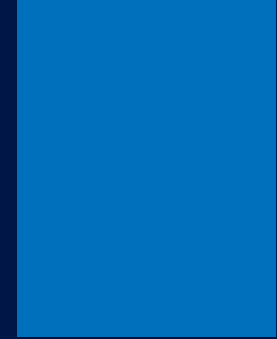# Large Truck Crash Causal Factors Study (LTCCFS)

U.S. Department of Transportation
Federal Motor Carrier Safety Administration

Southeastern CMV Safety Summit
May 2022
Thomas Keane, FMCSA Associate Administrator for Research & Registration

Agenda

- Update on LTCCFS efforts

- Study Phases

- High-Level Requirements

- Next Steps

The Latest Numbers

- 42,915 projected fatalities in motor vehicle crashes in 2021
  - Source: NHTSA Early Projections, 2021
  - 16-year high
- 10.5% increase from calendar 2020 fatalities (38,824), largest increase in history
- Fatalities involving at least one large truck – 13% increase in 2021 from 2020
- Reminder: Call to Action for all of us
- Source: [Newly Released Estimates Show Traffic Fatalities Reached a 16-Year High in 2021 | NHTSA](#)

Background

- Request For Information (RFI) was published January 15, 2020, and closed for comment on March 16, 2020.
    - 167 comments received from industry, academia and various stakeholders
- Funding:
    - In FY21 Congress appropriated $30M to be used by FMCSA on a study of the causes of large truck crashes, in collaboration with other study participants, available until expended.
    - MCSAP grant money will pay for State truck inspectors.
- Bipartisan Infrastructure Law (BIL)
    - In FY22 Congress passed the BIL which included more prescriptive language on the LTCCFS than the appropriations bill.
    - FMCSA is in discussions with Congress to reconcile differences in legislative language with plan to move forward with a phased approach.

Congressional Study Requirements

Section 23006 of the Bipartisan Infrastructure Law:
Study of CMV Crash Causation

SEC. 23006. STUDY OF COMMERCIAL MOTOR VEHICLE CRASH CAUSATION.

(a) DEFINITIONS.—In this section:

(1) COMMERCIAL MOTOR VEHICLE.—The term "commercial motor vehicle" has the meaning given the term in section 31132 of title 49, United States Code.

(2) STUDY.—The term "study" means the study carried out under subsection (b).

(b) STUDY.—The Secretary shall carry out a comprehensive study—

(1) to determine the causes of, and contributing factors to, crashes that involve a commercial motor vehicle; and

(2) to identify data requirements, data collection procedures, reports, and any other measures that can be used to improve the ability of States and the Secretary—

(A) to evaluate future crashes involving commercial motor vehicles;

(B) to monitor crash trends and identify causes and contributing factors; and

(C) to develop effective safety improvement policies and programs.

(c) DESIGN.—The study shall be designed to yield information that can be used to help policy makers, regulators, and law enforcement identify activities and other measures that are likely to lead to reductions in—

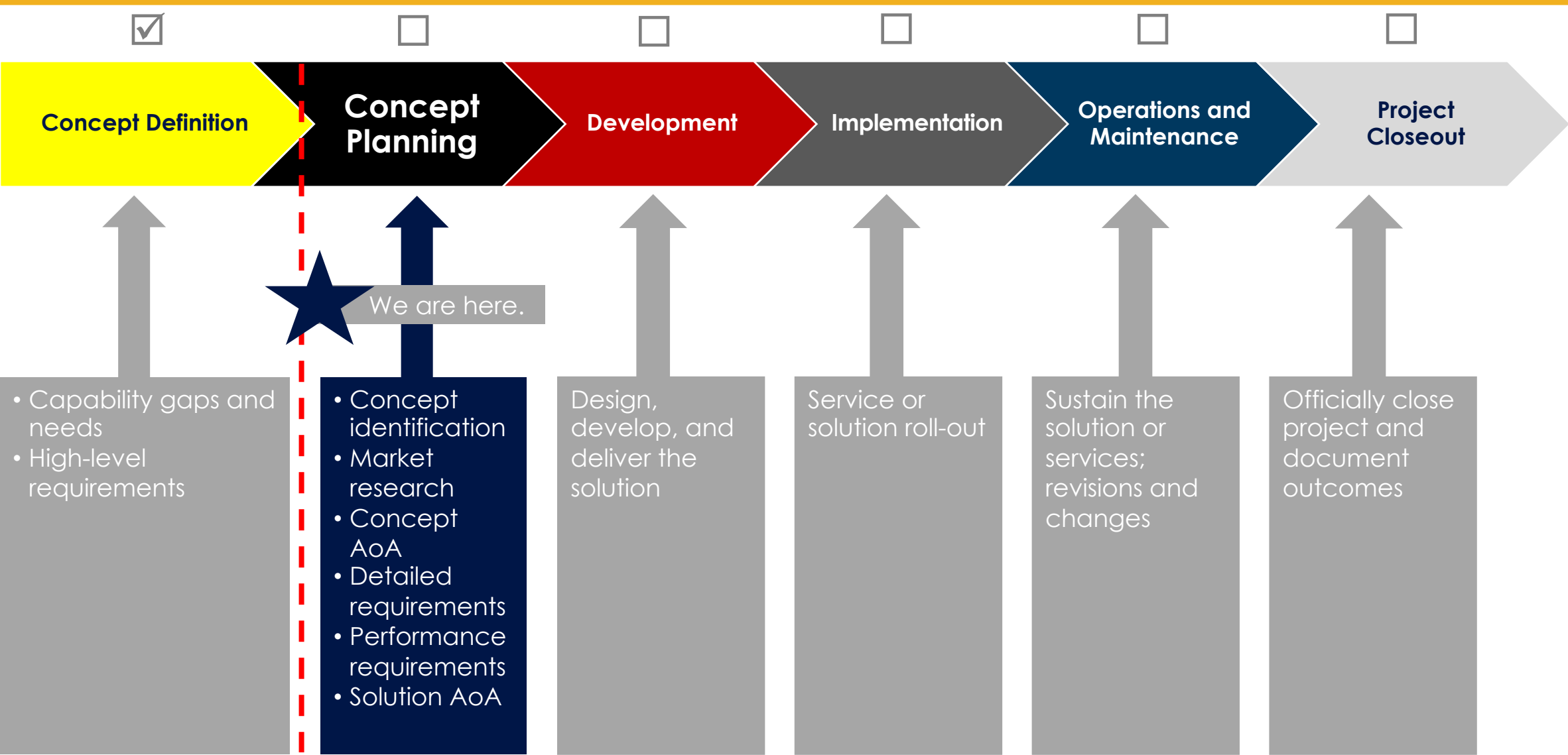(1) the frequency of crashes involving a commercial motor vehicle;

(2) the severity of crashes involving a commercial motor vehicle; and

(3) fatalities and injuries.

Research Questions

- Provided draft research questions to FMCSA leadership, NHTSA, and CVSA for comment.
- Broken out into the following areas:
  - Driver Factors
  - Vehicle Factors
  - Motor Carrier Factors
  - Environmental and External Factors
  - Role of Light Vehicles in Large Truck Crashes
- Research questions will be used to identify:
  - Data sources
  - Data elements
  - How data will be collected (e.g., on-scene, derived/linked, or off-scene).

LTCCFS Study Phases

| ☑ | ☐ | ☐ | ☐ | ☐ | ☐ |

| Concept Definition | Concept Planning | Development | Implementation | Operations and Maintenance | Project Closeout |

★ We are here.

| • Capability gaps and needs
• High-level requirements | • Concept identification
• Market research
• Concept AoA
• Detailed requirements
• Performance requirements
• Solution AoA | Design, develop, and deliver the solution | Service or solution roll-out | Sustain the solution or services; revisions and changes | Officially close project and document outcomes |

Source: FAI Project Managers Guidebook

LTCCFS High-Level Requirements

0 **Obtain Detailed Study Data:** The project must obtain sufficiently detailed data for in-scope crashes to inform causal factors analysis.

1 **Determine Required Study Data:** The project must identify required data for in-scope crashes to inform causal factors analysis.

2 **State/Jurisdiction Leadership:** The project must identify and establish working relationships with appropriate leadership representatives from States and/or jurisdictions participating in the study.

3 **Knowledge of State Systems and Processes:** The project must gather information on existing State and/or jurisdiction crash data collection processes and systems, to inform business requirements and data collection plans.

4 **Sample Design Expertise:** The project must obtain sample design support to develop a robust study sample design and analysis plan.

5 **Notification System:** The project must identify, or create, a functional and effective notification system that will notify LTCCFS data collectors of in-scope crashes.

6 **Expert PRA Support:** The project must obtain skilled support that can complete Supporting Statement Part B of the information collection request for study data collection.

7 **Expert Privacy Support:** The project must obtain skilled support that can complete the privacy documentation required for the study data collection and storage system. .
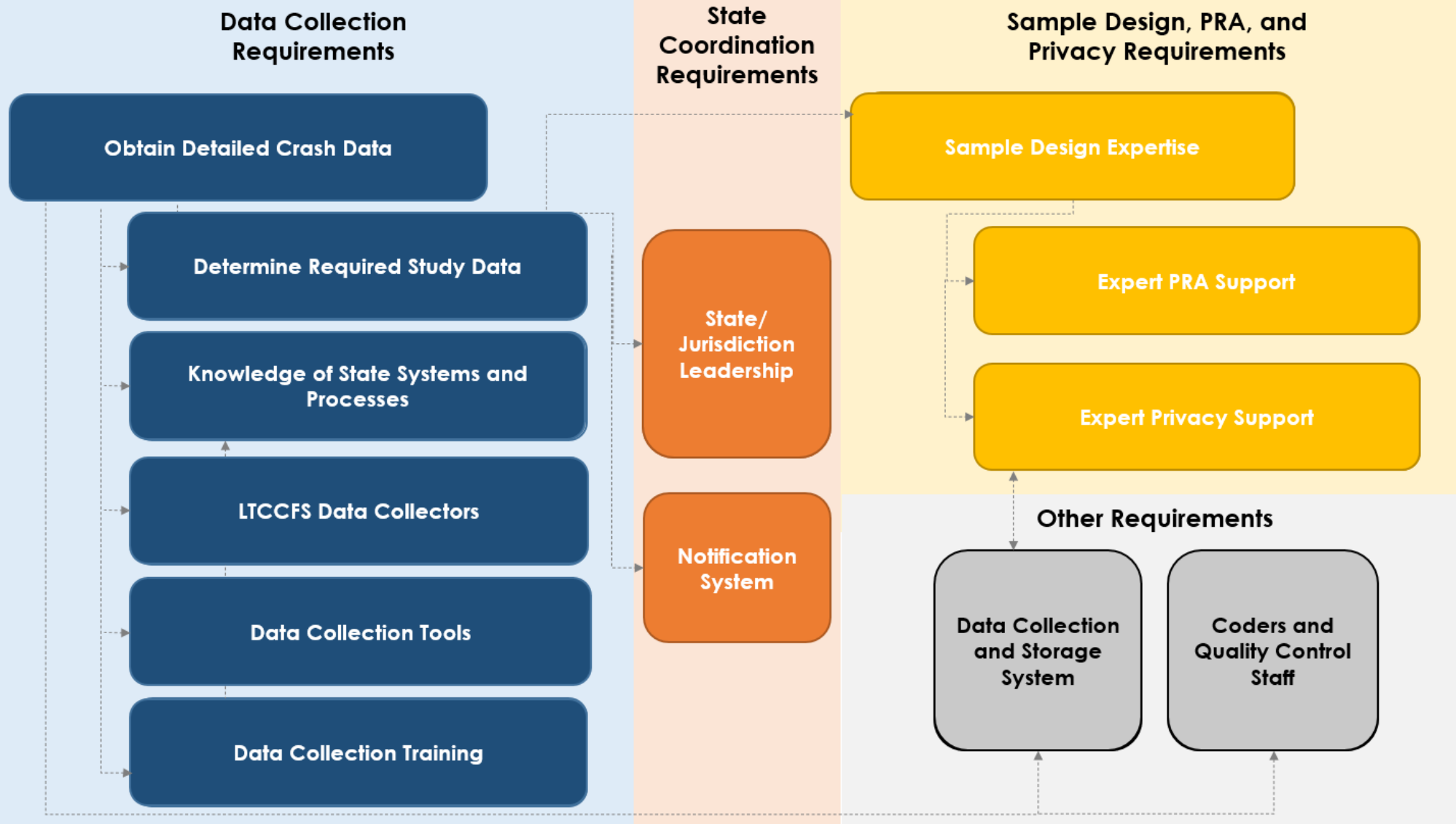
8 **Data Collection and Storage System:** The project must develop a scalable data collection and storage system that collects, stores, and supports analysis of crash causal factors data.
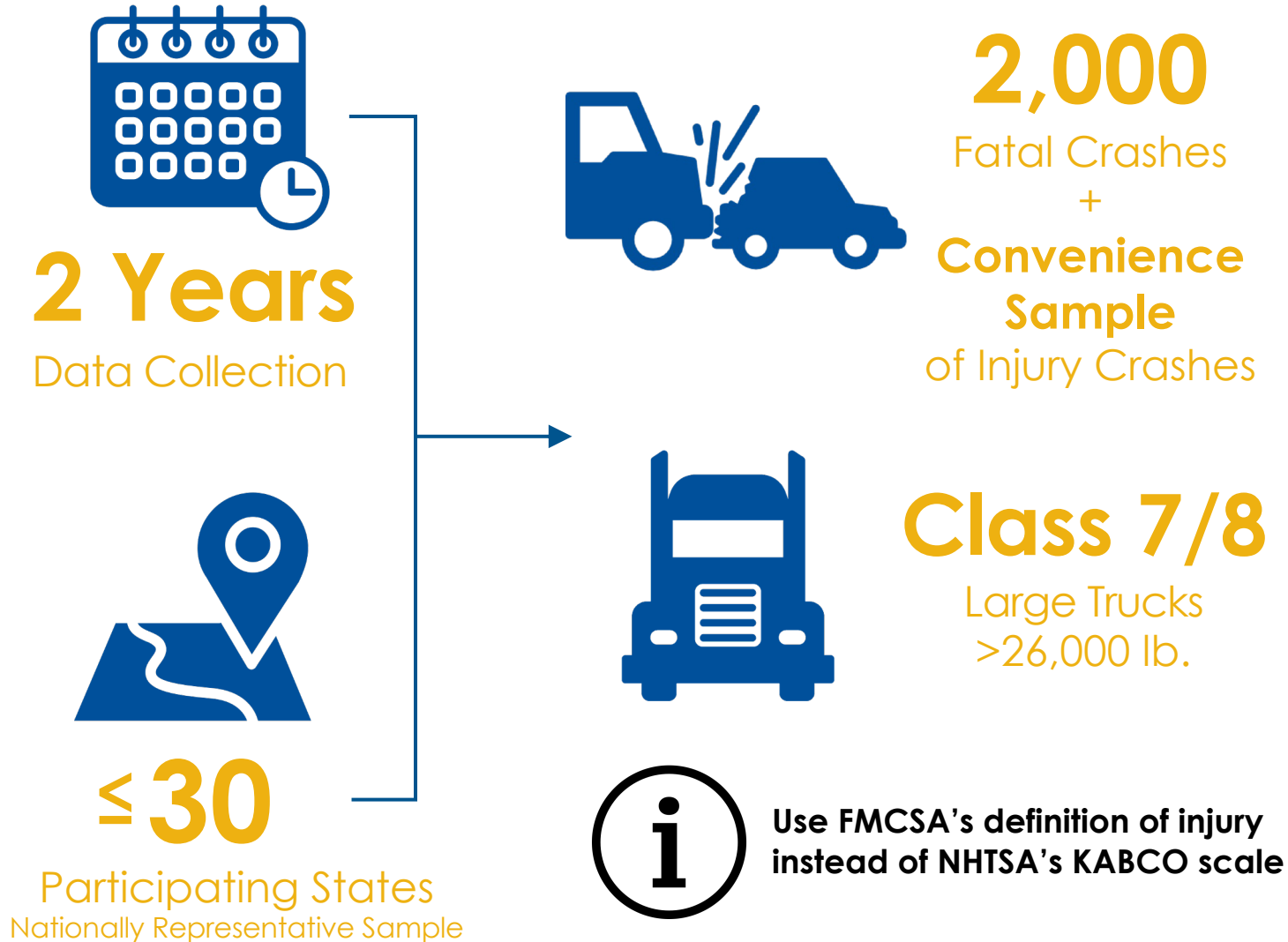
9 **LTCCFS Data Collectors:** The project must secure skilled support to collect required LTCCFS data.

10 **Data Collection Tools:** The project must ensure that LTCCFS data collectors have the necessary crash data collection tools to collect the required study data.

11 **Data Collection Training:** The project must provide crash data collection training to LTCCFS data collectors.

12 **Coders and Quality Control Staff:** The project must obtain data coding and quality control support to ensure study data are coded, accurate, and complete.

Relationships and Interdependencies Among the LTCCFS High-Level Requirements

Proposed Study Scope (Phase 1)

2 Years
Data Collection

≤30
Participating States
Nationally Representative Sample

2,000
Fatal Crashes
+
Convenience Sample
of Injury Crashes

Class 7/8
Large Trucks
>26,000 lb.

Use FMCSA's definition of injury instead of NHTSA's KABCO scale

Who Collects the Data?

Investigators
(on-scene)

Truck
Inspectors

Exclude tow-aways
Exclude medium-duty vehicles*

Next Steps

- Concept AoA was completed March 2022

- Deconstruct high-level requirements
  - Analyze risk and constraints of requirements
  - Prioritize and refine requirements

- Solution AoA will be completed June 2022

- Estimated to enter Acquisitions Process in July 2022

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