Crash Data Consortium

March 19, 2026

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Agenda

1. Welcome and introductions.
2. Statewide Traffic Records Advisory Committee update.
3. Regional crash data quality: Findings from minor update of Taking Action on Regional Vision Zero.
4. Consortium strategy implementation updates.
5. Crash data updates and other matters.
6. Next meeting – July 30, 2026.
7. Other items.
8. Adjourn.

Statewide Traffic Records Advisory Committee update

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Regional crash data quality

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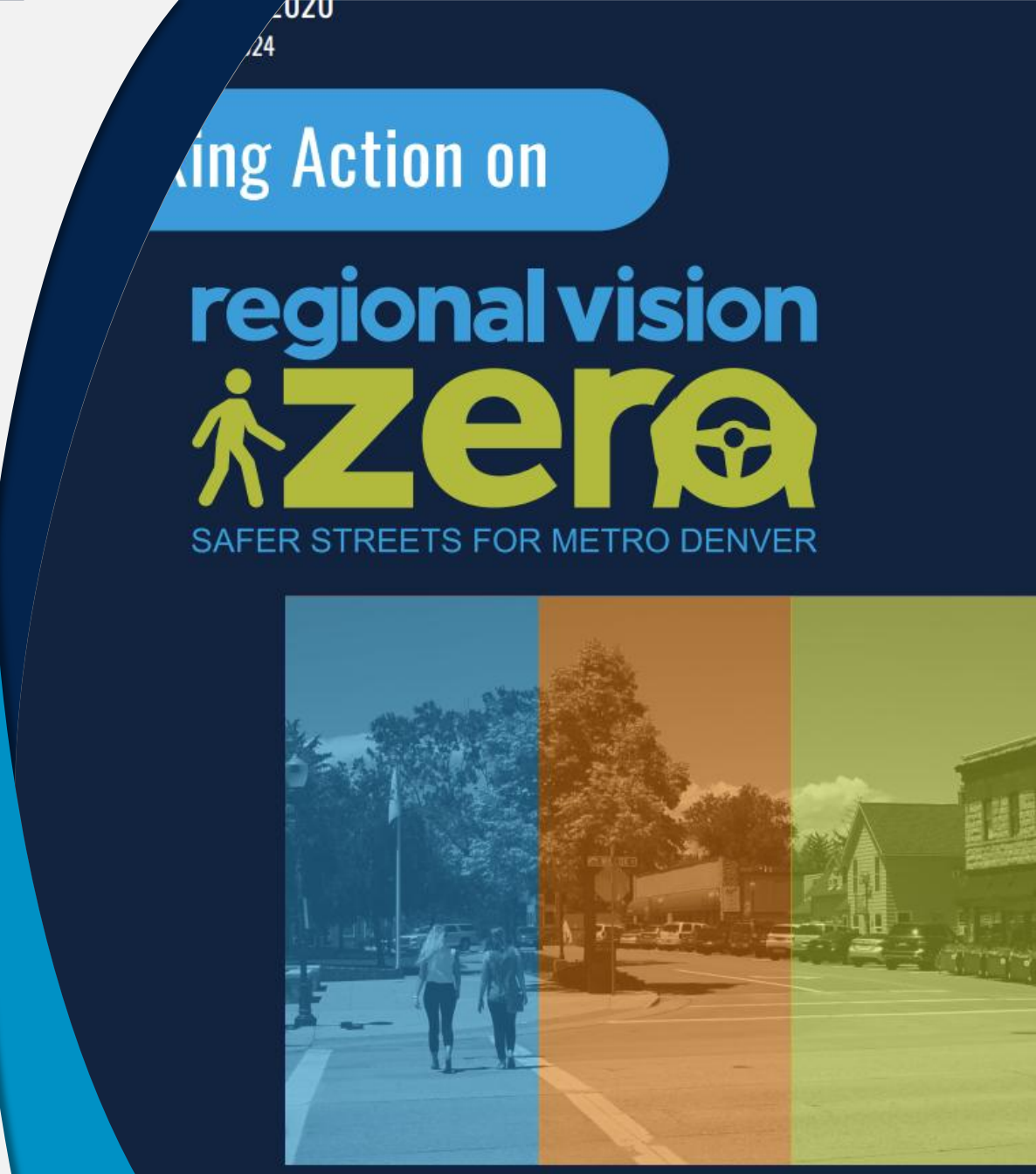
Background

DRCOG is in the process of updating the regional Vision Zero plan, *Taking Action on Regional Vision Zero*.

Tasks include updating the High Injury Network and Regional Crash Profiles (i.e., target crash types or emphasis areas) using more recent crash data (2020-2024).

The plan: brings attention to high injury corridors, identify existing and emerging crash types that should be targeted to make the biggest gains towards zero deaths, support grant applications.

Takes a Safe Systems approach.

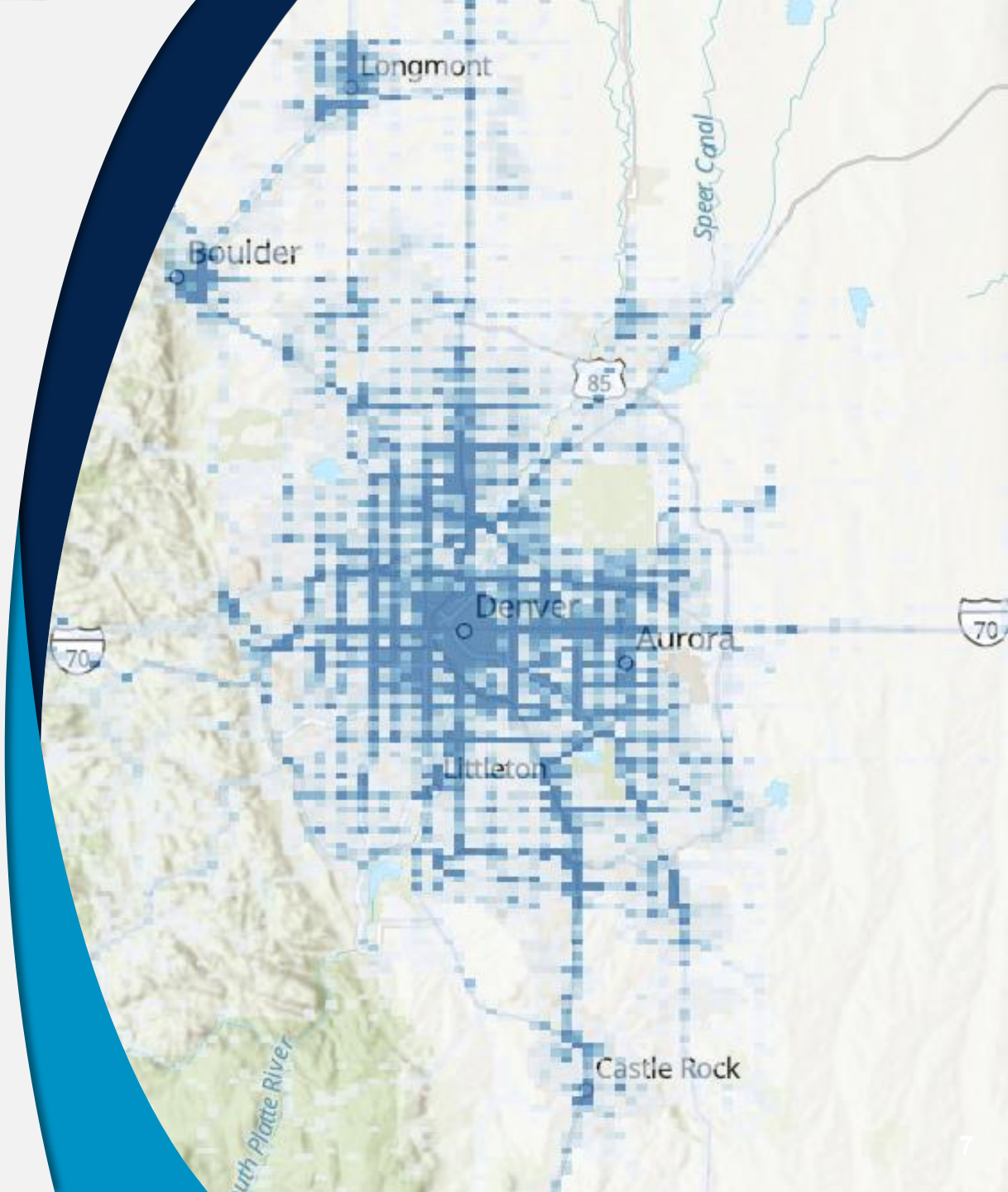


Background (continued)

- Significant cleaning of the crash data had to be undertaken.
- Findings of the most common or most significant irregularities or issues with the crash data can be used to educate law enforcement and improve data quality in the future.

Location

- One agency had 500+ crash points in one location.
- DRCOG GIS staff spends around one month geocoding and correcting the location of fatal, serious injury, and vulnerable road user crashes from the previous each year.



Underreporting of speeding

- 7% of fatal and serious injury crashes were speed-related based on the Driver Action field (Speeding, Too fast for conditions, or Racing).
- In an additional 6% of crashes, the narrative states that the driver was speeding (“high rate of speed,” “too fast,” “excessive speed,” “speeding”), but no speeding-related driver action is indicated.
- **One would think that speed/speeding is not a major cause of severe crashes….**

Speed is a key contributor to crash severity

Newton's Second Law provides the variables that impact the amount of force (F) generated by a crash. The higher the force, the greater the severity.

$$F = m \frac{\Delta v}{t}$$

m – The vehicle's **mass**.

v – The vehicle's **velocity**. Traditionally expressed in meters per second, but miles per hour can also be used.

t – The **time** it takes for the crash to occur. Typically expressed in seconds or milliseconds.

Velocity, or speed, is one of the four variables.

Importance of speeding in crash reports

- **An indication of "speeding" (or similar), when applicable, is crucial** for indicating a need for roadway design changes, enforcement programs, new legislation, and vehicle technology improvements.
- Estimated speeds or data retrieved from vehicle event data recorder (EDR) in narratives helps us understand at what speed various types of crashes become severe and fatal.
  - Rear-end crashes: 50 mph to be severe, 80 mph can be fatal.
  - Collision with object crashes: 40-45 mph is enough to be severe.
  - Front-to-side crashes: 35-40 mph is enough to be severe.
  - Rollover crashes: 65 mph can cause severe injuries, 100 mph is often fatal.
  - Wrong-way head-on crashes: 40 mph is enough to be fatal.

Strategies for addressing underreporting of speeding

Take-aways:

1. Investigate why speeding isn't being reported. Why is there an overreliance on "careless driving" and "reckless driving?" (Who: DRCOG)
2. Encourage officers to report "speeding" or "too fast for conditions" as a Driver Action when suspected. (Who: Law enforcement agencies)
3. Encourage officers to estimate speeds (video analysis, skid mark analysis) in cases of severe crashes and seek a warrant to retrieve vehicle data in cases of fatal crashes. (Who: Law enforcement agencies)

Underreporting of red light running

- Red light running should be indicated using the “Failed to stop a signal” Driver Action.
- 159 fatal and serious crashes (~1.5% of total) mentioned red light running in the narrative but did not select this Driver Action.
- Correct reporting of driver actions is crucial for developing targeted enforcement programs.

Take-away:

1. Train officers to select “Failed to stop at signal” Driver Action in cases of red light running. (Who: Law enforcement agencies)

Missing narratives

- **25% of fatal and serious crashes did not have a narrative.**
- Narratives help to ensure fields are filled out correctly and help analysts understand how and why the crash occurred and what could have caused it to be so severe.
- **Many narratives also have personal identifying information**, limiting their ability to be shared.
- Here is an example of a good narrative:

  "TU1 was WB on W. Colfax Ave with intention to turn NB on Tabor St. Driver of TU1 was intoxicated and drove too fast for the turn causing TU1 to crash into a fire hydrant on the NW corner of this intersection."

Fatal and serious injury (KSI) crashes that are missing narratives, by law enforcement agency (2020-2024).

Law enforcement agency	Number	Percent of agency's KSI crashes
Denver PD	801	28%
Aurora PD	254	22%
Westminster PD	219	87%
Boulder PD	178	93%
Commerce City PD	127	80%
Brighton PD	103	77%
Parker PD	101	90%
Northglenn PD	68	84%
Longmont PD	56	20%
Adams County Sherriff's Office	46	24%
Colorado State Patrol	46	2%
Thornton PD	45	15%
Lone Tree PD	32	86%

Strategies for addressing missing or improper narratives

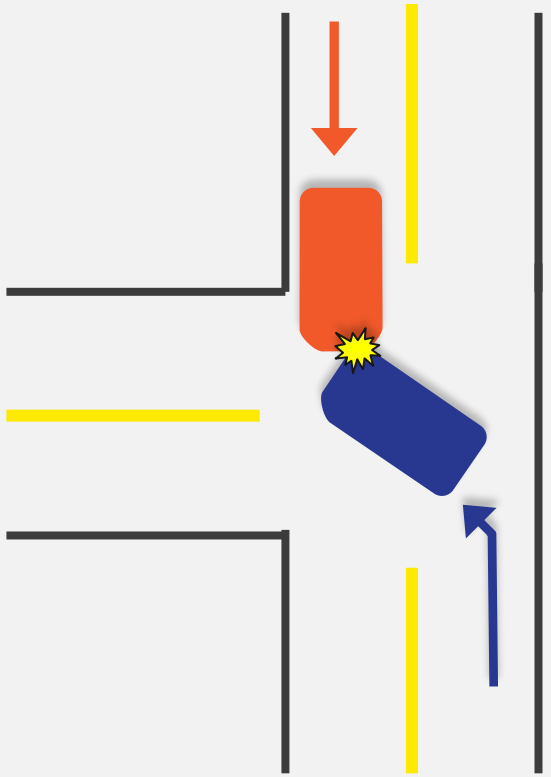
1. Consider requiring officers to provide narratives for fatal and serious injury crashes. (Who: Law enforcement agencies, Colorado Department of Revenue (DOR))
2. Check to see if your agency is having transmission issues to DOR. (Who: Law enforcement agencies)
3. Train officers on how to write a good narrative, without personal identifying information. Consider providing examples and templates. (Who: Law enforcement agencies)

First Harmful Event assignment for certain left-turn crashes

- How would you classify the First Harmful Event for this crash? **Front-to-Side** or **Front-to-Front?**
- There is a lot of discrepancy with how it's classified.
- CDOT typically assigns it a Crash Type of **Approach Turn** (a type of Front-to-Side crash).
- Crash Reporting Manual illustrations indicates it should likely be a **Front-to-Side** crash, though it's unclear.

Take-aways:

- Add an illustration to the Crash Reporting Manual to clarify how it should be categorized. (Who: STRAC)
- Train officers. (Who: Law enforcement agencies)
- Add illustrations and automated logic to electronic crash reporting systems. (Who: Law enforcement agencies with their vendors)

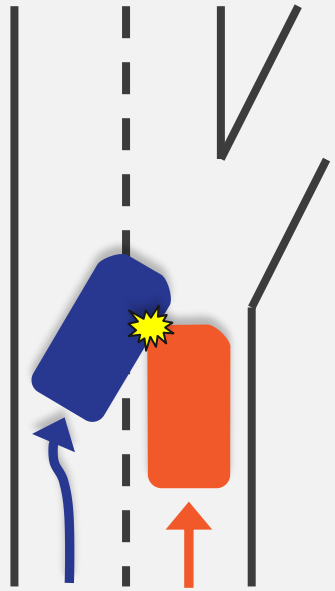


First Harmful Event assignment for crashes when vehicle is aggressively changing lanes

- How would you classify the First Harmful Event for this crash? **Front-to-Side** or **Side-to-Side - Same Direction**?
- There is a lot of discrepancy with how it's classified.
- CDOT typically assigns it a Crash Type of **Side-to-Side - Same Direction**.
- Illustrations in the Crash Reporting Manual indicates it should be a **Front-to-Side** crash.

Take-aways:

- Add an illustration of this scenario to the Crash Reporting Manual to clarify how it should be categorized. (Who: STRAC)



Missing non-motorist data

- 28% of severe crashes involving non-motorists state that the Non-motorist's Action was "No contributing action."
- Without a narrative, we have no idea what the non-motorist was doing when the crash occurred.
- "Unknown" at least makes it clear that the officer does not know what the non-motorist was doing when the crash occurred.
- There is no other field that clearly indicates what the non-motorist was doing leading up to the crash.

Take-aways:

- As part of the next update to the crash form, consider removing the "No contributing action" from the list of non-motorist actions. (There is already an "Unknown" option.)

Lack of causal information for fixed-object crashes

- Significant cleaning had to occur to begin to understand why vehicles are leaving the roadway and it's resulting in a fatality or serious injury.
  - Vehicle Movement frequently did not match the description in the narrative or the inputs in the Roadway Contour-Curve field.
- Most severe crashes with a First Harmful Event of Collision with Object **have no clear reason for the crash** beyond "careless driving" or "reckless driving."
- Speeding or Too fast for condition was only attributed to 15.3% of these crashes (this increased to 18.5% after reading narratives).
- Distraction, manipulating electronic device, or talking on cell phone: 6.5%
- For 27%, the contributing factor was "Unknown," "Not observed," or there was "No apparent contributing factor."
- **Why are vehicles leaving the roadway and why is it resulting in a fatality or serious injury?**

Strategies for addressing challenges with fixed-object crash reporting

Take-aways:

1. Encourage officers to **conduct further investigations** to understand the root causes of fatal and severe “Collision with Object” crashes. (Who: Law enforcement agencies)
   - 50% are occurring between 8pm and 5:59am. Likely under-reporting of speeding, intoxication, fatigue, distraction.
2. Encourage officers to **report on the specific factors**, beyond simple “reckless driving,” “careless driving,” or “lane violation.” (Who: Law enforcement agencies)
3. Add logic validations to electronic crash reporting systems to promote consistency between Road Contour-Curve field and Vehicle Movement field. (Who: Law enforcement agencies with their vendors)

Consortium strategy implementation updates

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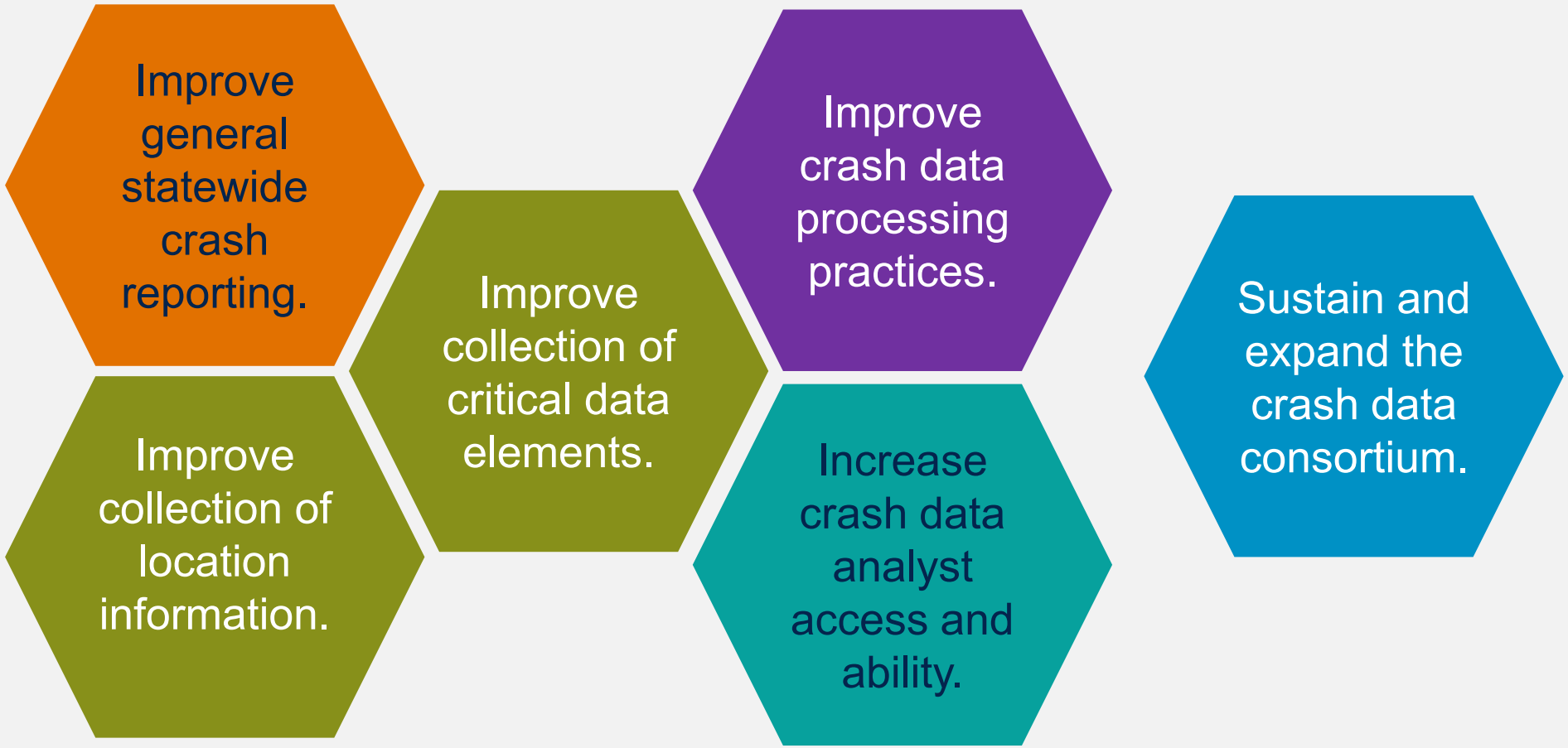
Today's conversation at a glance

- What the report set out to change in the crash data system
- Current consortium implementation approach
- Timeline for strategy implementation
- High priority results from the 2025 workshop
  - Potential benefits
  - Potential challenges
- Recap of medium priority results from the 2025 workshop
- How we can use the rest of the short-term window effectively

What the 2024 report strategies set out to change



Current implementation approach

- Working towards **high** and **medium priority strategies** identified at the February 2025 workshop.
- Started on most **short-term strategies**.
- Regular **Statewide Traffic Records Advisory Committee attendance** and **communication** with member agencies about consortium priorities.
- **Engagement** with **law enforcement agencies** in Colorado.
- **Monitoring grant funding opportunities** which may be applicable to implement strategies.

Timeline for strategy implementation

Timeframe	Years to implement	Calendar years
Short-term.	Zero to two years.	October 2024 → September 2026.
Medium-term.	Three to four years.	October 2026 → September 2028.
Long-term.	Five or more years.	October 2028 onward.

- We are now about **15 months into the two-year** short-term timeframe.
- **Upcoming 405c** traffic records improvement **grant opportunity** for consortium members in the **spring of 2027** for funding from **October 2027 - September 2028**.

2025 workshop results – High priority strategies

- **Require fields critical** to CDOT and other analysts.
- Encourage law enforcement agencies, records management system providers, the Colorado Department of Revenue, and CDOT to **enhance required fields** and **logical validations**.
- **Research** consolidating **statewide crash reporting** into a **single application**.

Enhanced requirements and logical validations

- Potential benefits
  - Data **transmitted** to DOR from law enforcement in **expected formats**.
  - **Less manual cleaning** needed to be done by CDOT and local governments.
  - **Fewer data inconsistencies** between law enforcement agencies.
- Potential challenges
  - Changing **requirements** and **validations** at the state level **requires changes** to the DOR system **DRIVES**.
  - There is a **balance** between the **requirements** and **validations** that must be struck with DRIVES and the **on-the-ground experience** of law enforcement.
  - **Uncertain timeframe** and **many stakeholders must** be **engaged**.

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Statewide electronic crash reporting application

- Potential benefits
  - **Consistent method** for collecting data across agencies.
  - Set up input fields in a way where the format matches what DOR expects.
  - **Conditional formatting** that makes **completing reports easier** for law enforcement.
  - Opportunity for **consistent training resources**.
  - **Update one system** following crash report form updates.
- Potential challenges
  - Decisions need to be made about **ownership** and **maintenance** of the system.
  - **Cost** to develop or acquire and maintain is **uncertain**.
  - **Application Programming Interfaces** (APIs) may **need to be created** between application and records management systems.
  - **Uncertain timeframe** and **many stakeholders must** be **engaged**.

2025 workshop results – Medium priority strategies

- **Encourage law enforcement collaboration** with engineers and planners.
- Continue **education** and **training** on the **importance** of precise **latitude and longitude** capture.
- Coordinate with consortium members to **determine if a regional license to a software vendor for crash data is desired**.
- Provide **training** on **how to effectively use state** and **regional data**.
- **Require** law enforcement agencies to include **latitude and longitude along with one other location reporting method**.

How we can use the rest of the short-term window effectively

- Identify **small groups** to move **specific issues** forward.
  - Meet **two to three times** over the next few months.
  - **Bring recommendations** back to the full consortium.
- Continue to **engage** with **law enforcement** and conduct **statewide reporting system research**.
- DRCOG will **reach out** to **local government partners** about **law enforcement contacts** if the connection has not been made yet.
- **Revise** the report strategies as needed.
  - Combine **related strategies**.
  - Define clear, **achievable objectives**.

Crash data updates and other matters

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Next meeting – July 30, 2026

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Thank you

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