Standard, Fast, Accurate:
Advancing Crash Data Reporting for Improved Road Safety

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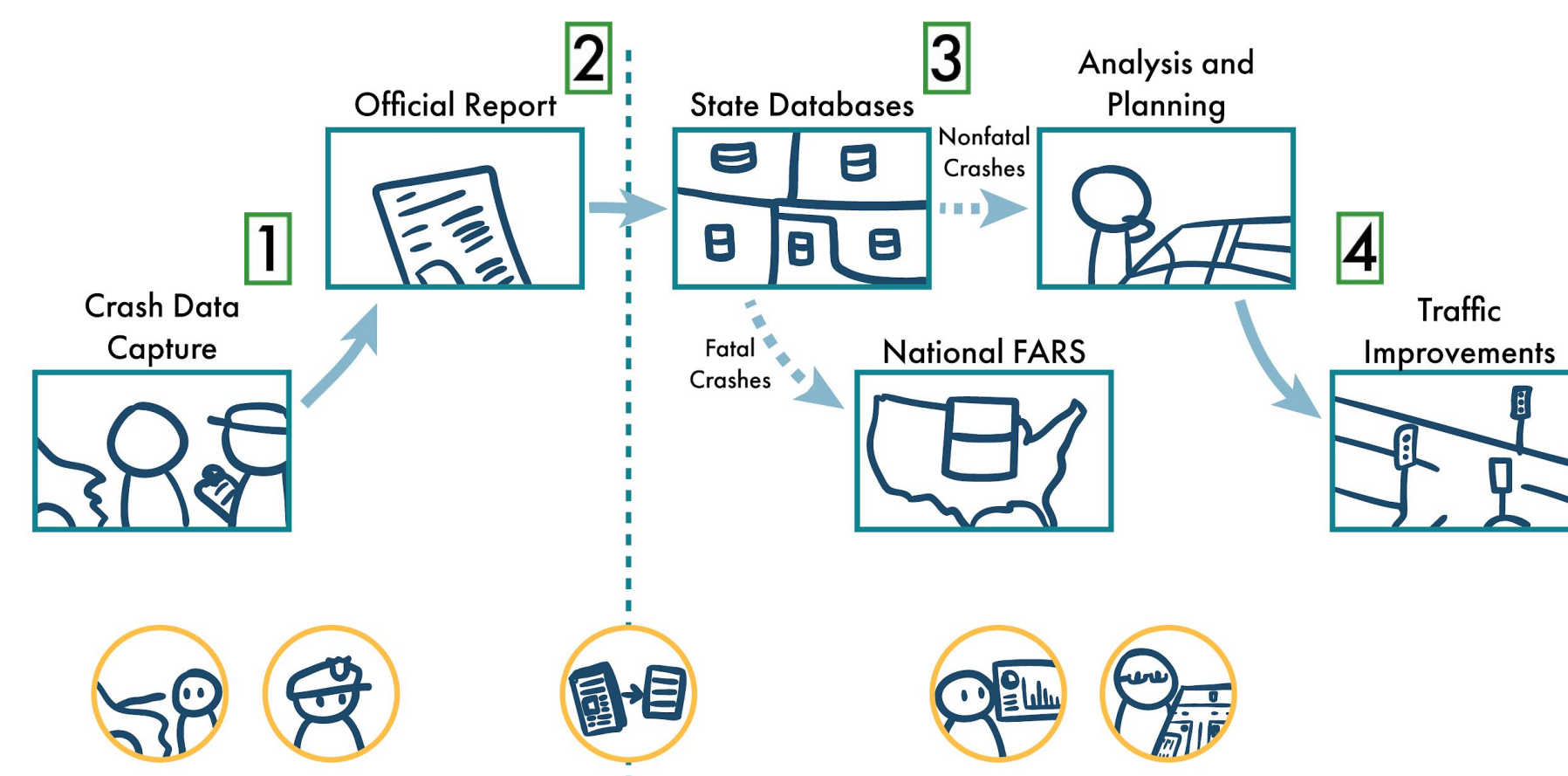
Crash Reporting Ecosystem

Stakeholders

Stakeholders are broadly categorized as either data producers or data consumers: producers are vehicle operators and crash reconstructionists/police officers who input crash data into the ecosystem, data consumers are analysts and local agency staff who analyze the data.

Current Process

1. Police officers use paper forms, police cruiser computers, and department-level reporting software to generate reports.
2. Official report data is sent to statewide databases. Currently, only fatal crash data is fully collected federally.
3. Crash data is made available for analysis through state-specific processes.
4. At the end of the crash data pipeline, various stakeholders use crash data for traffic safety improvement projects.

Insights & Direction

Automation of Data Capture
Officer captures more data with less manual work
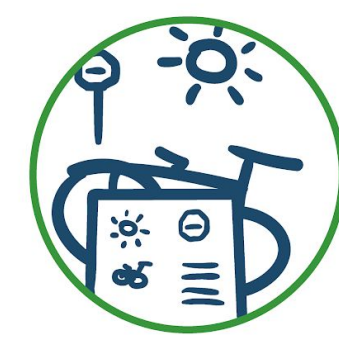
Objective and Fast Capture
Data is captured quickly and accurately

Data Standardization
Data is uniform across platforms

Streamlining of Data Record
Agencies and repositories share data freely

Data Relevance
Gathered data aligns with data users' needs

The five main categories for a solution that can provide the most value to stakeholders. These directions helped concentrate our focus for selecting a solution to implement.

Looking Forward

The Santos Family Foundation and the Volpe Center will be sponsoring a second SCOPE team to continue this work in the coming year. As such, our team focused our efforts toward a strong base application, with a focus on what we learned from our users. The work completed this year and our extensive documentation leaves a basis for our successor team to leverage our efforts and progress toward a highly polished product.

Mobile Toolkit Solution

Our mobile toolkit provides police officers with a set of tools allowing them to more accurately document a crash digitally with higher resolution. This toolkit, called Ruina, manifested itself in a cross platform mobile application for tablets.

Scanning

The scanning feature uses optical character recognition to scan vehicle VIN, vehicle license plate numbers, and driver licenses where information is then populated to linked questions.

Weather

A geolocation library is called to find the user's device latitude and longitude where an weather API is then used to get the location's weather conditions.

Map
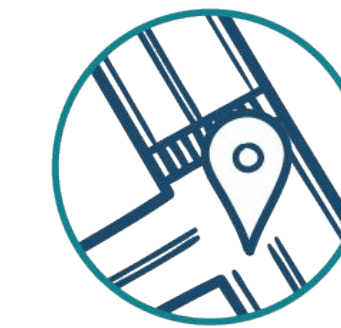
The map tool is used for automatically determining the location and the latitude and longitude of the crash.

Camera

The camera tool allows adding photos to the crash report. Images are stored off-device which reduces the potential for an officer's device to be subpoenaed in a related court case.

Report Setup

The report setup survey streamlines the input of data instantly visible upon arrival to a crash scene resulting in a more relevant crash report to the scene.

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