

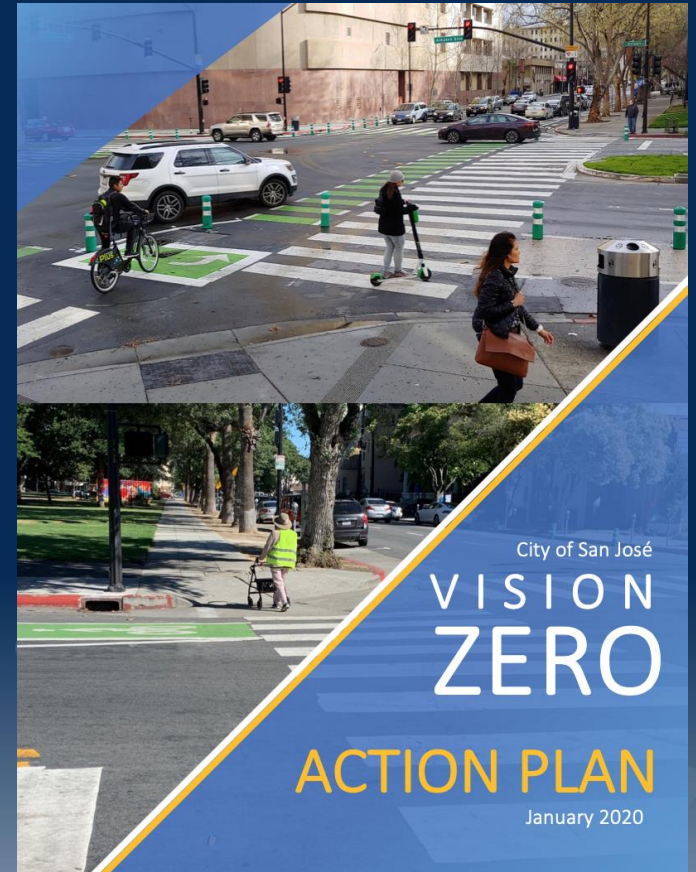
Vision Zero and Innovation

Jesse Mintz-Roth, AICP

Vision Zero Program Manager
Department of Transportation

Lily Lim-Tsao, PE

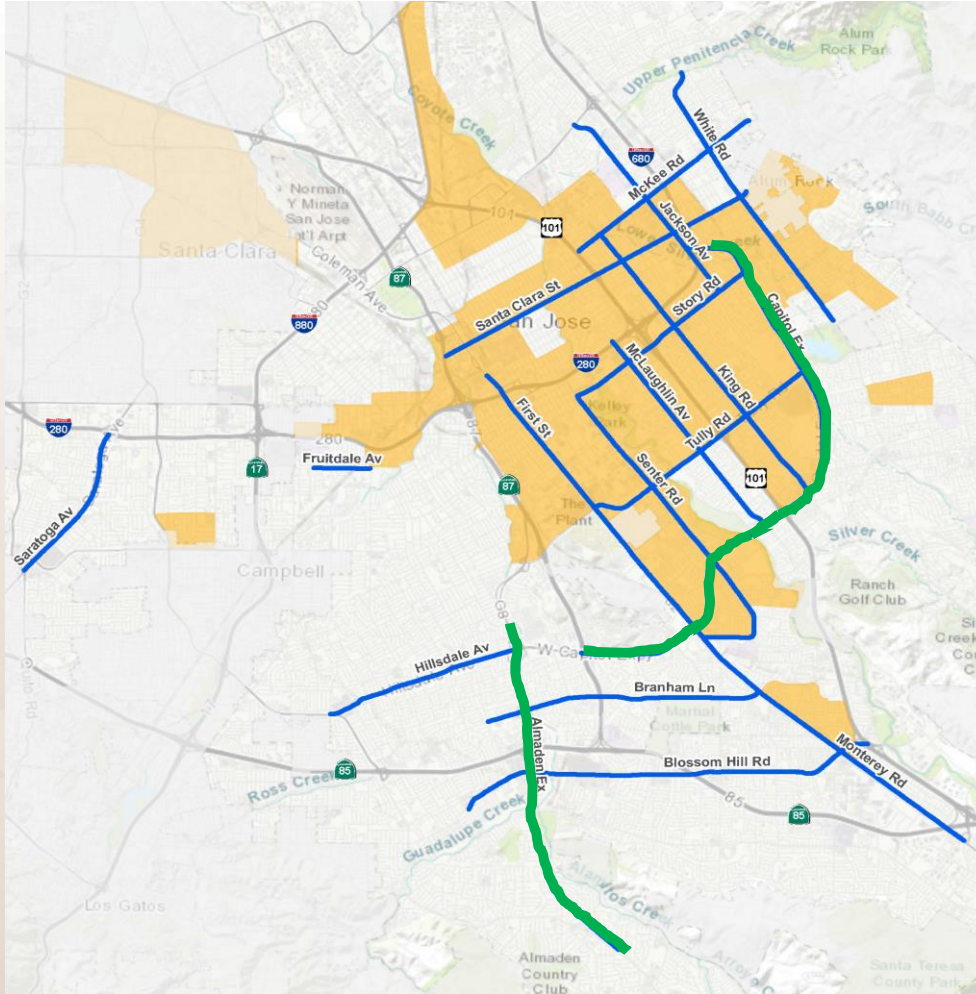
Deputy Director
Department of Transportation



Smart Cities and Service Improvements Committee
February 4, 2021

Crash Data Analysis

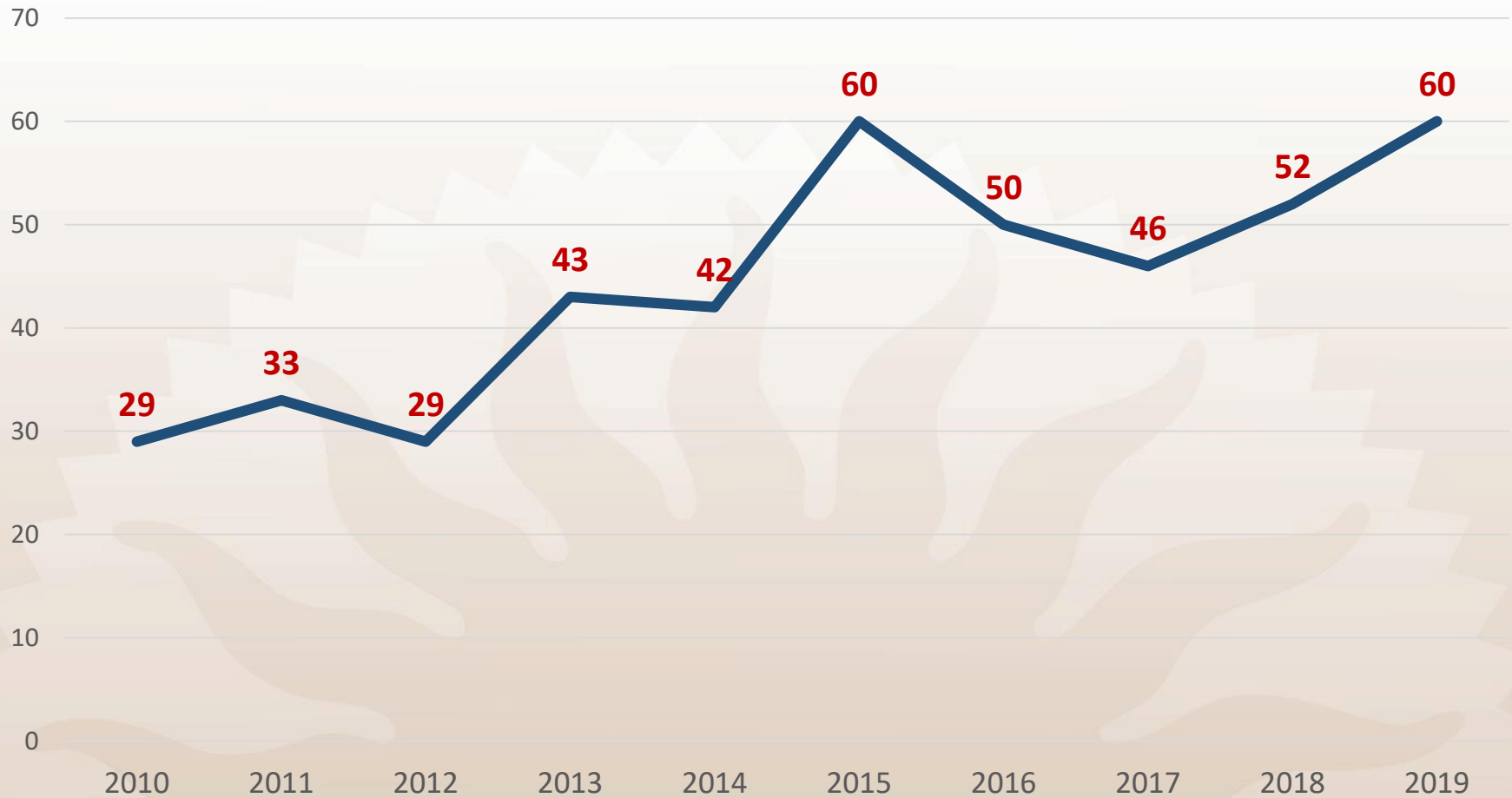
Priority Geographies



- 17 Priority Safety Corridors
 - 15 City/56 mi
 - 2 County/14 mi
 - Multi-lane, High Speed
- 38% of fatalities and 34% of severe injuries (2015-2019) are located on these 3% of San José's roadways
- Significant overlap with Communities of Concern

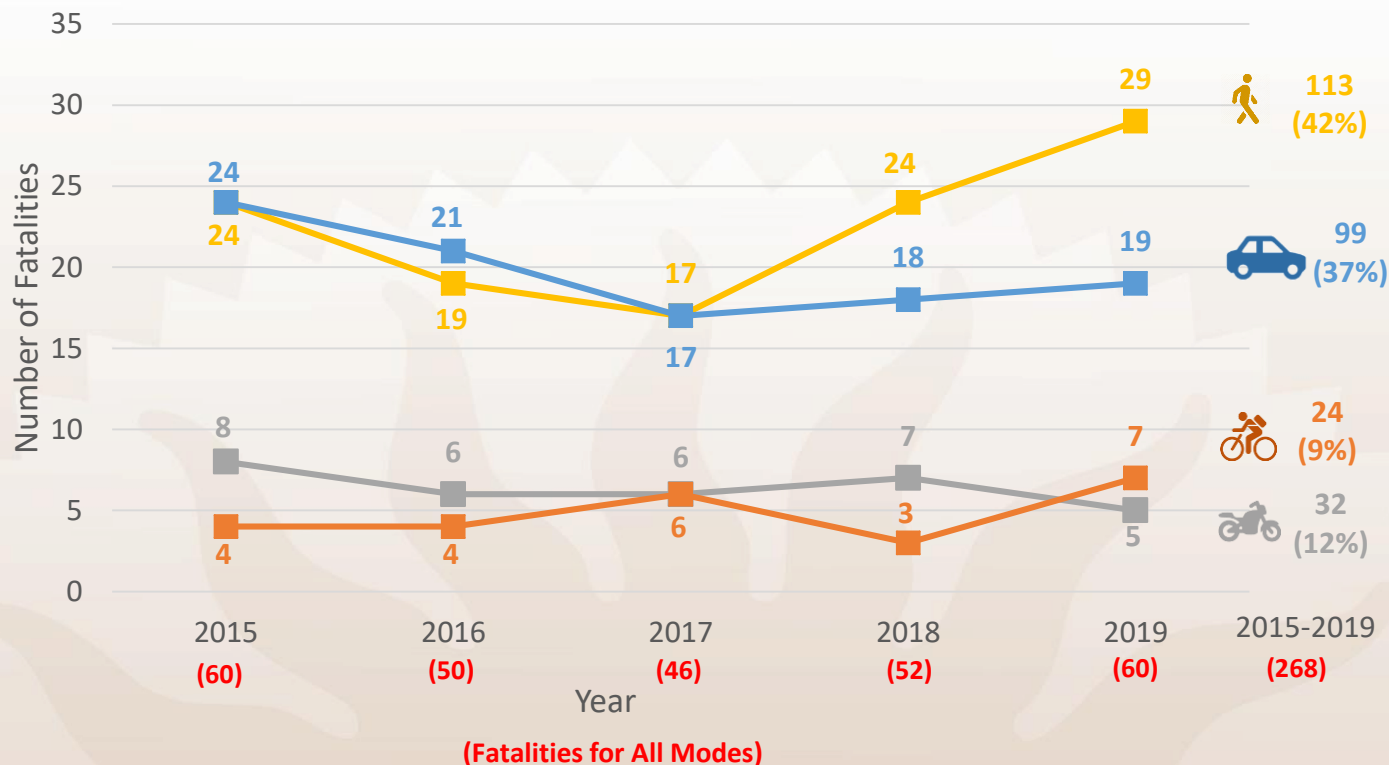
Traffic Fatalities

2015 and 2019 were peak years



Traffic Fatalities

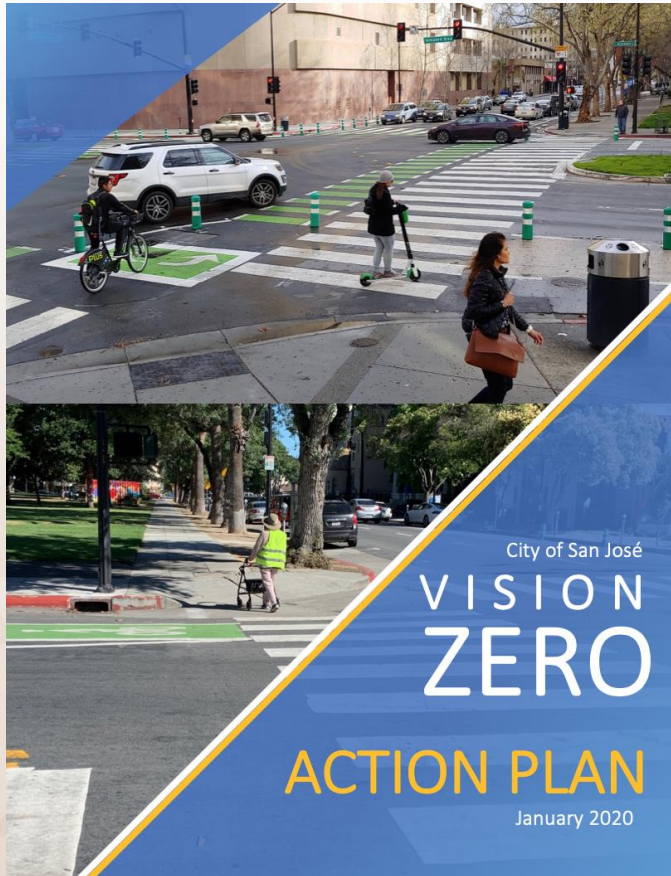
2015-2019 by Street User Type



- People hit while walking are the largest traffic fatality group, and increasing

2020 Vision Zero Action Plan

Passed City Council February 11, 2020

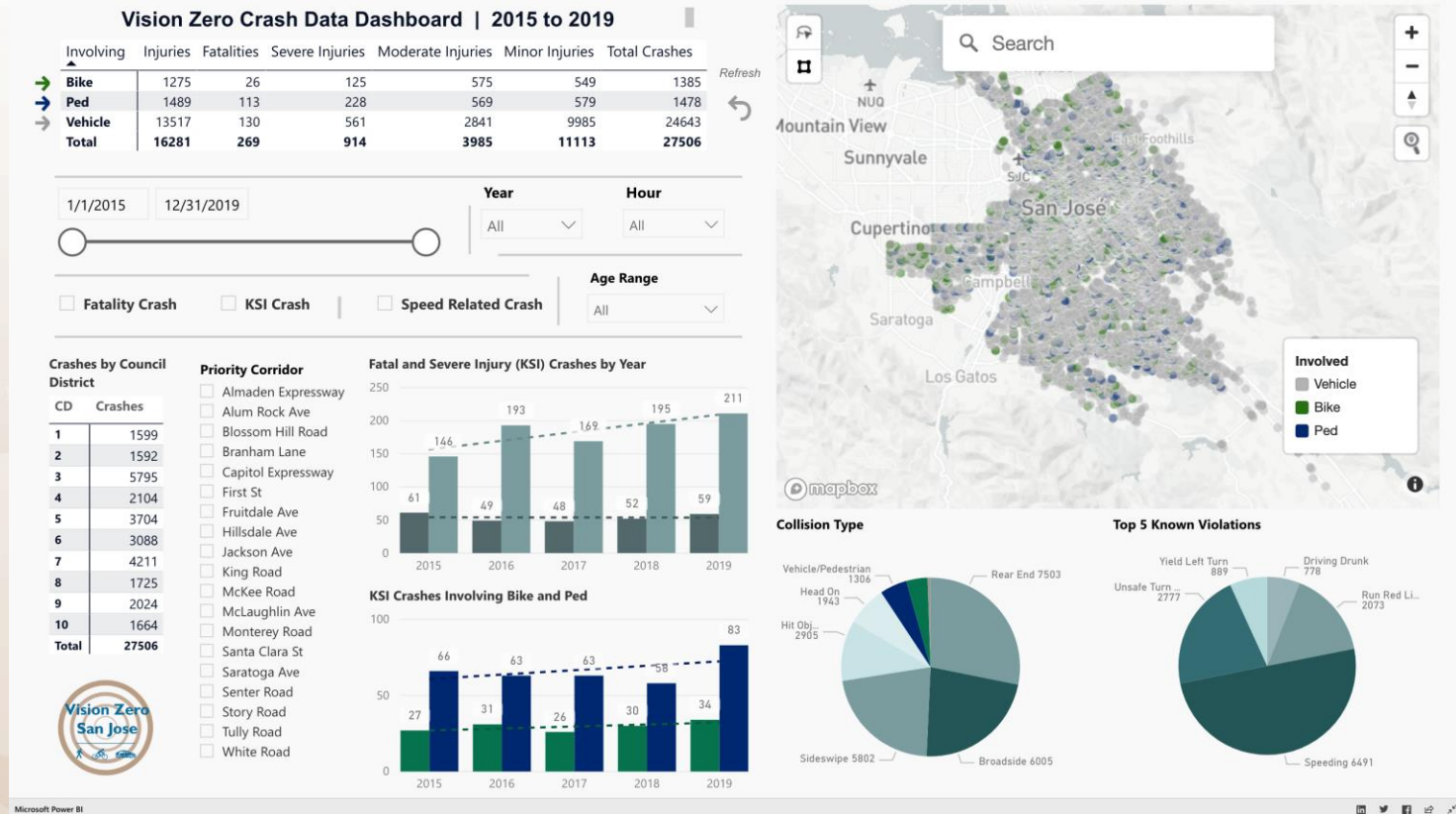


1. **Build Robust Data Analytics Tools**
2. Form a Vision Zero Task Force
3. Strategize Traffic Enforcement
4. Increase Community Outreach and Engagement
5. Implement Quick Build data-driven safety improvements
6. Prioritize resources on high-KSI corridors and districts

2020 Vision Zero Action Plan

Build Robust Data Analytics Tools

visionzerosj.org – 5-year (2015-2019) crash data in PowerBI



visionzerosj.org

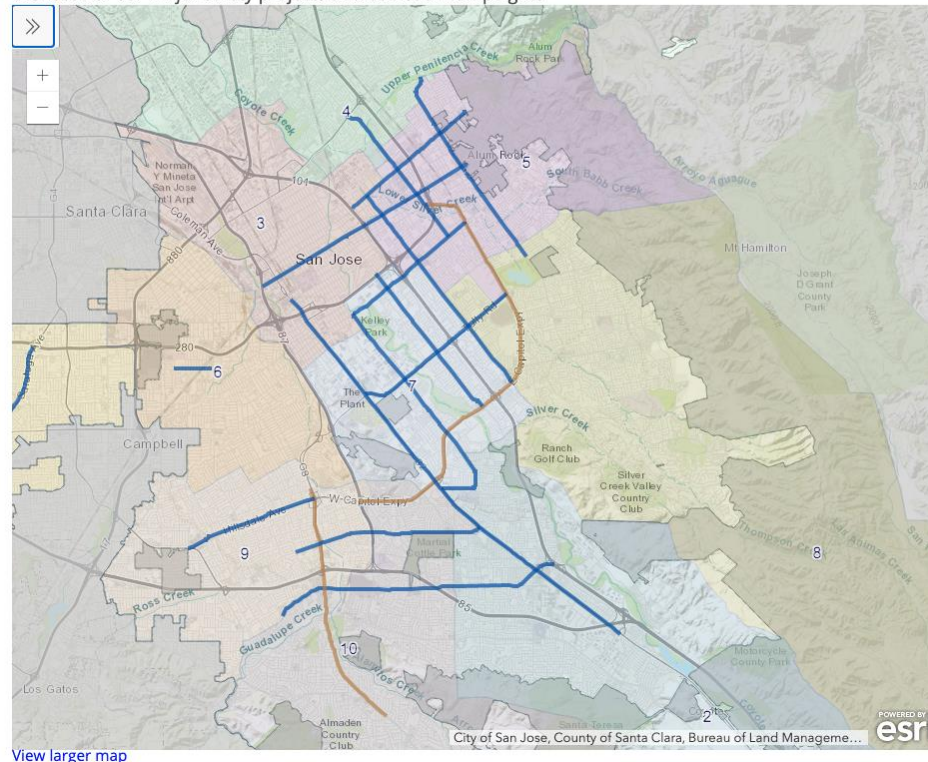
2020 Vision Zero Action Plan

Build Robust Data Analytics Tools

visionzerosj.org – Priority Safety Corridors by Council District in GIS

PRIORITY SAFETY CORRIDORS

These 17 corridors account for a high proportion of fatalities and severe injuries on San José streets. They are the focus of our major safety projects and outreach campaigns.

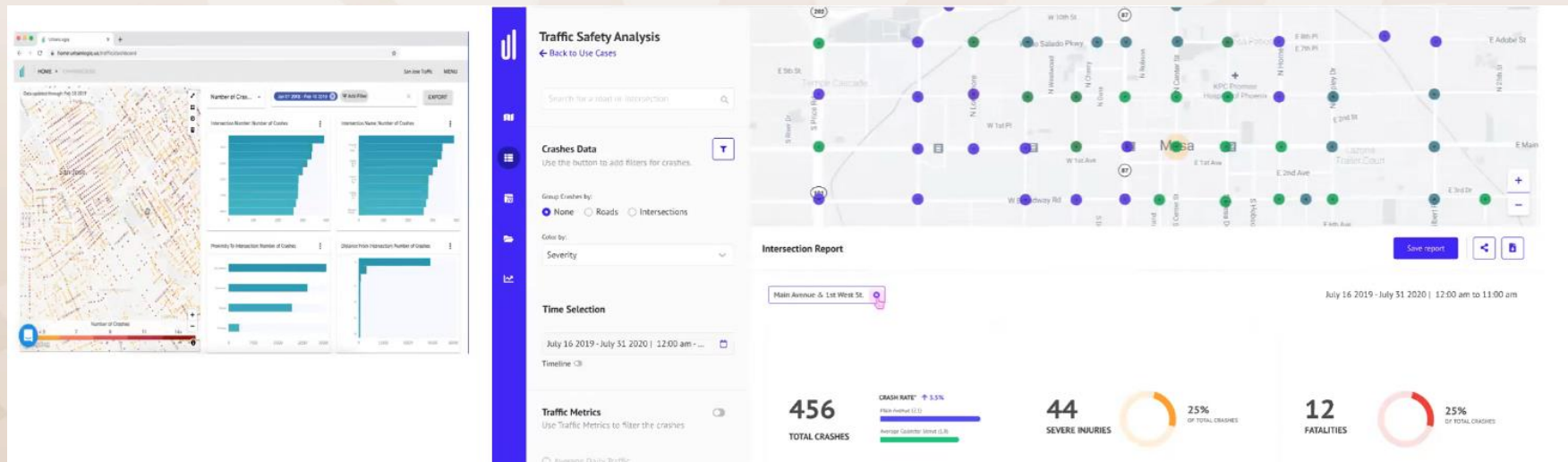


2020 Vision Zero Action Plan

Build Robust Data Analytics Tools

Urban Logiq selected for Start-Up in Residency (STiR): Nov 2020

Allows DOT to unify and analyze crash data with all other known city and county data, add live smart city subscription data (e.g., connected vehicles, cell phone signals, internet of things (IoT)), proprietary data sources (e.g., automated signals), or new/future innovation collaborations (e.g., camera-based machine learning: such as near miss events)



2020 Vision Zero Action Plan

Build Robust Data Analytics Tools

2018-2019 San José-Urban
Logiq Demonstration Project

Awarded:
American Planning Association
(APA) Technology Division
Smart City Merit Award

Presented at:
APA National Planning
Conference
San Francisco: April 2019

City of San José Department of Transportation
Receives APA Smart City Merit Award for Data-Driven
Innovation

April 16th, 2019



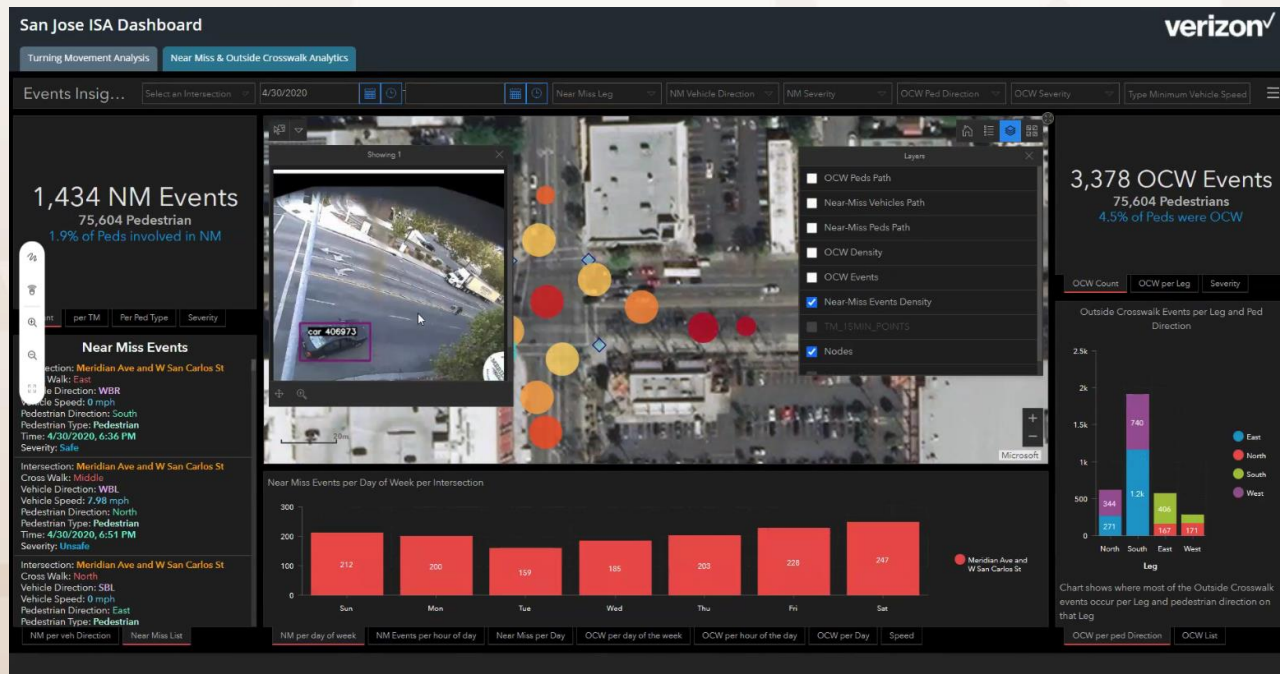
San Francisco, CA – April 16th, 2019 – The City of San José Department of Transportation (DOT) received an American Planning Association Technology Division Smart City Merit Award last night for its work with startup UrbanLogiq to leverage City transportation data for improved traffic operations and data-driven decision making.

Vision Zero Action Plan

Build Robust Data Analytics Tools

Developed Intersection Safety Analytics (ISA) tool with Verizon

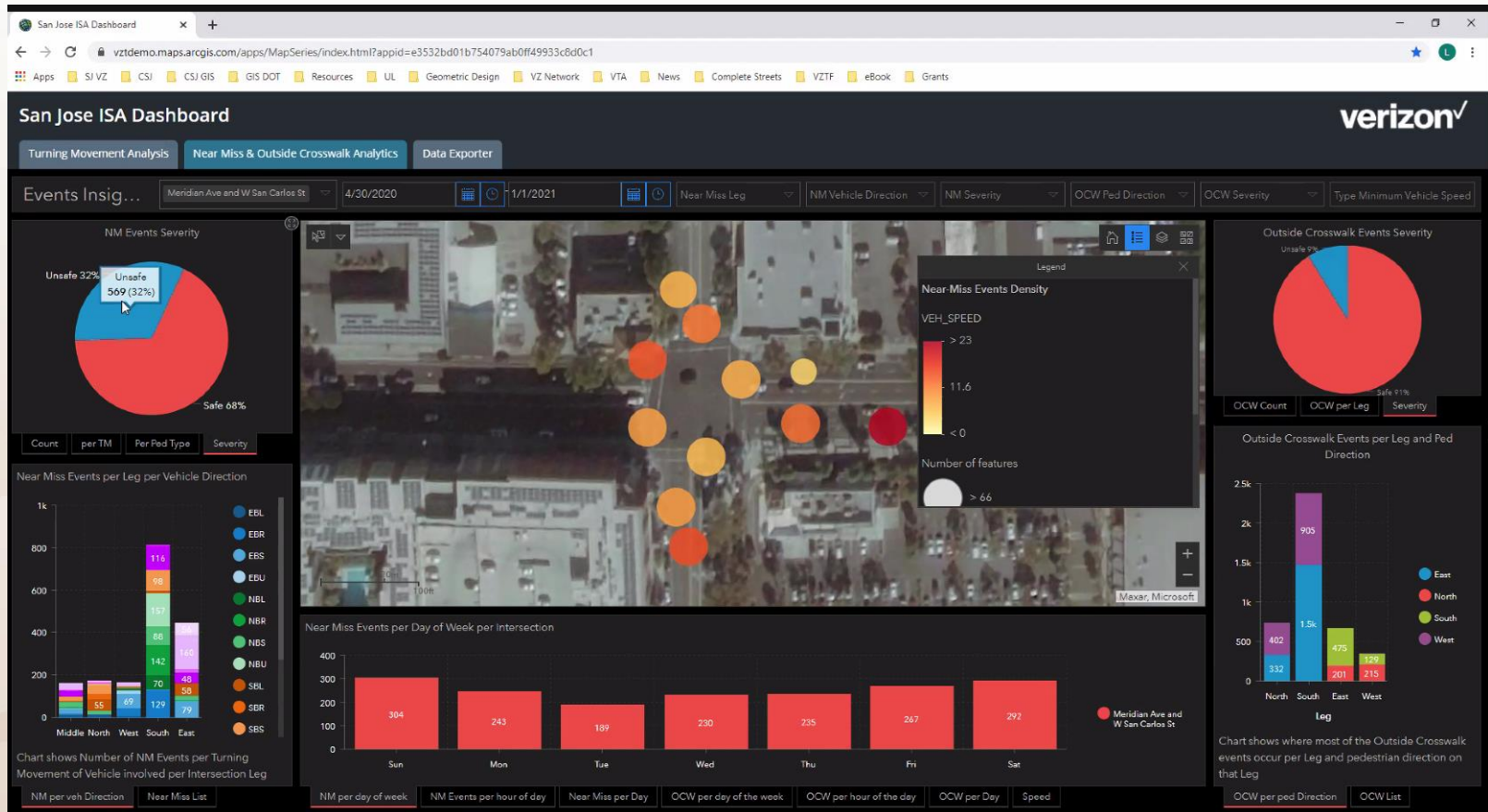
Near Miss; Developed Dashboard with Verizon team; use its insights to aid street redesign using Quick Build, Capital, Signals



Vision Zero Action Plan

Build Robust Data Analytics Tools

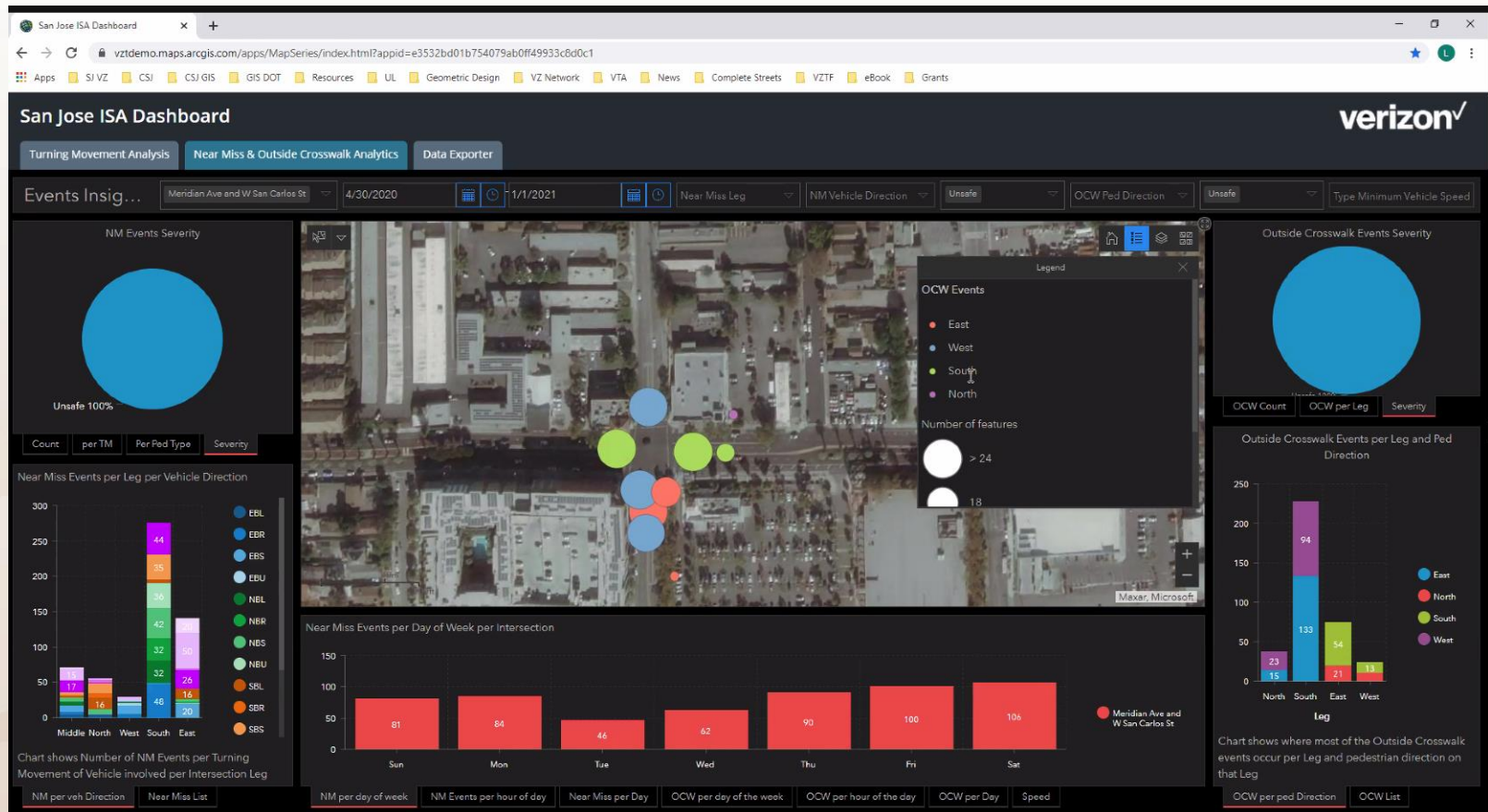
#, % of Near Miss (NM) and Out of Crosswalk (OCW) Events



Vision Zero Action Plan

Build Robust Data Analytics Tools

Where: Intersection leg, pedestrian direction, and vehicle movement



Vision Zero Action Plan

Build Robust Data Analytics Tools

Where: Heat map shows density and severity of Near Miss events

As indicated earlier, almost half of the near-miss events on **Meridian Ave and San Carlos** intersection were on the **South** leg.

As Figure 5 shows, **60%** of the vehicles involved in those South leg near-miss were **Northbound** vehicles which **40%** of are either turning **Right** or doing **U-turn**

83% of south leg near-miss events were caused by **OCW pedestrians** and **36%** of them were considered **unsafe** as in figure 6



South Leg Near Miss Vehicles Turning Movement

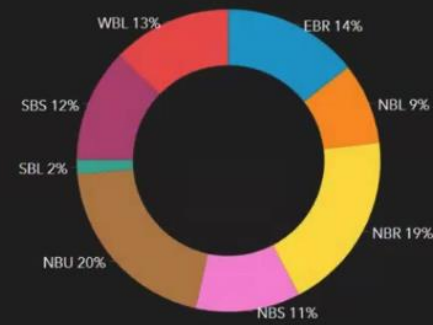


Figure 5

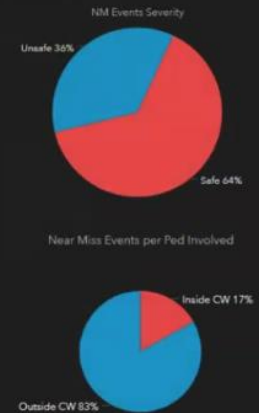


Figure 6

Preliminary Insights from Meridian Ave and W San Carlos St

Almost 50% of near miss events are on south leg

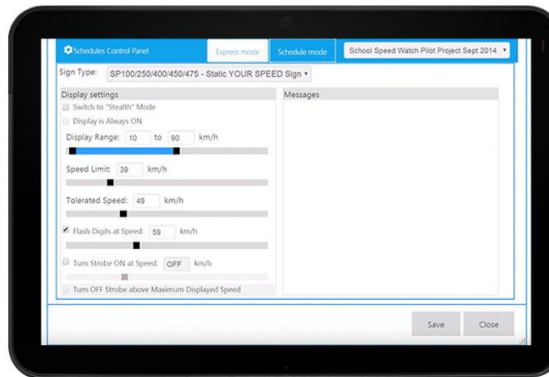
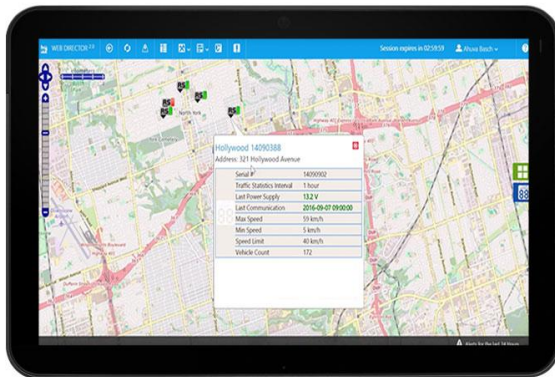
60% of near miss on south leg involve vehicles going northbound

83% of south leg near miss events involve peds outside crosswalk

DOT will use insights for W San Carlos project in preliminary design

Vision Zero Action Plan

Build Robust Data Analytics Tools



Piloting IoT Radar Speed Sign projects with Traffic Logix and Applied Information – adds cloud-based management tools:

- Data collection and analytics
- Remote programming
- Alerts: sign malfunctions, unusual traffic
- Ability to coordinate with enforcement



Thanks to Project Staffs

City of San José, Dept of Transportation

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Vince Pereira

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Rob Lloyd
Erik Jensen
Rajani Nair

Verizon, Smart Communities (Near Miss)

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Jim Bothwell
Darren Poikonen
Abdulsalam Almjan
Ahmed Abdeldayem
Jonathan Kurz

Urban Logiq (Data Analytics)

Herman Chandi
Julien Refour
Duong Vu
Max Burke

Applied Information (Radar Speed Signs)

Alana Stander

NorCal Signal Supply (Radar Speed Signs)

Ellen Poole

Vision Zero and Innovation

Summary

- **Data analysis informs safety investments**
- **Developed Near Miss tool with Verizon**
- **Urban Logiq for data analysis**
- **Radar Speed Signs pilot upgrade to cloud**

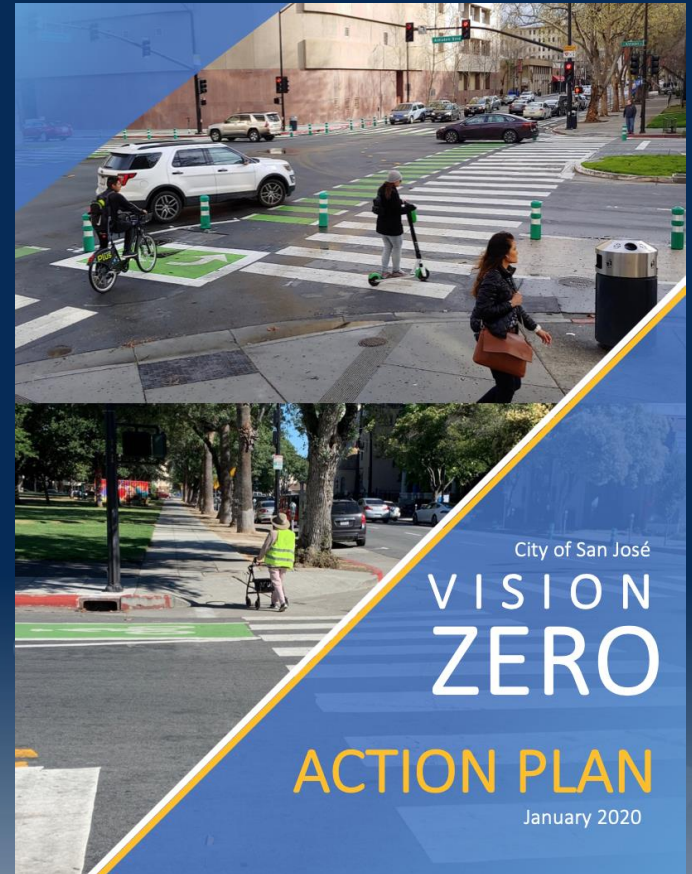
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