SafeMTS

Maritime Industry Near-Miss Reporting Program

February 20, 2025

U.S. Department of Transportation
Office of the Secretary of Transportation
Bureau of Transportation Statistics

Topics

- SafeMTS Background
- Results from the Pilot
- Maintaining Momentum

What is SafeMTS?

- Maritime industry has been pursuing a near-miss program for ~20 years

  "Near-Miss" *– A precursor to a more serious incident*

- MARAD and industry sought to fill this gap, with input on program design from SOCP, USCG, BTS, BSEE, others
  - **Initial program design:** A voluntary and confidential program aimed at collecting, analyzing, and sharing statistical results from near-miss reports generated by workers in the Maritime Transportation System and reported to BTS by their respective employers
  - **Program aims:**
    - Develop an industrywide source of precursor safety data that can be analyzed to identify key factors to prevent more serious events
    - Share results with industry stakeholders to support continuous safety improvement efforts
    - Update standards for maritime near miss reporting (e.g., ASTM F-3256)

Safe Maritime Transportation System

Role of BTS

- **Principal Statistical Agency** for the USDOT
- **Authority** to:
  - collect all transportation-related data (49 USC §6302)
  - develop trustworthy data through product independence ((49 USC §6302 (d))
  - protect confidential data (CIPSEA, 44 USC §§3561-3583)
- **Designated by the Evidence Act of 2018** as USDOT Statistical Official to lead the department in statistical policy and evidence building
- **Maintains secure infrastructure** to support data collection programs and protect confidential data
- **Provides expertise** in data collection, evidence building, statistics, data science, and IT systems

Leveraging BTS Experience with Other Near Miss Reporting Programs

- C3RS / Freight Rail (2005-2013)
- WMATA Close Call (2012- Present)
  - Established in 2013 for Rail & 2016 for Bus
  - Expanded to all WMATA employees in 2019
- SafeOCS: for the offshore energy industry (2013-Present)
- **SafeMTS: for the maritime industry**

How BTS Protects Data Confidentiality

BTS adheres to the Confidential Information Protection and Statistical Efficiency Act (44 USC 3561–3583) (**CIPSEA**) and protects the confidentiality of sensitive information provided by participants through established secure processes.

CIPSEA prohibits release of data

- No government agency may require, for any reason, a copy of any respondent's report.
- Courts cannot require a copy of any respondent's report; reports are immune from the legal process and cannot be admitted as evidence.
- Reports are exempt from Freedom of Information Act (FOIA) requests.

Disclosure is the unauthorized release of confidential information

- Willful disclosure of confidential information may incur sanctions and penalties
  - Removal from office, and/or
  - Fines (up to $250,000) and/or imprisonment (possible felony conviction, up to 5 years)
- Applies to all federal employees, contractors, and BTS agents

Overview of the Pilot Phase

- Pilot Timeline: Fall 2022 – Dec. 2023
- 7 participant companies
- Products developed: Data Key, Narrative Guidance, Pilot Report
- Final report on the SafeMTS Pilot available at: https://rosap.ntl.bts.gov/view/dot/73113

SafeMTS Core Data Fields

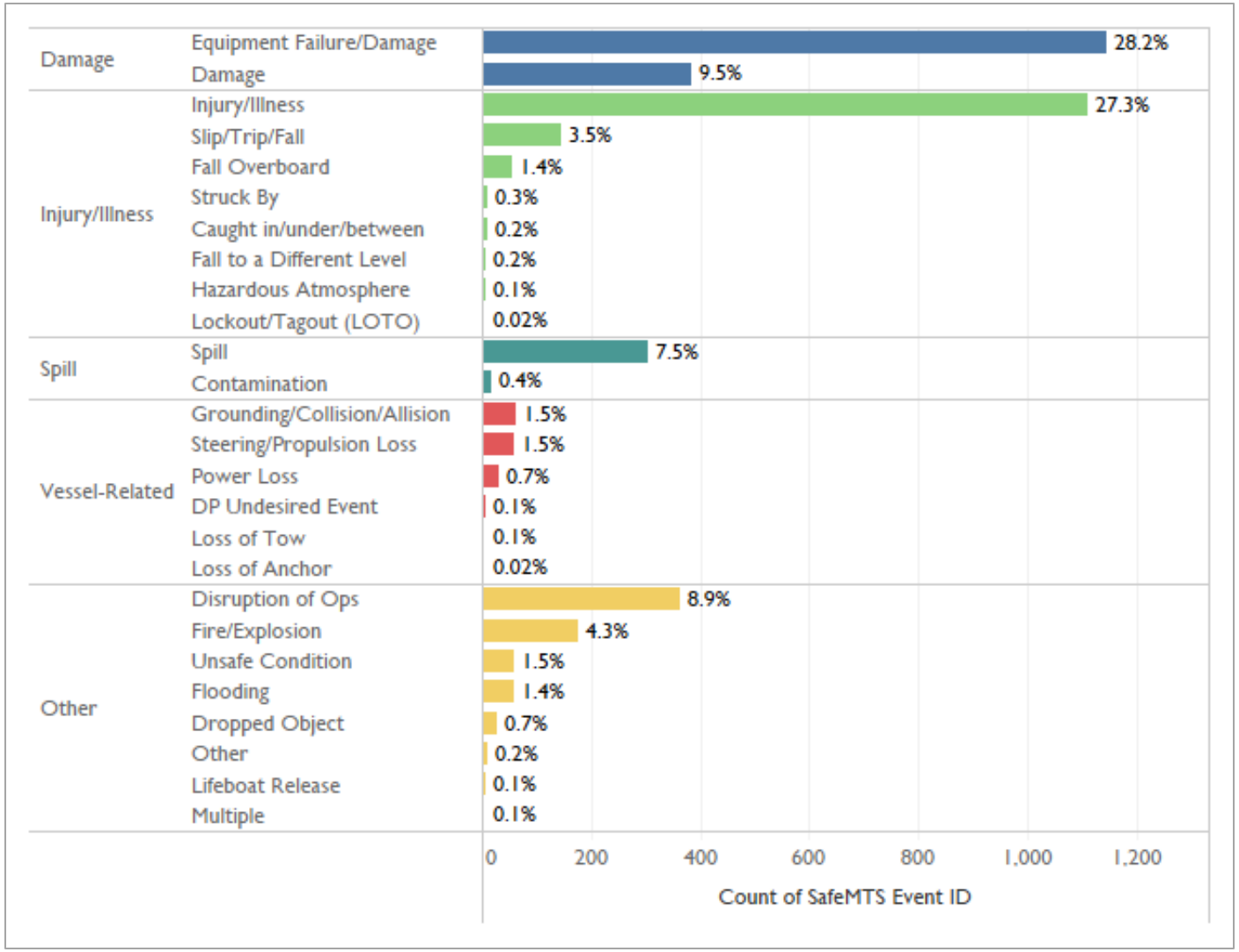
How It Works

- Data Collected and Processed:
  - Data accepted in company's native format and mapped to core data fields
  - Discrete data elements extracted from narrative information through text mining and subject matter expert review
  - Quality checks performed to eliminate duplicate entries and confirm data processed in standardized manner

Pilot Data Profile (cont'd-1)

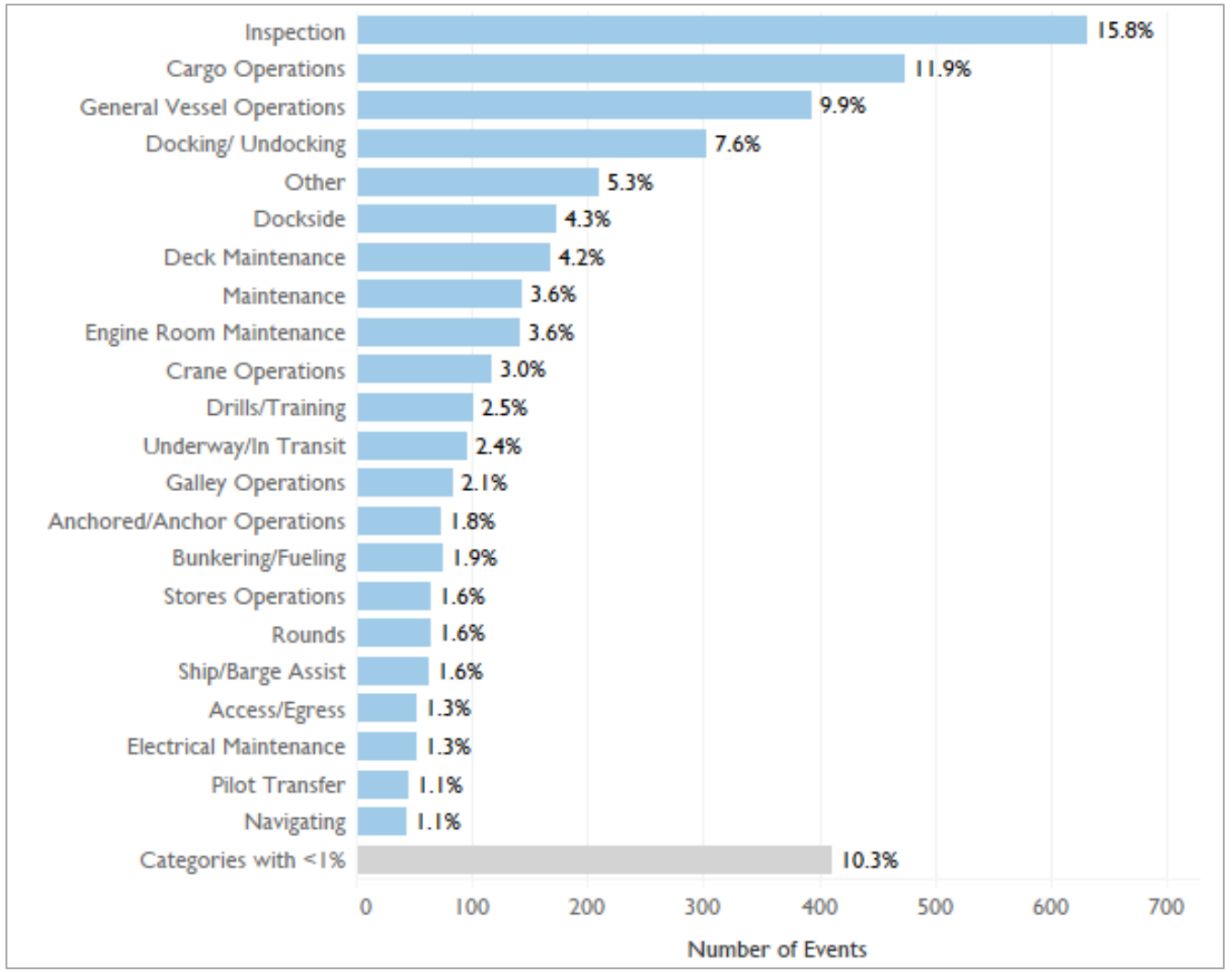
Pilot Dataset: 7,222 events occurring between January 1, 2020, and December 31, 2022

Near Miss Classification (n=4,067)



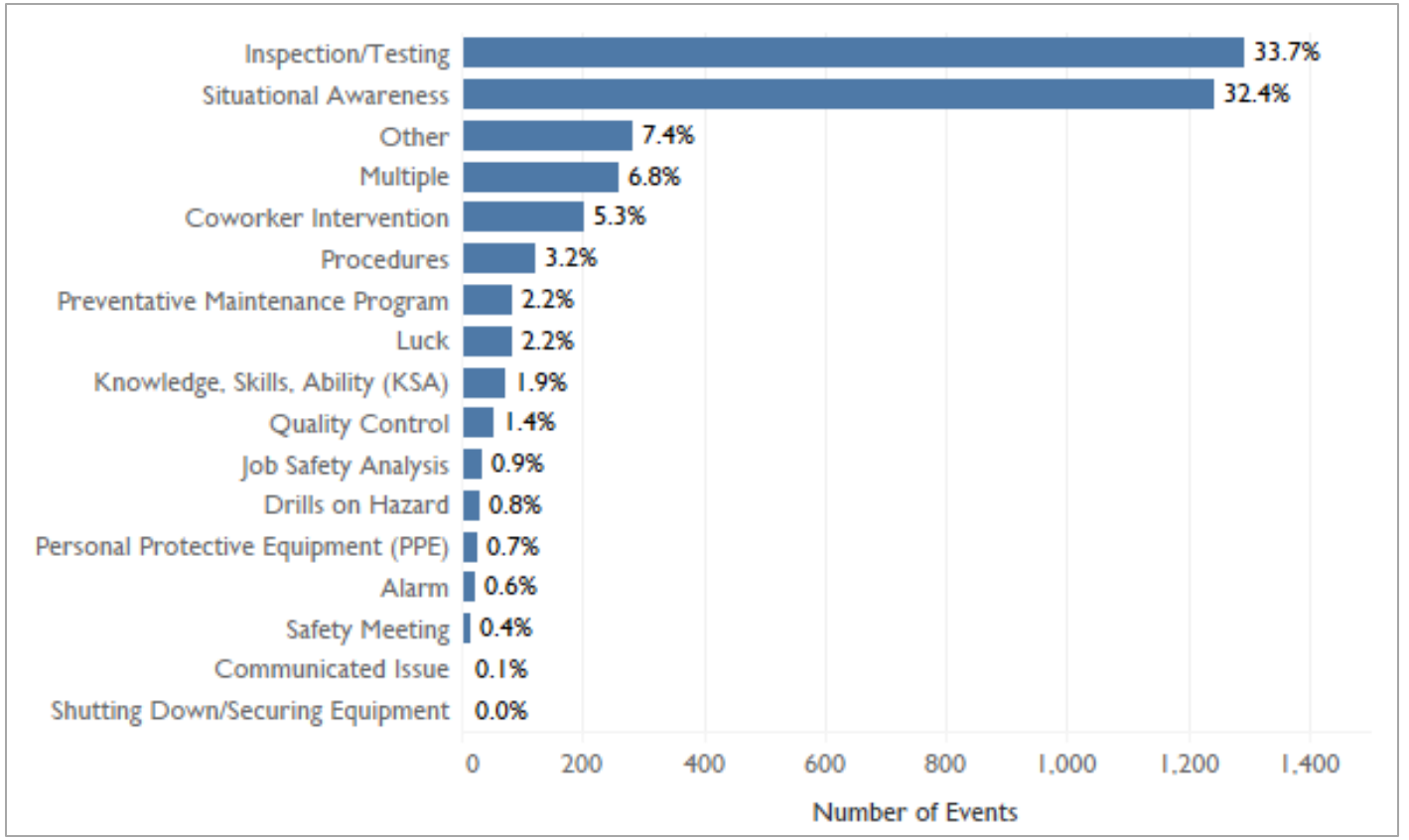
Pilot Data Profile (cont'd-2)

- Operations and Activities
  - The event ongoing when the near miss occurred
  - Shows that inspections are effective/good for hazard recognition and catching near-misses, but reflects definition differences



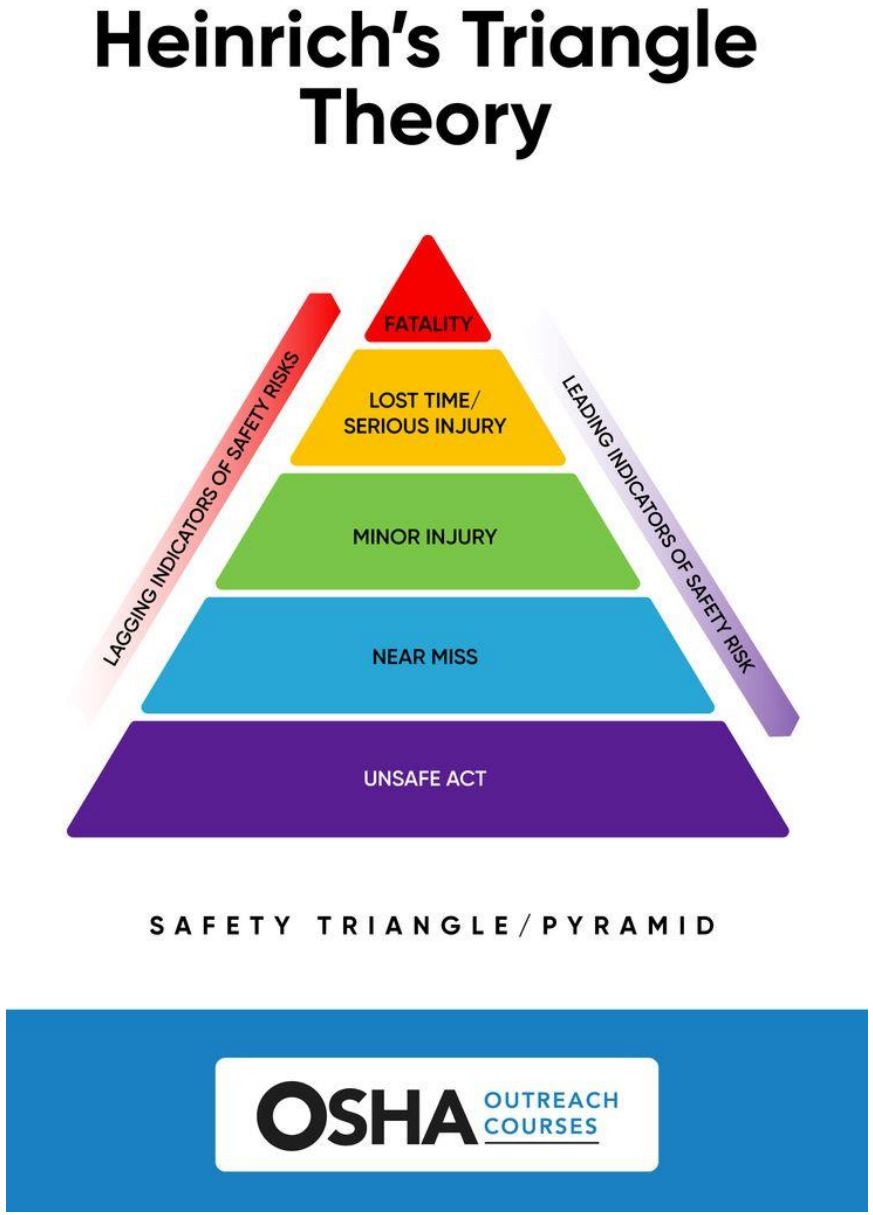
Pilot Data Profile (cont'd-3)

- Information on Causes, Follow-up, and Preventive Actions
  - Factor Preventing a Worse Incident (n=3,832)



Why Collect Near-Miss Data

- Lagging indicator are things that have happened such as injuries or fatalities. Companies should learn from these.
- Leading indicators are events that could have caused an injury, but for some reason were avoided.
- If you can learn from your near-misses, you may prevent a major event.



Why now?

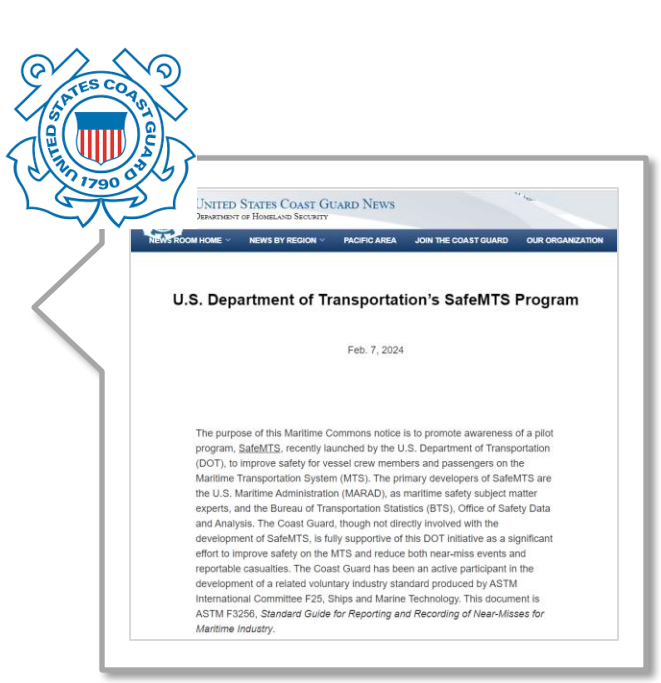
- The SafeMTS pilot project concluded, marking a significant milestone in the development of a robust near-miss program reinforcing the collective commitment to enhancing safety through proactive reporting
- Strong support from the industry for BTS role as an independent data steward that can **assure confidentiality** — the strongest impediment to industry participation in the past
- Strong support from industry, safety, and federal partners:

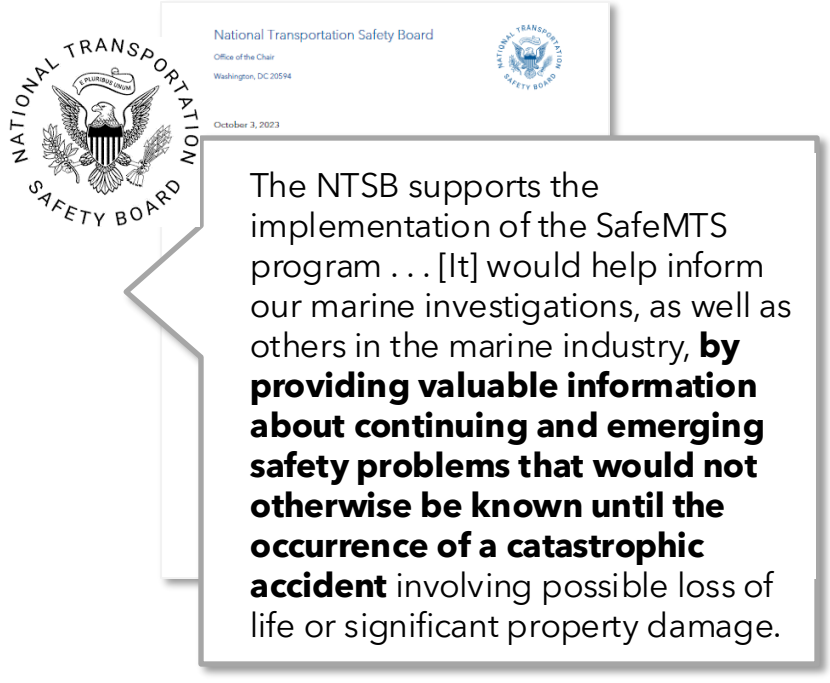
Passenger Vessel Association

The American Waterways Operators

National Safety Council

Waterborne Transport Group





Maintaining Momentum

- **Increase participation**: Collect a broad enough set of data to support many potential directions for further evaluation
  - Foundation for long-term, robust data collection
  - Coverage from major maritime sectors (blue water, brown water, passenger)
- **Explore additional areas of interest** (Partner Input):
  - Vessel Type / Environment
  - Geographic Area
  - Specialized Operations
- **Update ASTM Standard** on Near-Miss Reporting (F-3256), with learnings and recommendations from SafeMTS pilot
- **Pilot AI/ML studies** to streamline data processing and identify potential safety signals

Thank You

SafeMTS Website: https://www.c3rs.bts.gov/safemts-home/

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