

Long-Term Planning Report

Utah Department of Transportation

June 2016

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Executive Director



Vision and Mission



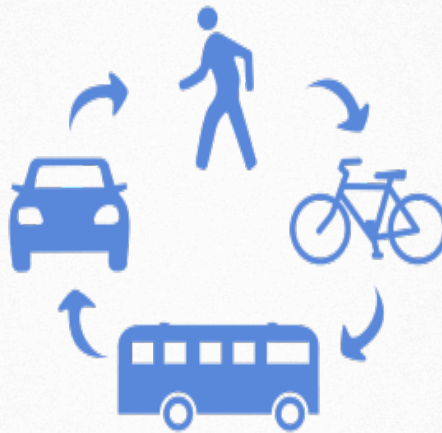
MISSION

Innovating transportation solutions that strengthen Utah's economy and enhance quality of life.

Strategic Goals

zero Crashes
Injuries
Fatalities

Zero Crashes,
Injuries,
Fatalities

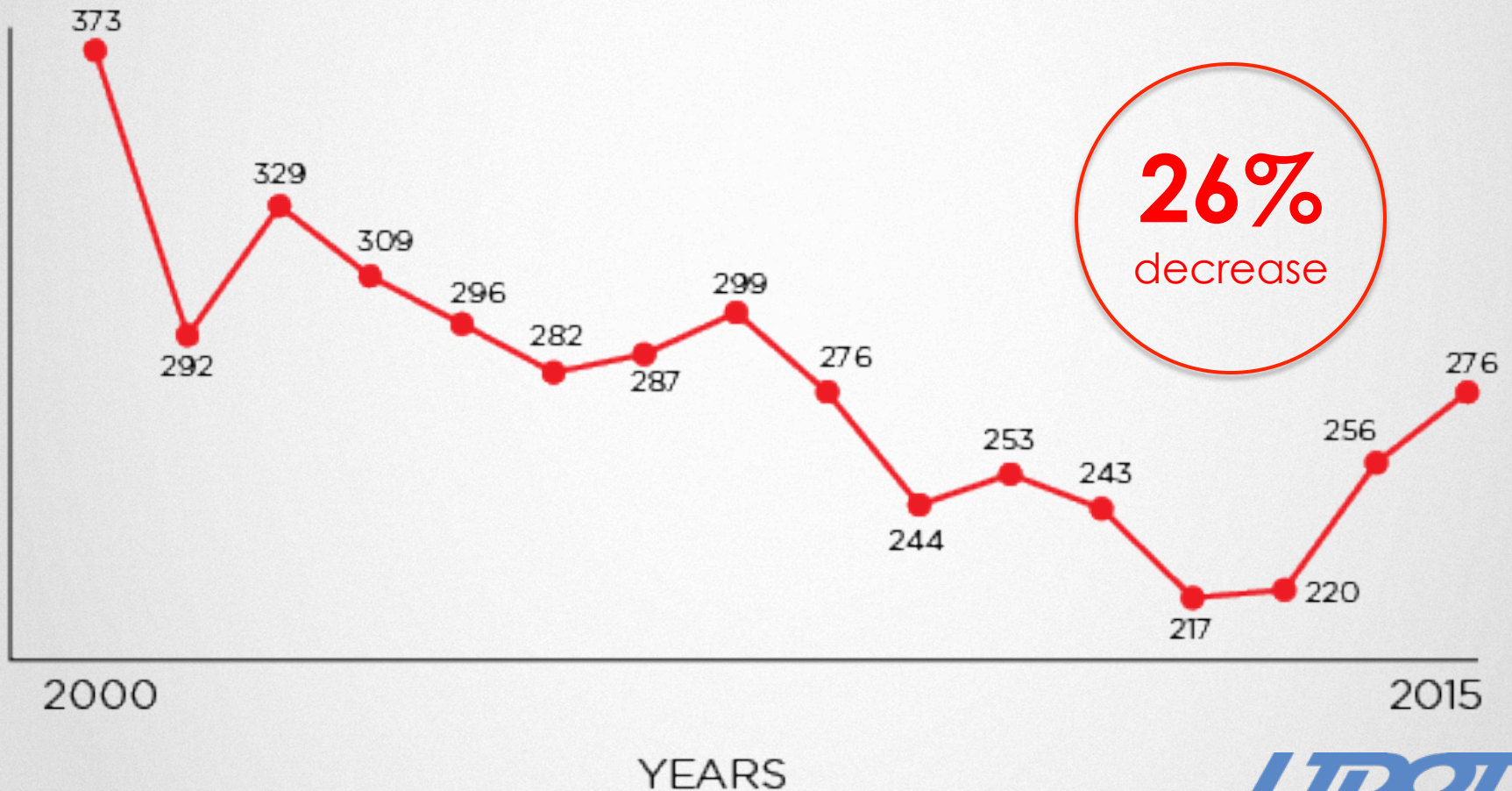


Optimize
Mobility



Preserve
Infrastructure

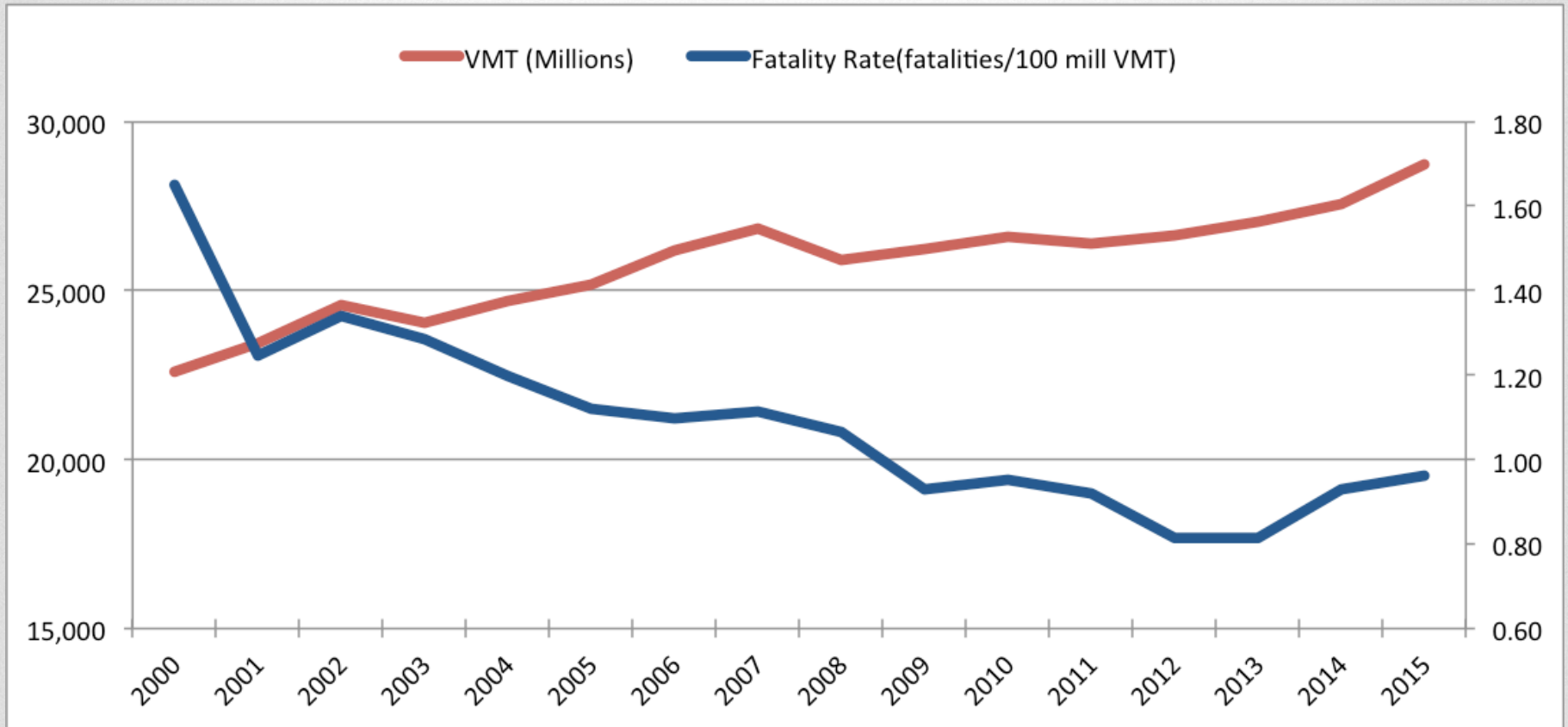
FATALITIES (2000-2015)



zero

Fatalities Rate

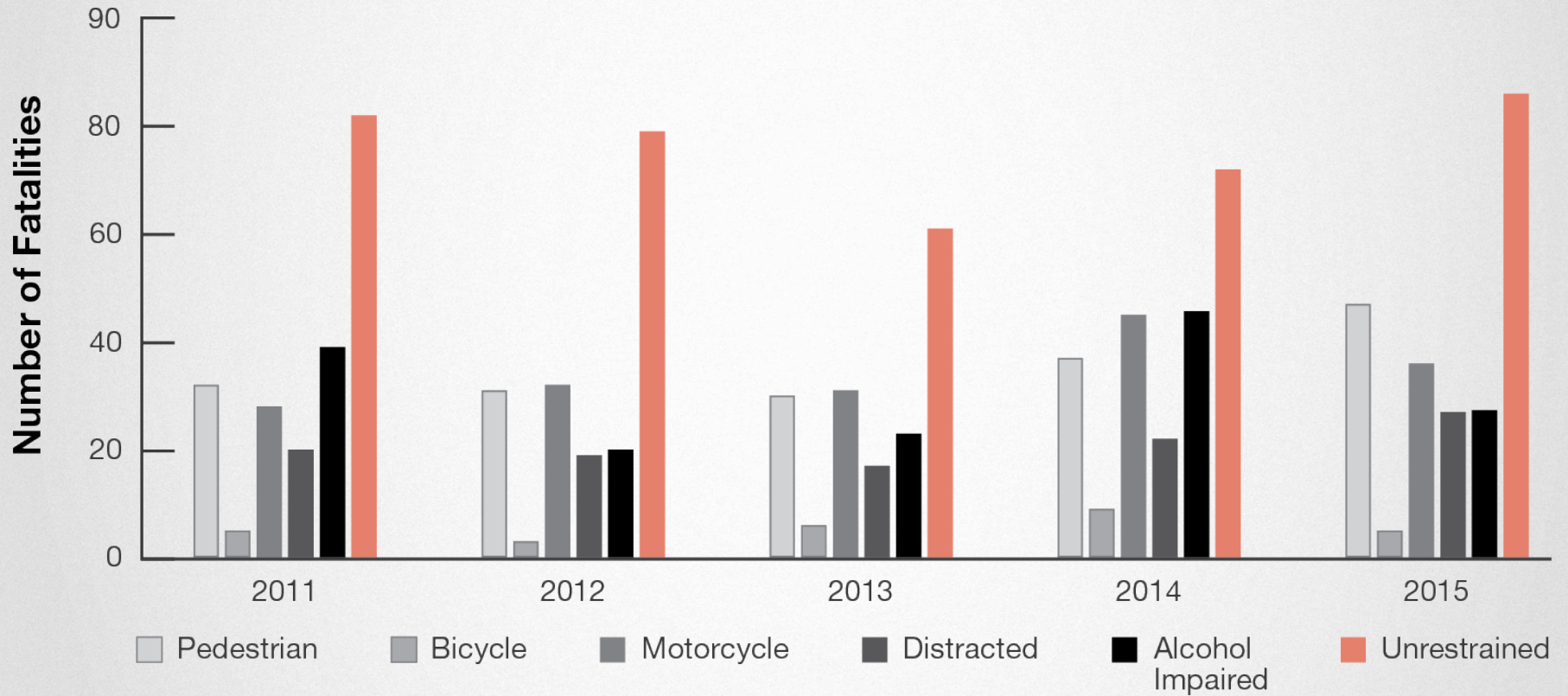
Vehicle miles traveled (VMT) and other factors



zero

Fatalities by Type

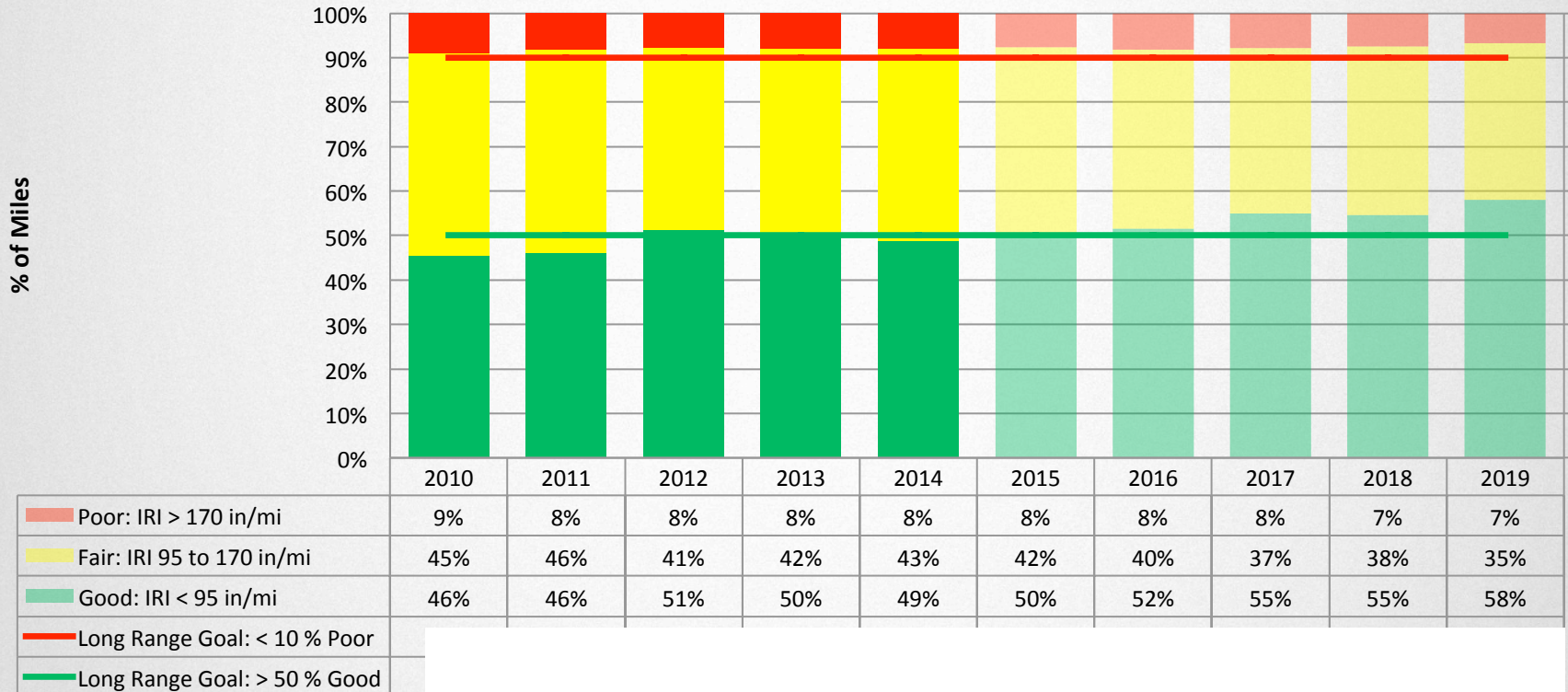
Zero Fatalities





Pavement Conditions - High-Volume

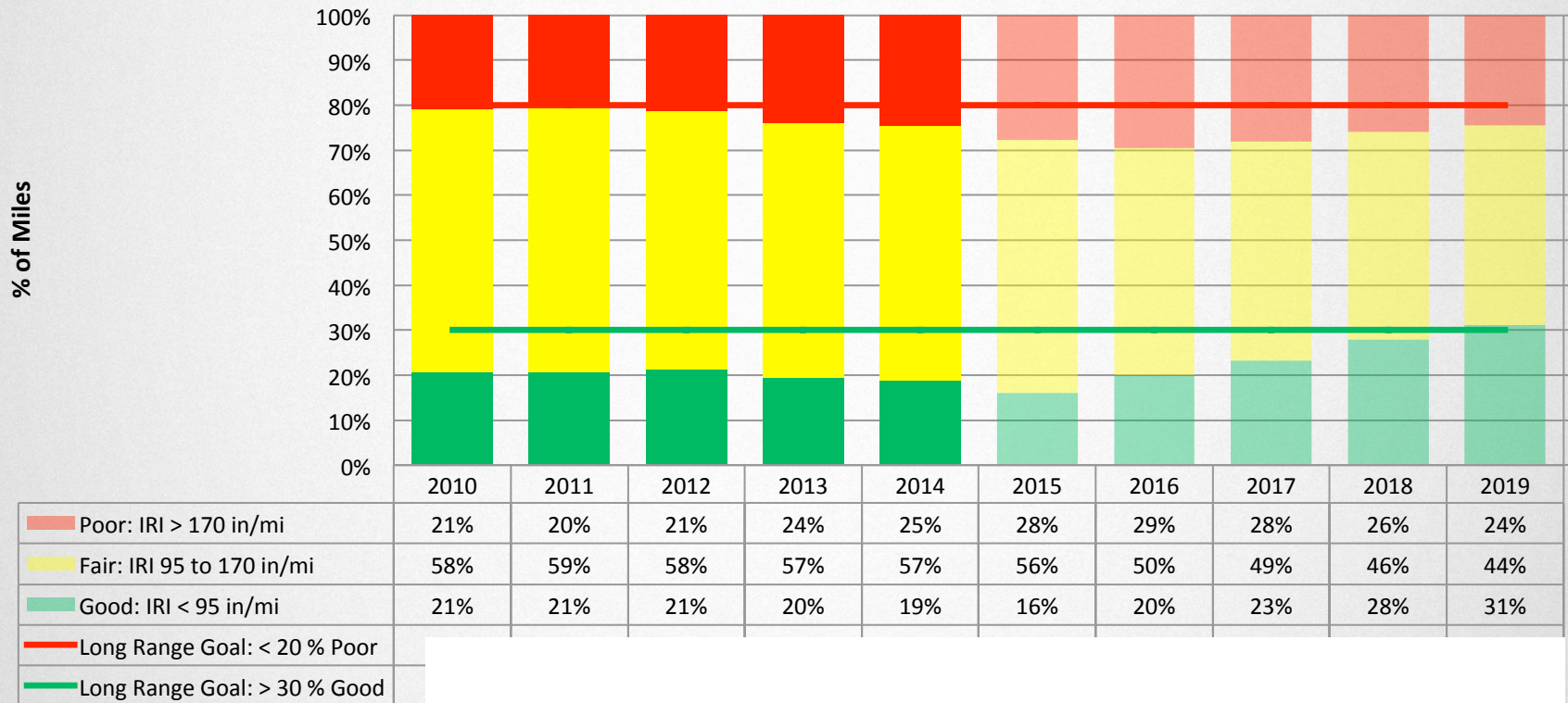
High Volume Pavement Condition (3,080 Mi/ 11,845 SA)
Forecast with 148 Million / Yr





Pavement Conditions – Low-Volume

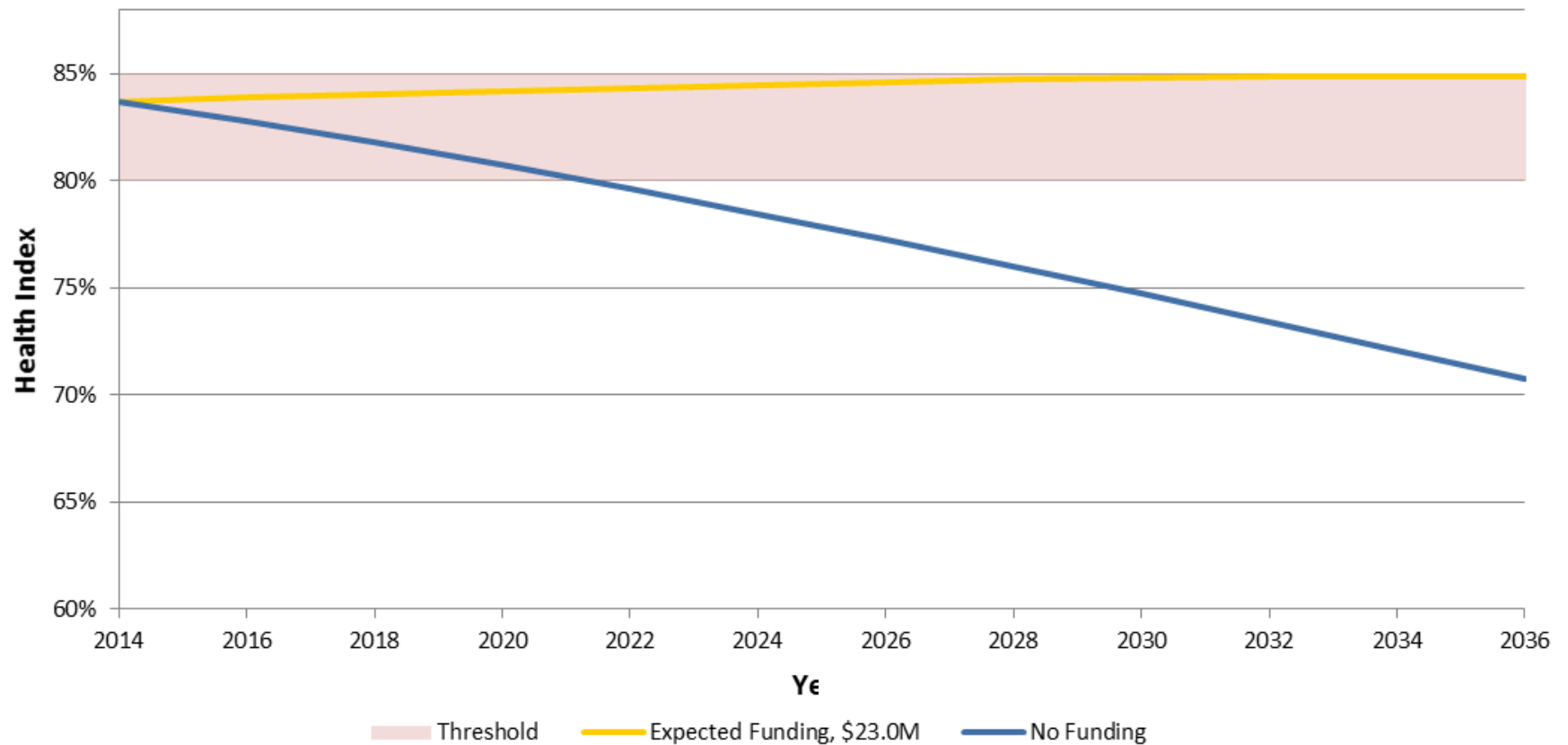
Low Volume Pavement Condition (1,865 Mi/ 4,410 SA)
Forecast with 10 + 40 Million / Yr





Bridge Conditions

Projected System Health State Inventory





Equipment and Fleet

Preserve Infrastructure

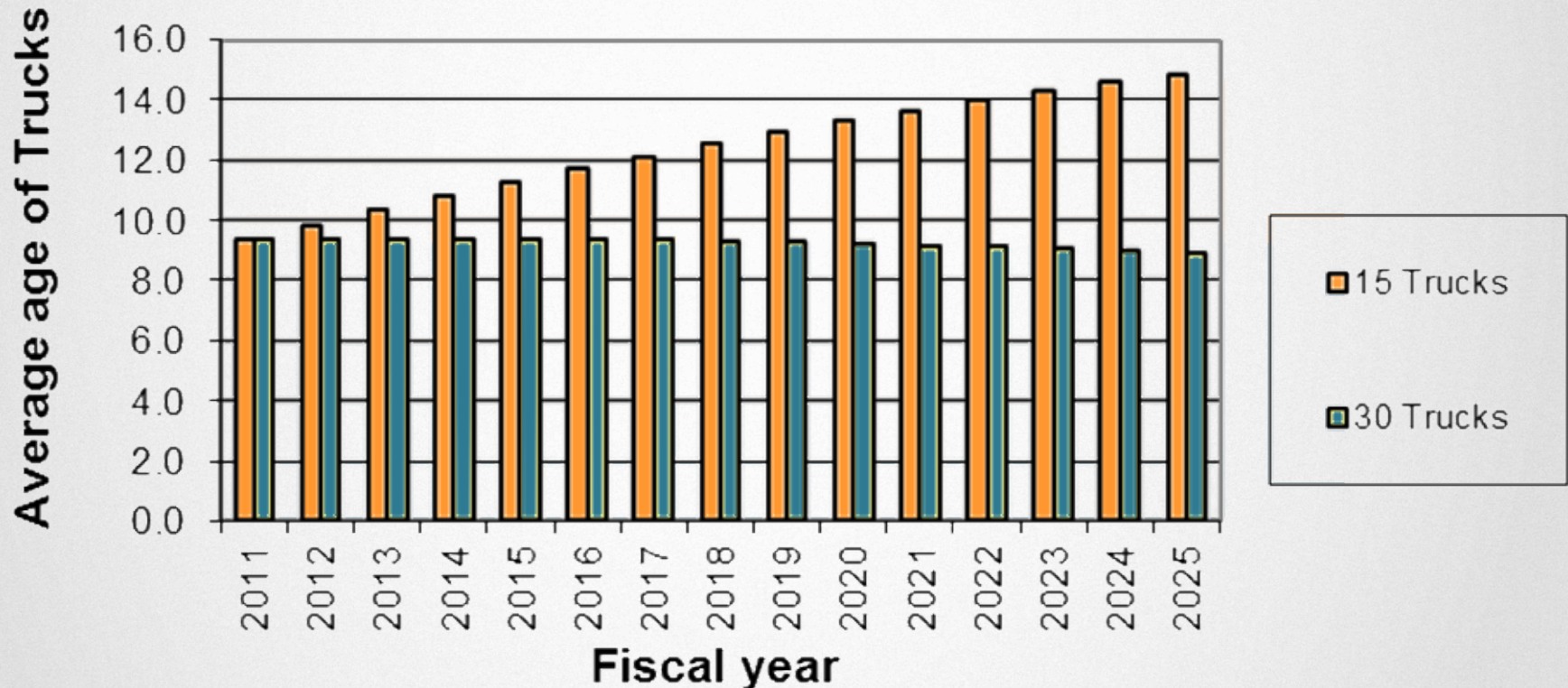




The Challenge: Aging Fleet

Preserve Infrastructure

Budget for up to 15 trucks/year

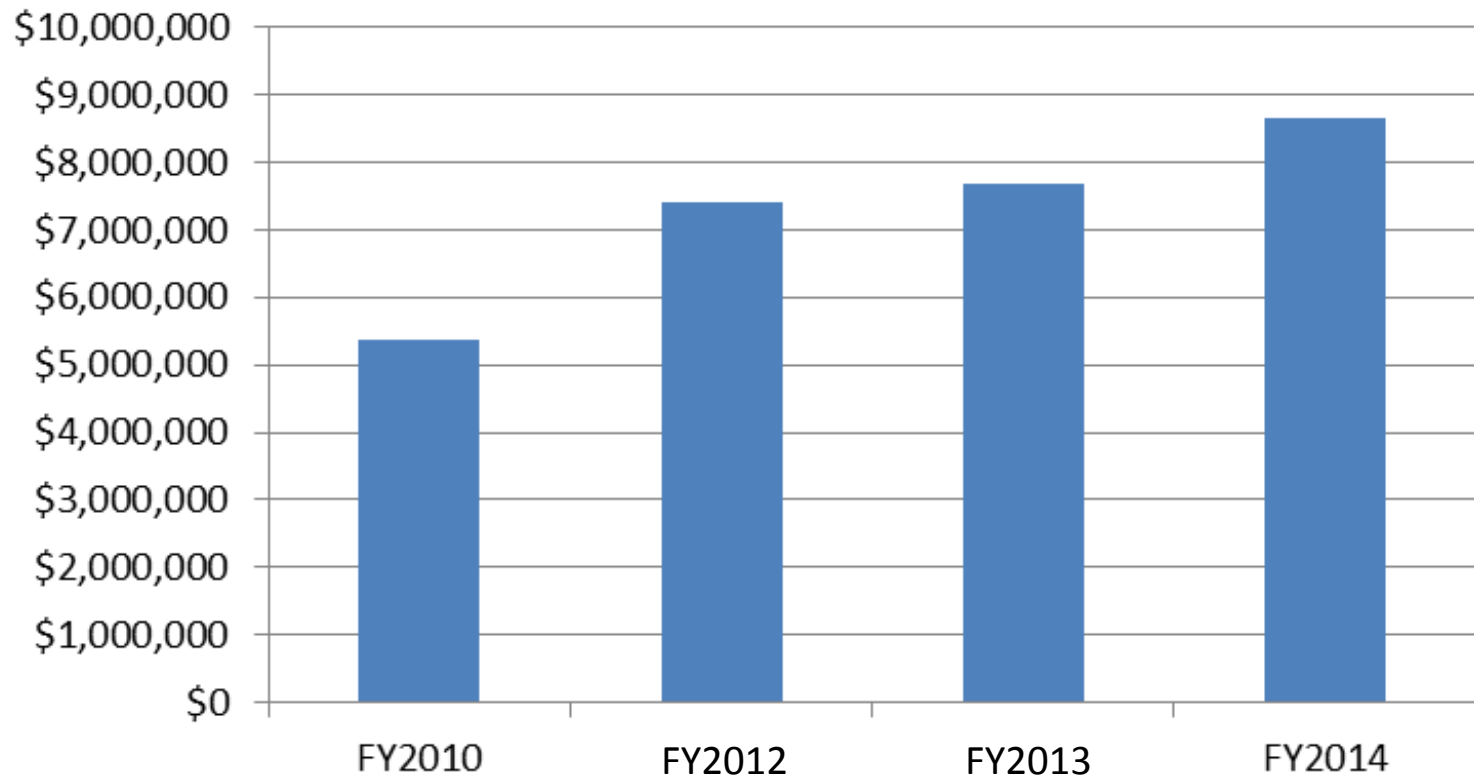




Cost of Aging Fleet

Preserve Infrastructure

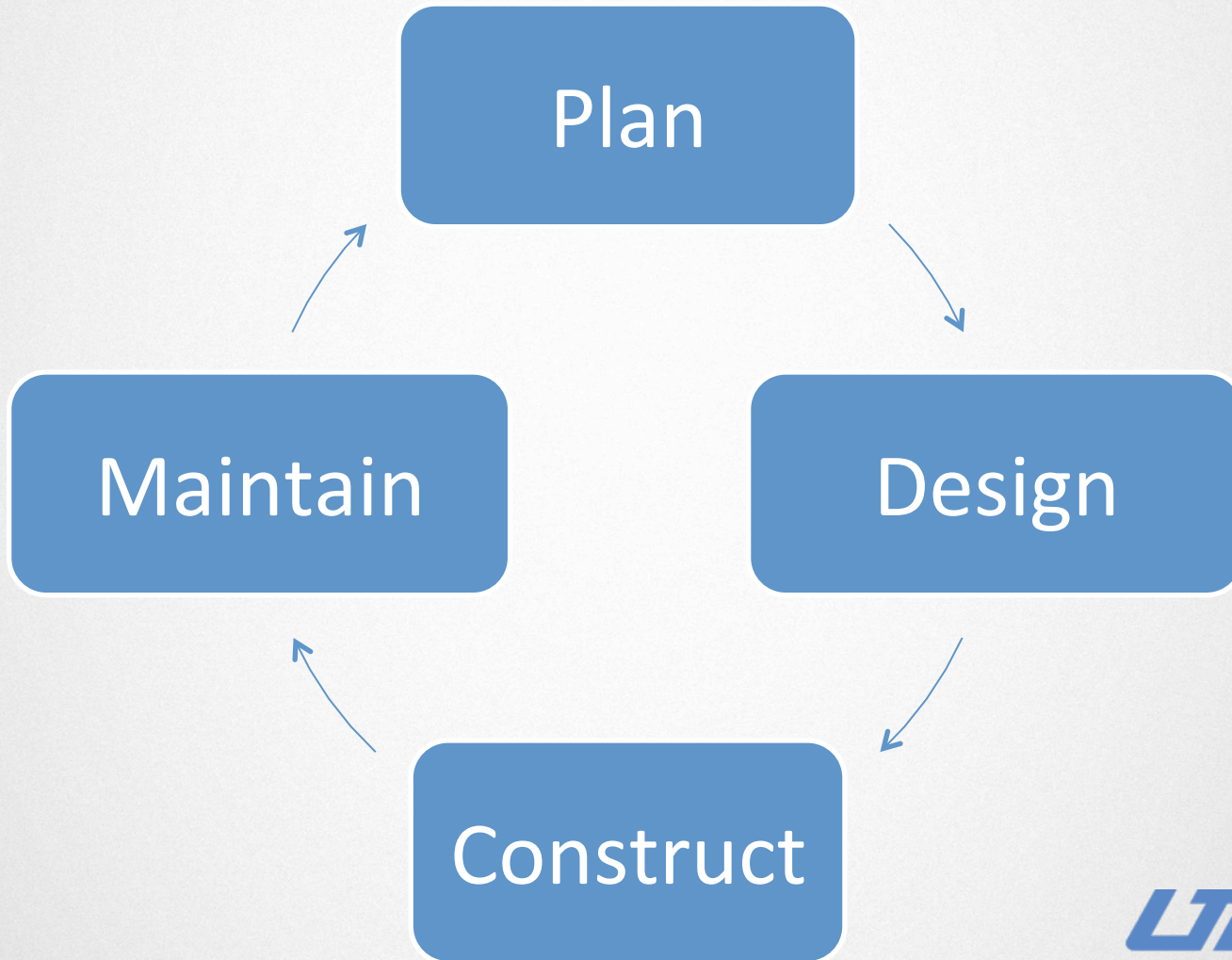
Repair costs over the last 4 years





Shifting Paradigm in Transportation

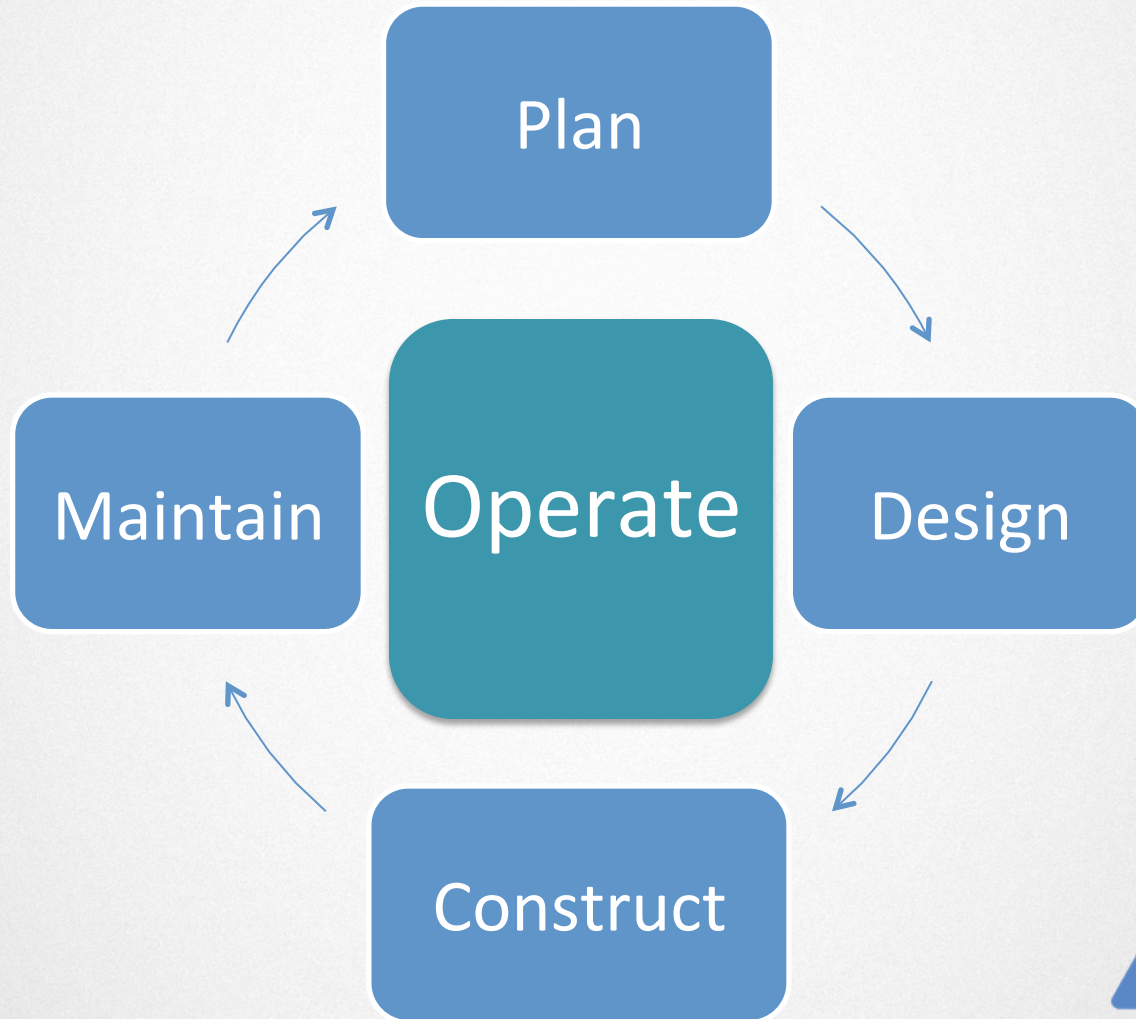
Optimize Mobility





Shifting Paradigm in Transportation

Optimize Mobility

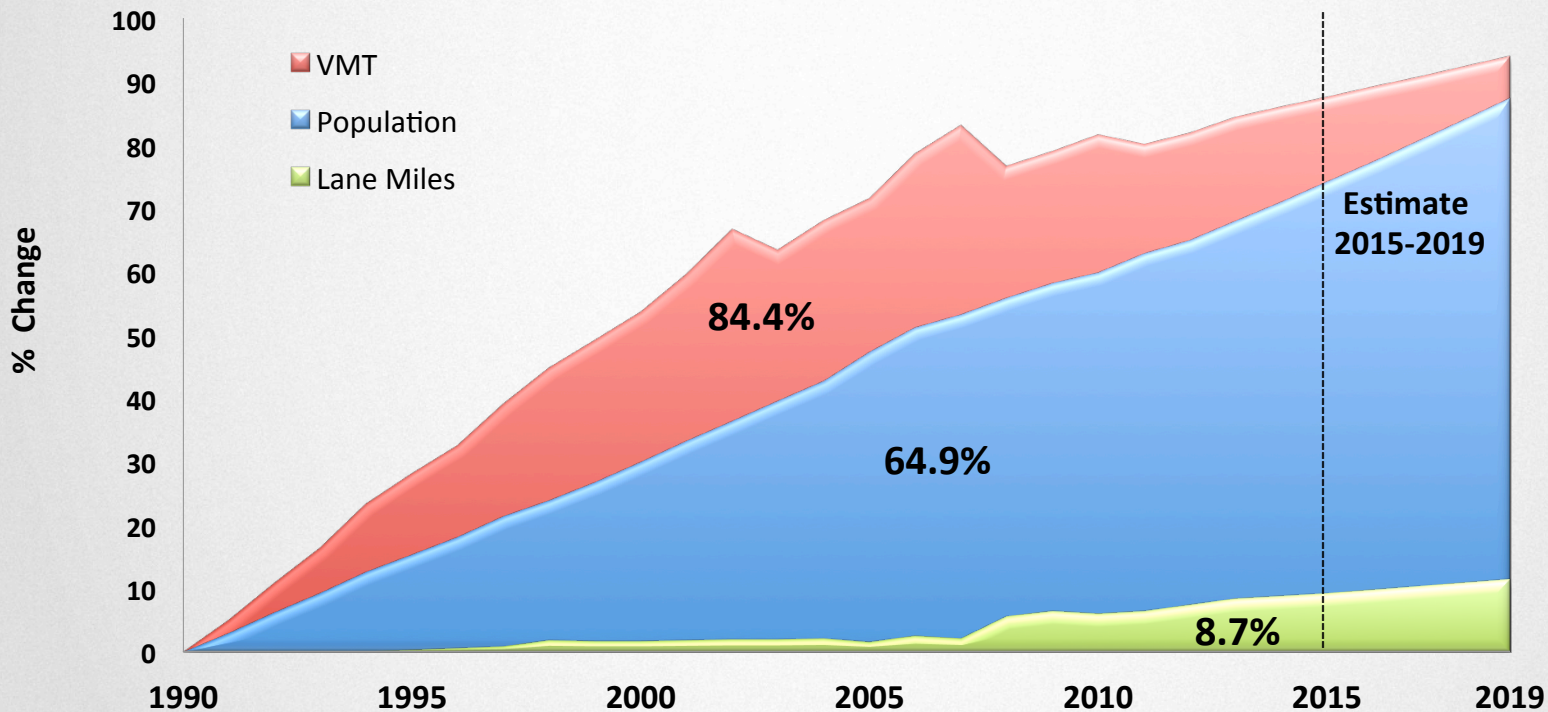




Traffic and Growth in Utah

Optimize Mobility

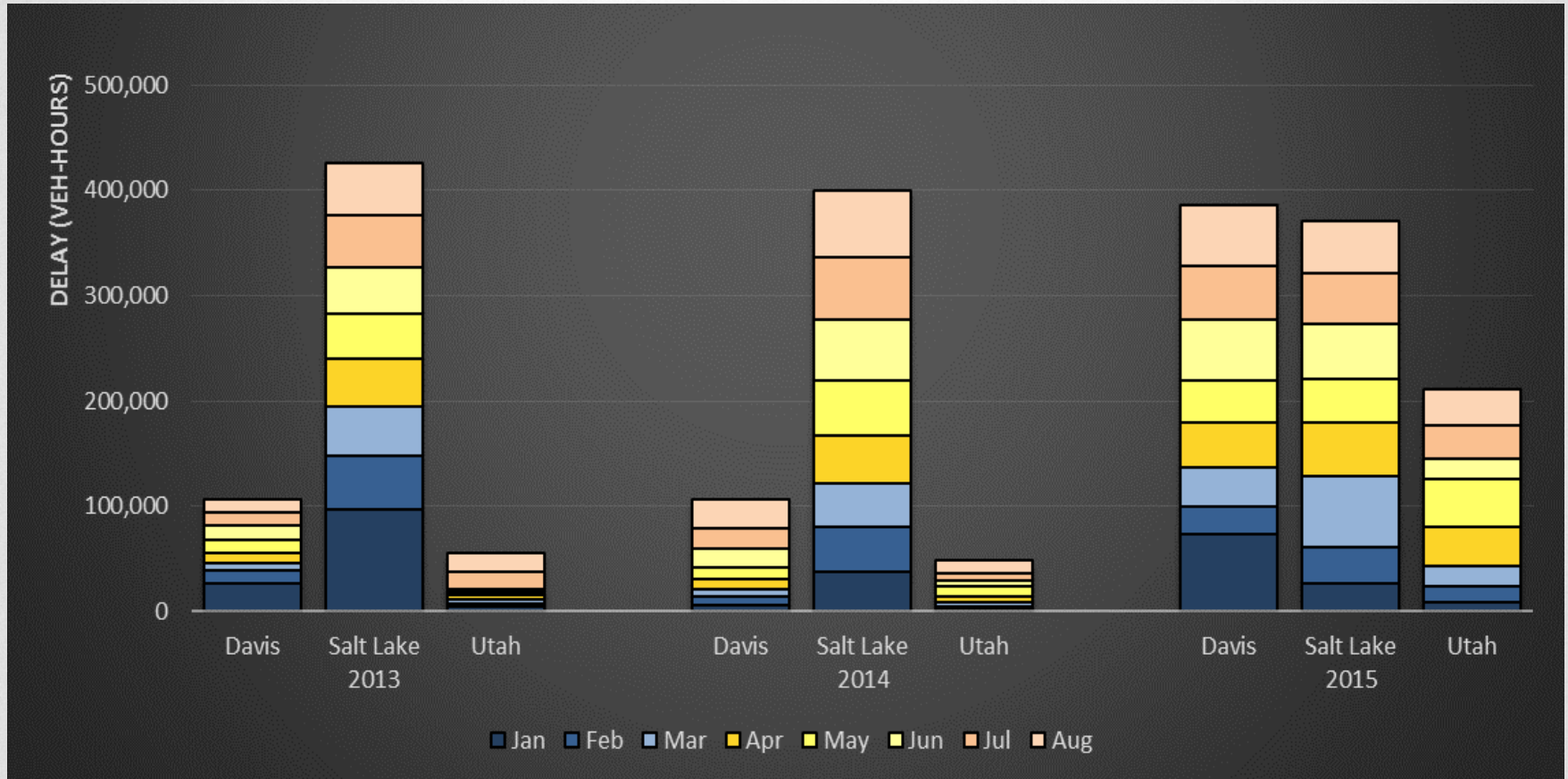
Utah Statewide Growth Trends
1990 - 2019





TMD Performance Measures – Delay

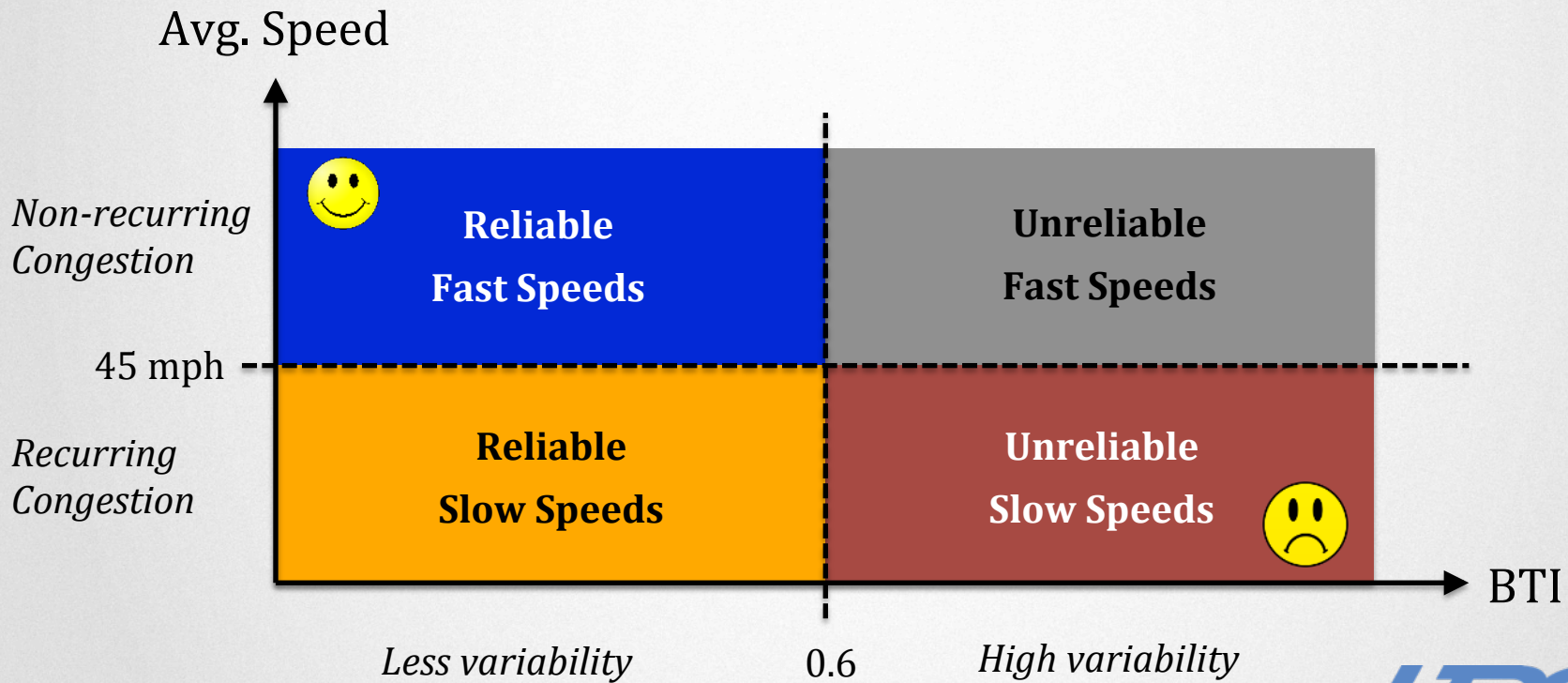
I-15 NB Delay by County (All Day, Every Day)





New Performance Measure: Reliability

The Buffer Time Index (BTI) represents the **additional time** drivers need to add to their average travel time to ensure that they arrive at their destination on time 95% of the time.

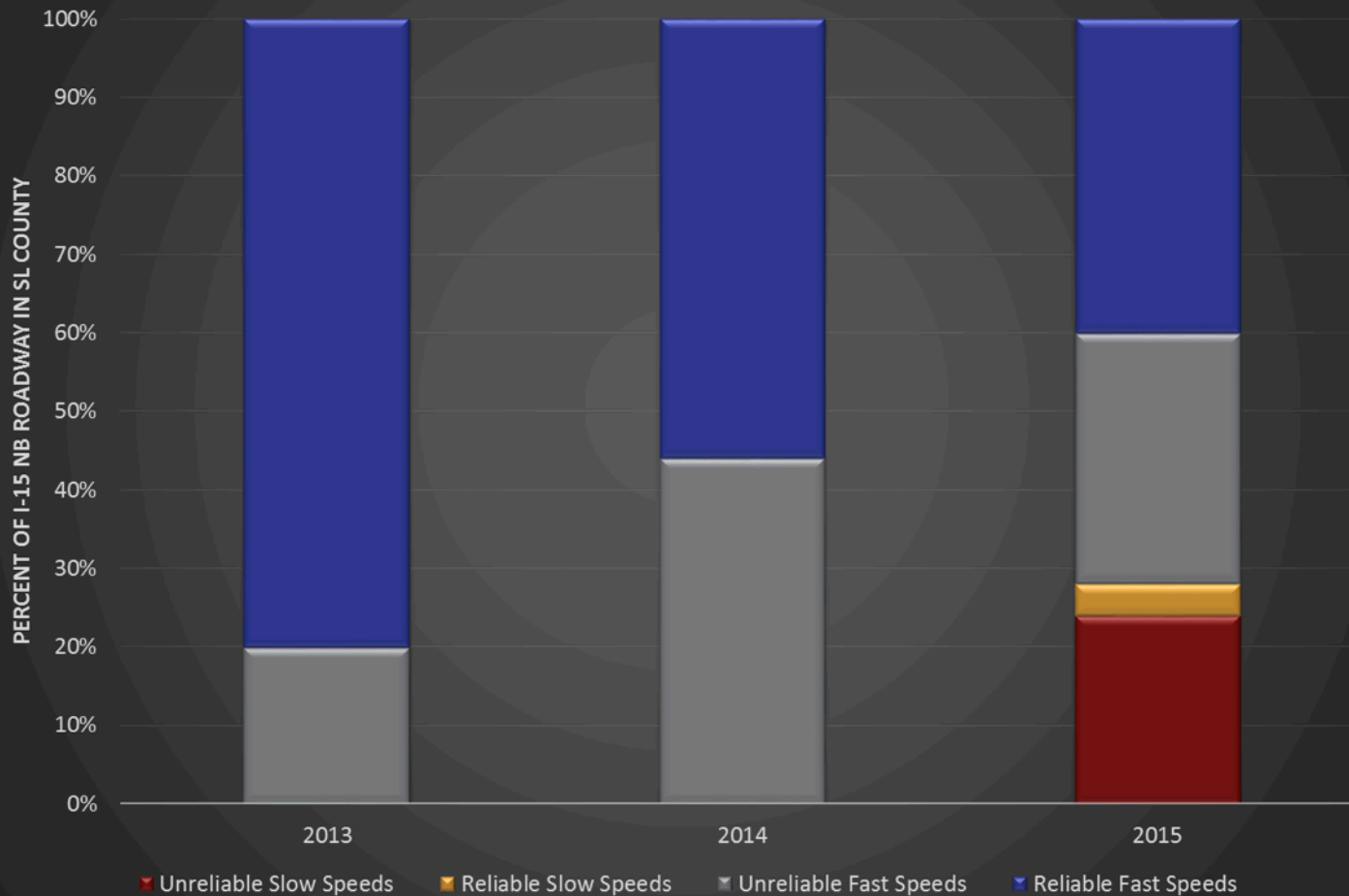




Performance: Reliability

Northbound in Salt Lake County

Annual I-15 NB in SL County (Weekdays 5-6 PM)
Reliability

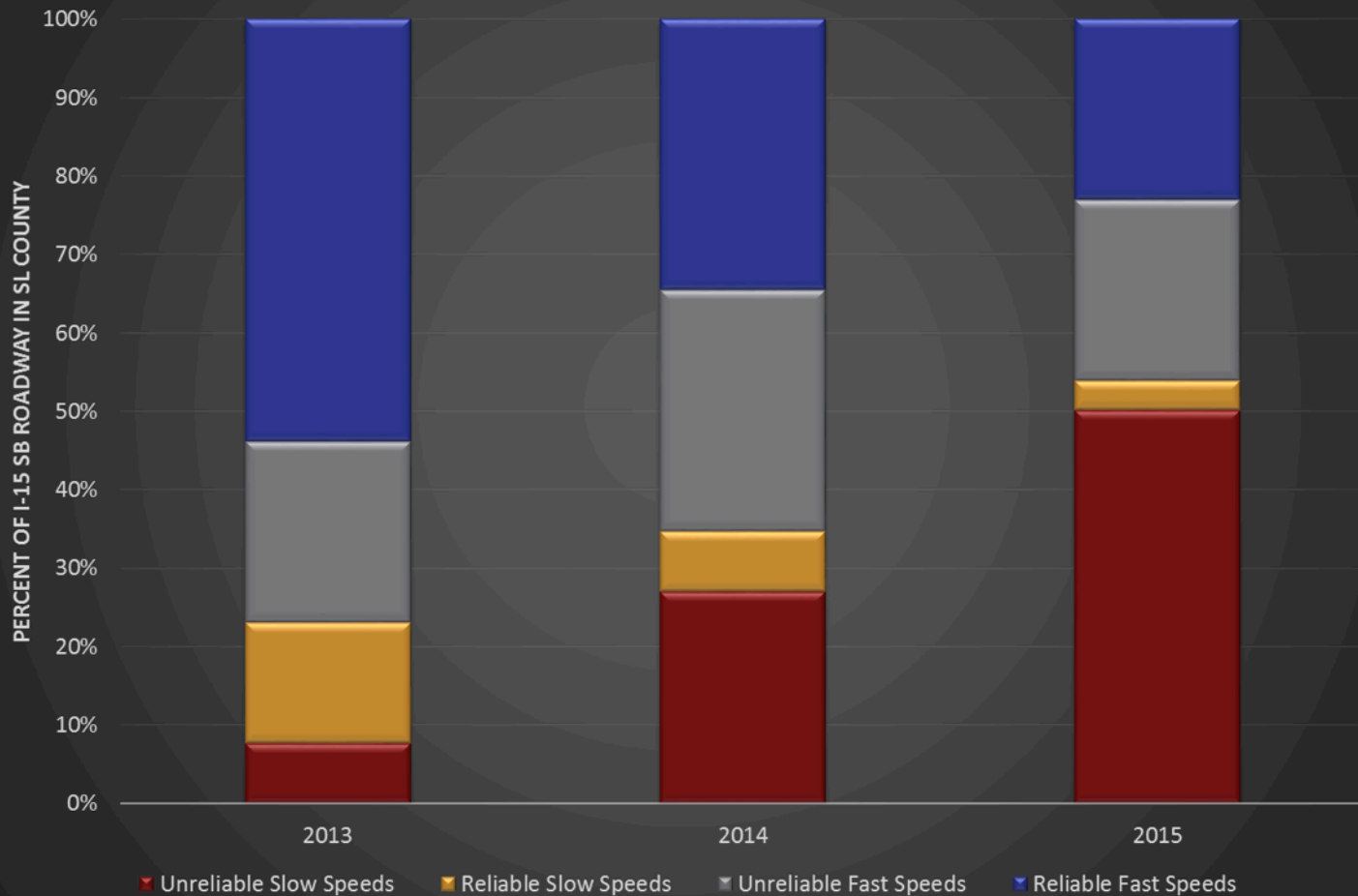




Performance: Reliability

Southbound in Salt Lake County

Annual I-15 SB in SL County (Weekdays 5-6 PM)
Reliability



Three Paradigms of Change



Automation



Electrification



Mobility as a Service

Inflection Point in Transportation

1964 - 2016



1st



3rd



5th



2nd



4th



6th

2007 - 2016

iPhone 1st Generation



iPhone 3G



iPhone 3GS



iPhone 4



iPhone 4S



iPhone 5



iPhone 5C



iPhone 5S



iPhone 6



iPhone 6 Plus



Evolution of Transportation



“If I had asked people what they wanted, they’d have said faster horses.”

- Henry Ford

Big Data and the Internet of Things



Innovative Construction



Environment for Progress



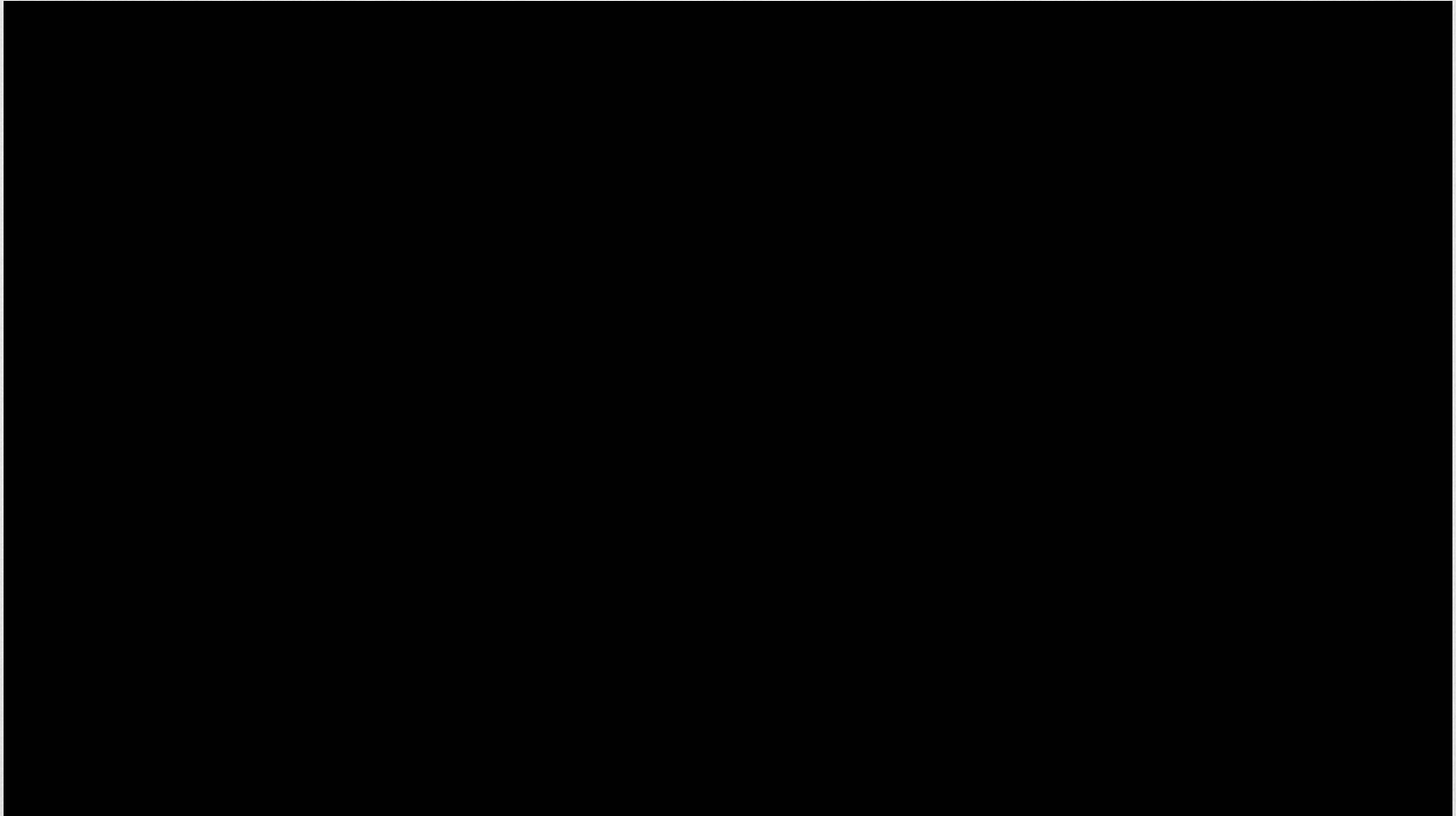
Utah's Advantage

DSRC HURDLES

- Compatibility
- Spectrum

Communication among Cars & Infrastructure

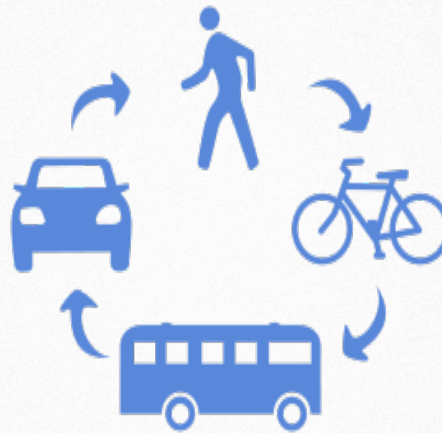
No Red Lights



Moving toward Our Goals

zero Crashes
Injuries
Fatalities

Zero Crashes,
Injuries,
Fatalities



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