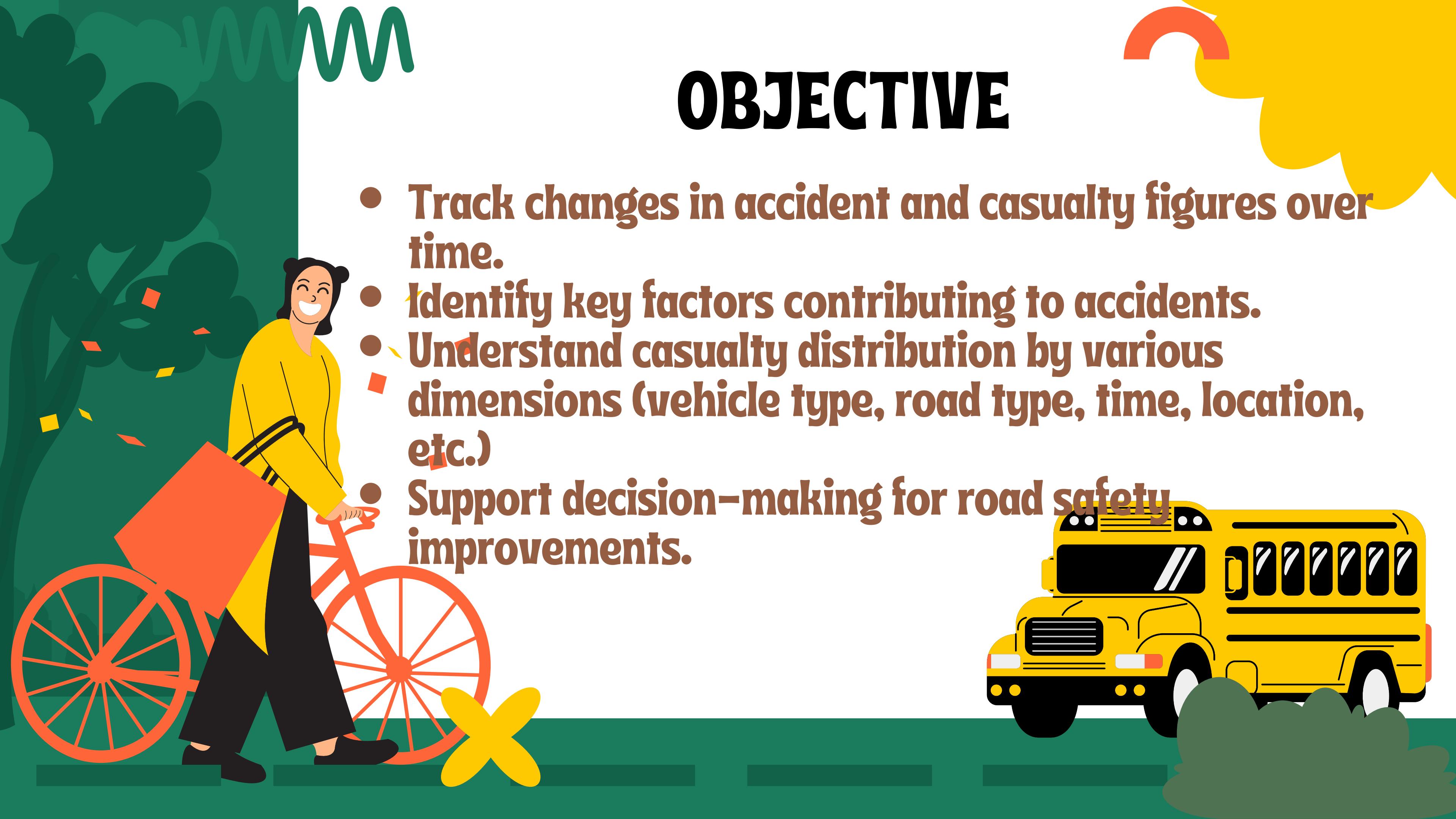


ROAD ACCIDENT ANALYSIS

OBJECTIVE

- Track changes in accident and casualty figures over time.
- Identify key factors contributing to accidents.
- Understand casualty distribution by various dimensions (vehicle type, road type, time, location, etc.)

Support decision-making for road safety improvements.



01.

CY CASUALTIES

```
[-]select * from road_accident  
[-]select SUM(number_of_casualties) as CY_Casualties  
      from road_accident  
      where YEAR(accident_date) = '2022'
```

	CY_Casualties
1	195737



01.

TOTAL CASUALTIES

```
[-] SELECT * FROM road_accident  
[-]   SELECT SUM(number_of_casualties)  
     FROM road_accident
```

CY_Casualties
1 417883



02.

CY FATAL CASUALTIES

```
select * from road_accident  
select SUM(number_of_casualties) as CY_Fatal_Casualties  
from road_accident  
where YEAR(accident_date) = '2022' and accident_severity = 'Fatal'
```

	CY_Fatal_Casualties
1	2855



03.

CY SERIOUS CASUALTIES

```
select * from road_accident  
      select SUM(number_of_casualties) as CY_Serious_Casualties  
            from road_accident  
      where YEAR(accident_date) = '2022' and accident_severity = 'Serious'
```

	CY_Serious_Casualties
1	27045

04.

CY SLIGHT CASUALTIES

```
SELECT * FROM road_accident  
SELECT SUM(number_of_casualties) AS CY_Slight_Casualties  
FROM road_accident  
WHERE YEAR(accident_date) = '2022' AND accident_severity = 'Slight'
```

CY_Slight_Casualties	
1	165837

05.

CASUALTIES BY VEHICLE TYPE

```
select
case
when vehicle_type in ('Agricultural vehicle') then 'Agricultural'
when vehicle_type in ('Car' , 'Taxi/Private hire car') then 'Cars'
when vehicle_type in ('Motorcycle 125cc and under', 'Motorcycle 50cc and under', 'Motorcycle over 125cc and upto 500cc', 'Motorcycle over 500cc', 'Pedal cycle') then 'Bike'
when vehicle_type in ('Bus or coach (17 or more pass seats)', 'Minibus (8 - 16 passenger seats)') then 'Bus'
when vehicle_type in ('Goods 7.5 tonnes mgw and over', 'Goods over 3.5t. and under 7.5t', 'Van / Goods 3.5 tonnes mgw or under') then 'Van'
else 'Other'
end as vehicle_group,
SUM(number_of_casualties) as CY_Casualties
from road_accident
where YEAR(accident_date) = '2022'
group by
case
when vehicle_type in ('Agricultural vehicle') then 'Agricultural'
when vehicle_type in ('Car' , 'Taxi/Private hire car') then 'Cars'
when vehicle_type in ('Motorcycle 125cc and under', 'Motorcycle 50cc and under', 'Motorcycle over 125cc and upto 500cc', 'Motorcycle over 500cc', 'Pedal cycle') then 'Bike'
when vehicle_type in ('Bus or coach (17 or more pass seats)', 'Minibus (8 - 16 passenger seats)') then 'Bus'
when vehicle_type in ('Goods 7.5 tonnes mgw and over', 'Goods over 3.5t. and under 7.5t', 'Van / Goods 3.5 tonnes mgw or under') then 'Van'
else 'Other'
end
```

	vehicle_group	CY_Casualties
1	Bus	6573
2	Other	3251
3	Bike	13805
4	Van	15905
5	Agricultural	399
6	Cars	155804

06.

CY CASUALTIES BY MONTHLY TREND

```
select DATENAME(month, accident_date) as Month_Name, SUM(number_of_casualties)
from road_accident
where YEAR(accident_date) = '2022'
group by DATENAME(month, accident_date)
```

	Month_Name	(No column name)
1	February	14804
2	June	17230
3	August	16796
4	April	15767
5	May	16775
6	December	13200
7	January	13163
8	September	17500
9	October	18287
10	July	17201
11	November	18439
12	March	16575



07.

CASUALTIES BY ROAD TYPE

```
select road_type, sum(number_of_casualties) as CY_Casualties from road_accident  
where year(accident_date) = '2022'  
group by road_type
```

	road_type	CY_Casualties
1	Single carriageway	144653
2	One way street	3499
3	Roundabout	12683
4	Slip road	2990
5	Dual carriageway	31912

08.

CASUALTIES BY URBAN/RURAL

```
select urban_or_rural_area, cast(sum(number_of_casualties) as decimal(10,2))*100 /  
  (select cast(sum(number_of_casualties) as decimal(10,2)) from road_accident where year(accident_date) = '2022')  
  from road_accident  
  where year(accident_date) = '2022'  
  group by urban_or_rural_area
```

	urban_or_rural_area	(No column name)
1	Rural	38.0541236455039
2	Urban	61.9458763544960



09.

TOP 10 LOCATIONS BY NO. OF CASUALTIES

```
select top 10 local_authority, sum(number_of_casualties) as Total_Casualties
from road_accident
group by local_authority
order by Total_Casualties desc
```

	local_authority	Total_Casualties
1	Birmingham	8611
2	Leeds	5821
3	Bradford	4431
4	Manchester	4366
5	Liverpool	4052
6	Cornwall	3820
7	Sheffield	3737
8	Kirklees	3312
9	County Durham	3295
10	Westminster	3169

10.

CASUALTIES BY LIGHT CONDITION

```
select
case
when light_conditions in ('Daylight') then 'Day'
when light_conditions in ('Darkness - lighting unknown', 'Darkness - lights lit', 'Darkness - lights unlit', 'D
end as Light_Condition,
cast(cast(sum(number_of_casualties) as decimal(10,2))* 100 /
(select cast(sum(number_of_casualties) as decimal(10,2)) from road_accident where year(accident_date) = '2022')
as CY_Casualties_PCT
from road_accident
where year(accident_date) = '2022'
group by
case
when light_conditions in ('Daylight') then 'Day'
when light_conditions in ('Darkness - lighting unknown', 'Darkness - lights lit', 'Darkness - lights unlit', 'D
end
```

	Light_Condition	CY_Casualties_PCT
1	Day	73.84
2	Night	26.16

11.

CY CASUALTIES BY ROAD SURFACE

```
select * from road_accident  
select SUM(number_of_casualties) as CY_Casualties  
from road_accident  
where YEAR(accident_date) = '2022' and road_surface_conditions = 'Dry'
```

	CY_Casualties
1	131976



KEY INSIGHTS

- Most accidents occur on single carriageway.
- Night-time accidents are significantly high.
- Casualties peak in certain months, revealing seasonal trends.
- Wet road conditions contribute to higher accident rates.
- Car accidents are more prominent.
- Urban areas accounted for 61% of casualties.

THANK YOU

