SAFETY PERFORMANCE MEASURES:
2020

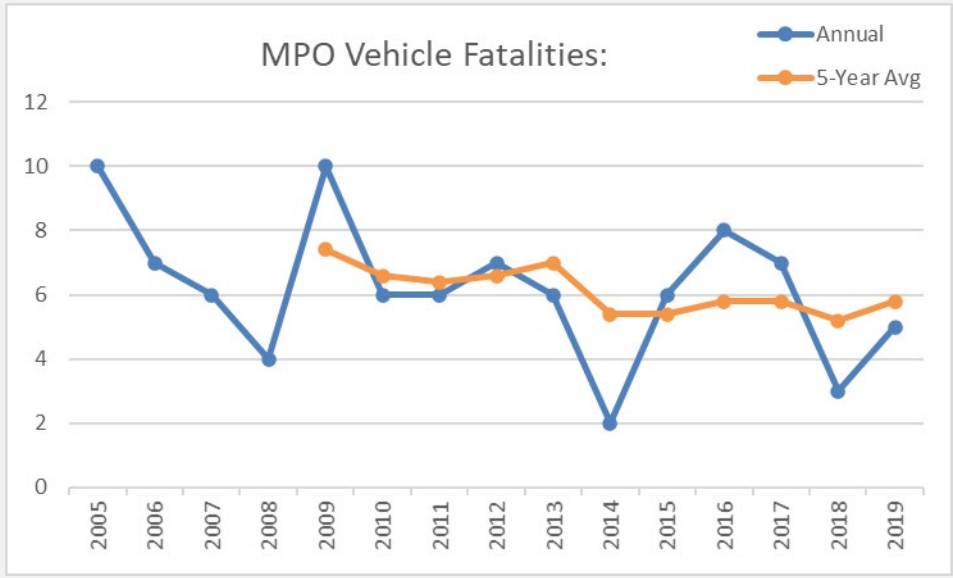
FHWA'S **5** SAFETY PERFORMANCE MEASURES

Regional 5-Year Rolling Averages of:

1. Number of Fatalities
2. Rate of Fatalities per 100 million VMT (Vehicle Miles Traveled)
3. Number of Serious Injuries
4. Rate of Serious Injuries per 100 million VMT
5. Number of Non-motorized Fatalities & Non-motorized Serious Injuries

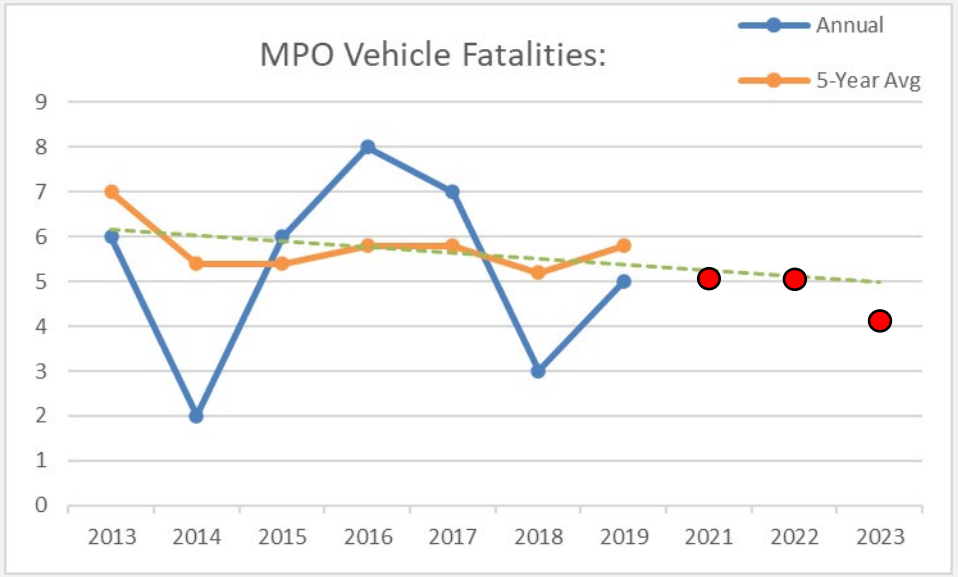
TARGET 1: # OF VEHICLE FATALITIES

Year	Annual Fatalities	5-Year Avg
2008	4	n/a
2009	10	7.4
2010	6	6.6
2011	6	6.4
2012	7	6.6
2013	6	7
2014	2	5.4
2015	6	5.4
2016	8	5.8
2017	7	5.6
2018	3	5.2
2019	5	5.8
Total	**74**	**n/a**



TARGET 1: # OF VEHICLE FATALITIES

Year	Annual Fatalities	5-Year Avg
2012	7	6.6
2013	6	7
2014	2	5.4
2015	6	5.4
2016	8	5.8
2017	7	5.8
2018	3	5.2
2019	5	5.8
2020	n/a	n/a
2021		
2022		
2023		

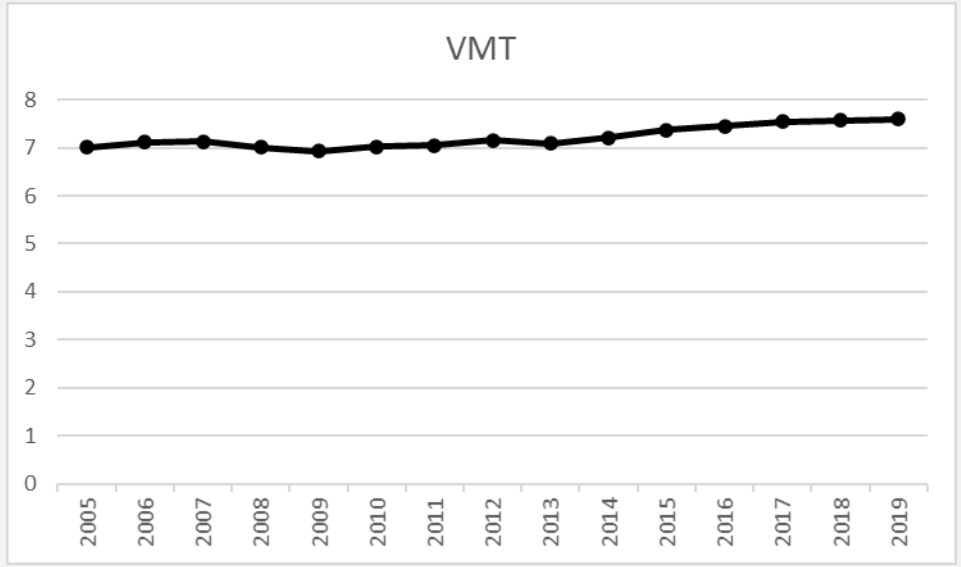


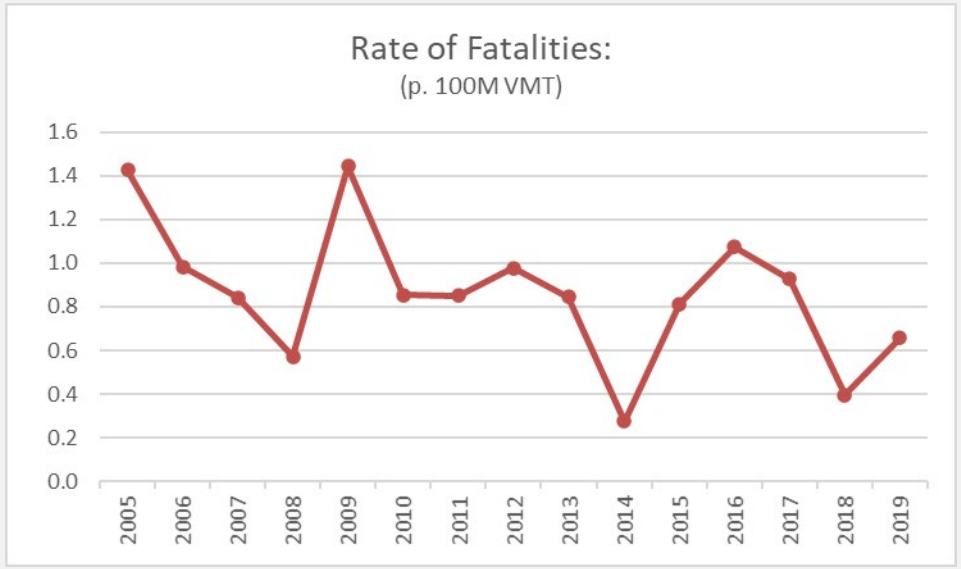
On Track

2021: 5
2022: 5
2023: 4

TARGET 2: RATE OF VEHICLE FATALITIES P. 100M VMT

Year	Annual Fatalities	100M VMT	Fatality Rate p. 100M VMT
2008	4	7.007	.571
2009	10	6.924	1.444
2010	6	7.019	.855
2011	6	7.047	.851
2012	7	7.16	.978
2013	6	7.094	.846
2014	2	7.214	.277
2015	6	7.375	.814
2016	8	7.449	1.074
2017	7	7.545	.928
2018	3	7.575	.396
2019	5	7.6	.658

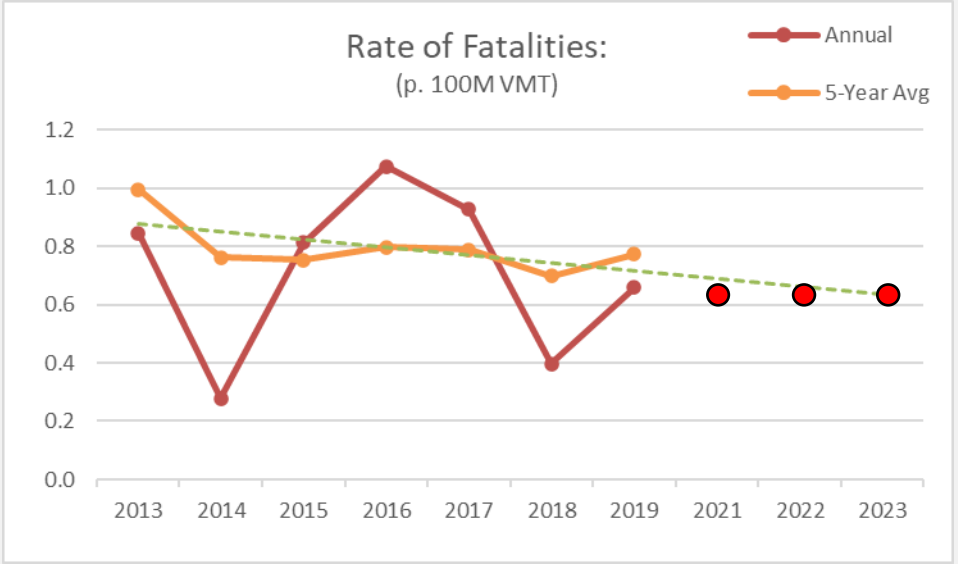




- VMT percent increases taken from KDOT historical data

TARGET 2: RATE OF VEHICLE FATALITIES P. 100M VMT

Year	Annual Fatalities	Fatality Rate p. 100M VMT	5-Year Avg
2015	6	0.814	.753
2016	8	1.074	.798
2017	7	.928	.788
2018	3	.396	.698
2019	5	7.6	.658
2020	n/a	n/a	n/a
2021			
2022			
2023			

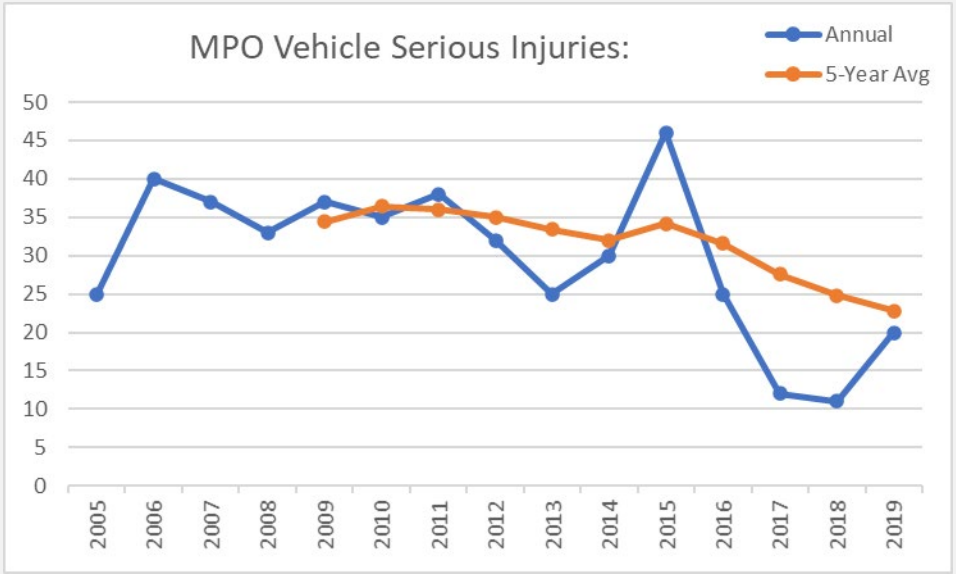


2021: 0.65
2022: 0.65
2023: 0.65

On Track

TARGET 3: # OF SERIOUS INJURIES

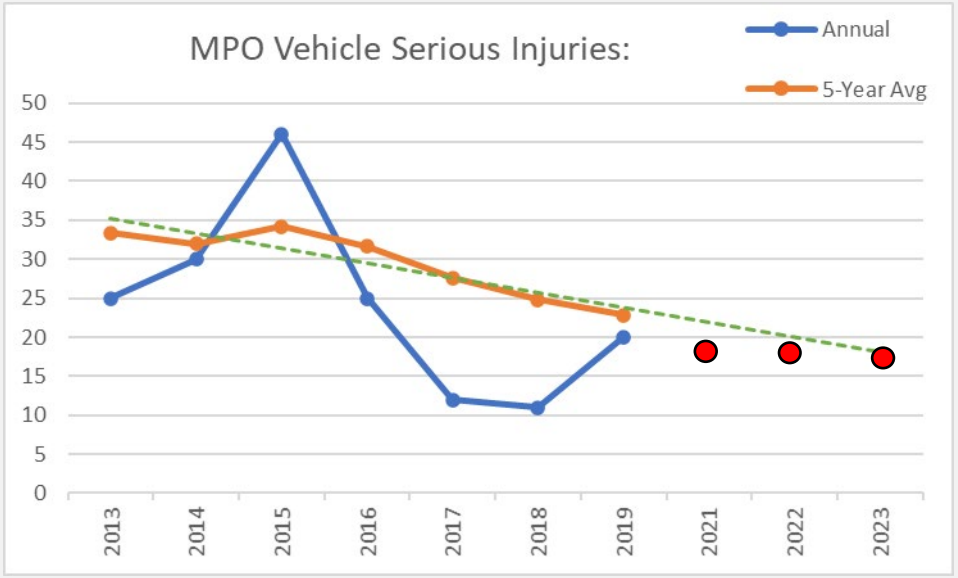
Year	Annual Serious Injuries	5-Year Avg
2008	33	n/a
2009	37	34.4
2010	35	36.4
2011	38	36
2012	32	35
2013	25	33.4
2014	30	32
2015	46	34.2
2016	32	33
2017	11	28.8
2018	10	25.8
2019	20	22.8
Total	**396**	**n/a**



TARGET 3: # OF SERIOUS INJURIES

Year	Annual Serious Injuries	5-Year Avg
2012	32	35
2013	25	33.4
2014	30	32
2015	46	34.2
2016	32	33
2017	11	28.8
2018	10	25.8
2019	20	22.8
2020	n/a	n/a
2021		
2022		
2023		

KDOT change is reporting criteria



2021: 18
2022: 18
2023: 17

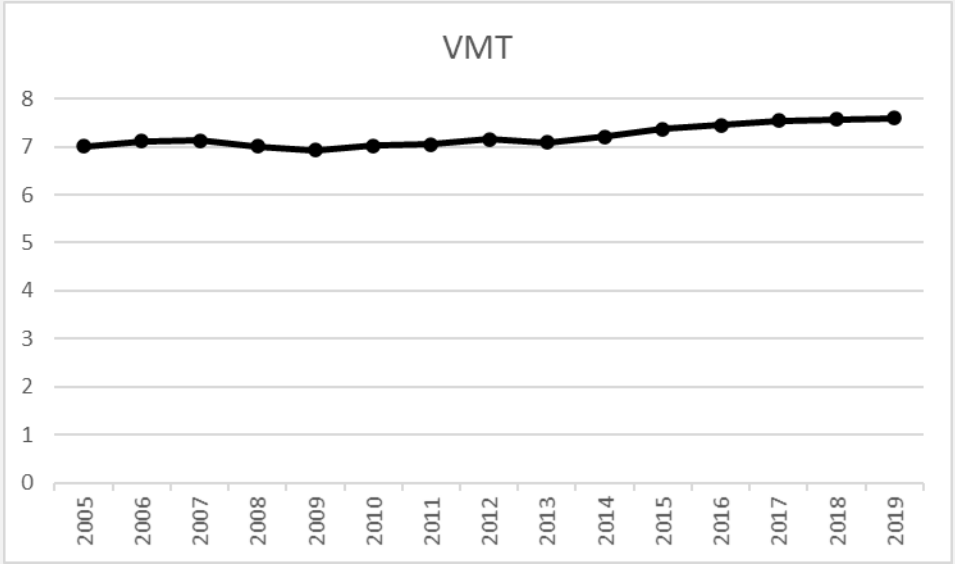
On Track

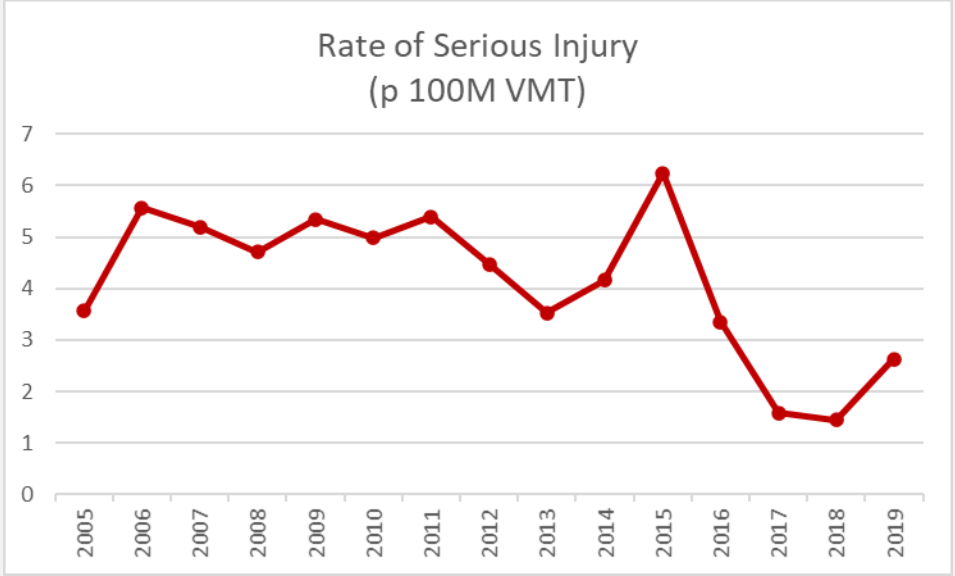
Change in reporting of Injury Severity likely cause of drop from 2016 to 2017 onward

TARGET 4: RATE OF SERIOUS INJURIES P. 100M VMT

Year	Annual S. Injuries	100M VMT	S. Injury Rate p. 100M VMT
2008	33	7.007	4.710
2009	37	6.924	5.344
2010	35	7.019	4.986
2011	38	7.047	5.392
2012	32	7.16	4.469
2013	25	7.094	3.524
2014	30	7.214	4.159
2015	46	7.375	6.237
2016	32	7.449	4.296
2017	11	7.545	1.458
2018	10	7.575	1.320
2019	20	7.6	2.632

KDOT change is reporting criteria



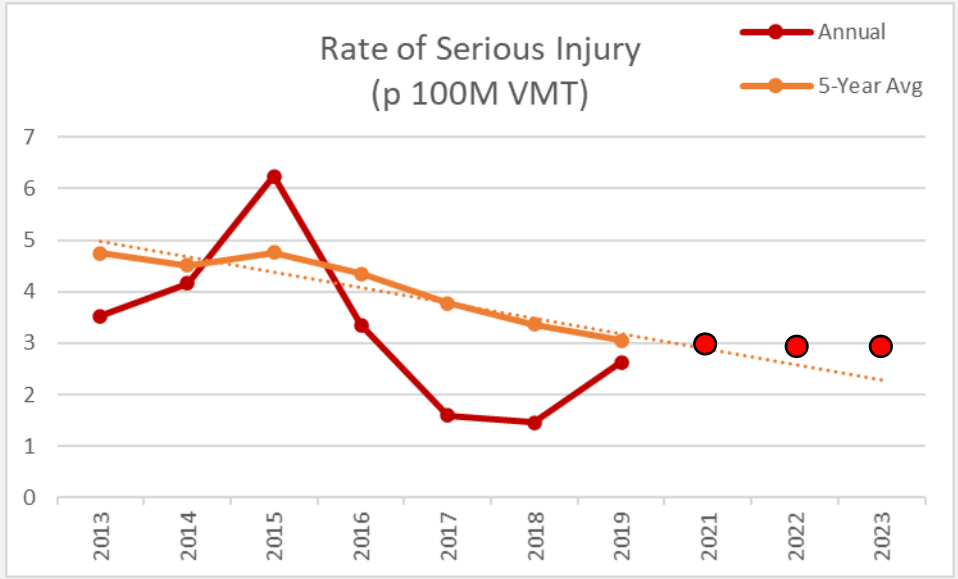


- 2005-2015 VMT was calculated with 2016 VMT then KDOT historical VMT tables to establish year-to-year changes.

TARGET 4: RATE OF SERIOUS INJURIES P. 100M VMT

Year	Annual S. Injuries	Serious Injury p. 100M VMT	5-Year Avg
2015	46	6.237	4.756
2016	32	4.296	4.537
2017	11	1.458	3.935
2018	10	1.320	3.949
2019	20	2.632	3.054
2020	n/a	n/a	n/a
2021			
2022			
2023			

KDOT change is reporting criteria



2021: 3
2022: 3
2023: 3

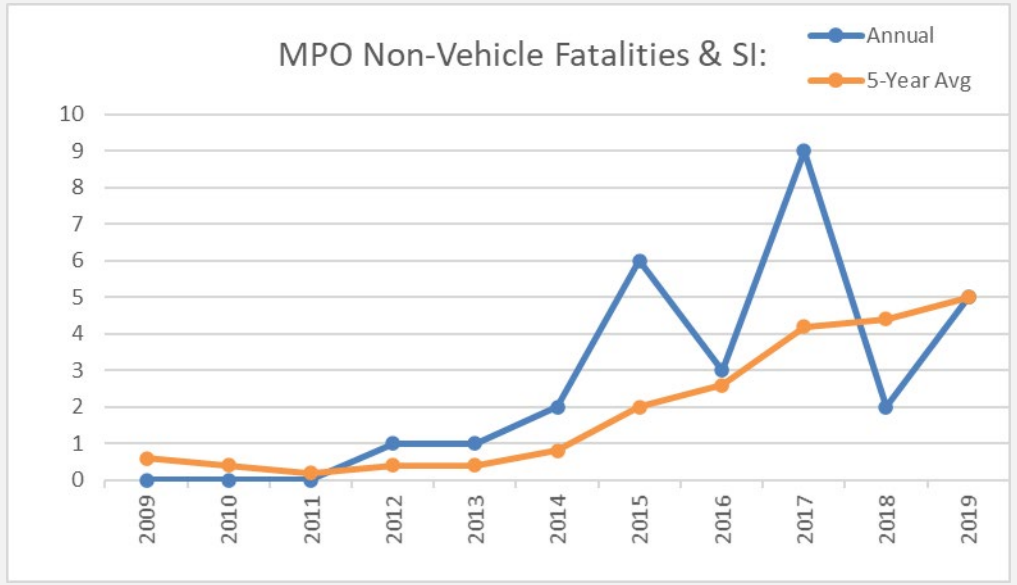
On Track

Change in reporting of Injury Severity likely cause of drop from 2016 to 2017 onward

TARGET 5: # OF NON-VEHICULAR FATALITIES & SERIOUS INJURIES

KDOT data updated with improved bike-ped info →

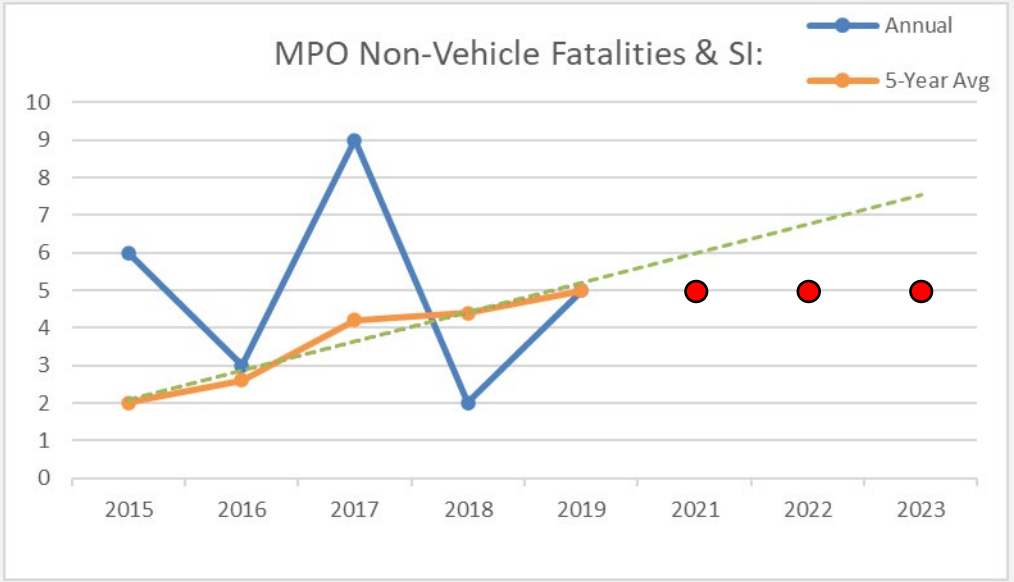
Year	Annual Fatalities & Serious Injuries	5-Year Avg
2008	1	n/a
2009	0	0.6
2010	0	0.4
2011	0	0.2
2012	2	0.4
2013	1	0.4
2014	2	0.8
2015	6	2
2016	3	2.6
2017	9	4.2
2018	2	4.4
2019	5	5
Total	**78**	**n/a**



TARGET 5: # OF NON-VEHICULAR FATALITIES & SERIOUS INJURIES

KDOT data updated with improved bike-ped info

Year	Annual Fatalities & Serious Injuries	5-Year Avg
2012	2	0.4
2013	1	0.4
2014	2	0.8
2015	6	2
2016	3	2.6
2017	9	4.2
2018	2	4.4
2019	5	5
2020	n/a	n/a
2021		
2022		
2023		



2021: 5
2022: 5
2023: 5

Off Track

TARGET SUMMARY

1. Number of Fatalities

2021: 5
2022: 5
2023: 4

2. Rate of Fatalities per 100 million VMT

2021: 0.65
2022: 0.65
2023: 0.65

3. Number of Serious Injuries

2021: 18
2022: 18
2023: 17

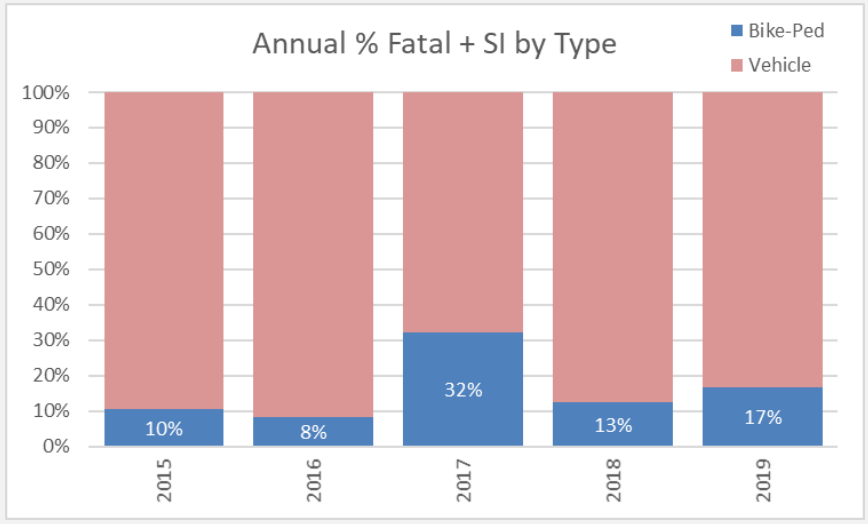
4. Rate of Serious Injuries per 100 million VMT

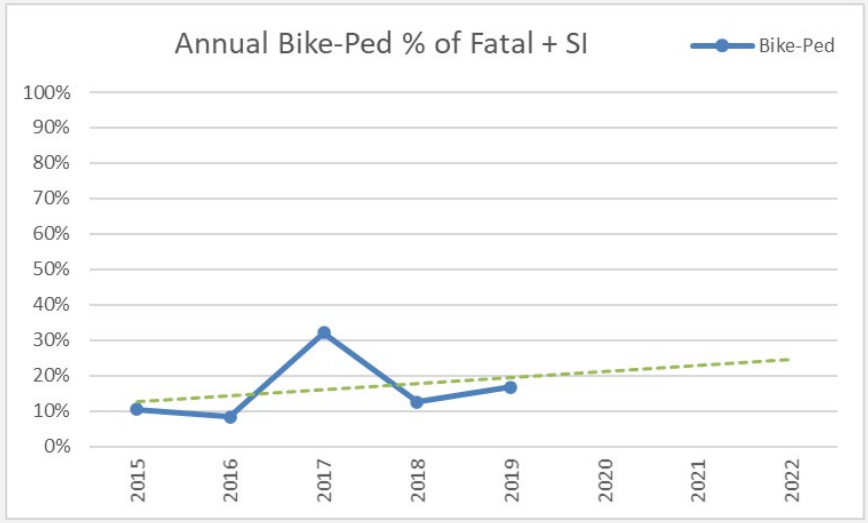
2021: 3
2022: 3
2023: 3

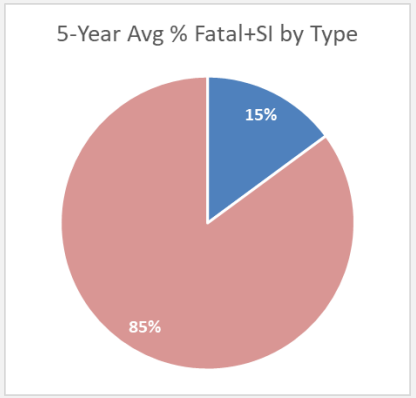
5. Number of Non-motorized Fatalities & Non-motorized Serious Injuries

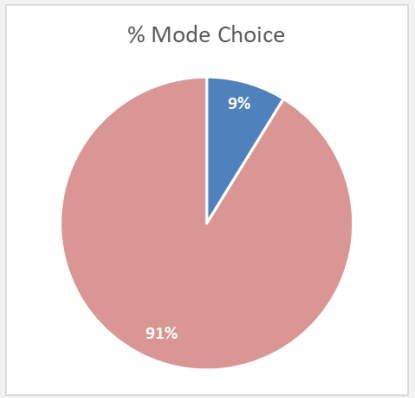
2021: 5
2022: 5
2023: 5

BIKE-PED DETAILS

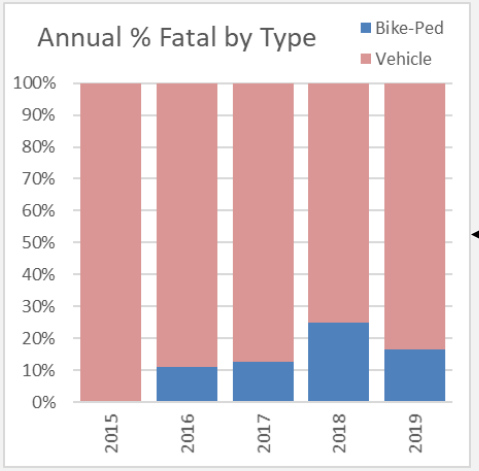


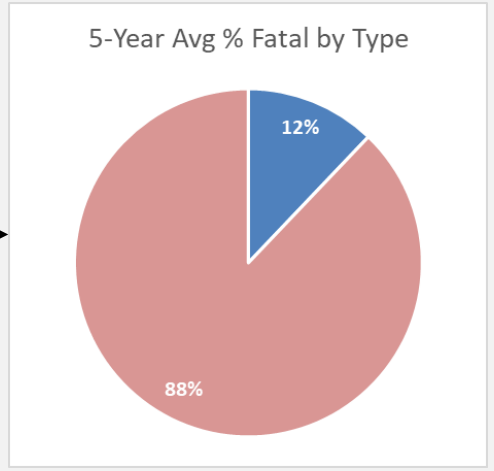


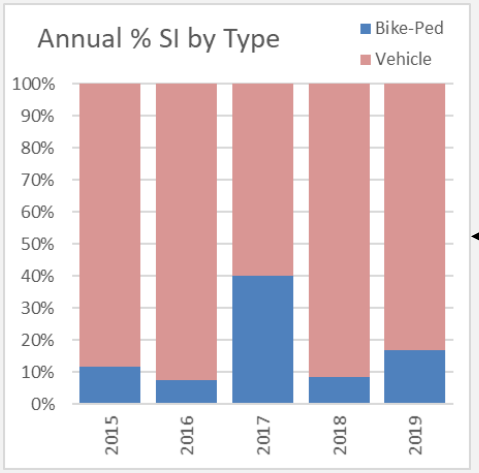


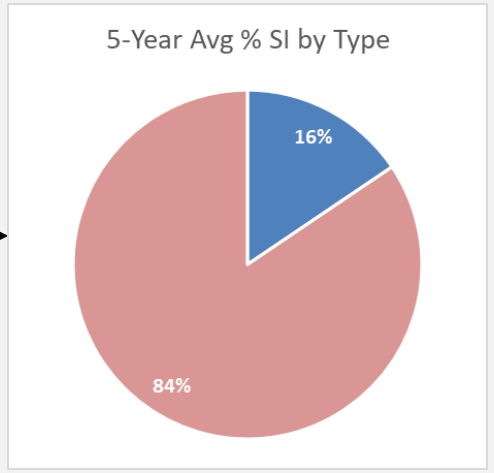


BIKE-PED DETAILS







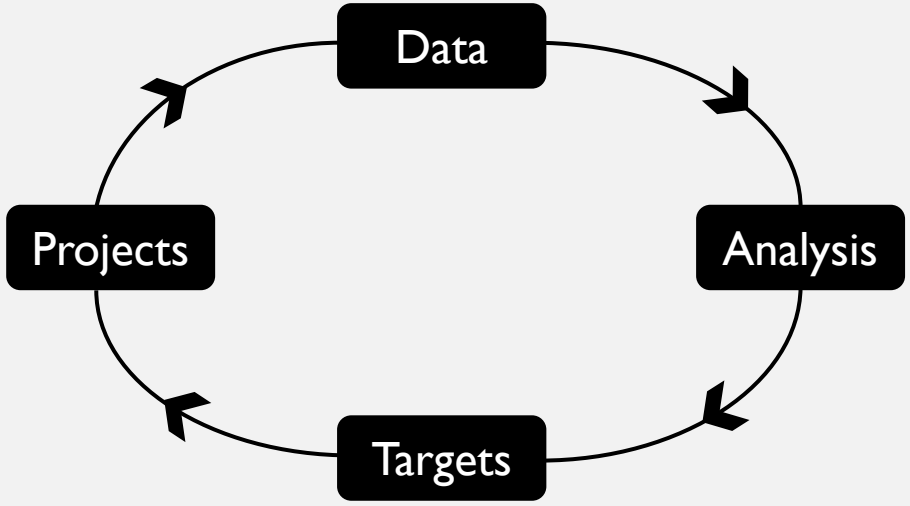


METHODOLOGY DETAILS

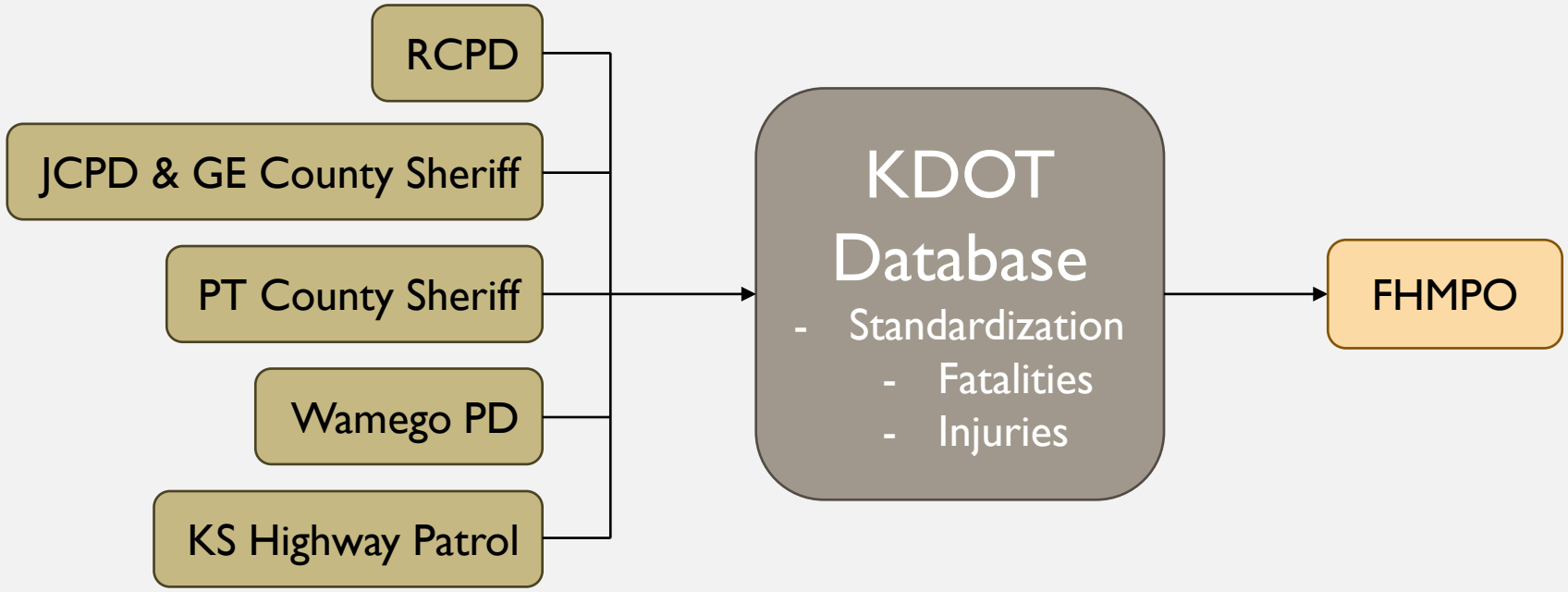
The following slides outline the workflow and methodologies used in analyzing the crash data.

DATA DRIVEN

- Based on the 5-Year Avgs, we must set annual Safety Targets for each Performance Measure.
- Data drives >>>> safer transportation system.

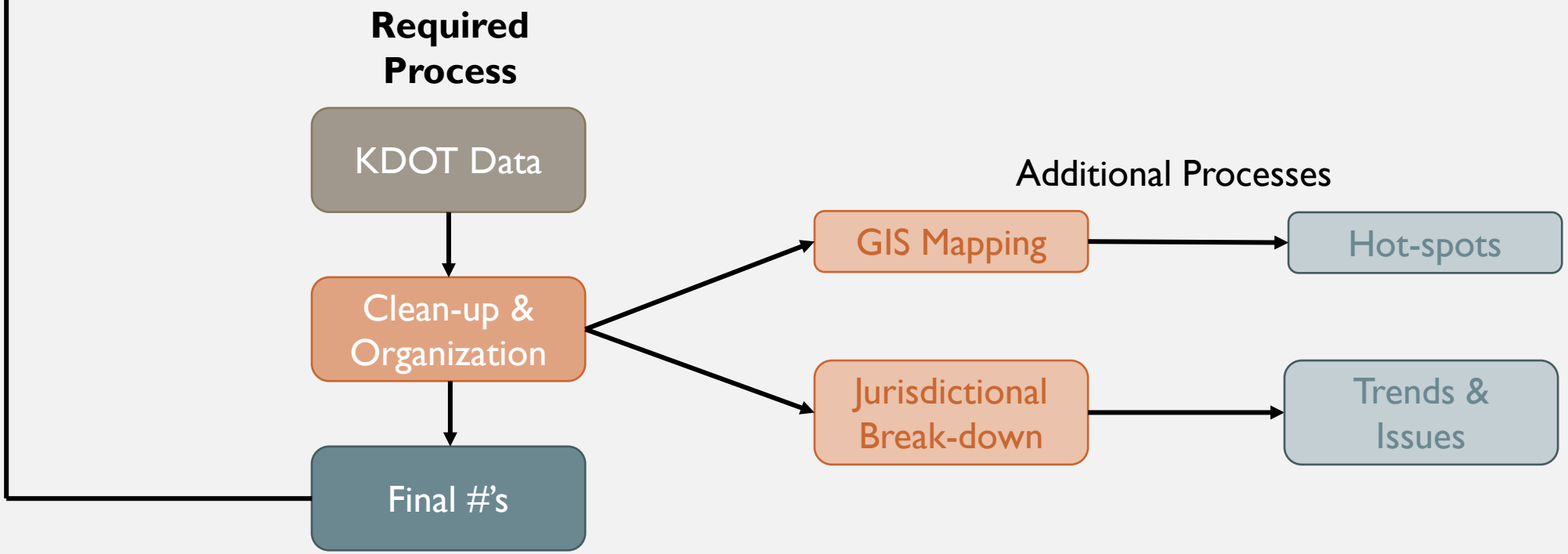


DATA FLOW


RCPD
JCPD & GE County Sheriff
PT County Sheriff
Wamego PD
KS Highway Patrol
KDOT Database
- Standardization
- Fatalities
- Injuries
FHMPO

PROCESS FOR RULES…

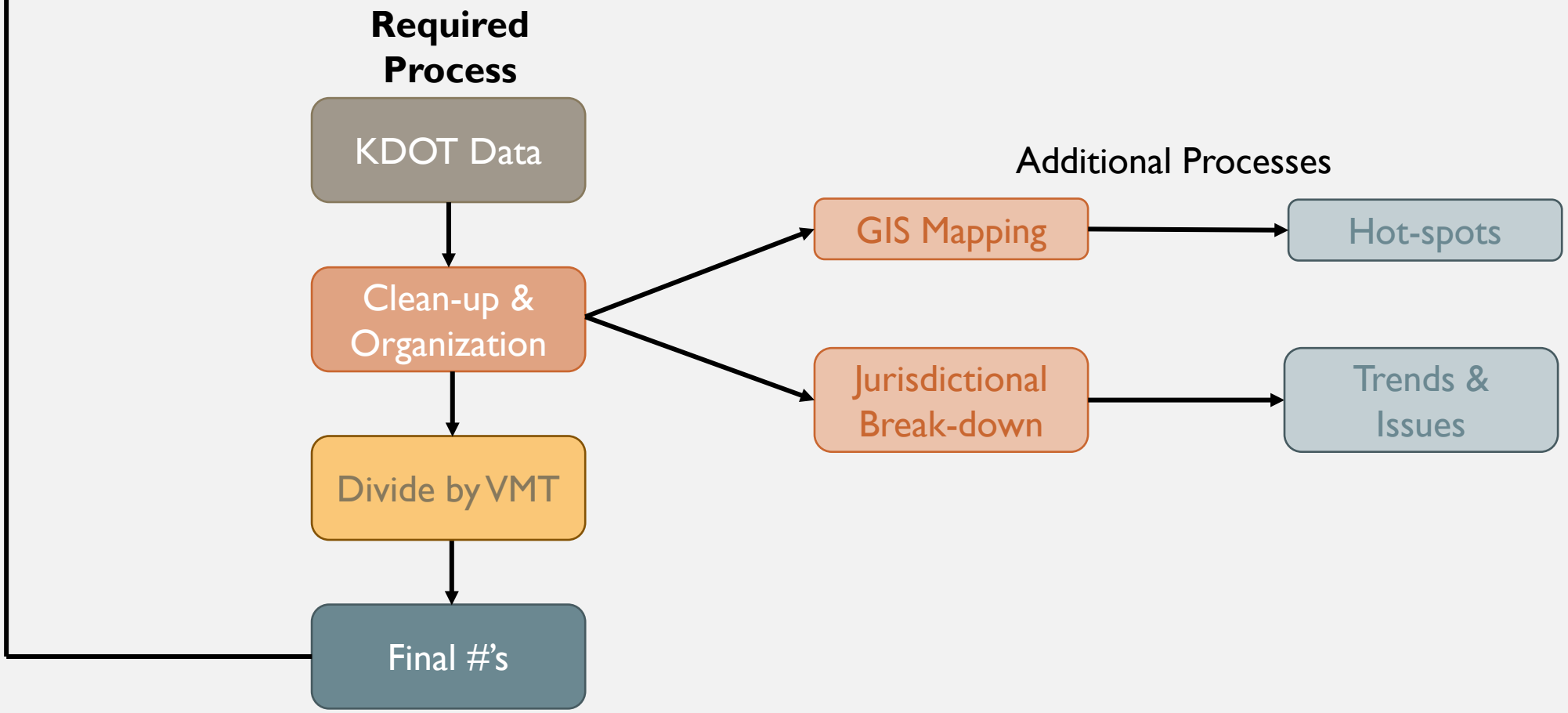
1. Number of Fatalities
3. Number of Serious Injuries
5. Number of Non-motorized Fatalities & Non-motorized Serious Injuries



PROCESS FOR RULES…

2. Rate of Fatalities per 100 million VMT

4. Rate of Serious Injuries per 100 million VMT



CALCULATING VMT

1. Calculate ADT for all Road Segments

TDM

Major Roads;
Skeleton network

Verify

Tube Counts

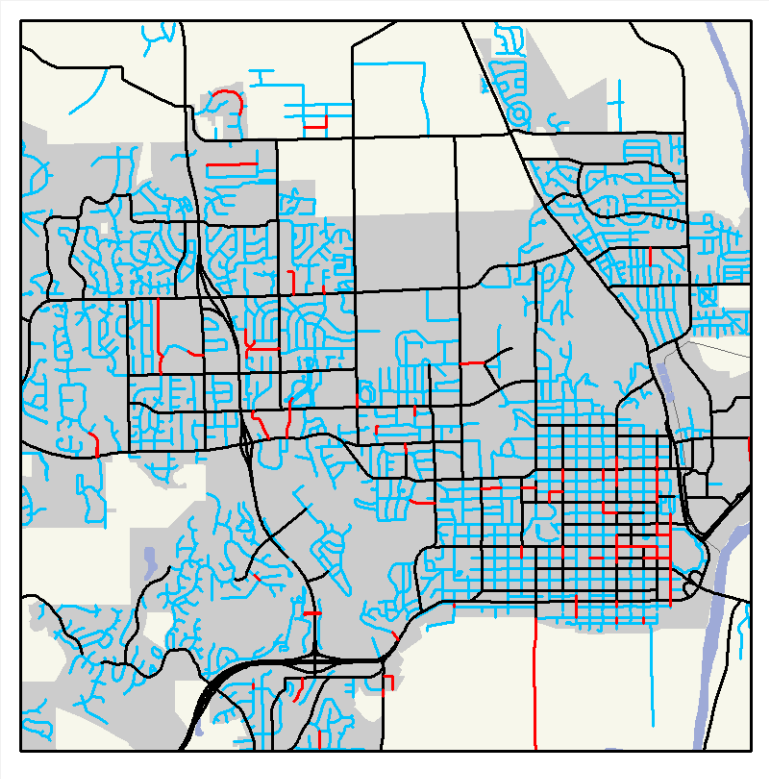
- KDOT
- City of MHK
- City of JC
- RL County
- PT County

Create

Zoning Sub-groups

- Rural Subdivision
- MHK Wards 1
- MHK Wards 2
- MHK Wards 3
- Subdivision 1
- Subdivision 2
- Subdivision 3
- Cul du Sac
- Industrial
- Commercial

Assign ADT to remaining roads (4,439 segments)



CALCULATING VMT

2. Calculate VMT from ADT for all Road Segments

$$(\text{Road Length (ft)} \div 5280) \times \text{ADT} = \textbf{Daily VMT}$$

$$\times 365 =$$

Annual VMT

KDOT Historic annual statewide VMT % change

VMT % Change
-1.65
-1.21
1.36
0.4
1.57
-0.92
1.66
2.18
1.00
1.01
1.01
1.01

2017 VMT: **754,500,000**