Intelligent Transportation Systems (ITS) for Tribes:
Unlocking Data to Improve Traffic Safety and Operations

miovision
rethink traffic
GLOBAL LEADER IN TRAFFIC DATA COLLECTION

50% of all intersections in North America are studied with MioVision

2.5 billion vehicles counted
“Intelligent Transportation Systems” has been poorly defined for years.
Miovision has helped over 10,000 small and rural agencies use ITS.
ITS for Tribes

Using data to unlock the potential of your roadways

- Securing Funding
- Safety Planning
- Operations Efficiency
- Project Management
ITS for Tribes

Done **right**, ITS gives small agencies the tools and data to punch above their weight.

Done **wrong**, ITS can lead small agencies to drown in data and complexity.

- Easy to Use
- Actionable
- Easy to Train For
What questions does traffic data answer?

How are your roads being used? volumes, vehicle types, pedestrians, etc.

Where are the safety issues? pedestrian crossings, trails, school zones, etc.

What impact did your changes have? safety, congestion, complaints, etc.
Traffic Data Collection Types

Road Information
- Road Geometry & Community Data

Traffic Behavior Data
- Road Volumes and Speeds
- Safety Indicators
- Vehicle Classes
- Trail and path studies

Post-Event Data
- Crash Data
- Turning Movements
Road Safety Audits

- Combine previously mentioned data types
- Getting much easier…
  - Modern ITS systems have ability to collect all the traffic behavior data within days at a reasonable cost
- Proven impact to safety in numerous studies
Using Traffic Data to Improve Your Community

- Proving Needs With Data to Help Secure Funding
- Help Make Better Transportation Decisions Backed by Data
- Measure Impact of Changes to Secure Further Funding
Using Traffic Data to Improve Your Community

- Lack of data is **#1 cause of unsuccessful TTPSF applications**. Data is also **#1 criteria** in evaluating applications.

**Example: Applying for school-flashers to be installed**
- What are road volumes during school hours?
- What are vehicle speeds at the crossing?
- Are there issues with high speed snowmobiles in winter?
- Past incidents?
Using Traffic Data to Improve Your Community

- Options for “how and where” will always exceed available funds → Optimize!

Example: Applying for school-flashers to be installed
- What locations are kids crossing at?
- Where are the locations with the most “near misses” or incidents?
- Where are the blind spots in road geometry?
Using Traffic Data to Improve Your Community

- Need for data to prove impact in order to extend projects further

**Example: Applying for school-flashers to be installed**
- How did traffic speeds change?
- What percentage of kids are now crossing at a safe location?
- Change in measurable incidents and “near misses”?
Practical Tips to Access Data

- Cost of Data
- Ease of Use
- Rugged Technology
Practical Tips to Access Data

Cost of Data

- **Budget Neutral:** Cost of collecting data can be covered by TTP Safety Fund

- **TTP Safety Fund MAP-21:**
  - 2% set-aside of TTP (~$9M annually)
  - Supports Projects in 4Es (Engineering, EMS, Enforcement, Education) and Safety Planning

- **Not cost-prohibitive if done with modern automated technology**

Missouri DOT reported a **33% cost saving** in moving from manual to automated data collection.
Practical Tips to Access Data

Cost of Data

Ease of Use

Rugged Technology

- Hardware that’s simple and safe to deploy
- Easily train staff to use technology
- Get clean information vs. mounds of raw data

Farmington (New Mexico – Population 45K) reported a 65% reduction in time-in-field by moving to modern data collection technologies
Practical Tips to Access Data

- Ensure technology is built to handle **harsh environments**
- Ensure technology is able to withstand **vandalism and abuse**
- Portable, reusable, **long-lasting**, doesn’t require constant hardware / software upgrades

City of Edmonton reports moving to modern technology has produced winter road and off-trail data that was historically not available, and has generated new funding wins.
Miovision Traffic Data Solution

Easy, reliable data collection.

Used by 75% of the DOTs in the USA.

Battle tested in harsh environments from Alaska to Texas.

Affordable data collection costs less than $5000.

Videos analyzed and reports created... delivered to your inbox.

Portable traffic count hardware collects data using video.

Battery powered up to 1 week.
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