numetric™

Bringing Fast, Flexible Roadway Rankings to the State, County, and City Level

For too long, the difficulty of pulling, combining, and analyzing data for road segment rankings has restricted its benefits to annual network screenings reports for the FHWA. That's about to change.

According to the Federal Highway Administration (FHWA), "Network screening is the process of analyzing the network to identify sites for further investigation. ... Network screening pares down the list of sites across the network to a manageable list."[1]

The FHWA requires that each state provide an annual roadway ranking report, however, this is only one way to rank roadways. The ability to rank roadways by various attributes — including driver age, time of crash, and speed limit — makes roadway rankings powerful for all users. When this is done in a data-driven way, traffic safety teams are able to identify projects with the highest benefit and ROI, generating an estimated $4.3M in benefits for every $10M budgeted for safety.[2]

Unfortunately, performing data-driven roadway ranking is fraught with difficulties.

PROBLEM: RANKING ANALYSIS TAKES TOO LONG, IS NOT FOCUSED ENOUGH

Pulling, combining, and analyzing data for network screening is inherently difficult and time-intensive. To deal with this, agencies have devised a few approaches to perform network screening, but none of them is without serious drawbacks.

APPROACHES	CONS
Commission a research study from an academic group.	• Little to no knowledge transfer to internal teams • Does not address the needs of counties and municipalities • No knowledge transfer means it must be created from scratch the next year
Build a simple tool that runs one specific mathematical equation on the state network.	• Ignores the host of measurement options available • Limited usefulness, especially to counties and municipalities
Perform the analysis manually in house.	• Usually performed only once a year, due to time required • Prohibitively difficult for counties and municipalities • Increased difficulty as data volume increases

Result: data difficulty limits roadway segment ranking to fulfilling FHWA requirements. In the meantime — whether you're at the state, county, or municipal level — you miss out on the increased benefits and ROI that more frequent, targeted rankings could bring.

Network Screening Application Features

- Instantaneous search and filtering
- Coverage of roadways and intersections
- Hundreds of ranking methods
- Built-in HSM methodologies
- Roadway ranking report generator

"When we use Numetric with mayors and local officials, emotions go away, and the data comes forward."

RICK TORGERSEN

Region 4 Director
Utah Department of Transportation

SOLUTION: STREAMLINE THE DATA WORK OF NETWORK SCREENING

When you automate the busywork of pulling, joining, and analyzing data for network screening, you put roadway ranking within reach of any traffic safety professional. With time constraints removed and data pre-joined, you can rank road segments by any criteria that matters most to you whenever you want, as much as you want. This is the genius behind **Numetric's Network Screening application.**

APPLICATION FEATURES

Numetric's Network Screening application empowers anyone at the state, county, or municipal level to rank road segments, by the criteria that matter most to them, whenever they want, as much as they want. Result: you are equipped to maximize your safety ROI and save more lives.

Instantaneous Data Performance
In Numetric's Traffic Safety Analytics Platform, all your available datasets are joined, cleansed, and primed for instantaneous analysis in the Network Screening app, with the ease of a Google search.

Robust, User-Friendly Interface
The app is built to be intuitive enough for anyone to use — yet powerful enough for the most discriminating users—to perform network screening analysis or rank roadways or intersections by a myriad of methods in just minutes.

Hundreds of Criteria and Filters
Now you can rank your road segments by what matters most to you — including crash ratio, crash rate, crashes per mile, fatal crashes, total crashes, countermeasure type, geospatial, and more — in real time without waiting for data to load.
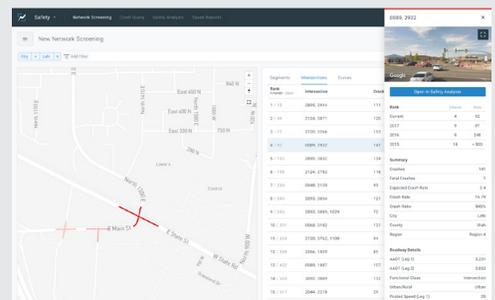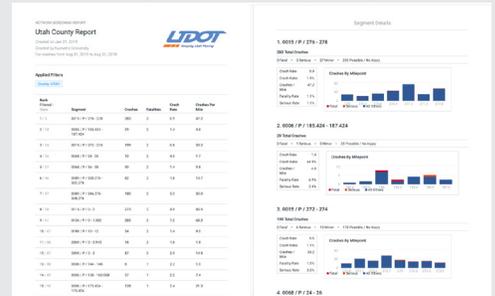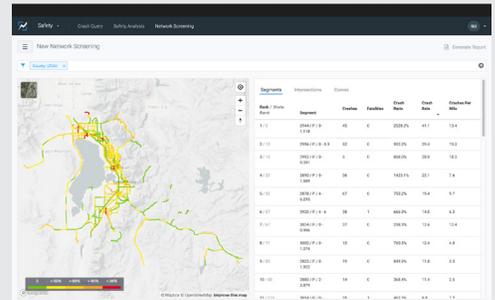
Built-in Methodologies
Highway Safety Manual methodologies and formulas are built directly into the app and automatically calculated in a split second, providing you with reliable rankings and countermeasure recommendations.

Rich Contextual Data
With photos and Google Streetview, you can explore ranked segments—and even see how each one has changed over time—with a few clicks, to understand each location like never before.

BENEFITS
- **No longer limited to annual FHWA reports**
- **Benefits of network screening opened to all safety groups**
- **Increased overall safety ROI at state and local level**

1. "Evaluation of Four Network Screening Performance Measures," FHWA, 2016.
2. "Reliability of Safety Management Methods: Network Screening", FHWA, 2016.

Data-driven network screening generates an estimated $4.3M in benefits for every $10M budgeted for safety.[2]

Make roadway ranking a reality for all traffic safety organizations

With our off-the-shelf, configurable Traffic Safety Analytics Platform and our suite of purpose-built applications, Numetric is dedicated to empowering you to achieve greater confidence and consensus around resource investment decisions and save more lives on your roadways. To see how we can empower you, **request a custom demo at numetric.com.**