

# Telling the Story of Safety – Tribal Reservation Transportation

## Road Safety Audits and Their Role In That Story

Matt Jensen  
Lummi Nation  
Transportation Planner/Transit  
Manager

# Agenda

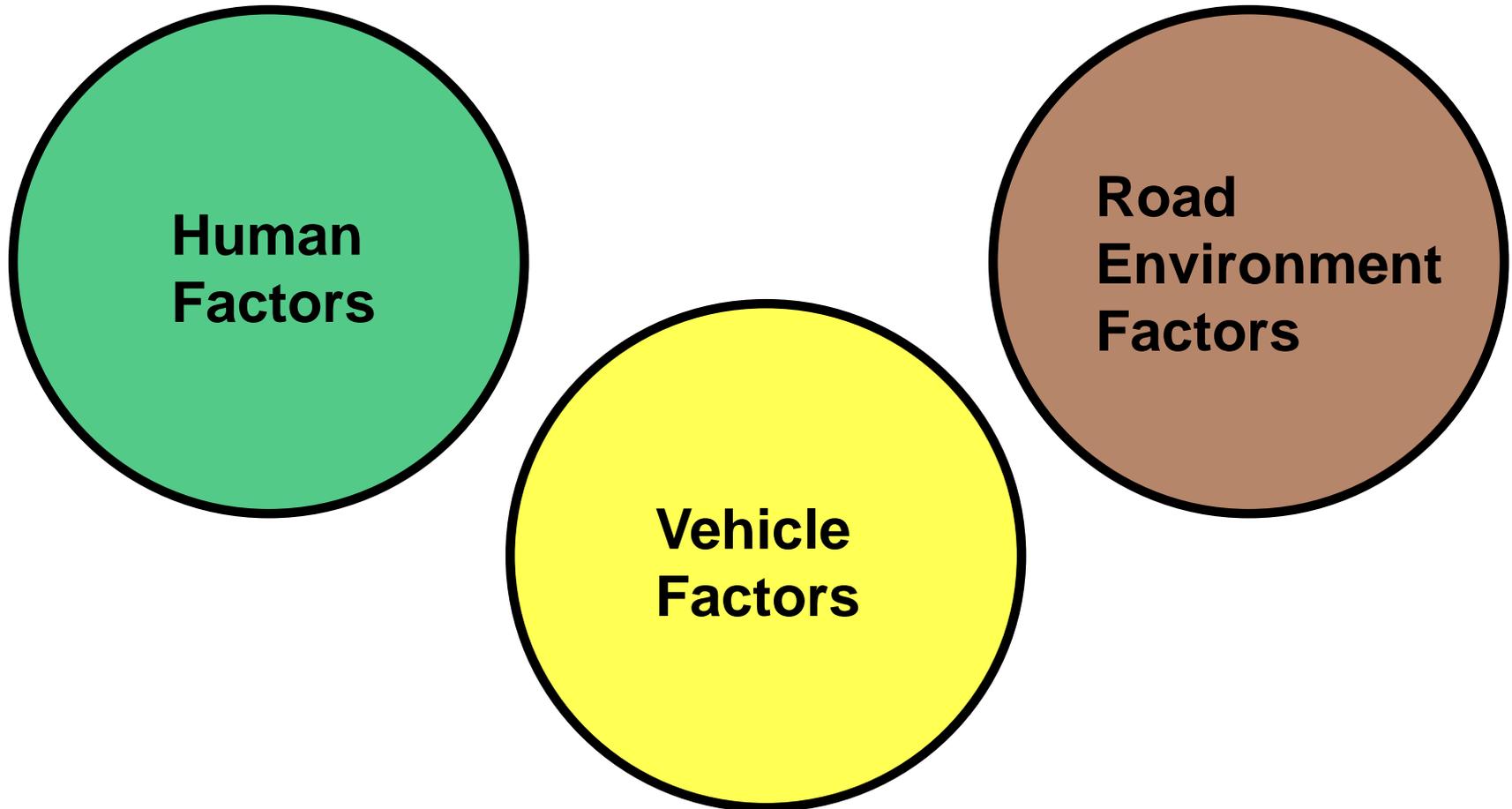
- The Story
- RSA Definition
- Steps in the RSA Process
- Lummi RSA Example
- Lummi RSA Outcomes
- Resources



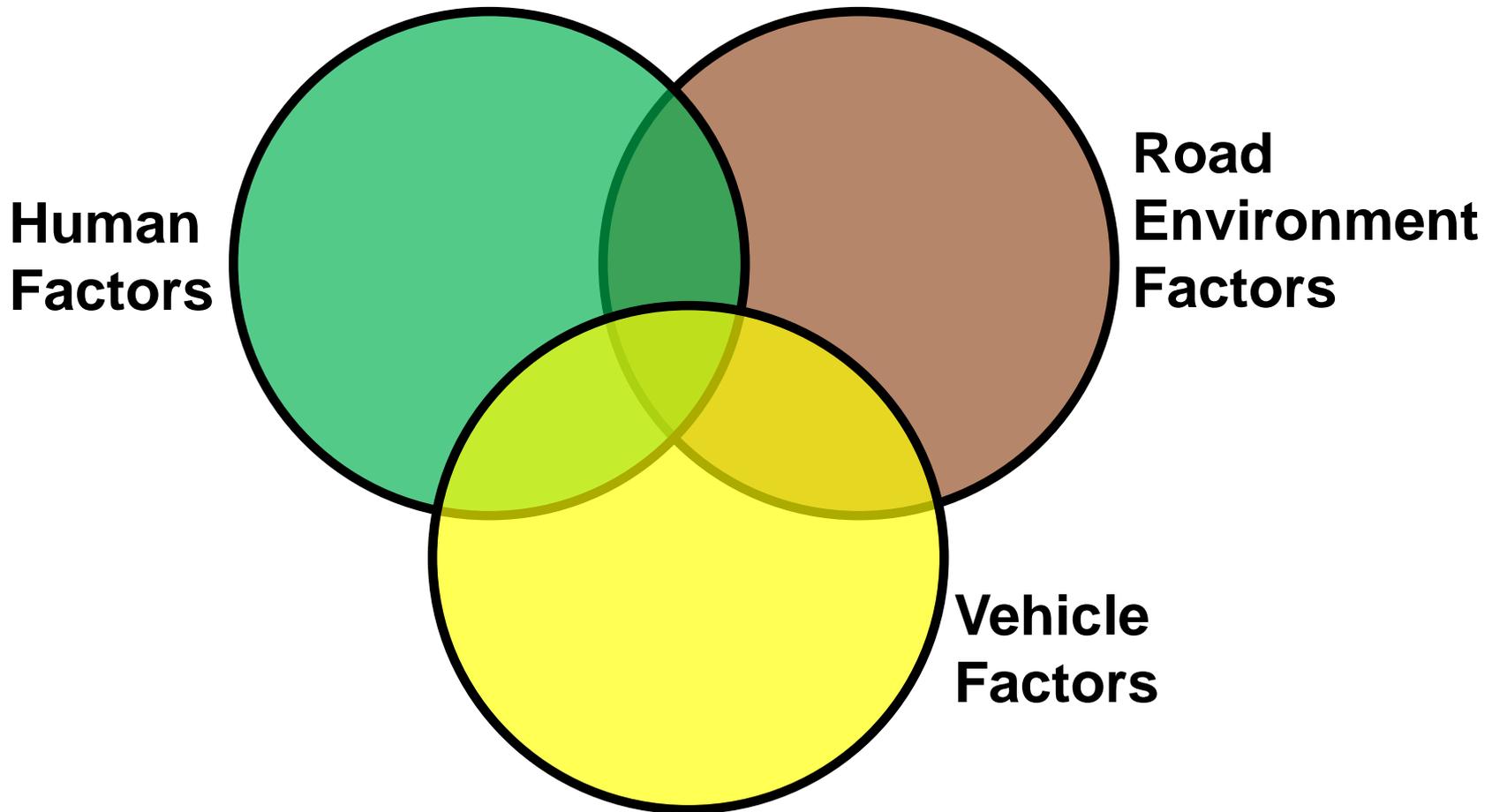
# Washington Statewide Tribal Story

- The rate of Native American People dying in a crash is 5 times more likely when the driver was speeding.
- The rate of Native American People dying as a pedestrian is 5 times higher.
- The rate of Native American People dying in a traffic crash because a driver is impaired 5 time higher.
- The rate of Native American People dying in a crash is 7 times more likely **when they aren't** using their seat belts.

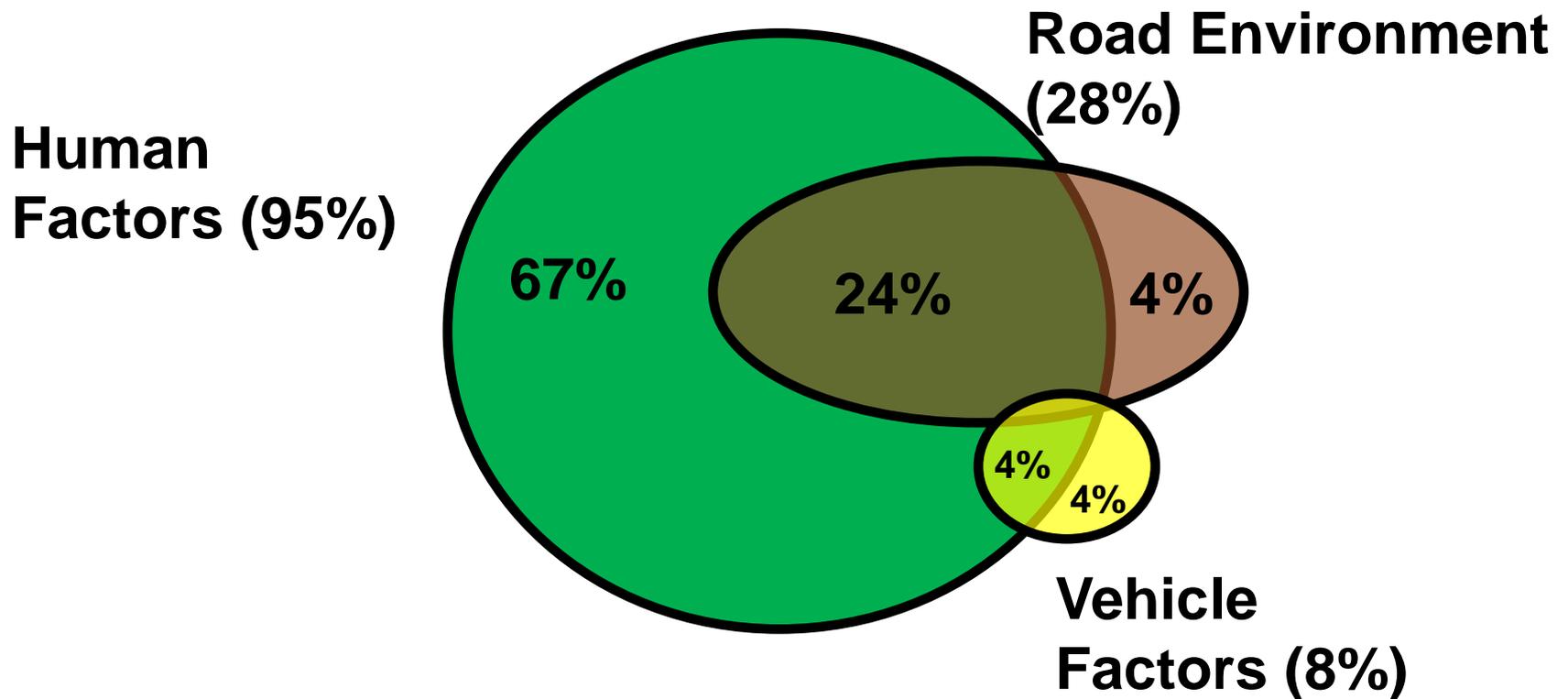
# Transportation Safety Plan Typically Focuses on Road Environment Factors



# Transportation Safety Plan Should Look at the Data and Relationships of all 3 Factors



# What the Data tells us of Traffic Crashes



**TYPICAL REPORTED CRASH CAUSES-According to FHWA**



## **Transportation Safety Plan**

A data-driven plan developed by a multi-disciplinary team to improve safety on the entire road network by prioritizing the activities implemented by a government and communicating these priorities with safety partners.



## **Road Safety Audit**

A formal and independent safety performance review of a road project by an independent, multidisciplinary, experienced team of safety professionals, addressing the safety of all road users.

# Road Safety Audit (RSA) Key Points

## Road Project

- Formal: Procedures & Documentation
- Independent: Auditors Detached from Road Agency & Design Team, No Bias
- Safety Performance: Focus on Substantive Safety
- Experienced Team: Audit work is based on experience and knowledge
- All Road Users: All relevant human travel modes are considered

# The Goal of All RSA's

“Hands down, is making your  
road safer”

-Craig Allred, FHWA

# Responsibilities



RSA Team

Project Owner

# RSA's 8 Steps



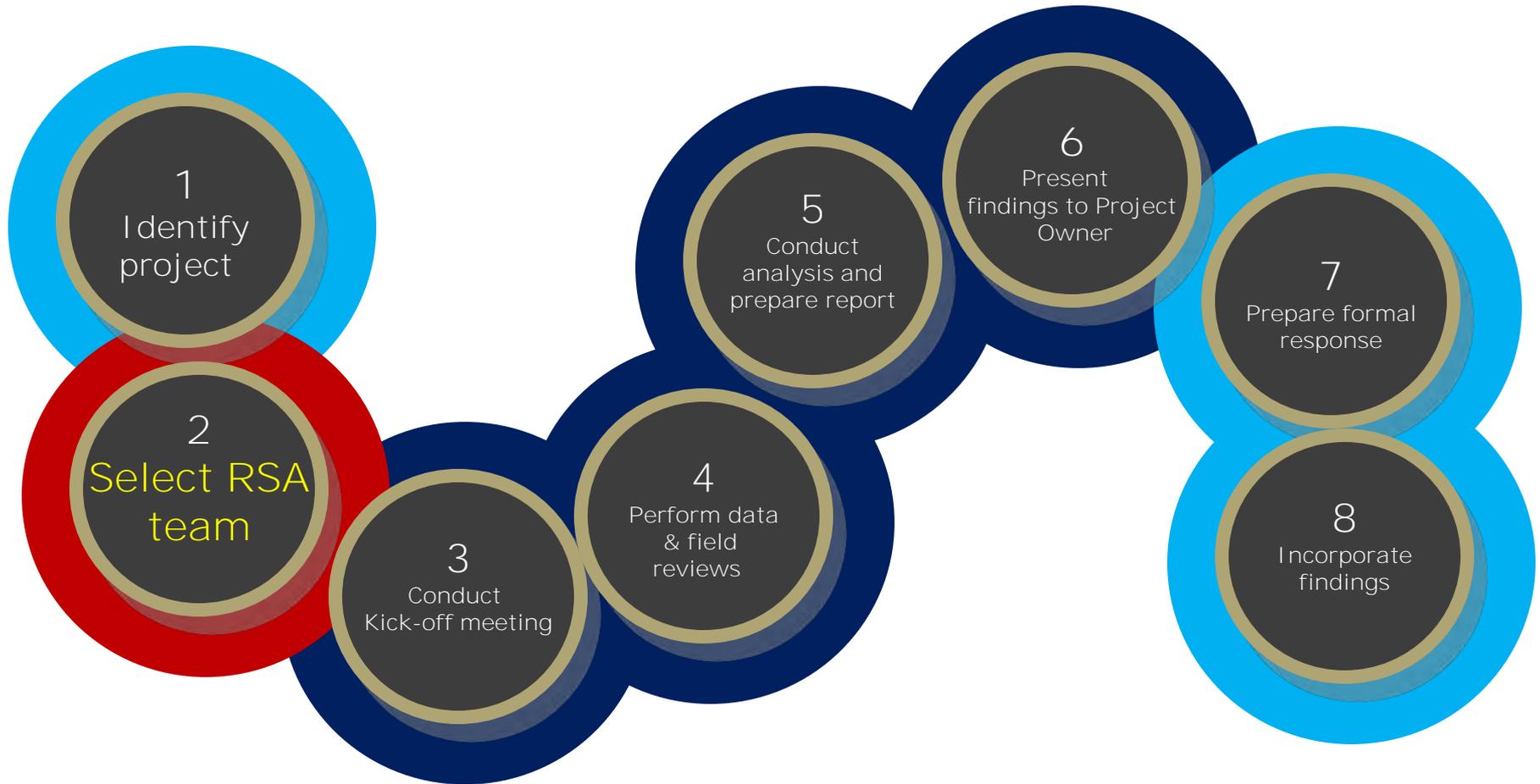
# Responsibilities



RSA Team

Project Owner

# RSA's 8 Steps



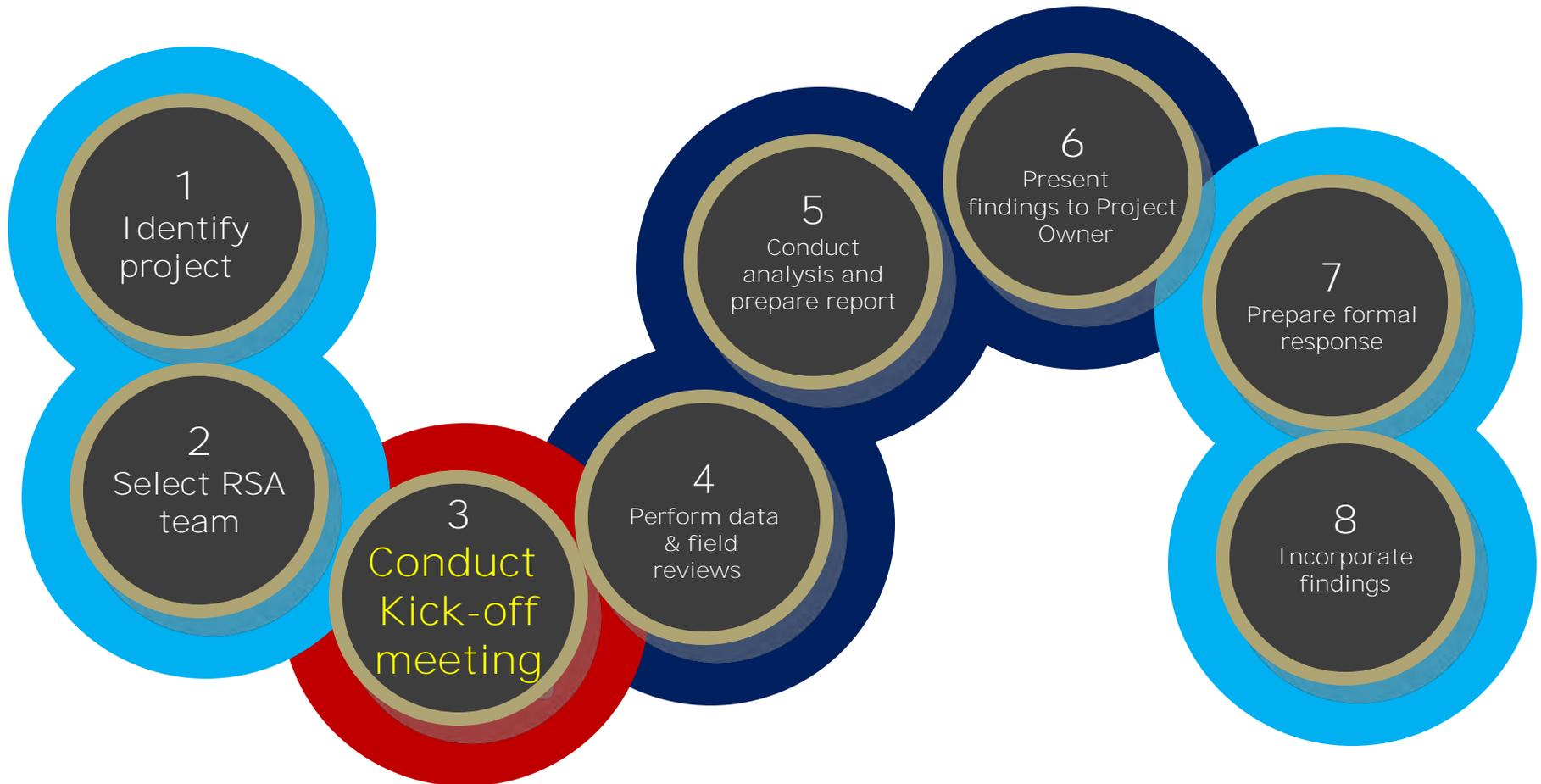
# Responsibilities



RSA Team

Project Owner

# RSA's 8 Steps



# Responsibilities

-  RSA Team
-  Project Owner

# RSA's 8 Steps



# Responsibilities

-  RSA Team
-  Project Owner

# RSA's 8 Steps



# Responsibilities



RSA Team

Project Owner

# RSA's 8 Steps



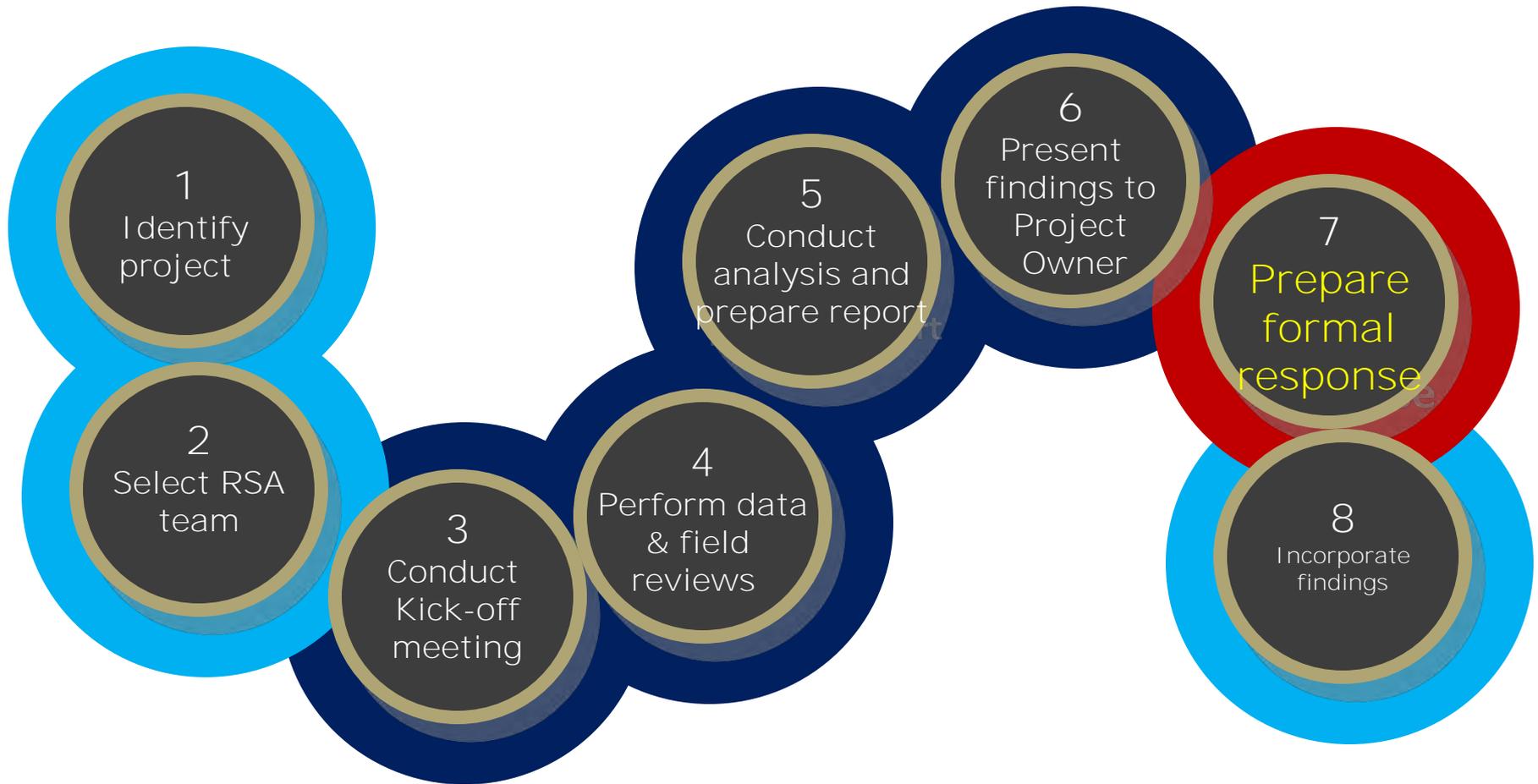
# Responsibilities



RSA Team

Project Owner

# RSA's 8 Steps



# Responsibilities

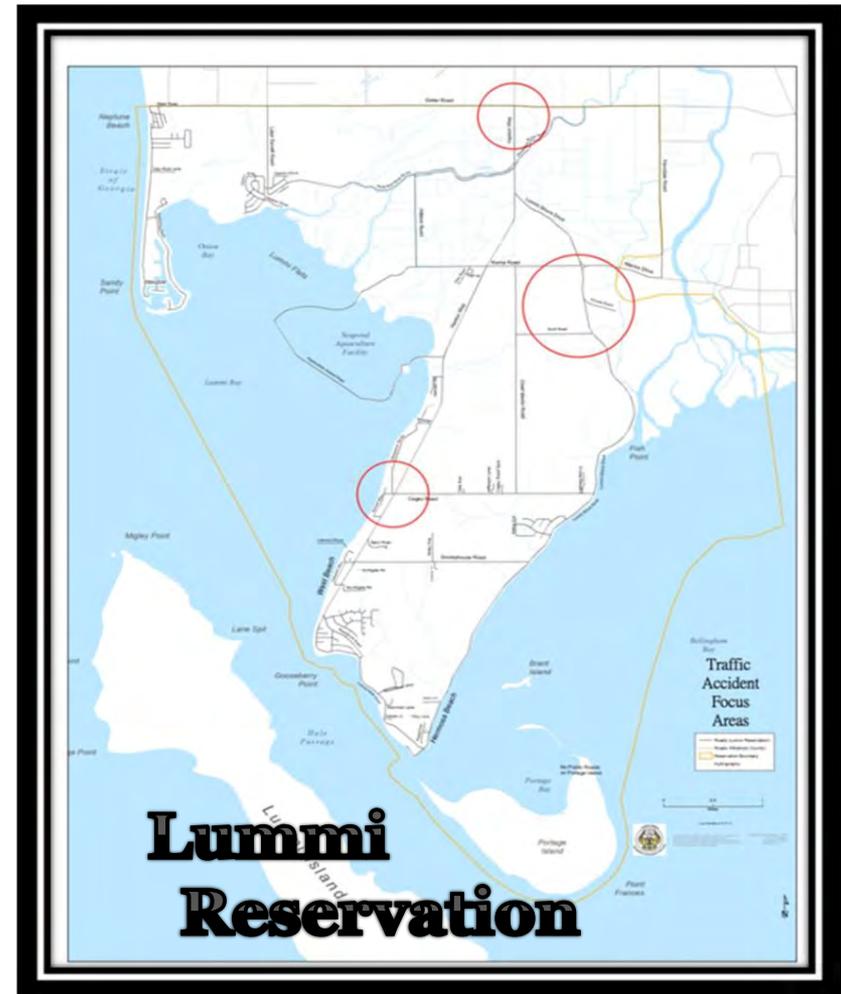
-  RSA Team
-  Project Owner

# RSA's 8 Steps



# Lummi RSA and Training

- Held March 1-3, 2016 at Lummi Nation
- Included a training for other Tribes
- Sponsored by Northwest TTAP
- Conducted by Adam Larsen and Craig Allred, FHWA
- 2 locations analyzed



# RSA Team

- FHWA Resource Center and Tribal Transportation Staff
- Planner and engineers from other Tribal Nations
- Lummi Transportation Planners
- Lummi Law Enforcement



# Step 6: Present Findings to Project Owner

- **What's working**
- Issues
- Crash experience
- Low cost/short term countermeasures
- Mid-term recommendations
- Long term recommendations

# Slater Rd. & Haxton Way - Example



# Slater Rd. & Haxton Way - Example

## What's Working

- Ped accommodations at intersection
- Lighting
- Good pavement
- Condition of pavement marking
- Adequate for most circumstances



# Slater Rd. & Haxton Way - Example

## Issues

- Mixed users, many unfamiliar drivers use this intersection (local / non-local)
- High number of older drivers
- Major traffic generators: convenience store, gas station, casino/hotel, ferry, and main reservation access
- Wayfinding to I-5
- Commercial use of Slater, large trucks for oil industry

# Slater Rd. & Haxton Way - Example

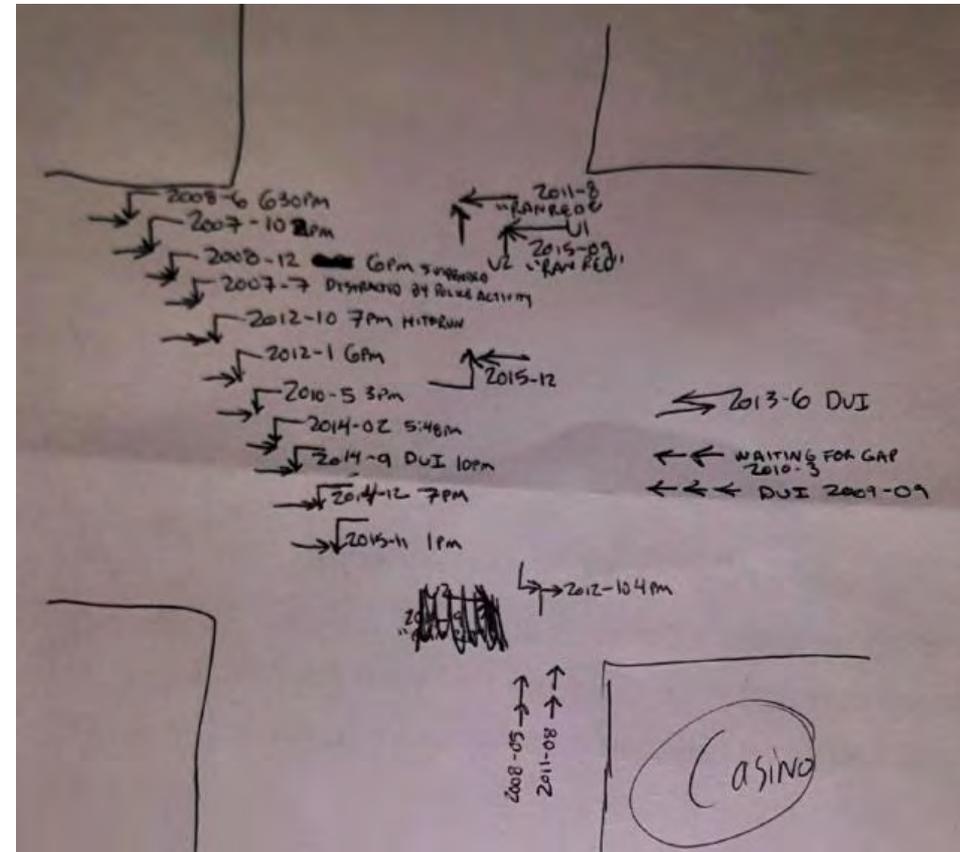
## Issues

- Permissive left turns, WB to SB
- Sun glare could impair visibility of EB or WB signal or oncoming vehicles
- Fog is frequent
- EB to SB right turning vehicle may obscure other EB vehicles
- Posted speed on Slater (50mph) compared to Haxton Way (35mph)

# Slater Rd. & Haxton Way - Example

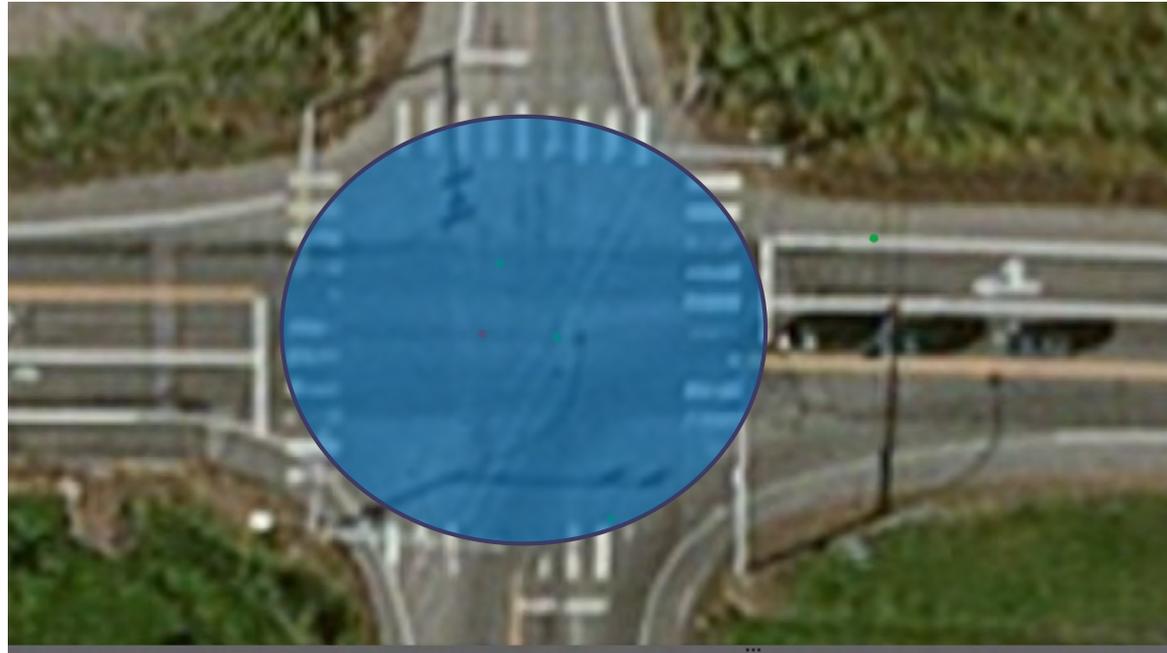
## Crash Experience

- At least 12 high severity angle crashes WB to SB
- Crashes and near-collisions with NB right turns
- Ten years crash data:
  - 13+ Serious Crashes
  - 16+ PDO Crashes
  - 3 Deaths
  - 2 Deaths Recently not in crash data yet



# Slater Rd. & Haxton Way - Example

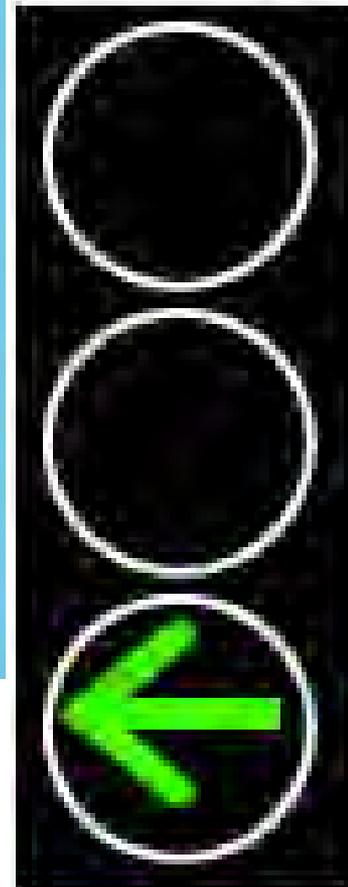
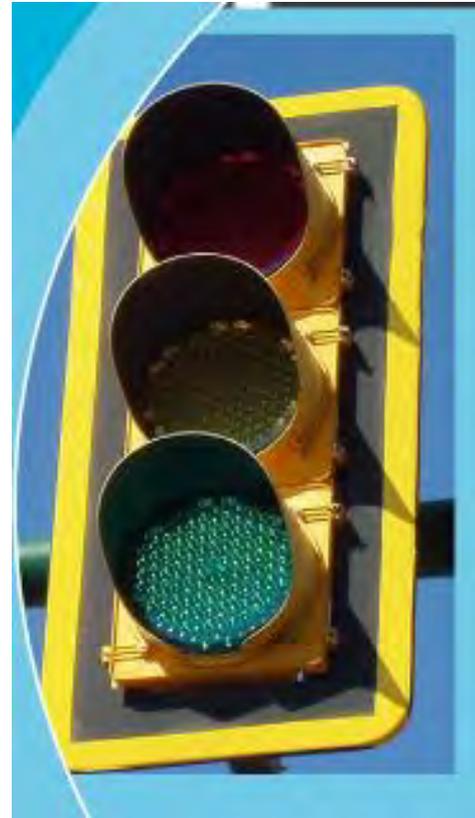
- Long Term Recommendation
- Roundabouts reduce:
  - crash severity
  - frequency
  - maintenance costs
- Potential gateway to Reservation
- Eliminates last signal in county



# Slater Rd. & Haxton Way - Example

## LOW Cost /SHORT Term Countermeasures

- Add protected left turn phase for WB to SB
- Add protected NB right turn arrow (same time as WB left turn phase)
- Add EB acceleration lane for NB right turns or prohibit NB right turns on red
- Continue 45mph zone EB until east of Haxton
- Over-sized, retroreflective back plates
- Upgrade to 12-inch signal heads
- Upgrade to LED signal heads



# Final Steps

## Step 6 – Prepare Formal Audit Report

- Audit Report written by Northwest TTAP

## Step 7 – Response to RSA

## Step 8 – Incorporate Findings

- Working with County on stripping
- We have new traffic lights on our Tribal-TIP and County TIP

2016

## Lummi Nation Road Safety Audit Report



Prepared by  
Rowena Yeahquo  
NW TTAP, Eastern Washington University

# Benefits of an RSA - Part of the Story

- Ideas that improves Road Environment Factors
  - Low cost and Short Term Countermeasures
  - Long Term Recommendations
- A True Collaborative Approach
  - Engineers
  - Designers
  - Planners
  - Law Enforcement
  - Emergency Medical Services
  - Maintenance
- Communication and Networking

# Washington Traffic Safety Commission

## Why we need to tell the story

We asked citizens all across  
Washington State these  
questions...



# Think an RSA could help your Tribe?

- Identify a champion at your Tribe
- Review the available resources (see next slides)
- Ask for assistance
  - Tribal Technical Assistance Program
  - FHWA Tribal Program and Resource Center
  - National Center for Rural Road Safety (Safety Center)
- Get Tribal leaders on board
- Start with Step 1: Identify Project

# Resources

- **RSA Toolkit for FLMA's and Tribal Governments**  
<http://safety.fhwa.dot.gov/rsa/resources/toolkitflh/>
- **Tribal RSA's 2009 Case Studies**  
<http://safety.fhwa.dot.gov/rsa/resources/casestudiesflh/>
- **Tribal RSA's 2008 Case Studies**  
[http://safety.fhwa.dot.gov/rsa/tribal\\_rsa\\_studies/](http://safety.fhwa.dot.gov/rsa/tribal_rsa_studies/)
- **Other FHWA RSA Resources**  
<http://safety.fhwa.dot.gov/rsa/resources/>
- **FHWA RSA Videos**  
[https://www.youtube.com/watch?v=ObMD\\_xaSTIQ](https://www.youtube.com/watch?v=ObMD_xaSTIQ) and  
<https://www.youtube.com/watch?v=zWeYddkLymk>

# Resources (cont.)

- Tribal Safety Website

<http://www.tribalsafety.org/>

- Find your local Tribal Transportation Assistance Program (TTAP)

<http://nltapa.org/regions/ttaps>

- Safety Center Tribal RSA Training Videos  
(*Coming Soon*)

<https://ruralsafetycenter.org/about-our-center/contact-us/>

Questions???

Matthew Jensen  
Lummi Transportation Planner  
MatthewJ@lummi-nsn.gov