or Latino/a/x communities. Equity is another critical component of transportation safety and has become a clear focus through safety planning.

A marquee safety planning concept is a Strategic Highway Safety Plan (SHSP). Maryland developed its first SHSP in 2003 using the American Association of State Highway and Transportation Officials (AASHTO) plan. The State is currently implementing its [fifth SHSP](#), which was adopted in December 2020 and covers 2021 through 2025. Several years ago, MDOT suggested that each of Maryland's twenty-four jurisdictions develop local strategic plans to complement the State plan. This is important as a notable portion of serious crashes occur on roads that are maintained by local departments of public works or transportation and are under the authority of local police departments and sheriff's offices. In 2020, 40 percent of all crashes, 37 percent of injury crashes, and 28 percent of fatal crashes occurred on county and municipal-maintained roadways (MHSA, 2021). The implementation of local SHSPs ensures that the entire roadway network and population are considered for safety countermeasures. To further that effort, the Maryland Department of Transportation Motor Vehicle Administration's Highway Safety Office (MHSA), expanded the partnership with the Baltimore Metropolitan Council (BMC) to fund a safety planner focused on supporting local SHSPs throughout the Baltimore region.

Strategic Highway Safety Plan (SHSP)

FHWA requires every state to develop and implement an SHSP. The primary goal of an SHSP is to reduce fatalities and serious injuries on all public roads (FHWA, 2017). It offers the following benefits:

- Establishes common statewide goals and priorities;
- Strengthens existing partnerships;

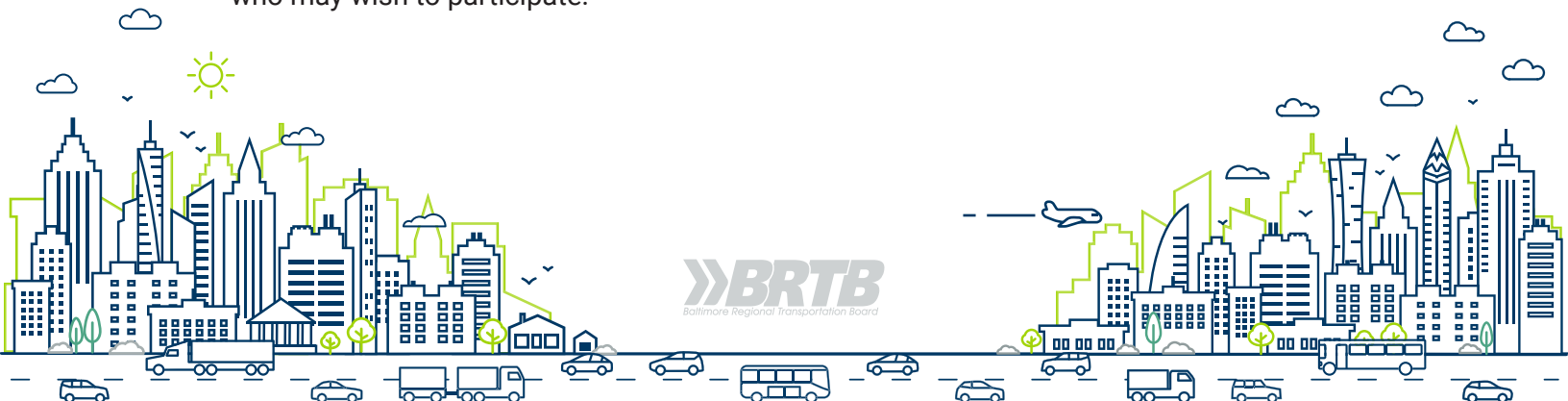


- Builds new safety coalitions;
- Promotes data, knowledge, and resource sharing;
- Focuses on the State's most serious traffic safety problems;
- Avoids redundant activities and leverages existing resources, such as funding, personnel, and leadership;
- Provides a multidisciplinary approach to solving problems; and
- Incorporates both behavioral and infrastructure strategies and countermeasures to more effectively reduce highway fatalities and serious injuries on all public roads.

Involvement in the SHSP means one organization does not carry all of the financial or technical burdens alone. It fosters camaraderie and trust, so individuals know where to turn with questions, problems, shared strategies, and new ideas. The possibilities for sharing resources through SHSP collaborations are endless. For example, high-visibility enforcement combined with low-cost safety improvements, where appropriate, may improve safety more than either strategy alone. This collaborative approach brings about combinations of countermeasures that improve safety more effectively than any single countermeasure.

In Maryland and the Baltimore region, this strategic planning process has followed a standard approach using the Vision, Mission, Objectives, Strategies, and Action Plans strategic planning method developed by the Center for Community Health and Development at the University of Kansas. This method, commonly known as VMOSA, provides a clear, defined step-by-step process to link the vision to discrete actions to achieve success. The VMOSA process is as follows:

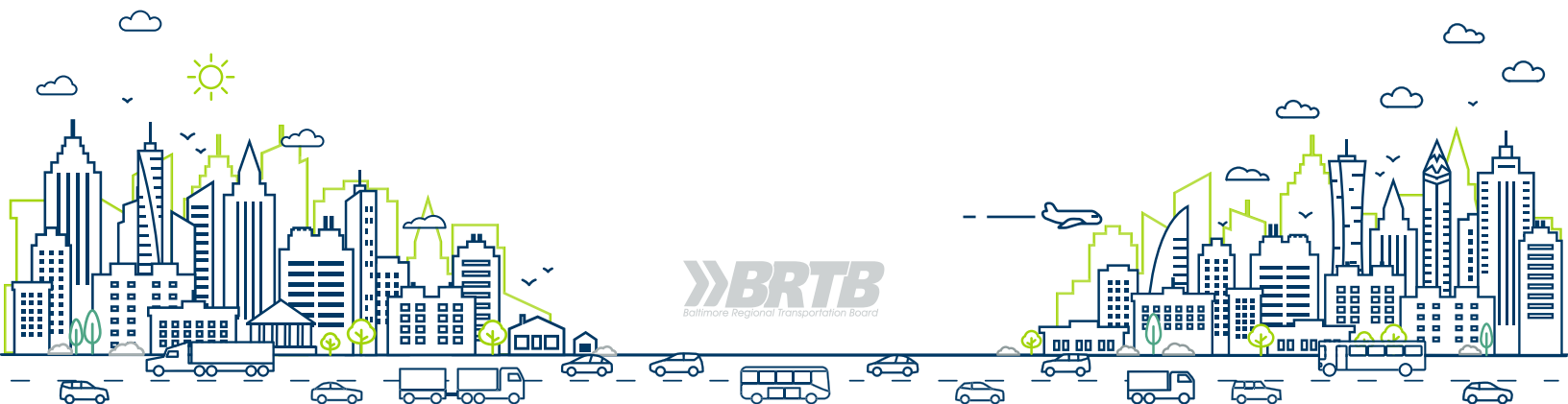
- Identifying the **vision** and ultimate goal to reduce traffic fatalities to zero
- Developing a concise **mission** statement on how that goal will be achieved
- **Objectives** may be defined as **Emphasis Areas**, which identify the most critical factors that impact traffic safety in the jurisdiction.
- **Strategies** are broad statements as to how the team will organize efforts to achieve the mission and vision.
- The **Action Plan**, or **Implementation Plan**, contains the specific projects within each strategy. Each project will have an assigned lead agency, partners, justification for its inclusion, timeline, and evaluation metric. Establishing those items for each project before implementing the plan is critical to its success because it provides the framework over the life of the plan for any partner who may wish to participate.



Emphasis Areas in the Maryland SHSP

The Maryland SHSP identifies the following Emphasis Areas (with definitions):

- **Aggressive driving/speeding:**
 - Aggressive Driving Related Crash: A crash in which a driver failed to yield, failed to stop, failed to obey traffic signals, drove too quickly, followed too closely, or otherwise failed to follow roadway rules, as indicated in a Maryland crash report
 - Speed Related Crash: A crash where at least one driver in the crash was reported to be speeding
- **Distracted driving:** A distracted driving related crash is a crash where at least one driver was reported to be distracted in a Maryland crash report. Examples include distraction by a cell phone, electronic device, other occupants, audio or climate controls, eating/drinking/smoking, or by an outside person/object/event.
- **Impaired driving:** An impaired driving crash is defined as a crash where at least one driver in the crash is determined to be impaired by the investigating officer. This definition includes drug impairment as well as alcohol impairment.
- **Infrastructure:**
 - Highway Infrastructure Related Crash: A crash in which any of the following were a factor: road surface, road type, road environment (weather, visibility), work zone, road segments (curves, grade, tunnels, number of lanes, shoulder condition, width of lanes), junction type (gradient, length, sight distance, conflict points), junctions.
 - Intersection Related Crash: Crashes reported as occurring in an intersection or being intersection related. "Intersection related" is not a location type but a judgment about the effects of intersections and their traffic controls upon traffic and crash causation. If the crash is deemed to have occurred as a result of backed-up traffic from an intersection (presumably at a non-intersection location) the crash is considered to be "intersection related."
 - Run-off-the-Road Crash: A crash where the first event was recorded as "striking a fixed object" or "running off the road" or the location of the crash was reported as "off-road" or "in the median."
 - Work-Zone Crash: Crashes occurring in a construction or maintenance zone.



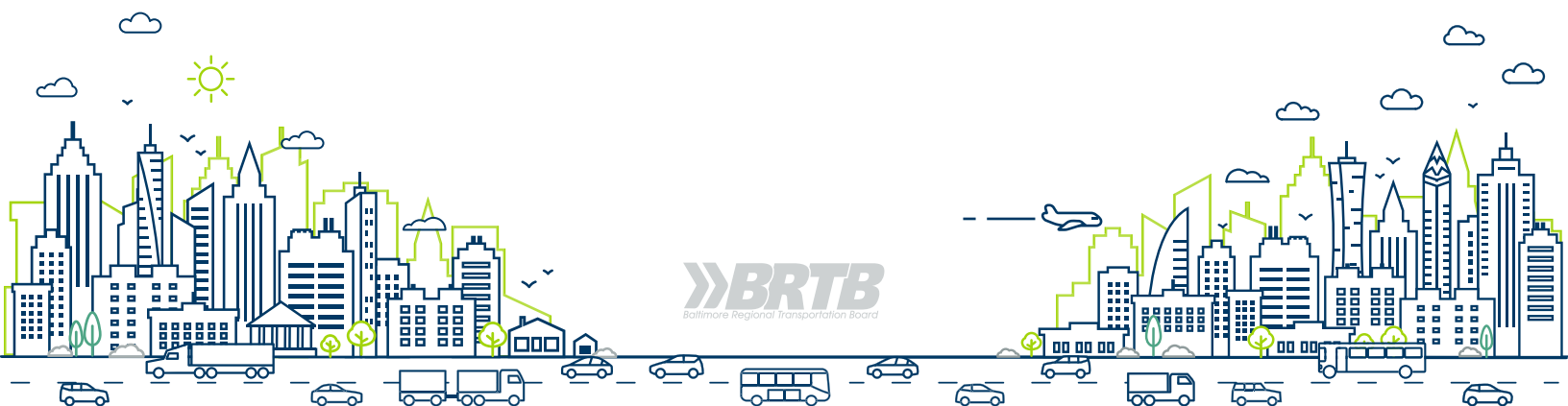
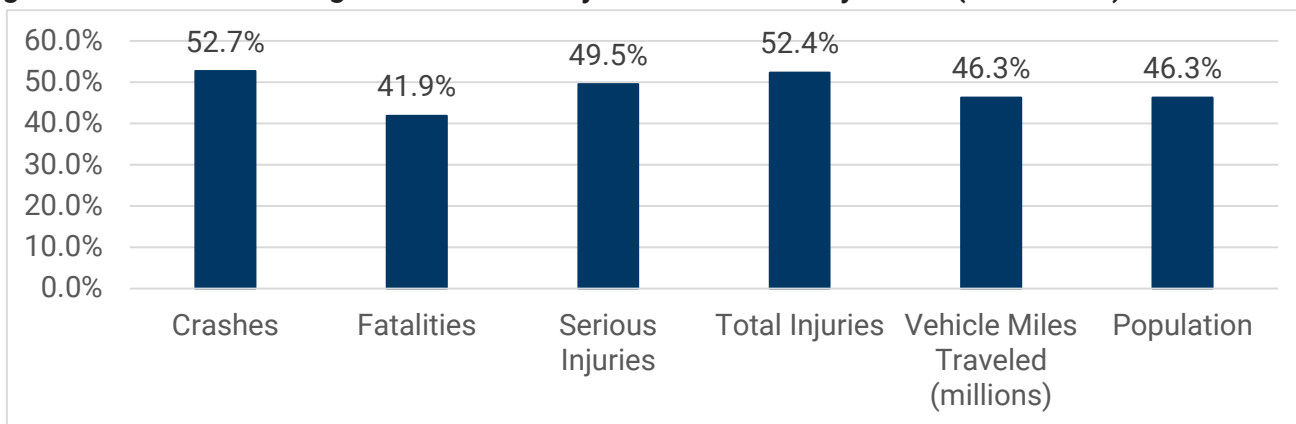
- **Occupant Protection:** Occupant protection involves unrestrained occupants. An unrestrained occupant is defined by age for passenger-vehicle (automobile, station wagon, van, SUV, pickup truck) occupants:
 - 0-7 years old: Not using a child or youth restraint
 - 8+ years old: Not using a seat belt
- **Pedestrian/bicycle safety:**
 - Pedestrian Crash: A crash where at least one involved person is reported as a person on foot, including a motorist who has exited a vehicle.
 - Bicyclist Crash: A crash where at least one involved person is on any type of pedal cycle, including bicycles, tricycles, unicycles, and any trailers or sidecars attached to these cycles.

Each Emphasis Area includes strategies for data, enforcement, infrastructure, legislation, education/outreach, and vehicle engineering and technology. With this model, local SHSPs were developed throughout the Baltimore region and all seven BRTB member jurisdictions will have a plan in place by summer 2022.

SHSP Emphasis Areas in the Baltimore Region

When looking at traffic crash frequencies and severity, the Baltimore region consistently accounts for approximately half of Maryland's issues (MHSO, 2021). Figure 9 shows the Baltimore region's share of various data points from 2018 through 2020. For example, the Baltimore region accounts for approximately 41.9% of Maryland's fatalities and about 52.4% of Maryland's total injuries. However, the region also has 46.3% of the state's population and carries 46.3% of its vehicle miles traveled.

Figure 9. The Baltimore Region's Share of Maryland's Traffic Safety Issues (2018-2020)



As local SHSPs have been developed throughout the region and problem identification processes have been completed, it is clear that the Baltimore region and the state of Maryland face the same problems. Below is a data breakdown for the last five years of available data (MHSO 2021) by problem area. It is important to note that these numbers reflect all persons involved in the identified crashes (e.g. pedestrian crash figures also include the drivers and occupants in the vehicles).

Total Crashes, Injuries and Fatalities (2016-2020):

- There were 302,880 crashes in the region, an average of 60,576 each year. The region accounted for 53.6% of all crashes in the state.
- There were 1,144 fatalities in the region, an average of 229 each year. The region accounted for 42.4% of all fatalities in the state.
- There were 123,103 injuries in the region, an average of 24,621 each year. The region accounted for 51.8% of all injuries in the state.

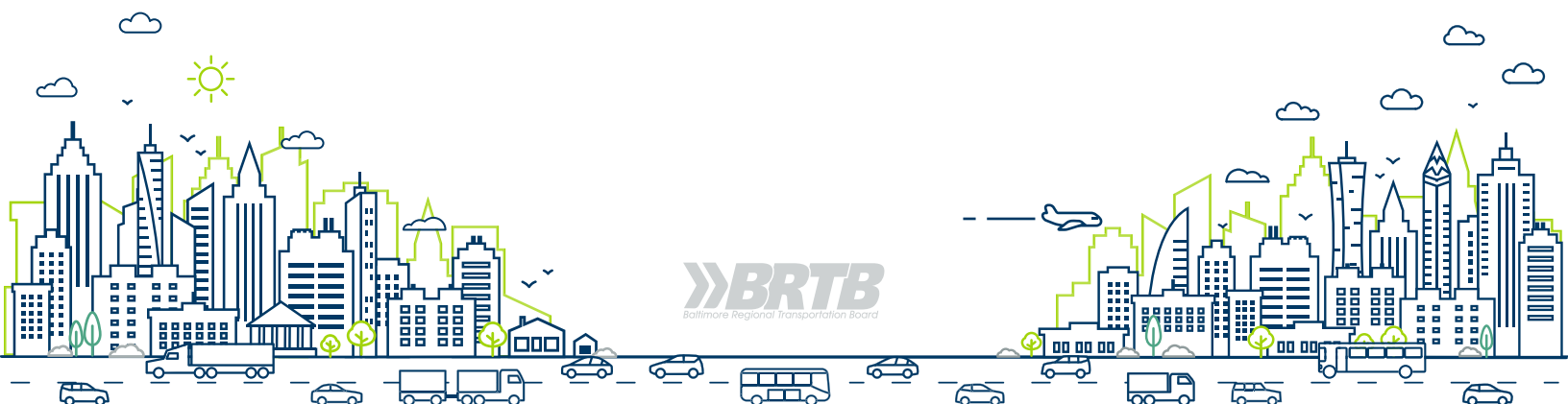
Non-motorist safety: Non-motorist safety is the most prevalent issue, which aligns with the pedestrian/bicycle emphasis area in the State plan and is a BRTB priority. It is the primary focus area in the Baltimore City and Anne Arundel, Baltimore, and Howard County SHSPs and is a strong focus area in all other local SHSPs in the Baltimore region. In the last five years (2016-2020):

- There were 11,492 crashes involving non-motorists in the region, an average of 2,298 each year. This represents 3.8% of all crashes in the region over this period.
- There were 327 non-motorist fatalities in the region, an average of 65 each year. This represents 28.6% of all fatalities in the region over this period.
- There were 11,404 non-motorist injuries in the region, an average of 2,281 each year. This represents 9.3% of all injuries in the region over this period.

One statistic that jumps out is the high share of injuries and fatalities resulting from crashes involving non-motorists. While crashes involving non-motorists account for 3.8% of all crashes in the region, they account for 28.6% of all fatalities and 9.3% of all injuries. This means that non-motorist crashes lead to a disproportionately high share of injuries and fatalities in the Baltimore region. Similarly, in the Maryland counties around the Washington, DC urbanized area (Charles, Frederick, Montgomery, Prince George's), non-motorists accounted for 3.3% of crashes, 26.5% of fatalities, and 7.6% of injuries.



A recently completed report, *Dangerous by Design*, ranked the danger to pedestrians in the top 100 metropolitan areas (by population). The Baltimore region ranked number fifty-four in the country as compared to other metropolitan areas. The Orlando-Kissimmee-Sanford metro area in Florida



ranked number one. The rankings are based on the number of people struck and killed by drivers while walking, controlling for the number of people and the share of people who walk to work as a proxy for overall walking in an area (Smart Growth America, 2021).

Speeding: Speeding is a major emphasis area and focus throughout the region and is also related to non-motorist safety. All of the local SHSP plans in the region include a focus on speeding. In the last five years (2016-2020):

- There were 23,386 crashes related to speeding in the region, an average of 4,677 each year. This represents 7.7% of all crashes in the region over this period.
- There were 240 fatalities related to speeding in the region, an average of 48 each year. This represents 21% of all fatalities in the region over this period.
- There were 9,765 injuries related to speeding in the region, an average of 1,953 each year. This represents 7.9% of all injuries in the region over this period.

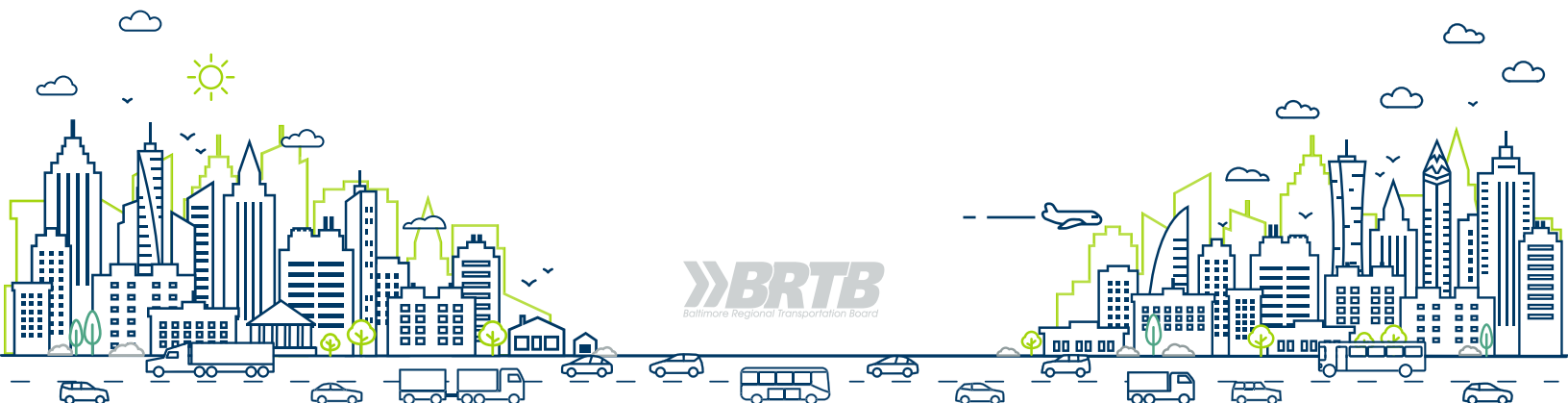
Speeding leads to a disproportionately high share of fatalities in the Baltimore region. While crashes involving speeding account for 7.7% of all crashes in the region, they account for 21% of all fatalities in the region.

Impaired driving: Impaired driving continues to be a concern throughout the State and the Baltimore region. All of the region's local SHSP plans include a focus on impaired driving. In the last five years (2016-2020):

- There were 14,040 crashes involving impaired drivers in the region, an average of 2,808 each year. This represents 4.6% of all crashes in the region over this period.
- There were 313 fatalities involving impaired drivers in the region, an average of 63 each year. This represents 27.4% of all fatalities in the region over this period.
- There were 6,758 injuries involving impaired drivers in the region, an average of 1,352 each year. This represents 5.5% of all injuries in the region over this period.

Impaired driving also leads to a disproportionately high share of fatalities in the Baltimore region. While crashes involving impaired drivers account for 4.6% of all crashes in the region, they account for 27.4% of all fatalities in the region.

Non-motorist safety, speeding, and impaired driving continued to be major issues in 2020, with each accounting for disproportionately high shares of fatalities in Maryland and the Baltimore region. In Maryland in 2020, close to one in five fatalities was related to impaired driving, while one in five was related to speeding, and one in four was a pedestrian, bicyclist, or other non-motorist.



Safety Planning and Funding in the Baltimore Region

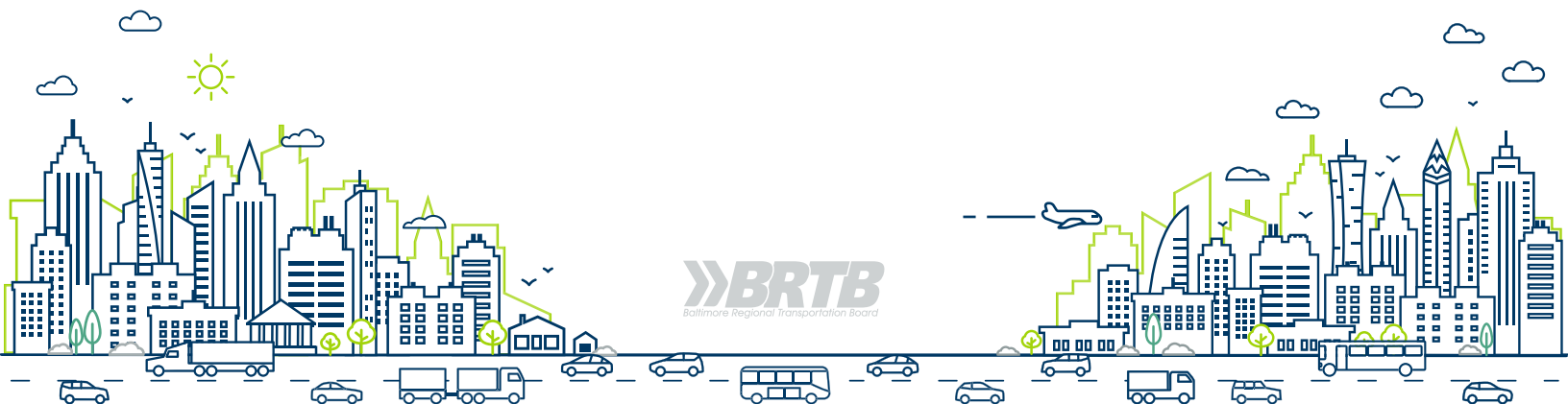
The BRTB utilizes the TIP and LRTP to fund safety programs. The TIP is a short range program of improvements and the LRTP is a longer term planning document that includes projects the region expects to implement over the next 20 plus years. Projects funded with federal dollars must be in the TIP or LRTP to move forward. As projects move from the conceptual to the implementation stage, they move from the LRTP (long-term) into the TIP (projects requesting funds over the next 4 fiscal years).

The upcoming LRTP, *Resilience 2050*, demonstrates the high priority placed on safety through the regional goals and strategies and the project scoring methodology. The goals and strategies establish guiding principles as the region plans and carries out transportation projects and programs. Improving System Safety is one of the nine goals for the region. This goal is accompanied by a number of supporting strategies that will help the region to improve system safety. The full text of the safety goal and strategies are included below.



Resilience 2050 Goal: Improve System Safety - Reduce the number of crashes, injuries, and fatalities experienced by all users of the transportation system toward meeting Zero Deaths Maryland.

- Continue to coordinate with MDOT and local agencies to improve roadway and transit safety through performance-based planning and programming.
- Adopt relevant state and local plans that seek to reduce transportation-related injuries and fatalities.
- Improve traveler safety in all modes through traffic and transit system management, communication systems, local governance and policies, and operations techniques.
- Eliminate hazardous or substandard conditions in high crash locations and corridors (all modes) using best practices and proven countermeasures.
- Improve conditions to enable non-motorists to travel more safely on a day-to-day basis, including safe interactions with users of other modes and safe access to transit stations and stops.
- Support research into better understanding the causes of bicycle and pedestrian crashes and injuries to promote more effective countermeasures.
- Educate all travelers of all modes on safe travel techniques using different outreach methods, such as media and educational campaigns.



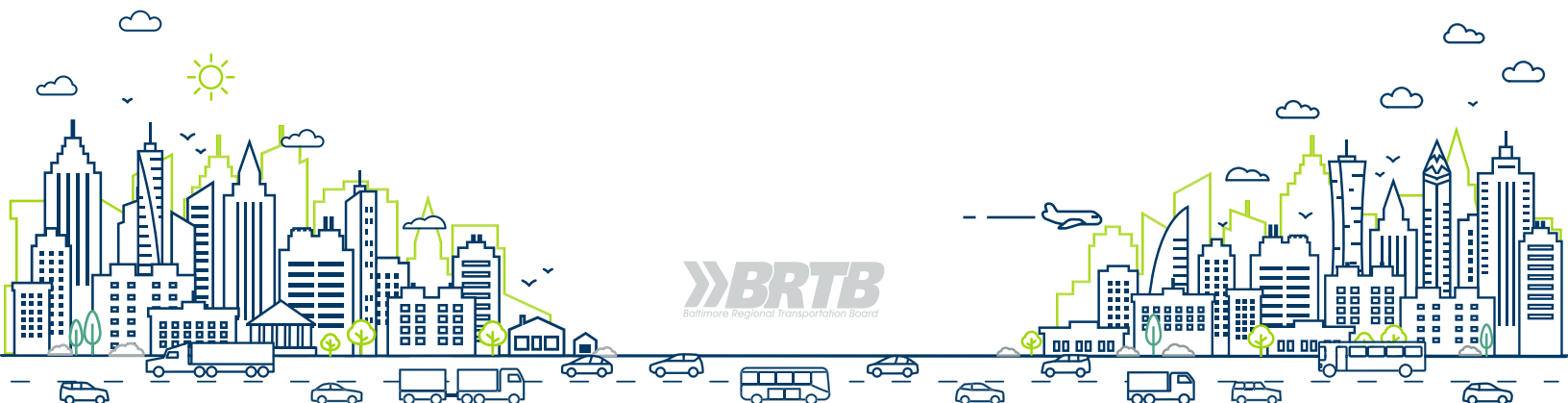
The project scoring methodology also places a high priority on safety. Projects are given both a policy and a technical score. The policy score is worth up to 40 points and is based on how high of a priority the project is for the submitting jurisdiction as well as whether the project has financial support from MDOT. The technical score is based on project consistency with criteria drawn directly from the regional goals, including improving system safety. As jurisdictions submit project proposals from April to June of 2022, BMC staff will score those projects based on the technical scoring methodology. The technical score is worth a maximum of 50 points for roadway projects. Safety accounts for 10 out of 50, or 20%, of the technical scoring points.

The technical scoring criteria for safety focus on the top safety issues in the region as identified by the local SHSPs. Specifically, it emphasizes the inclusion of countermeasures addressing non-motorist safety, speeding, and impaired or distracted driving. Projects are eligible for a maximum of 10 highway safety points:

- 2 points: Projects will receive two points for identifying the specific SHSP emphasis areas that the project will address. This will be drawn from the local SHSP or the state SHSP if no local SHSP has been adopted.
- 6 points: Three issues are consistently among the top issues affecting safety in both Maryland and the Baltimore region, as detailed previously:
 - Non-motorist safety: Projects that improve the safety of non-motorists such as bicyclists, pedestrians, and wheelchair users will receive the maximum of 6 points.
 - Speeding: Projects that reduce excessive travel speeds to promote safer driving will receive 4 points.
 - Impaired or Distracted Driving: Projects that reduce the likelihood that a driver will leave their lane or the roadway will receive 2 points.
- 2 points: Projects anticipated to improve safety for low-income and minority populations will receive an additional 2 points.

In addition to the emphasis of safety in the LRTP, infrastructure improvements related to safety are a significant focus in State, regional, and local plans, especially with the recent expansion of the Highway Safety Improvement Program (HSIP) funds available for local road improvements. The purpose of the HSIP is to achieve a significant reduction in traffic fatalities and serious injuries on public roads. To obligate “core” safety funds, the Maryland Department of Transportation State Highway Administration (MDOT SHA) must have an HSIP in effect under which the State:

- develops and implements a Strategic Highway Safety Plan (SHSP) that identifies and analyzes highway safety problems and opportunities to reduce fatalities and serious injuries,



- produces a program of projects or strategies to reduce identified safety problems,
- evaluates the plan on a regular basis to ensure the accuracy of the data and priority of proposed improvements, and
- submits an annual report to the FHWA Division (MHSO, 2020).

HSIP funds have not typically been shared with local agencies for projects on local roads, but instead have primarily been used to improve safety on state-maintained roadways. In 2021, MDOT SHA began a grant application process for local use of a portion of HSIP funds. To qualify for those funds, local jurisdictions must have an SHSP in place and are encouraged to identify systemic or network-level improvements.

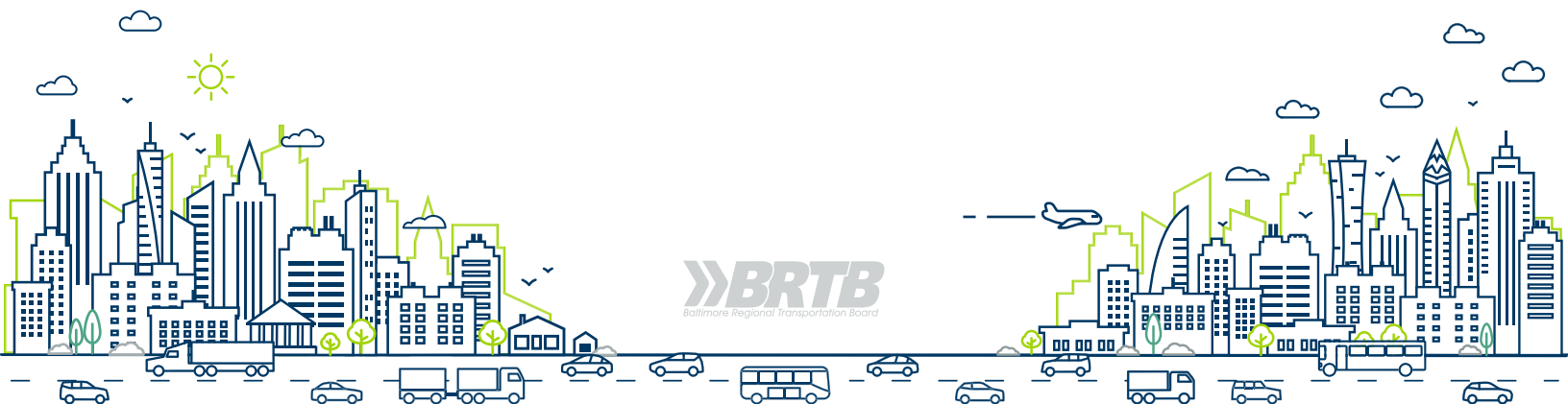
The HSIP represents an exciting new funding opportunity for local agencies. Other opportunities include new funds associated with the recently passed Bipartisan Infrastructure Law that allow for behavioral and infrastructure projects focused on safety.

Safe System Approach

The Safe System Approach (SSA) is a systemic approach focused on reducing roadway fatalities and serious injuries to zero. BMC staff are beginning to incorporate the Safe System Approach into their work. Under the SSA, road safety is a shared responsibility among everyone, including those that design, build, operate and use the road system. It takes a holistic view of the road transport system and the interactions among roads and roadsides, travel speeds, vehicles and road users (MHSO, 2020).

Maryland was formerly a Toward Zero Deaths state and became a Vision Zero state in 2019. Eliminating serious and fatal injuries to users of the transportation network is the goal, regardless of the name of the program. Therefore, using SSA in combination with Vision Zero, Toward Zero Deaths, and other approaches adopted by the jurisdictions in the Baltimore region will be seamless. Staff at the BMC have been and continue to work closely with partners in the MDOT SHA, Motor Vehicle Administration, and MHSO to implement the SSA. This promotes strong partnerships across the disciplines of engineering, emergency services, education and outreach, and enforcement. BMC's proposed FY 2023 UPWP includes a project focused on integrating the SSA further into the work of BMC and the BRTB's member jurisdictions.

Safety is becoming more ingrained in the project selection process and development of *Resilience 2050*. However, the development of *Resilience 2050* is also coming at a time of increasing uncertainty due to the COVID-19 pandemic and associated emergence of traffic safety trends that have been unexpected by practitioners for many decades. It is vital that *Resilience 2050* and future plans account for these and future traffic safety trends. Safety is and will continue to be a primary focus of departments of transportation, metropolitan planning organizations, highway safety offices, health care practitioners, and educational outreach partners.



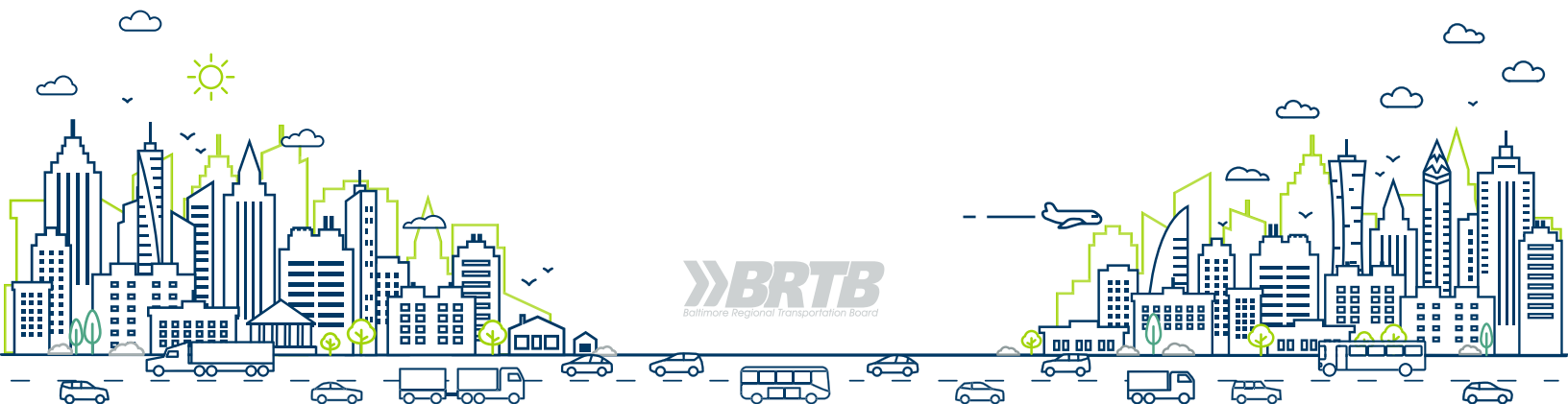


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