Crash Causal Factors Program Update

June 6, 2023

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

Background

- The original Large Truck Crash Causation Study (LTCCS) was conducted from 2001 – 2003
  - Collected data on nearly 1,000 injury and fatal crashes involving large trucks.
  - The data collected provided a detailed description of the physical events of each crash, along with an unprecedented amount of information about all the vehicles and drivers, weather and roadway conditions, and trucking companies involved in the crashes.
- The Crash Causal Factors Program (CCFP) expands upon this initial effort:
  - Incorporates lessons learned from LTCCS (e.g. focused scope, increased sample size, collaboration with State/Local jurisdictions)
  - Phased approach based on vehicle type and crash severity
  - The data will greatly increase our knowledge about causal and related factors sufficient to create countermeasures through legislation, regulation, enforcement and education

Lessons Learned from LTCCS

Notification system

Development of working relationships

Communication plan

Training

Reduce scope to Class 7/8 large trucks

Crash Causal Factors Program (CCFP)

Request for Information (RFI)

- Published January 15, 2020, and closed for comment on March 16, 2020.
- 167 comments received from industry, academia and various stakeholders, including CVSA

Funding:

- In FY21, Congress appropriated $30M to be used by FMCSA, in collaboration with other research participants, on a study of the causes of large truck crashes, available until expended.
- Motor Carrier Safety Assistance Program (MCSAP) and High Priority (HP) grant money.

Bipartisan Infrastructure Law (BIL)

- In FY22, Congress passed the BIL which included more prescriptive language on the Large Truck Crash Causal Factors than the appropriations bill.
- FMCSA has created a plan to move forward with a phased approach.

CCFP Phased Approach

Phase 1

Large Truck Crash Causal Factors Study (LTCCFS)
Class 7/8 Large Trucks involved in fatal crashes
$30M Appropriations + MCSAP and HP Grant Funding*

Phase 2

Medium-Duty Truck Crash Casual Factors (MDTCCFS)
Class 3-6 large trucks with a USDOT number and operating under FMCSA's jurisdiction.
Dependent on funding requested ($24M FY24 appropriations)

Phase 3
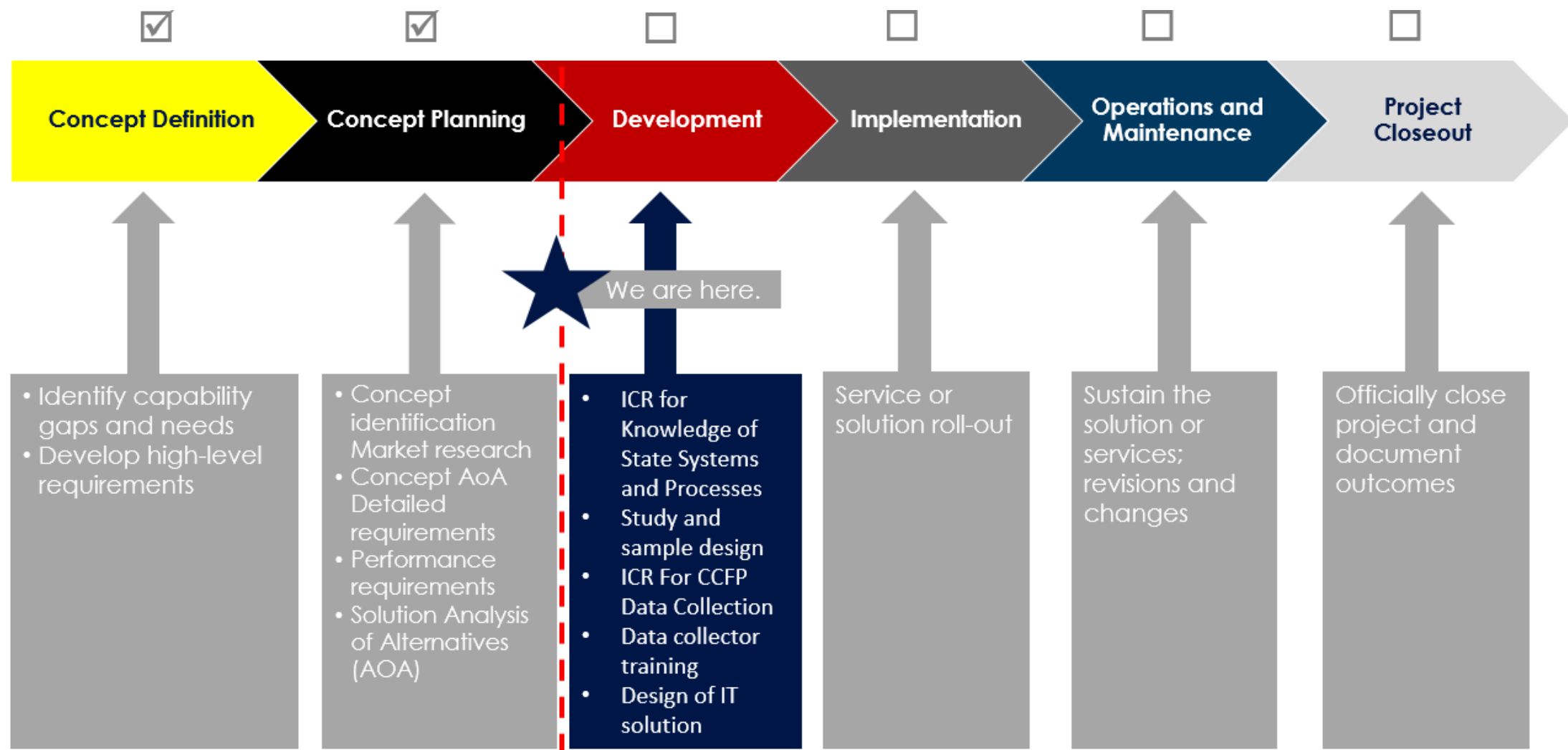
Bus Crash Causal Factors Study (BCCFS)
Scope TBD, based on funding.

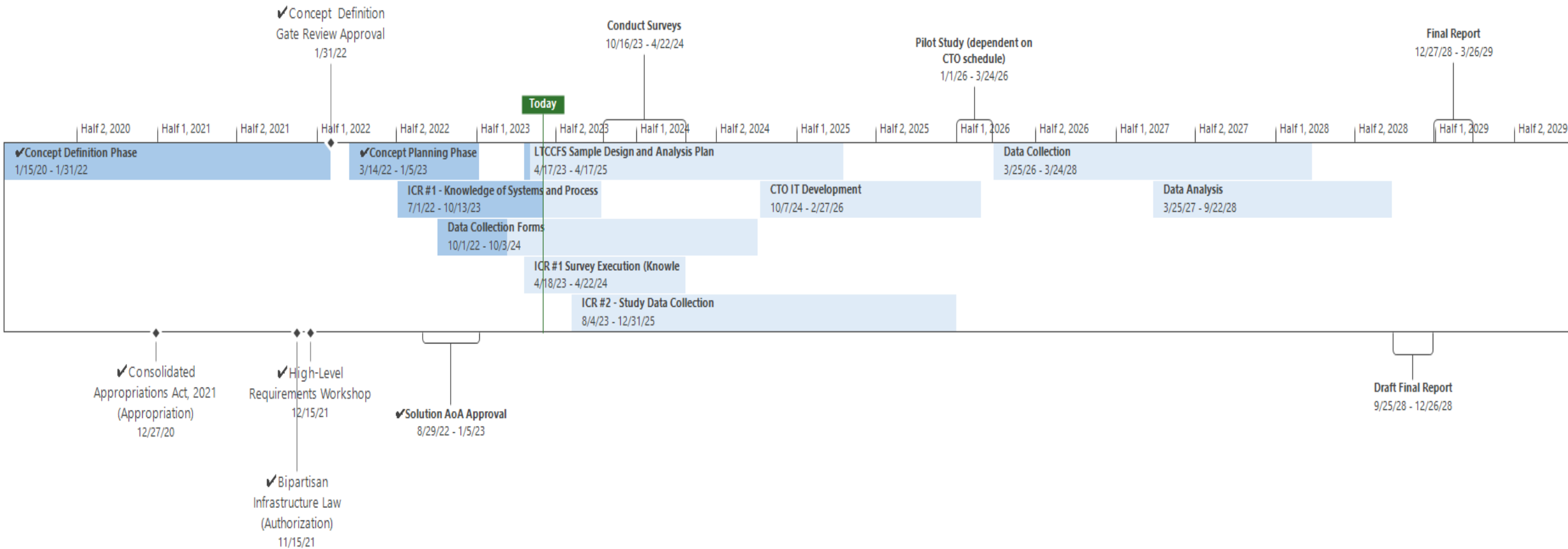*MCSAP = Motor Carrier Safety Assistance Program; HP = High Priority

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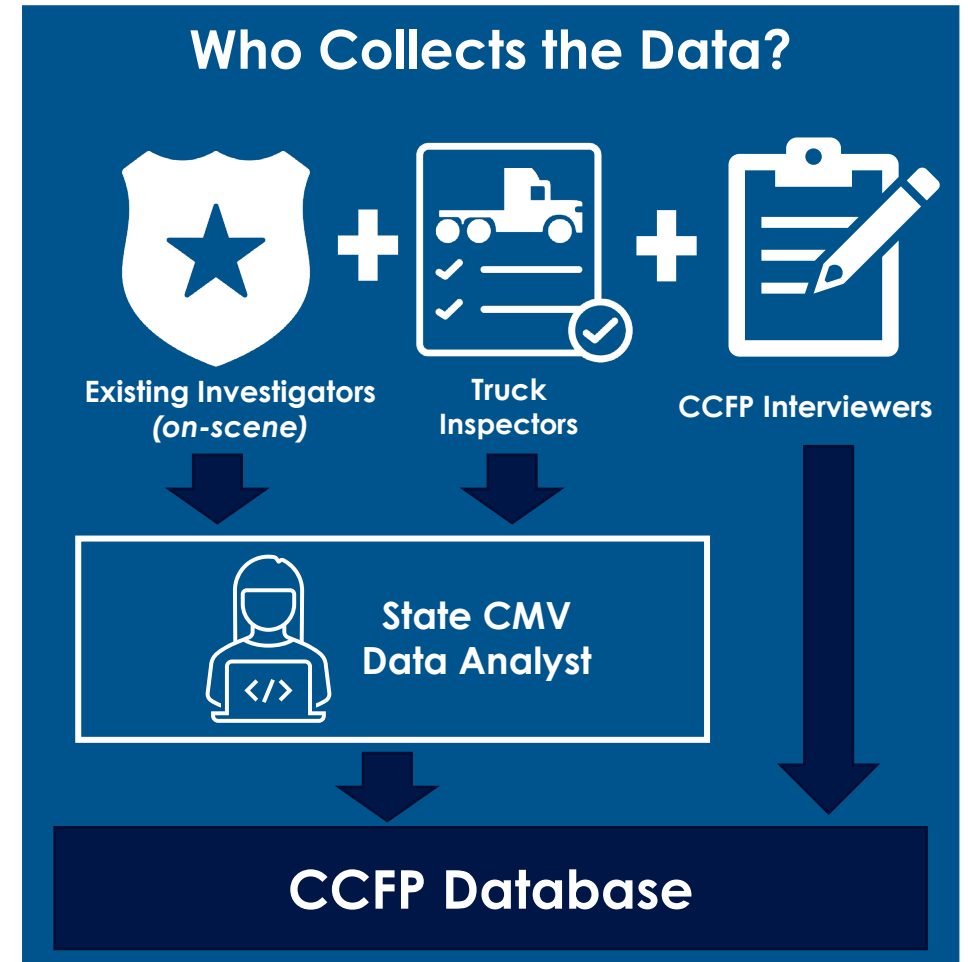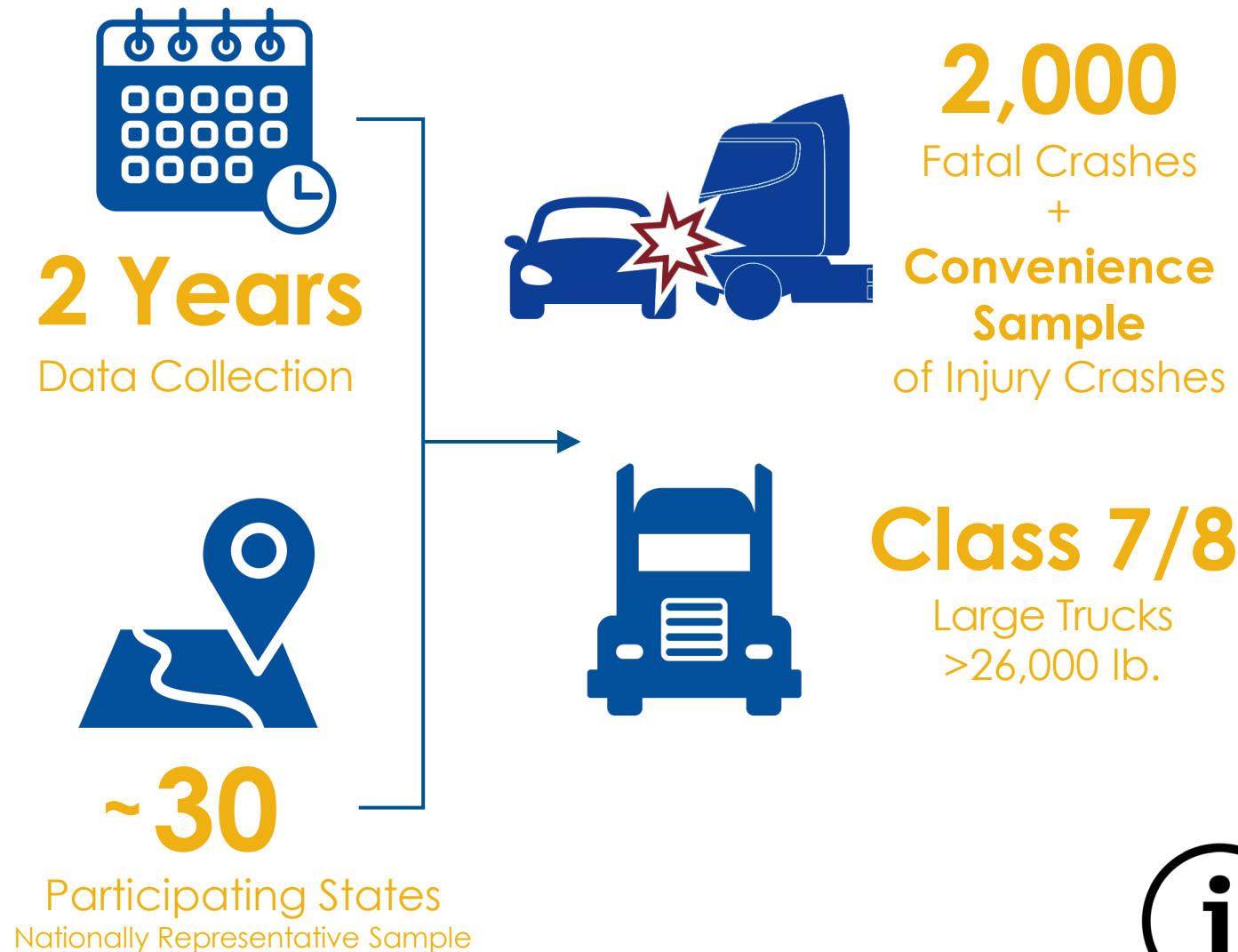**Federal Motor Carrier Safety Administration**

LTCCFS Study Phases

☑	☑	☐	☐	☐	☐
Concept Definition	**Concept Planning**	**Development**	**Implementation**	**Operations and Maintenance**	**Project Closeout**

We are here.

Concept Definition
- Identify capability gaps and needs
- Develop high-level requirements

Concept Planning
- Concept identification Market research
- Concept AoA Detailed requirements
- Performance requirements
- Solution Analysis of Alternatives (AOA)

Development
- ICR for Knowledge of State Systems and Processes
- Study and sample design
- ICR For CCFP Data Collection
- Data collector training
- Design of IT solution

Implementation
Service or solution roll-out

Operations and Maintenance
Sustain the solution or services; revisions and changes

Project Closeout
Officially close project and document outcomes

Phase 1: LTCCFS Study Scope

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.

Who Collects the Data?

Existing Investigators *(on-scene)* + Truck Inspectors + CCFP Interviewers

State CMV Data Analyst

CCFP Database

Phase 1 will be built with sustainability and scalability in mind. Future phases will be built off this framework to the degree possible.

Ongoing Activities

Key Task Areas

- Information Collection Request (ICR) on Knowledge of State Systems and Processes
- Data Collection Forms
  - Mapping existing data collection efforts (e.g., PCR, post-crash inspections) to LTCCFS research questions
  - Gap analysis and prioritization of supplementary data collection
- CCFP Funding Streams
- Review Data Protection Options (CIPSEA vs. NIH Certificate of Confidentiality)
- IT Solution

ICR – Knowledge of State Systems and Processes

- ✓ 60 Day Notice (Dec 27 – Feb 27)
  - ✓ FMCSA Reviewed Comments, Drafted Responses
- ✓ IC Survey Refinement *(completed)*
  - ✓ IC 1: Identifying Points of Contact
  - ✓ IC 2: Sample Design; Partnerships and Coordination
  - ✓ IC 3: Crash Data Collection
  - ✓ IC 4: CMV Enforcement Resources and Funding
- ✓ 30 Day Notice *(May 25th)*
- ✓ Submittal to OMB *(May 31st)*
- ▪ Survey Deployment (anticipated August 2023)

IC Surveys (an overview)

IC 1: Identifying Points of Contact

Target Population: FMCSA Division Administrators (DAs)

Focus Area: Identify key points of contact to respond to ICs 2, 3 and 4.

IC 2: Sample Design; Partnerships and Coordination

Target Population:

State Crash Records Manager(s) and/or Supervisory-level DPS representatives

Focus Area(s):

 * Identify and document constraints for participating in CCFP/LTCCFS to help ensure a nationally representative design.

* Identify required agreements, and understand need for legal support to streamline CCFP/LTCCFS participation

IC 3: Crash Data Collection

Target Population:

State Crash Records Manager(s) and/or Supervisory-level DPS representatives

Focus Area(s):

* Increase understanding of existing notification/dispatch processes

* Increase awareness of crash data collection processes in States/Local Jurisdictions to identify existing gaps

* Gather information on existing data collection training and quality control plans.

IC 4: CMV Enforcement Resources and Funding

Target Population:

State MCSAP Coordinator(s)

Focus Area(s):

* Understand existing CMV Enforcement Resources and Policies within States/Local Jurisdictions.

*Identify restrictions in MCSAP/HP Funding

CCFP Funding Streams

CCFP Funding Streams

The final solution for executing the LTCCFS includes a combination of various acquisition vehicles to meet the requirements for a successful study.
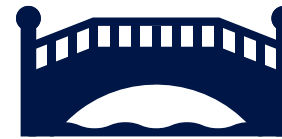
Volpe IAA
- Survey Development and Administration
- Sample Design and Analysis Planning
- Data Collection Requirements
- PRA Support

MCSAP/HP* Eligible Expenses
- Crash Investigation & Tools
- Crash Reconstruction & Tools
- Post-crash Inspection
- CCFP Data Entry

CCFP Supplementary Funding
- Direct funding to States/Local Jurisdictions not eligible for MCSAP/HP
- Crash Investigation & Reconstruction
- Onboarding and Training
- CCFP Supplemental Interviews

CCFP IT Solution
- Data Lake
- Data Quality
- Data Standardization
- De-identified database for public use

*MCSAP = Motor Carrier Safety Assistance Program; HP = High Priority

MCSAP Eligible Expenses

Next Steps

- Data Collection Forms
  - Mapping existing data collection efforts (e.g., PCR, post-crash inspections) to LTCCFS research questions
  - Gap analysis and prioritization of supplementary data collection
  - Develop supplemental data collection forms
- Confidential Information Protection and Statistical Efficiency Act (CIPSEA) Protections with the Bureau of Transportation Statistics (BTS)
- ICR Survey Execution
  - Finalize survey instruments
  - Pilot/Test surveys
  - Survey Deployment (*anticipated August 2023*)
- Sample Design and Analysis Plan
  - Identifying constraints and restrictions
  - Development of a nationally representative sample design
- CCFP Supplemental Funding

Questions?

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