NHTSA

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

Performance Management

February 19, 2020

Welcome

Webinar objectives

- The purpose of this webinar is to reiterate performance management requirements. i.e., what does a “data-driven” realistic and attainable annual performance target involve?

What is Performance Management?

- Performance management is a *strategic* and *outcome* based approach that uses system information to inform investment and policy decisions.

Key Safety Performance Management Milestones

2009 NHTSA/GHSA Report

States voluntarily included PMs in FY2010 HSPs

2012 MAP-21 enacted

NHTSA Issued interim final rule

2013 PMs required in FY14 HSPs

2016 FAST Act enacted

NHTSA issued IFR

FHWA issued safety PM rule

2018 NHTSA issued FAST Act final rule

What are the requirements?

HSPs shall include—

- quantifiable **annual performance targets** for each performance measure;

- **justification** for each performance target, that explains why each target is appropriate and evidence-based;

- a **strategy** for programming funds apportioned to the State under this section on projects and activities **that will allow the State to meet the performance targets.**

What are the requirements? (Continued)

HSPs shall include—

- § 1300.11(c)(3) (HSP Contents)– "For program areas where performance measures have not been jointly developed (e.g., distracted driving, drug-impaired driving) for which States are using HSP funds, the State *shall* develop its own performance measures and performance targets that are data-driven.

State Performance Measures

- At least one performance measure (and target) for each program area.

- States must develop their own measures & targets for program areas where core NHTSA/GHSA agreed upon measures do not exist e.g., distracted driving, older drivers, child passenger safety, and EMS.

- Performance measures must specifically relate to the program area.

- States should not use total fatalities, serious injuries and fatality rate measures in lieu of program specific PMs as a “catch all” for projects that do not directly impact one of the 12 core PMs.

GAO Report: Improved Reporting Could Clarify States' Achievement of Fatality and Injury Targets

- In October 2019, the Government Accountability Office (GAO) published a report on whether or not States use performance measures to make traffic safety funding decisions.

- The audit concluded that many States did not provide the required assessments of fatality targets.

- “GAO found that in the 2019 plans submitted by states to NHTSA, less than a third of states reported how performance targets and funded projects were linked”.

- https://www.gao.gov/products/GAO-20-53

GAO's Recommendations to NHTSA

- Recommendation 1: The NHTSA Administrator should provide direction and clarification to States to ensure compliance with requirements to assess and report progress made in achieving fatality targets.

- Recommendation 2: The NHTSA Administrator should develop and implement a mechanism that communicates to Congress and other stakeholders, whether States achieve their fatality and serious injury targets.

Data driven = Linkage

- NHTSA regulation requires “a description of the linkage between program-area problem identification data, performance targets, identified countermeasure strategies and allocation of funds to planned activities.” (23 CFR Part 1300.11(d))

- Per the GAO Report – “*We <GAO> examined the sections of 2019 HSPs where states are prompted to provide this linkage, and found, however, that less than a third of states (12 of 52) described all the linkages between their performance targets and the countermeasure strategies in those sections*.”

Terminology

Achievable

Goals

Aggressive

Projections

Aspirational

Targets

Attainable

Realistic

Evidence-Based

Data-Driven

What does data-driven mean?

- “Data-driven means informed by a systematic review and analysis of quality data sources when making decisions…”.

Aspirational (Zero) Targets

- Aspirational targets are acceptable as a “vision” and as part of the State’s longer-term prevention strategy.

- Aspirational targets set the stage for collaboration.

- The Road to Zero acknowledges “*it will take a generation*” to bring about this change. – RTZ Coalition: A Vision for Achieving Zero Roadway Deaths, by 2050

Goals of Safety Performance Management

Augment planning

Increase coordination

Set goals

Connect goals to action (linkage)

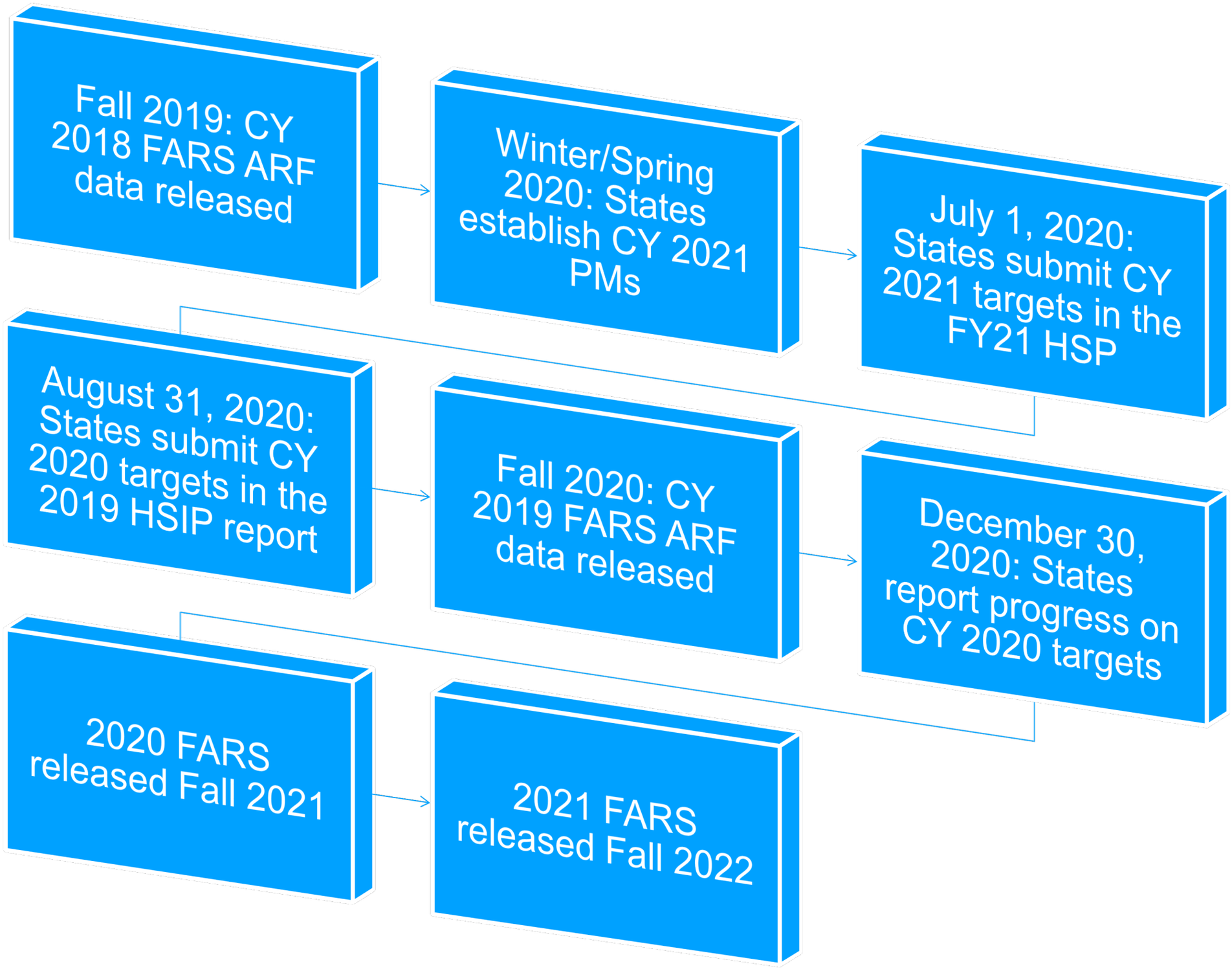
Direct resources to where most needed

Assess progress

Communicate priorities and results

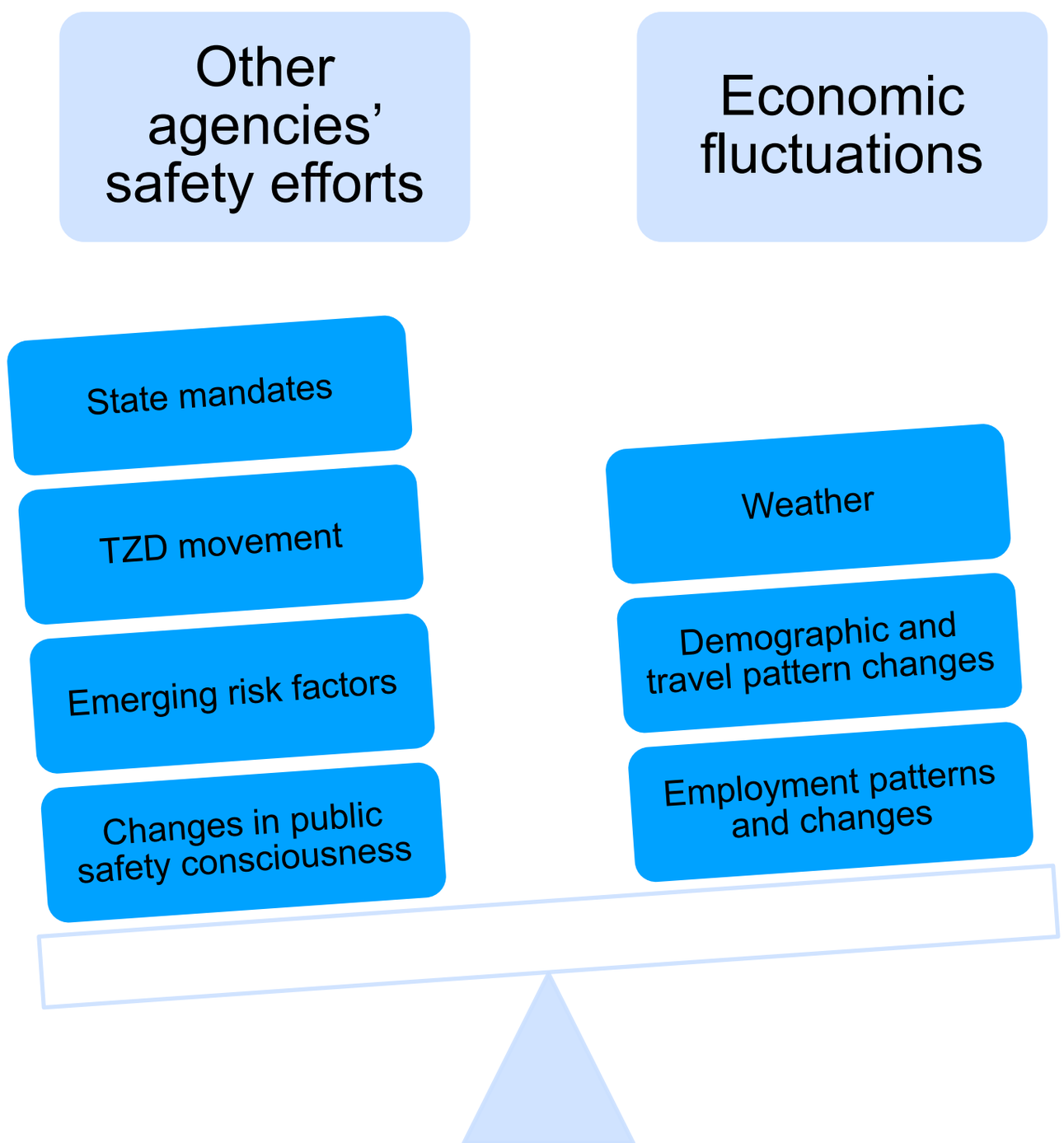
Other goals?

Limitations of Performance Management (Data challenges)

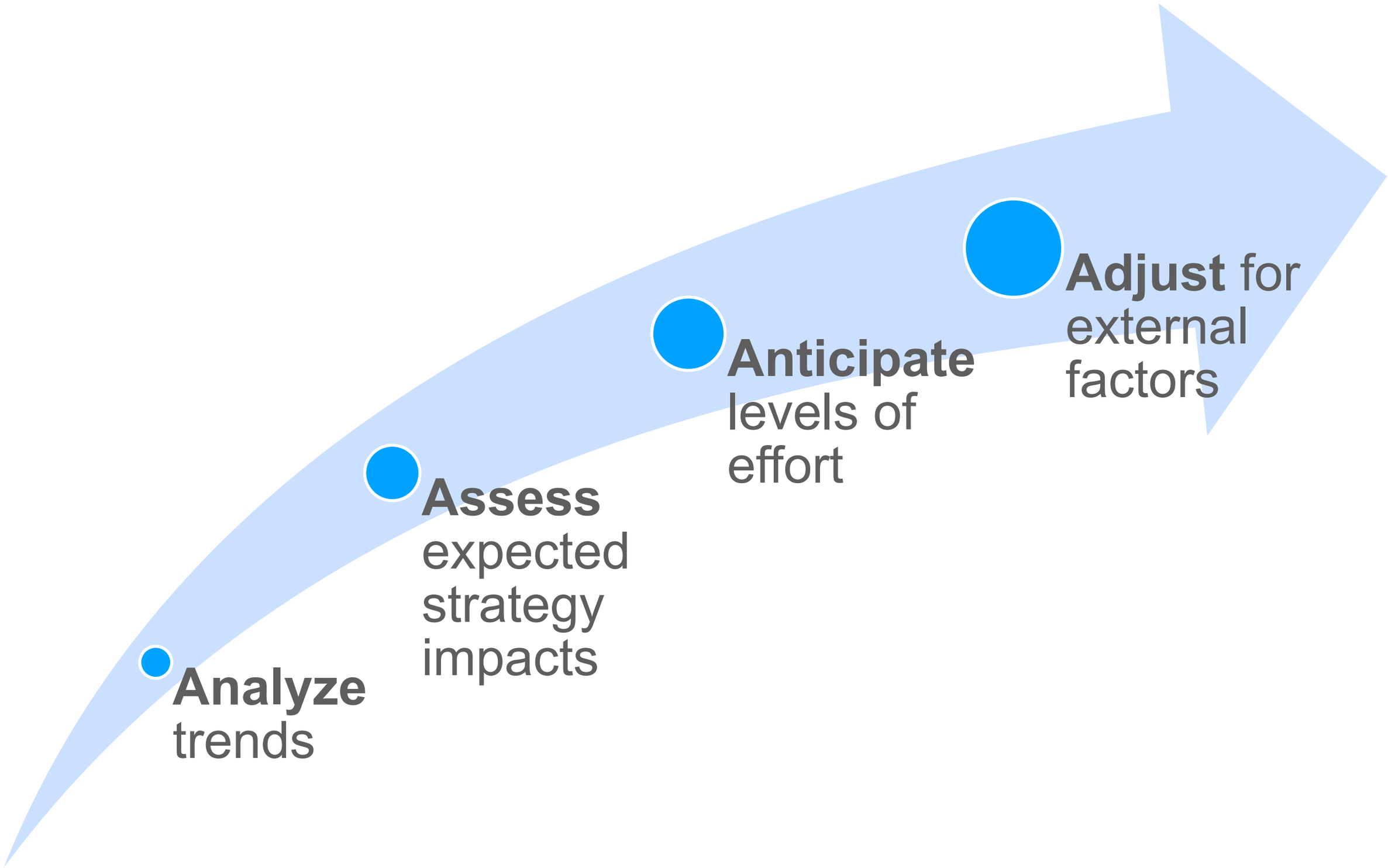


Limitations of Performance Management

Many factors affect highway safety performance:



Basic “Data Driven” Target Setting Process



When setting targets, consider the following:

- Were **quality data** sources used to inform the target?

- Is the CY 2021 target **attainable** (by 12/31/2021)?

- Is there a clear **linkage** between problem ID, targets, countermeasures, and funding? (Activities/investments should allow the State to meet its targets)

- Does the 2021 target **guide** your FY 2021 investments?

- Do strategies need to be **adjusted**?

Data-Driven

- Compare the targets to historical trends to assess what is reasonable and attainable (use baselines).

- Do the targets align?

- Is there adequate justification for the target selections (including external factors and investments made outside SHSO, if needed)?

Baselines

- Compare the targets to historical trends to assess what is reasonable and attainable.

- NCSA Tools, Publications, and Data webpage: https://cdan.nhtsa.gov/

State Traffic Safety Information (STSI)

Core Outcome Measures		Year									
		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Traffic Fatalities	Total (C-1)	806	759	826	821	849	773	897	952	998	1,010
	Rural	419	354	384	375	337	289	343	335	360	318
	Urban	386	405	439	444	509	482	550	612	637	680
	Unknown	1	0	3	2	3	2	4	5	1	12
Fatalities Per 100 Million Vehicle Miles Driven**	Total (C-3)	1.31	1.27	1.39	1.37	1.40	1.23	1.38	1.45	1.53	
	Rural	2.30	2.04	2.24	2.20	2.37	1.86	2.20	2.13	2.25	
	Urban	0.89	0.95	1.04	1.03	1.10	1.02	1.11	1.22	1.30	
Passenger Vehicle Occupant Fatalities (All Seat Positions)	Total	464	432	438	470	451	392	495	511	491	501
	Restrained	164	157	171	164	174	140	188	205	211	197
	Unrestrained (C-4)	248	235	222	254	228	208	256	246	243	237
	Unknown	52	40	45	52	49	44	51	60	37	67
Alcohol-Impaired Driving Fatalities (BAC=.08+)*** (C-5)		218	206	212	230	221	200	267	244	269	285
Speeding-Related Fatalities (C-6)		293	262	299	302	293	255	315	325	313	285
Motorcyclist Fatalities	Total (C-7)	121	91	136	141	151	130	137	146	162	149
	Helmeted	52	35	56	68	62	56	58	55	68	63
	Unhelmeted (C-8)	66	50	73	70	83	69	74	86	86	68
	Unknown	3	6	7	3	6	5	5	5	8	18
Drivers Involved in Fatal Crashes	Total	980	990	1,096	1,086	1,153	1,022	1,228	1,303	1,371	1,385
	Aged Under 15	1	1	1	0	6	1	1	5	3	0
	Aged 15-20	94	78	115	99	113	85	93	100	114	101
	Aged Under 21 (C-9)	95	79	116	99	119	86	94	105	117	101
	Aged 21 and Over	840	865	937	946	988	889	1,081	1,146	1,193	1,159
	Unknown Age	45	46	43	41	46	47	53	52	61	125
Pedestrian Fatalities (C-10)		118	145	147	122	151	142	155	186	213	237
Bicyclist and Other Cyclist Fatalities***** (C-11)		25	19	23	18	31	29	28	31	32	23
Observed Seat Belt Use**** (B-1)		80.8	81.8	82.9	82.2	84.7	87.2	86.6	88.0	86.1	85.9

Select on the map below to see a State report or [View USA Crash Location Map]

[View Native American Traffic Safety Facts]

STSI Reports Contain Additional Information From The Following Sources

[Federal Highway Administration: Highway Statistics Series]

[United States Census Bureau: Population Data]

Contact NCSARequests@dot.gov for any questions or comments.

United States Department of Transportation

NHTSA
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

Ratings | Recalls | Risky Driving | Road Safety | Equipment | Technology & Innovation

Fatality and Injury Reporting System Tool (FIRST)

The new query tool allows users to construct customized queries using data not only from NHTSA's Fatality Analysis Reporting System (FARS) but also from the General Estimat
(GES) / Crash Report Sampling System (CRSS) to generate injury estimates.

Crashes | Vehicles | People | Drivers | Occupants | Pedestrians | Pedalcyclists

Select Fatality and/or Injury

- (•) Fatal Motor Vehicle Crashes
- ( ) Estimated Injury Only Motor Vehicle Crashes
- ( ) Estimated Property-Damage-Only (PDO) Motor Vehicle Crashes
- ( ) Estimated Injury and PDO Non-Fatal Motor Vehicle Crashes
- ( ) All Motor Vehicle Crashes

Select Time Frame

Select State or Region

Filter Your Selection

Build Your Reports

Current Criteria:

Crashes ▶ Fatal Motor Vehicle Crashes ▶ Years: 2014-2018 ▶ Report Type: Table > Rows (Crash Date (Year)); Columns (Crash Date (Month))

Submit | Save | Retrieve | Reset

Contact NCSARequests@dot.gov for any questions or comments.

Getting Started

Sample Queries

Crashes

Data specific to the crash such as the date, time, locatio
and atmospheric conditions.

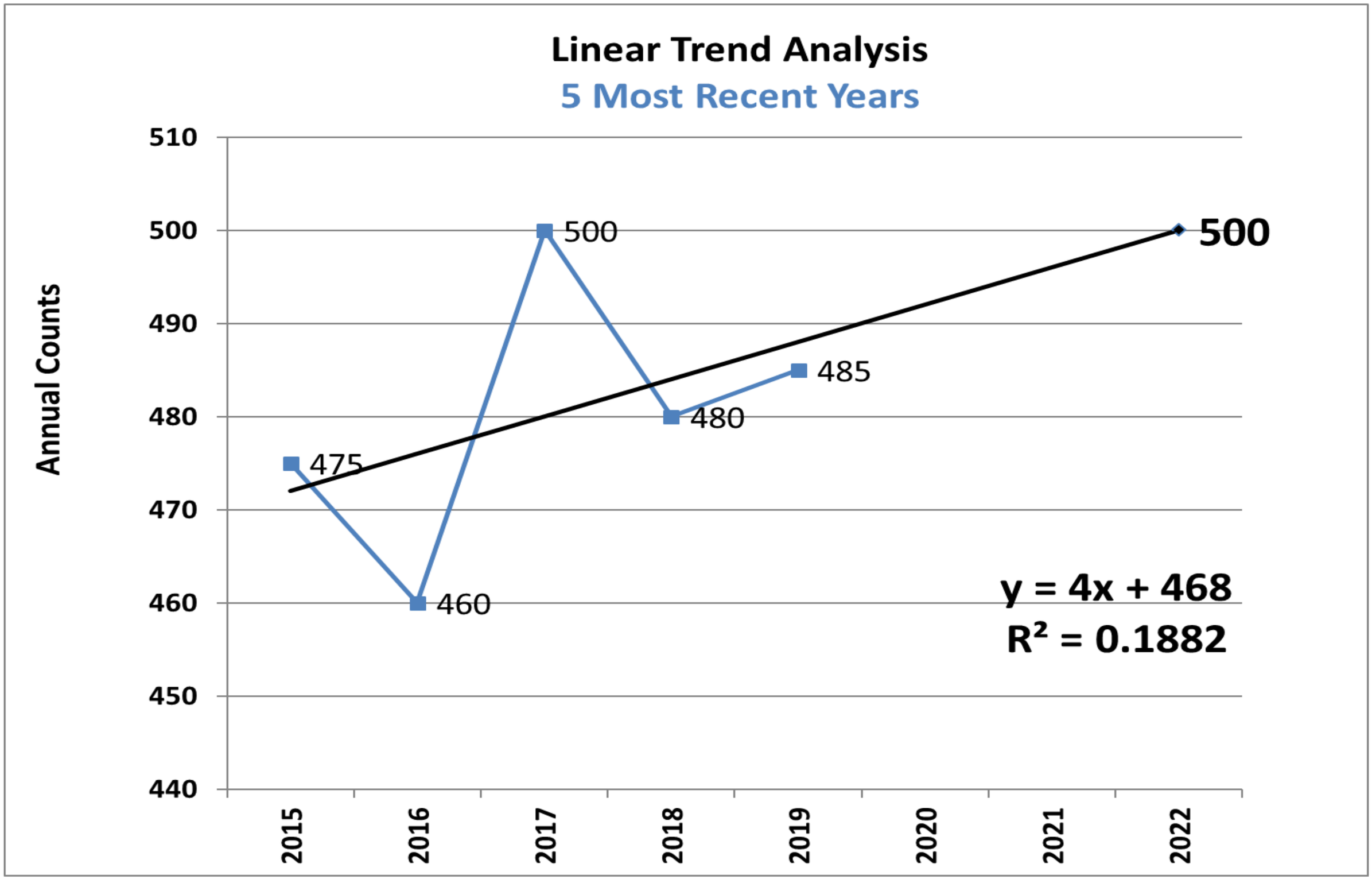
Additional Publications on:

Fatal Crashes Information

Instructional Videos

https://cdan.dot.gov/query

Sample Trend Line



Target alignment

- Targets for individual core performance measure targets (e.g. traffic fatalities (C-1) should be aligned with other core performance measure targets (e.g., number of fatalities in crashes involving a driver or motorcycle operator with a BAC of .08 and above (C-5) and pedestrian fatalities (C-10).

- Due to interrelationship, States may inadvertently set conflicting targets that result in unaligned targets. For example, a State sets a target to reduce traffic fatalities C-1 by 30% and sets remaining core performance measure targets to "*maintain"* at current levels.

Target justification

- Does this justification:

(1) Explain how the target is data-driven, realistic and attainable?

(2) Discuss influencing factors? Address external factors (if needed)?

(3) Address investments beyond the SHSOs influence (if needed)?

Coordination

- Strategic Highway Safety Plans (SHSP), updated every 5 years, have longer term goals.

- To the extent possible, NHTSA should be invited in SHSP planning and State annual target setting meetings.

Example

Example of an Aggressive Target that Appears Unrealistic and Unattainable – 2021 HSP

- 2017-2021 total fatalities C-1 target: 425

- 2015-2019 moving average (baseline): 480 fatalities

- The FY21 target in 11.5% less that the baseline.

2015-2019 Baseline:	**480**
2017-2021 Target:	**425**
Reduction:	**11.5%**

Example of an Aggressive Target that appears Unrealistic and Unattainable – 2021 HSP

- However, for the State to reach their 2021 target using a 5-year moving average (2017-2021), the State must have no less than a average of 330 fatalities for 2020 and 2021. This represents a 31% decrease in traffic fatalities (compared to the average in 2017- 2019).

Base Ave. 480	Target Ave. 425
2015 - 475	2017 - 500
2016 - 460	2018 - 480
2017 - 500	2019 - 485 (estimated)
2018 - 480	2020 *< 330*
2019 - 485 (estimated)	2021 *< 330*

Example of Aggressive Target without Adequate Justification and Alignment – 2021 HSP

- C-1 Number of traffic fatalities, requires a 31% average reduction in fatalities in 2020 and 2021.

- Justification: The performance target was selected by using a polynomial trend line.

- Target Alignment: Targets for C-5, C-6, and C-10 are all set to “increasing”.

Example of Aggressive Target with Adequate Justification – FY 2021 HSP

C-1 Number of traffic fatalities, requires a 31% average reduction in fatalities in 2020 and 2021

Justification:

Overall economic conditions	Improvements to overall programming and funding changes
Gas prices	Publicity
Per capita alcohol consumption	Heightened enforcement
Gas prices	Educating motorist
Anticipated Vehicle Miles Traveled	Additional safety investments from agencies outside the SHSOs
Vehicle technologies	State Legislative changes

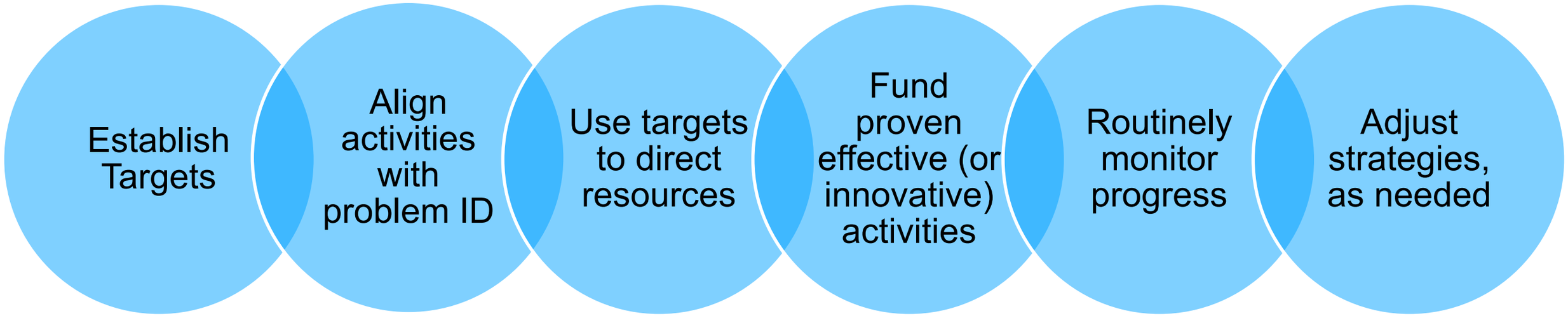
Example of Aggressive Target with Adequate Alignment – FY 2021 HSP

C-1 Number of traffic fatalities, requires a 31% average reduction in fatalities in 2020 and 2021

Target Alignment:

- C-5 Number of fatalities in crashes involving a driver or motorcycle operator with a BAC of .08 and above decreases 25%
- C-6 Number of speeding-related fatalities decreases 8%
- C-10 Number of pedestrian fatalities decreases 5%

Data driven performance management



Transparency & Accountability

Performance measures:

- Help decision makers understand the effects of investment decisions.

- Improve communications between decision makers, stakeholders, and the traveling public.

- Enhances coordination among different safety agencies and plans.

https://safety.fhwa.dot.gov/hsip/spm/fhwasa18006/

Tying it all together

- Performance management allows for objective, data-driven discussions for how to best achieve highway safety goals.
- Performance management is both a planning tool and an evaluation tool.

Target Achievement Assessment and Significant Progress Determination

Dana Gigliotti

FHWA Office of Safety

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives
http://safety.fhwa.dot.gov

PY2018 Target Cycle

Target Setting Coordination

- By Spring, begin engaging DOT, SHSO, and MPO stakeholders
- Set targets for PY2018

Target Approval

By June, secure PY 2018 target approval from DOT/SHSO leadership

2017

July 1
SHSO submits HSP to NHTSA including 3 identical safety targets

August 31
State DOT submits HSIP Annual Report to FHWA, including safety targets

2018

By February 27
MPOs establish safety targets

2019 - 2020

December 2019
Data available to evaluate targets

March 2020
States notified whether they met or made significant progress toward PY2018 targets

Target Achievement Assessment

A State DOT is determined to have met or made significant progress toward meeting its safety performance targets when **at *least four*** *of the five* established targets:

a) are met

--- or ---

b) the outcome performance is better than the baseline

Actual vs Baseline Performance

PY2018 Target

(2014-2018)

PY2018 Actual Performance

(2014-2018)

PY2018 Baseline Performance

(2012-2016)

Data Sources for PY2018 Target Assessment

Performance Measure	Data Source for Target Achievement Assessment
Number of Fatalities*	2018 FARS Annual Report File (ARF)
Fatality Rate per 100M VMT*	2018 FARS ARF & 2018 HPMS VM-2 Table
Number of Serious Injuries*	2019 HSIP Annual Report
Serious Injury Rate per 100M VMT	2019 HSIP Annual Report & 2018 HPMS VM-2 Table
Number of Non-motorized Fatalities and Serious Injuries	2018 FARS ARF and 2019 HSIP Annual Report

** Identical Targets in the HSIP and HSP*

PY2018 Target Assessment Example

Performance Measure	5-year Rolling Averages			Target Met?	Better than Baseline?	Met or Made Significant Progress?
	2012 – 2016 Baseline Performance	2014-2018 Target	2014-2018 Actual Performance			
Number of Fatalities	420.6	390.0	398.4	No	Yes	**YES** (4 out of 5 targets were either made or significant progress was made towards meeting the targets)
Fatality Rate	1.406	1.320	1.330	No	Yes	
Number of Serious Injuries	1,730.6	1,650.0	1,653.8	No	Yes	
Serious Injury Rate	5.792	5.585	5.526	Yes	N/A	
Number of Non-Motorized Fatalities and Serious Injuries	104.4	112.0	116.0	No	No	

States Not Meeting Safety Performance Targets

- Develop and submit an HSIP Implementation Plan for FY 2021 by June 30, 2020 that meets the applicable statutory and regulatory requirements as described in the HSIP Implementation Plan Guidance.
- Use the FY 2017 HSIP apportionment only for HSIP projects in FY 2021

Safety Target Assessment Process

Target Achievement Assessment

- Data available approximately December 2019 to begin assessing State target achievement
- Notifications made no later than March 31, 2020

FHWA Office of Safety

- Notify Division Offices of official State determination of target achievement determination

FHWA Division Offices

- Notify State DOTs of official determination of target achievement by March 31, 2020
- Ensure States that do not meet or make significant progress submit FY2021 HSIP Implementation Plan by June 30, 2020
- Completed plan due to Office of Safety prior to October 1, 2020

Performance Measure Computations

Guidance Available*:*

FHWA Procedures for Safety Performance Measure Computation and State Target Achievement Assessment

https://www.fhwa.dot.gov/tpm/guidance/safety_performance.pdf

Ongoing Training Opportunities

- **Transportation Safety Institute (TSI) Trainings**
  - “Data-Driven Highway Safety Planning” course
  - “Foundations of Highway Safety”

- **National Highway Institute Trainings**
  - “Transportation Performance Management for Safety” course.

- **FHWA Office of Safety Website**