ROAD CRASH DATA ANALYSIS IN SRI LANKA

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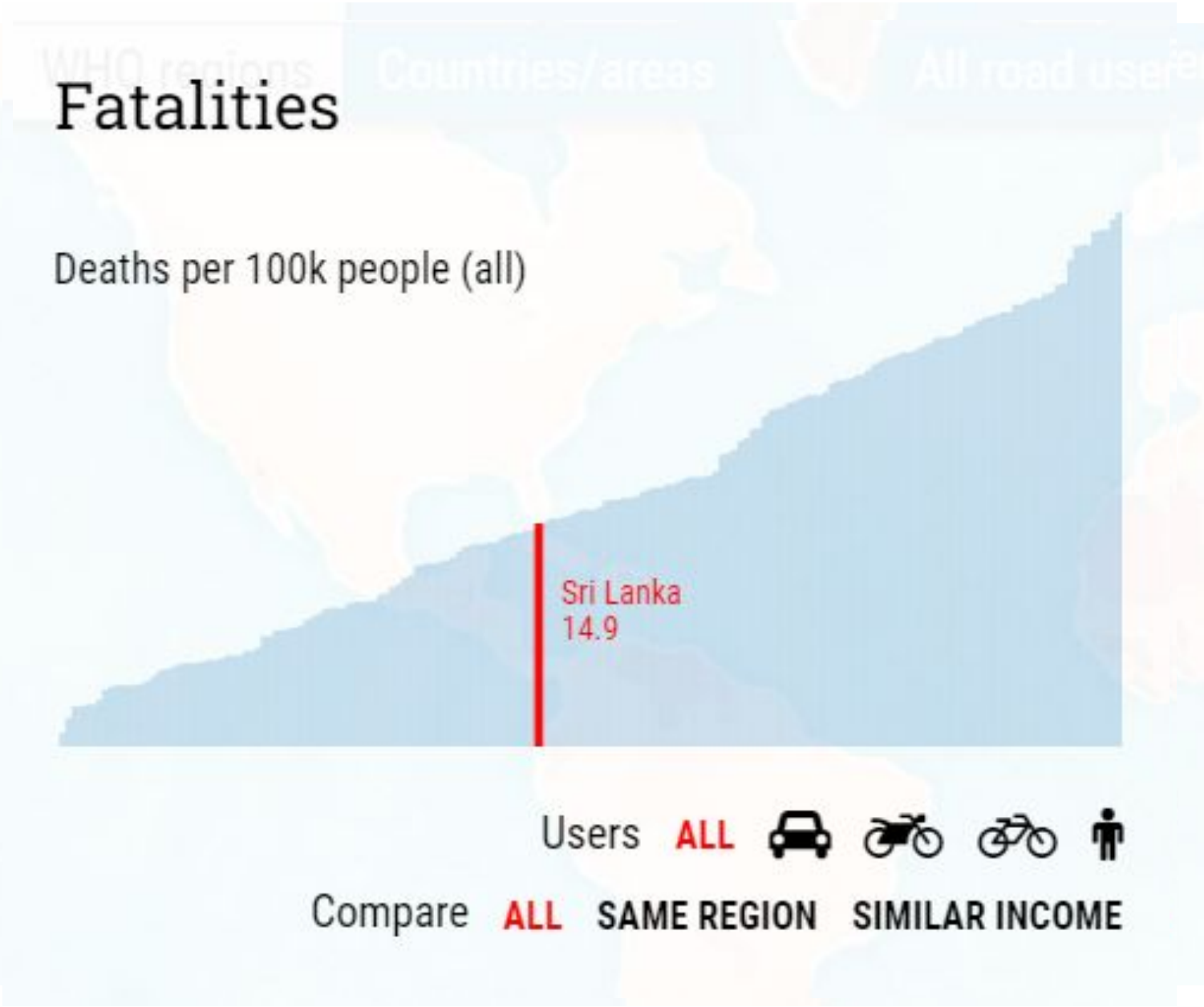
Outline

- Overview of road safety in Sri Lanka
- Development of Sri Lanka Accident Data Management System
- Decade of Action 2011-2020: Insights from crash data analysis

Overview of Road Safety in Sri Lanka

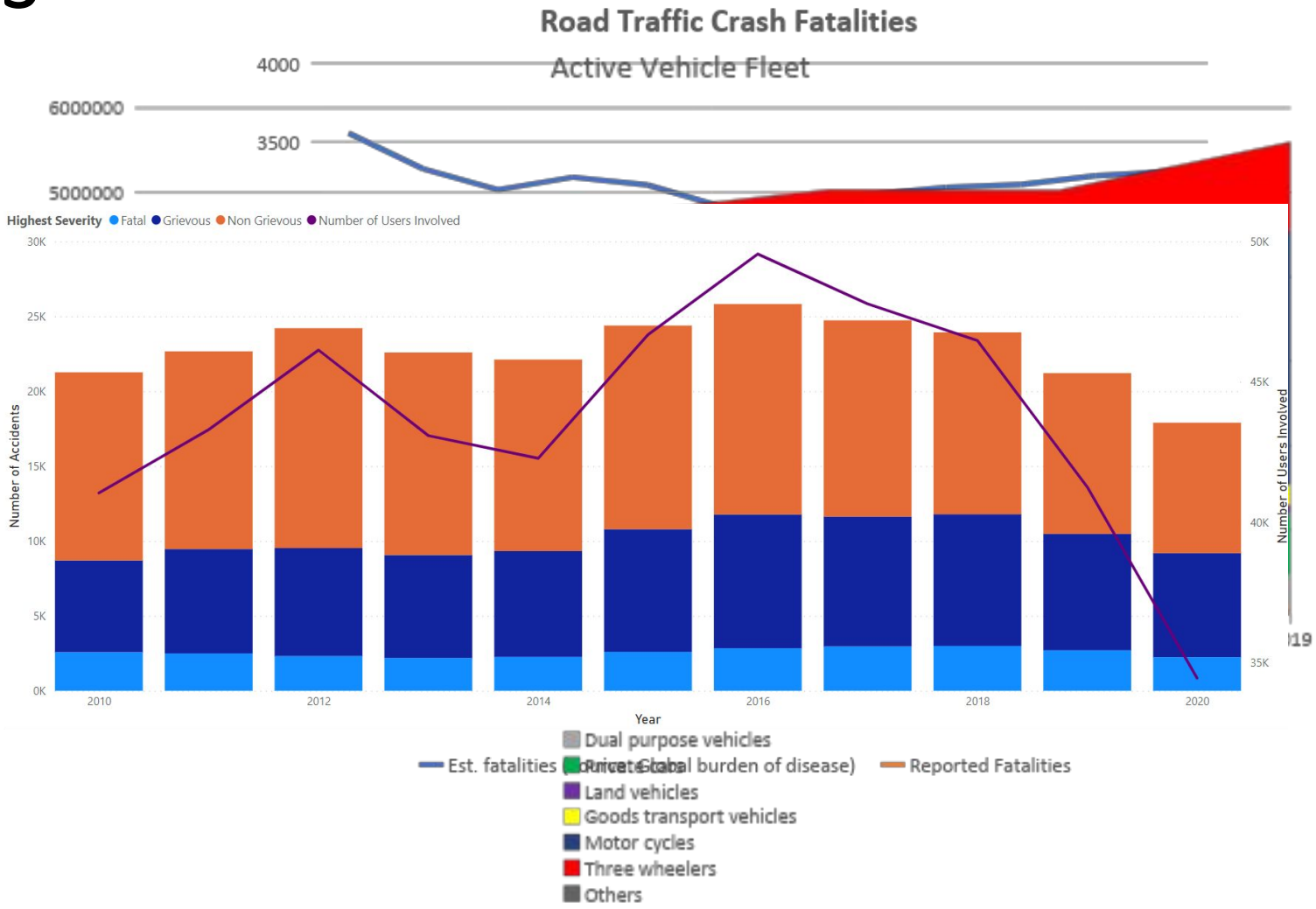
- Population 22 million
- Per capita GDP $3814 (in 2021)
- Approx. 3000 deaths per annum
- Vehicle fleet 5.6 million



https://extranet.who.int/roadsafety/death-on-the-roads/#country_or_area/LKA

Road Crash Fatalities

- Road fatalities have remained around 3000 p.a range over the last 5 years
- Minor reduction in 2019 & 2020 due to Covid, economic crisis, terror attack related shut down
- Considerable increase between 2014 and 2016 largely attributed due to influx of motor-cycle and three-wheeler into the fleet



Development of Sri Lanka Accident Data Management System

- Sri Lanka Police – Traffic Division is responsible for recording crash data and managing road crash database in Sri Lanka
- In 2017/18 the development of a new SLADMS was initiated
- Collaborative project
  - Department of Civil Engineering, University of Moratuwa – crash data analytics, review of the issues in existing crash database, designing M&E framework for implementation
  - Effective Solutions Pvt Ltd – software development, facilitating training for Police officer, deployment
  - World Health Organization – Funding the implementation of the pilot project, capacity building (550+ Police officers trained)
  - National Council for Road Safety – Funds to equipment purchase for islandwide implementation, expected date Jan/2023

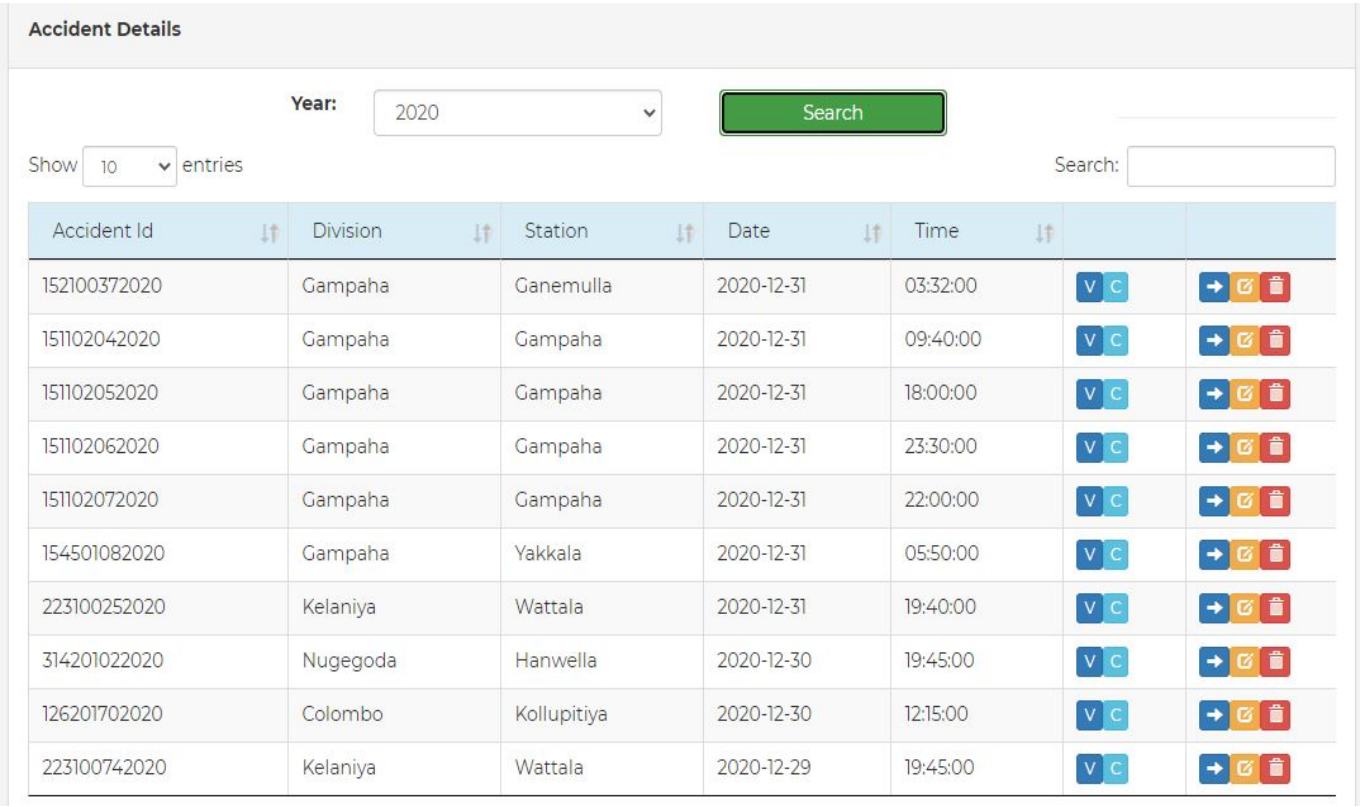


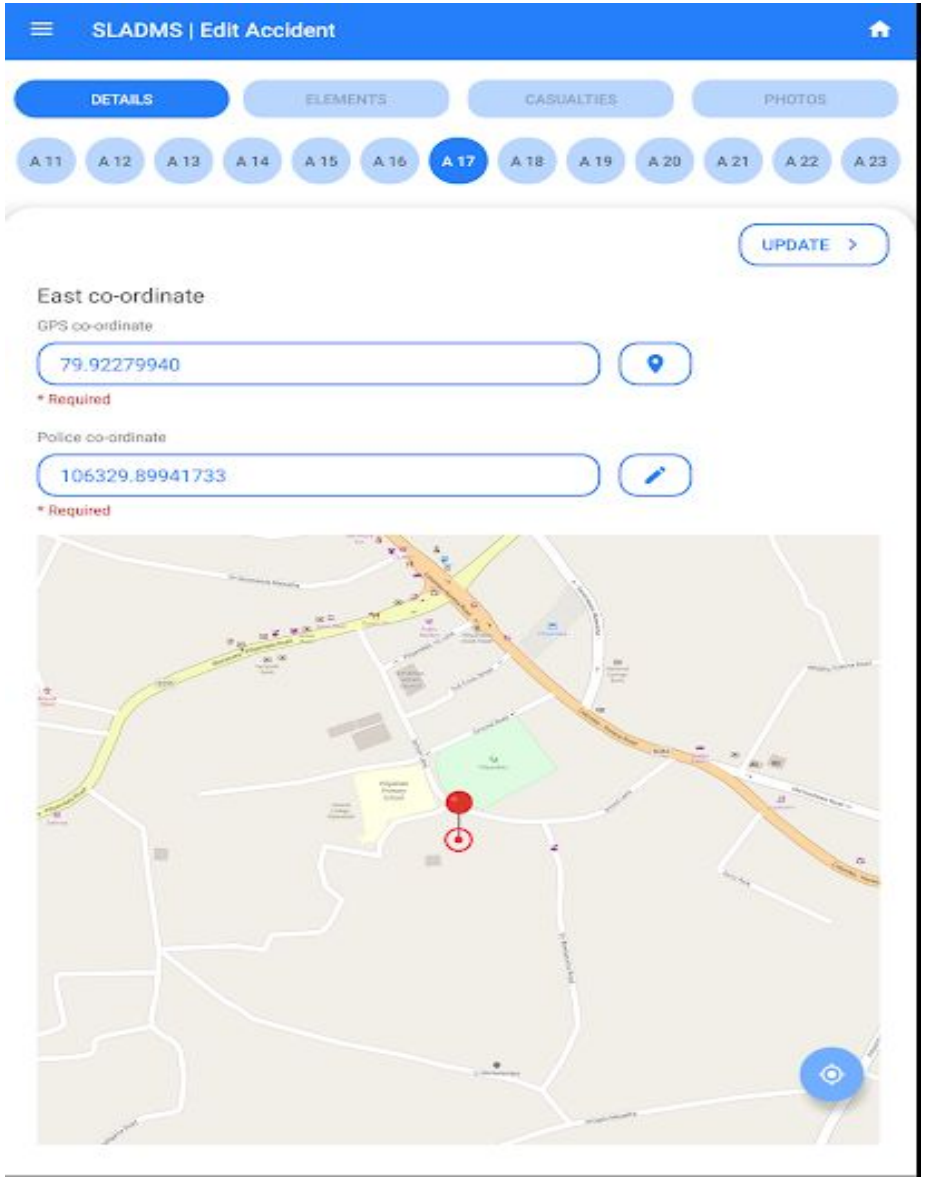


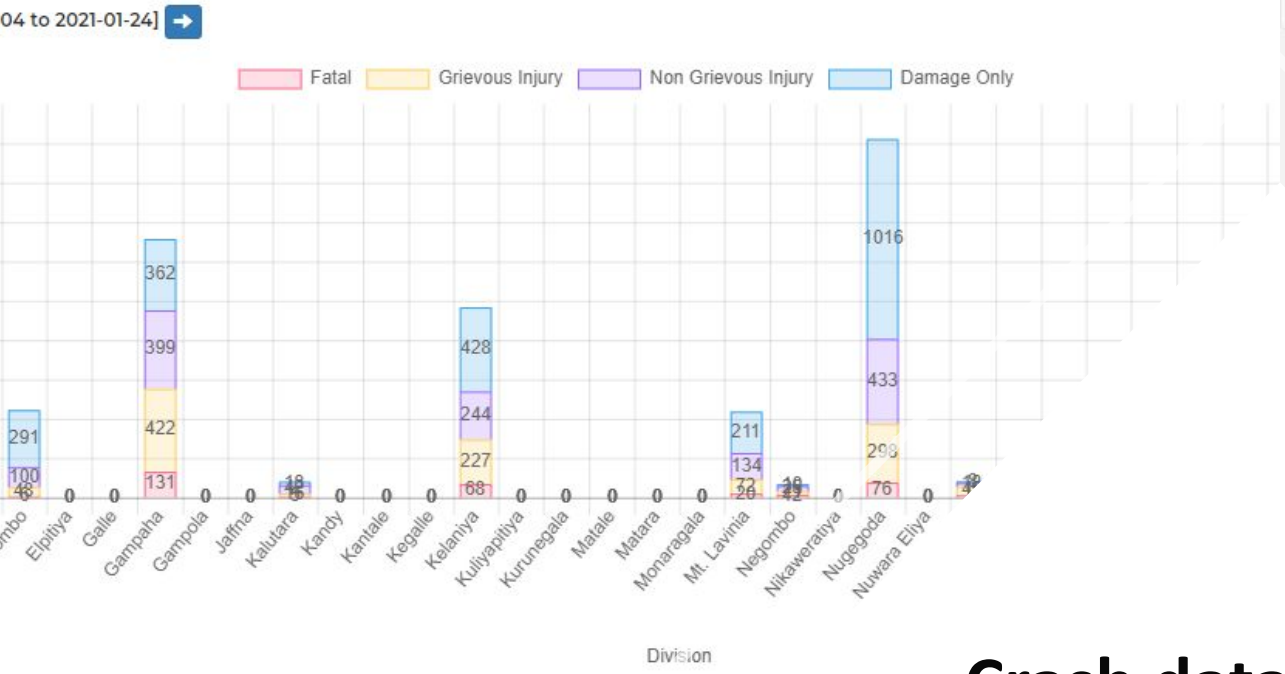


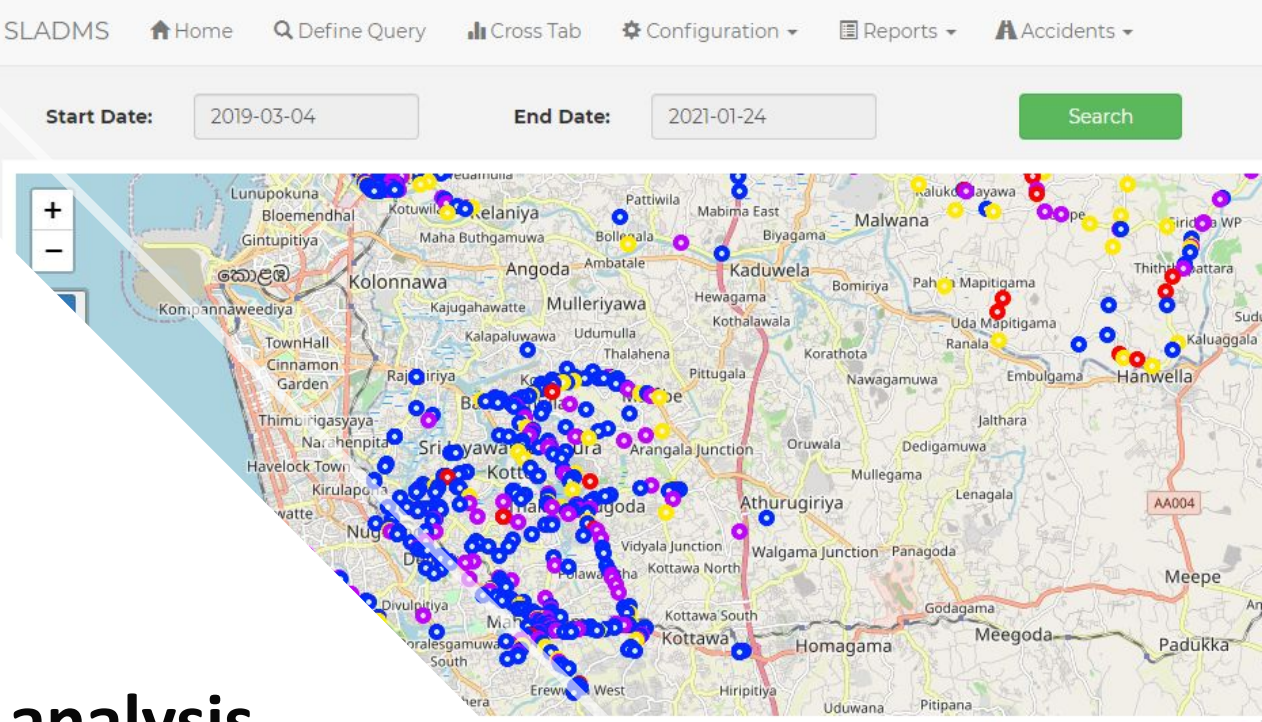
SLADMS Training Programs

Web System: Accident Recording & View









Crash data analysis

Start Date: 2018-01-02 End Date: 2021-01-23

Road : AA001 - Colombo - Kandy

End Date: 2020-01-01 Search

Excel

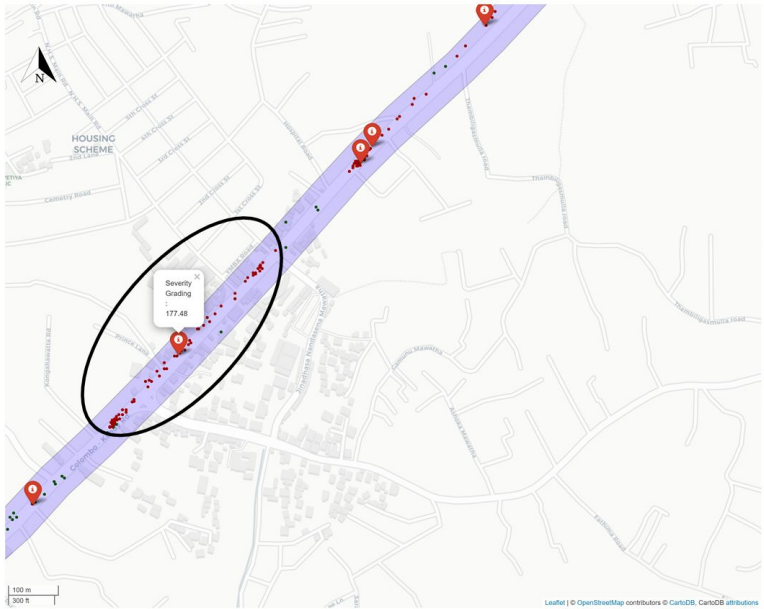
Search:

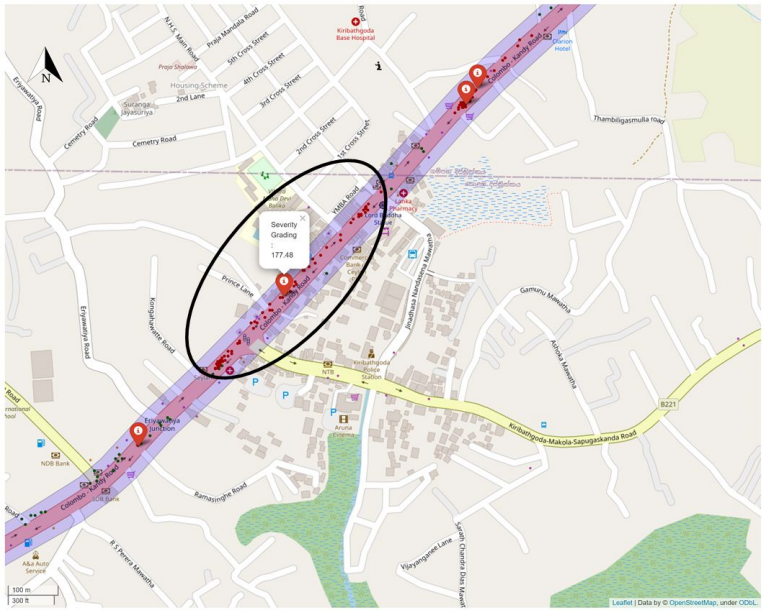
Accident ID	Division	Station	Road name	Nearest post (km)	Collision type	Day of week	Severity	
1523152018	Gampaha	Weerangula	Veediyawatta	34	With passenger falling off vehicle	Monday	1.Non grievous 2.Non grievous	1.Dual purpose vehicle 2.Three wheeler
1523152018	Gampaha	Weerangula	Veediyawatta	34	With passenger falling off vehicle	Monday	1.Non grievous 2.Non grievous	1.Dual purpose vehicle 2.Three wheeler
1523532018	Gampaha	Weerangula	COLOMBO-KANDY	400	With passenger being hit when	Thursday	1.Grievous	1.Dual purpose vehicle

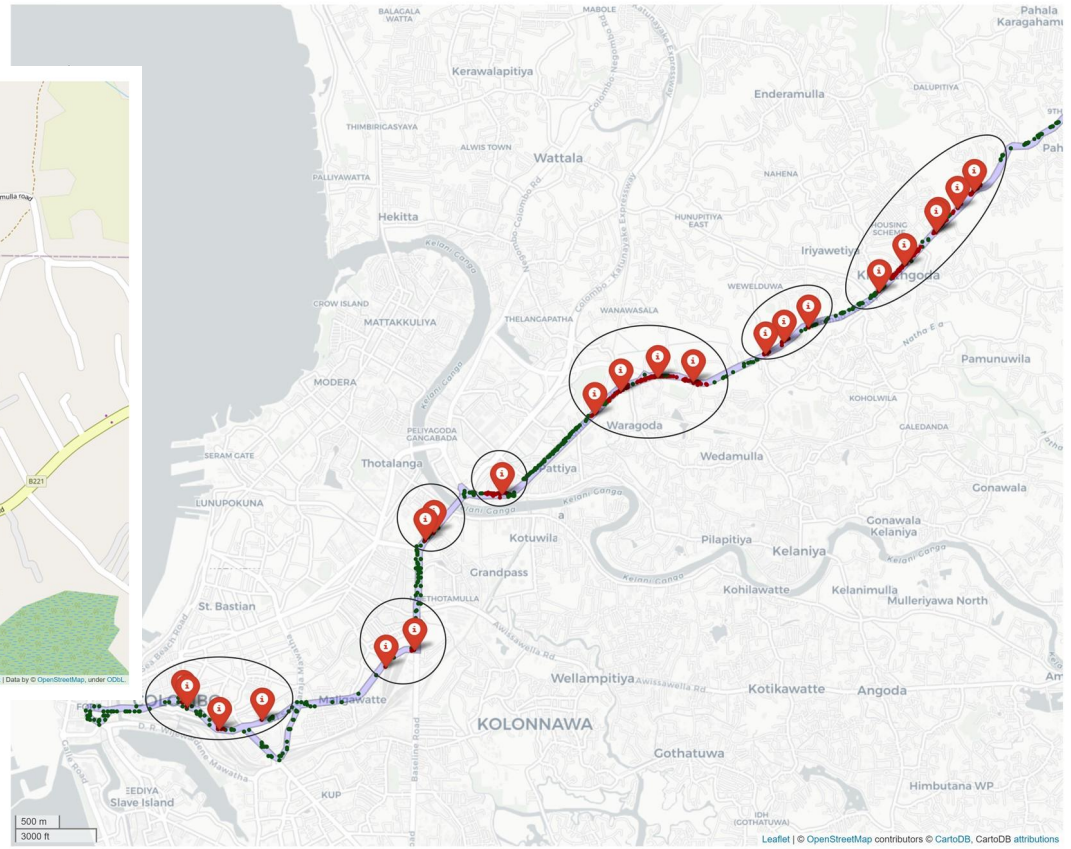
		Fatal		Grievous Injury		Non-Grievous Injury		Damage
		Number	Percentage	Number	Percentage	Number	Percentage	Number
	wn /	6612	7.07%	22914	24.51 %	31286	33.47 %	32665
	speeding	1317	12.43%	2918	27.54 %	3409	32.18 %	2950
	Aggressive / negligent driving	3454	8.13%	10479	24.66 %	13790	32.45 %	14768
03	Error of judgment	519	7.42%	1712	24.48 %	2420	34.6 %	2343
04	Influenced by alcohol / drugs	166	7.82%	474	22.34 %	729	34.35 %	753
05	Fatigue / fall asleep	89	12.86%	151	21.82 %	202	29.19 %	250
06	Distracted /	48	6.28%	161	21.07 %	268	35.08 %	287

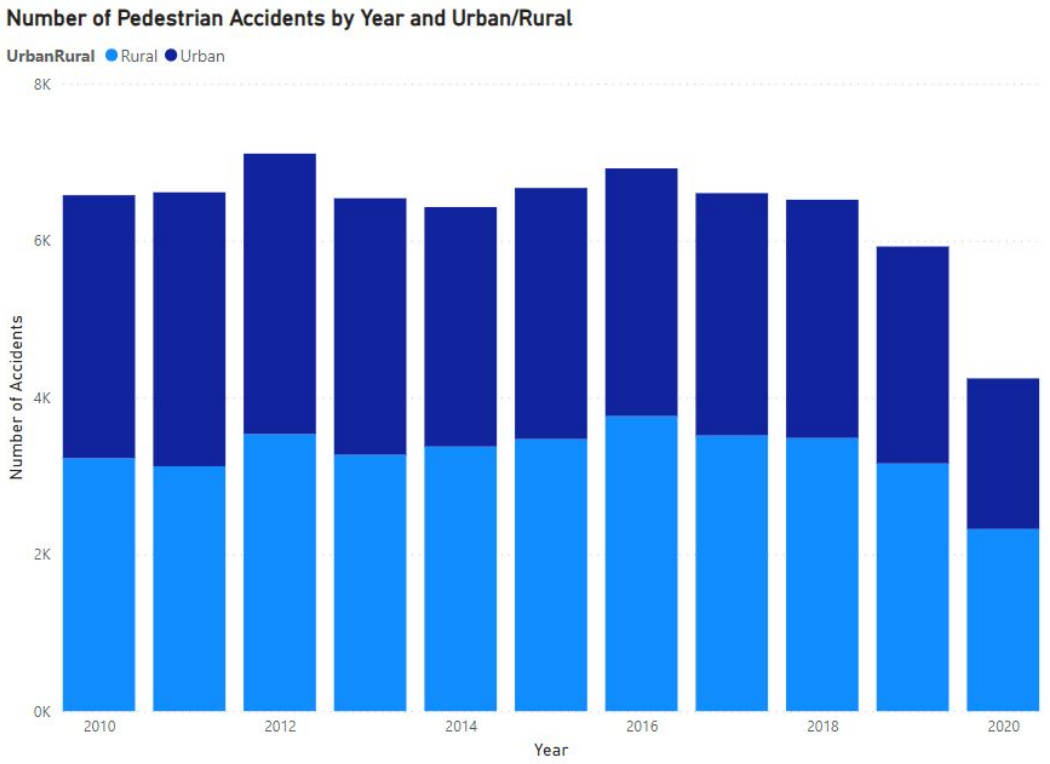
Advanced crash data analytics

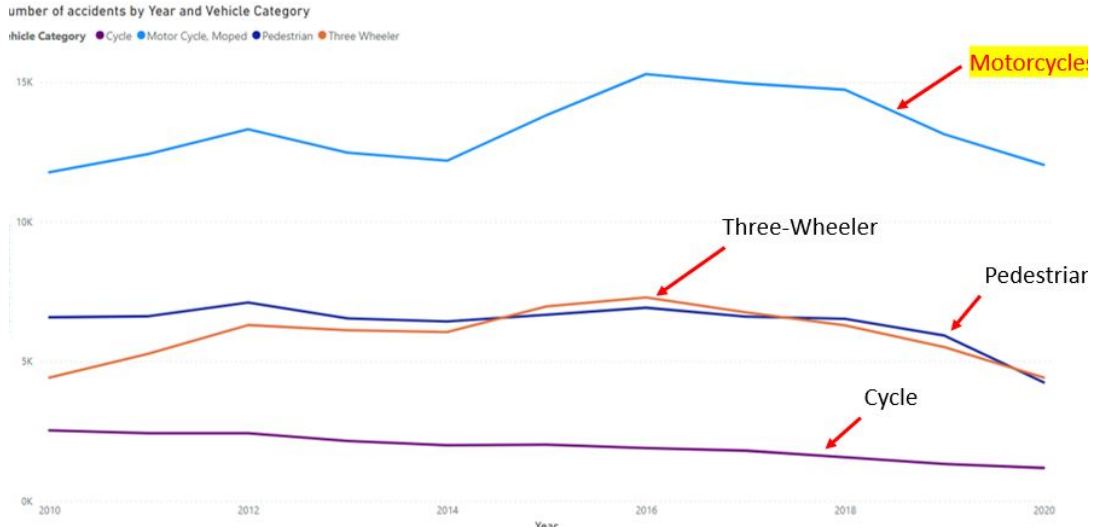
- Accurate crash location identification allows for spatial analysis
- High crash risk road segment identification using clustering techniques
- Input to optimize deployment of Police officers for enforcement, road agencies for road safety inspections







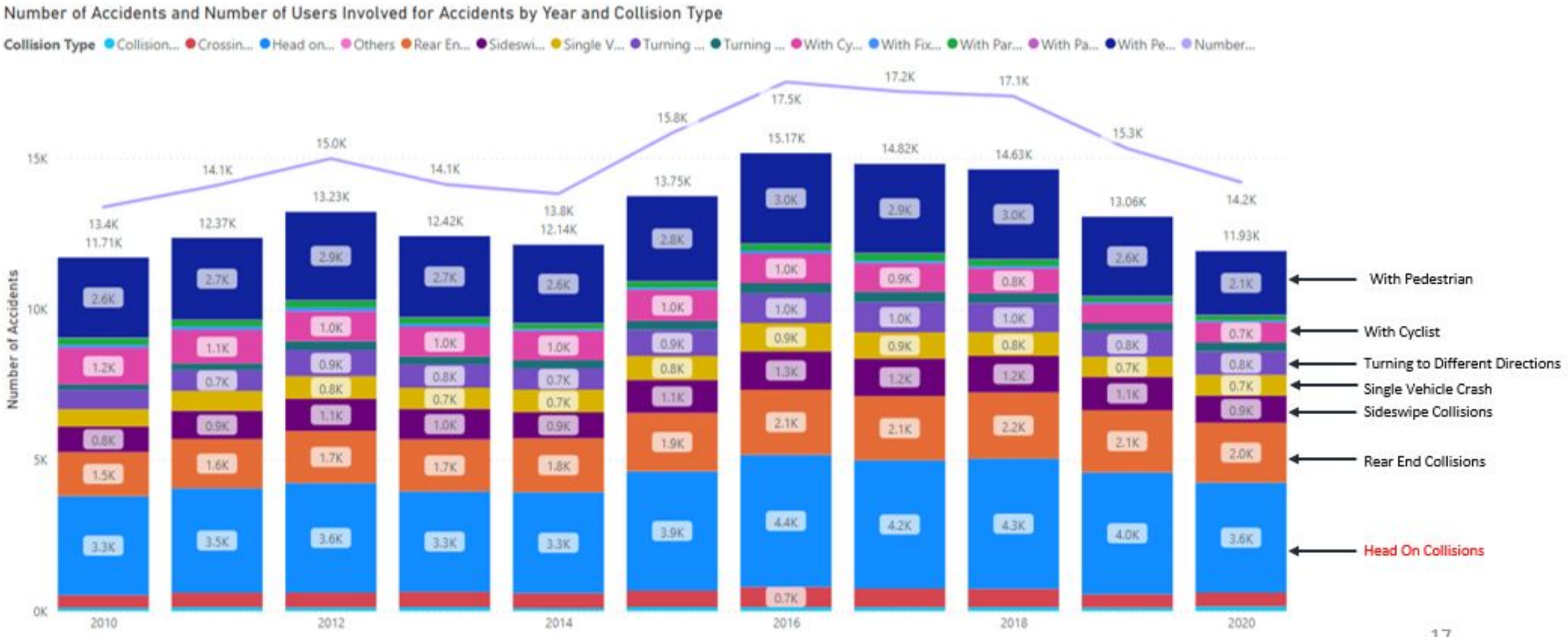




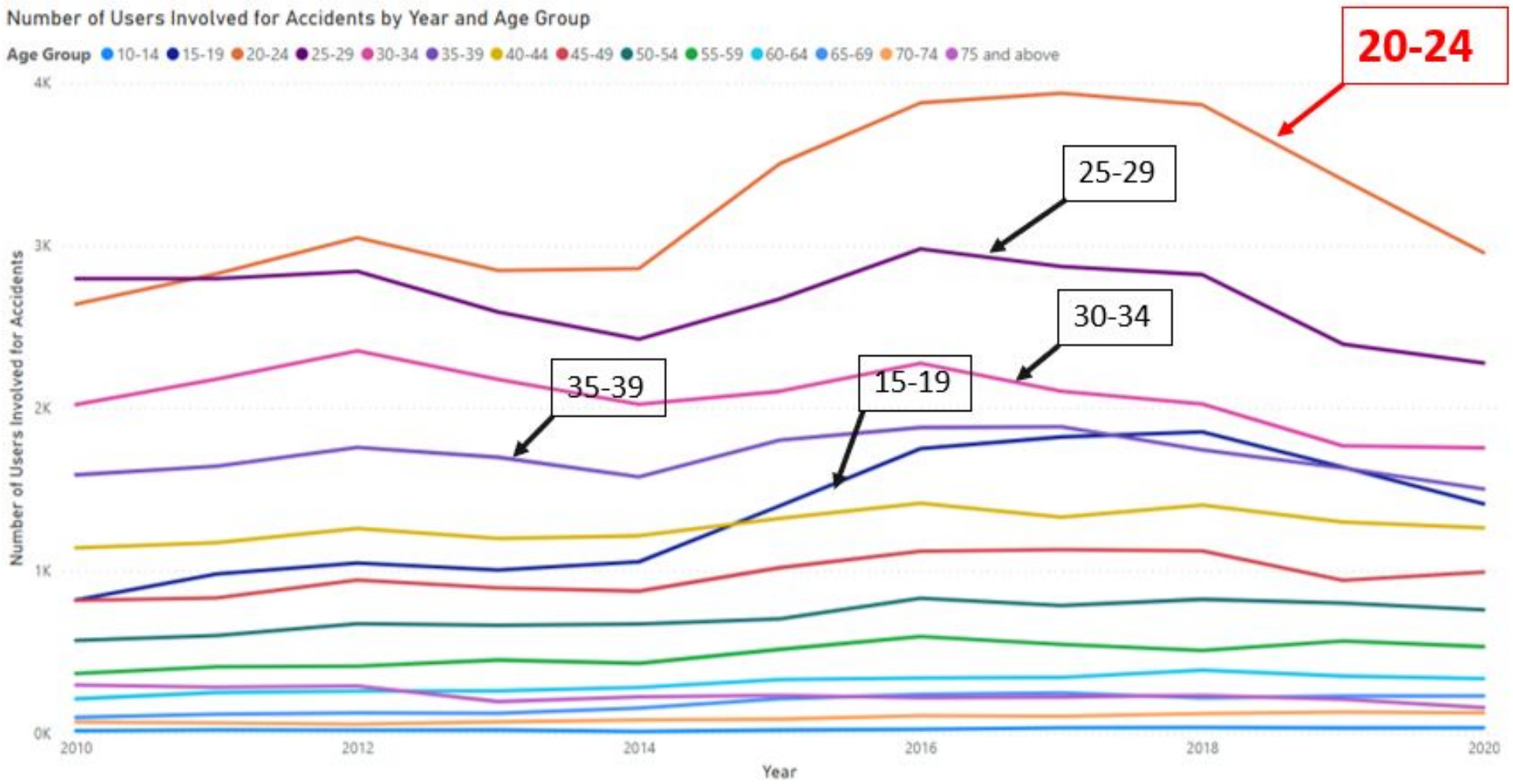
Decade of Action (2011-2020): Road Crash Trends

- The major focus over the last decade remain on the road crashes involving motorcycles, three-wheelers and pedestrians

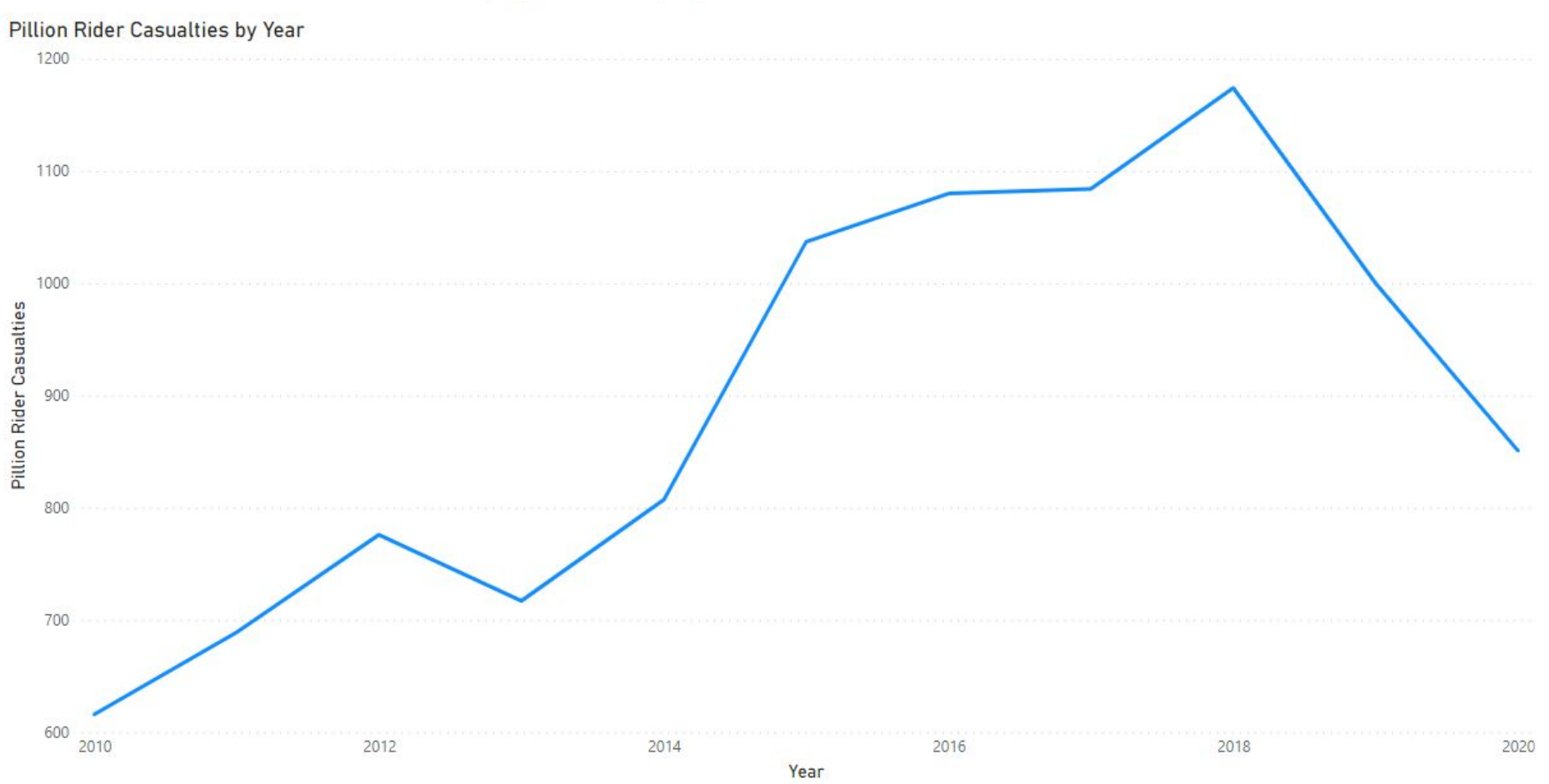
Motorcycle related crashes: Collision types



Motorcycle riders involved in crashes: age wise distribution for Fatal/Grievous/Non-Grievous Crashes

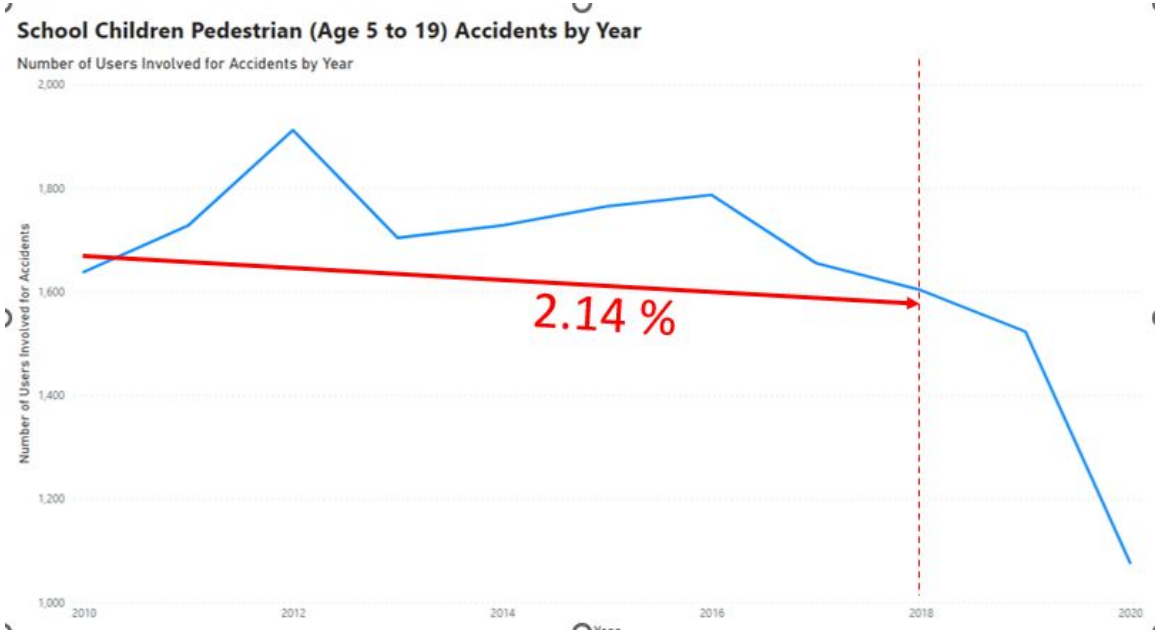


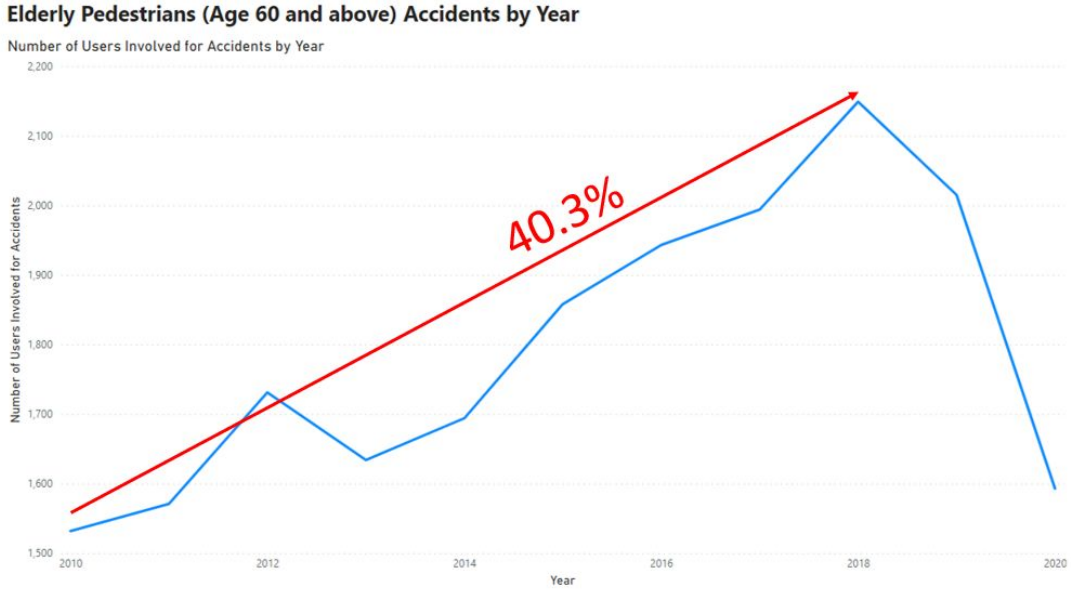
Motorcycle Crashes involving School Children as Pillion Rider



Road crashes involving Pedestrians

- Casualties among those 60+ years increased significantly over the last decade
- School children casualties numbers have marginally reduced





Key issues in Road Crash Analysis

- Data quality
  - Lack of roadway related causal factor identification (more than 90% crash records roadway factors N/A)
  - Inconsistent identification of human factors involved in road crashes
- Promote use of crash data analytics
  - Monitoring and evaluation mechanism for road safety interventions
  - Prioritizing evidence-based road safety interventions that would encourage more use of crash data analysis for decision making
- Data sharing & coordination with other stakeholders
  - Integrating road crash data with road asset management databases, road network risk assessment data (irap ratings etc) for better decision making

source: the archives

THANK YOU!

- First recorded Road accident in the city of Colombo, Ceylon in 1910.