

# NEXT-GENERATION TRAFFIC MANAGEMENT: CHANGING THE STATUS QUO WITH DATA



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**ALL TRAFFIC**  
SOLUTIONS



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## Introduction

This paper will show how easy and efficient it can be to use next-generation technology to improve traffic safety in your community. We'll talk about some of the common challenges we're seeing today regarding traffic management and why the status quo—the way you typically approach these challenges—must change to incorporate technology if you expect to reduce crashes and relieve road congestion for the long term. You'll learn why it's not only in your best interest to change (saving you time, freeing up resources and reducing paperwork and file management), but how it can also make your community safer and your citizens happier.

We'll explain this technology in plain terms and how easy it is to implement and maintain, but more importantly we'll show how you can leverage the traffic data you collect from your signs and other devices to create long-term solutions that save lives.

## Adding Resources is Not an Option

It's no news to anyone that populations in most towns and cities are increasing at a phenomenal rate. Law enforcement tries its best to keep up with the increasing number of calls for service, but traffic incidents are through the roof, and there's more congestion on our roads, more road construction, more headaches, more to do, more paperwork to fill out.... How do agencies address these challenges?

Most agencies throw more resources at the problem, assigning more officers to sit alongside busy roadways or in school zones. That's not always the best solution. More presence doesn't necessarily solve fundamental problems such as increasing rush hour traffic, distracted drivers, and no way to efficiently redirect traffic away from accidents and work zones. Besides, many jurisdictions are understaffed due to limited budgets or hiring freezes, as well as largely unqualified applicant pools.

It's time to find innovative ways to address these problems for good.



## Make Data Work for You

A smart solution is one that incorporates portable, web-enabled versions of traffic devices you may already be using—such as radar speed signs, variable message signs, count and classification devices, and handheld Lidar—with a central online platform that automatically gathers data from each device in real time and turns that data into actionable reports you can access from your desktop or mobile device. Your radar speed sign sends vehicle speeds and volumes, along with the dates and times that each vehicle passed the sign; your vehicle counter classifiers send back vehicle volume counts, classification information, speed measurements, and direction of travel, etc. Think of all this data flowing into a funnel and coming out the other side as tidy, pre-packaged reports and charts you can generate anytime, from anywhere—without assigning someone to spend their workdays managing all the data files and tabulating spreadsheets.

The reports direct you to where your trouble spots are located such as what times you have the most congestion, the highest percentage of speeders, and the highest average speeds. By setting date and time ranges you can spot trends and identify enforcement priorities so **you become less reactive and more proactive**. Now you can deploy your resources precisely when and where you need enforcement.

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The reports direct you to where your trouble spots are located and tell you at what times you have the most congestion, the highest percentage of speeders, and the highest average speeds.

”

### YOU CAN SHARE THESE REPORTS:

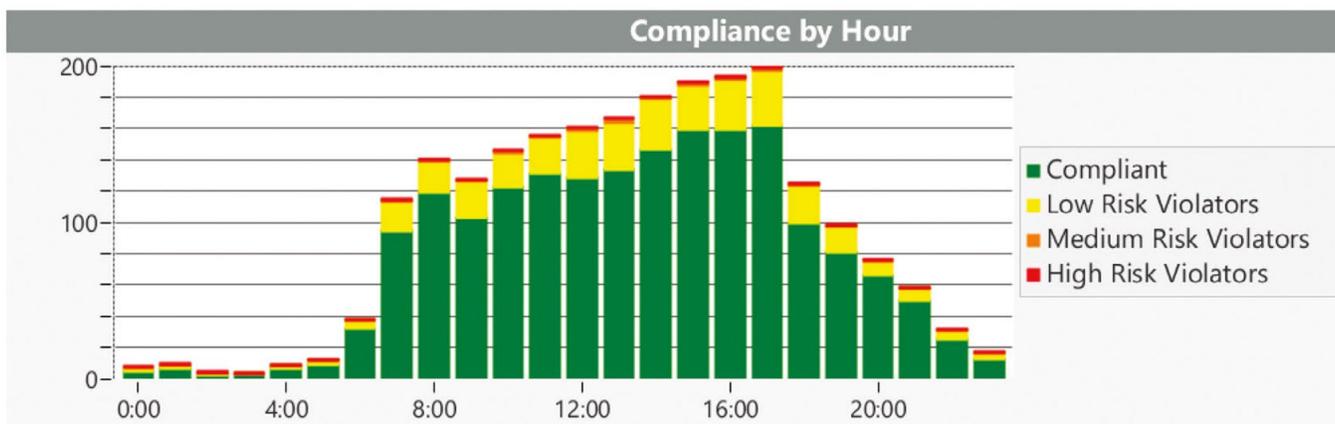
- With citizens to clear complaints and show the results of your traffic-calming efforts
- On your website, with HOAs, and with local media to demonstrate your commitment to safety in your community
- With your chief to keep him/her informed
- With other agencies like Public Works and the Department of Transportation
- With other jurisdictions to create a regional view of traffic flow and tackle traffic issues on a larger scale
- With state and federal agencies when applying for grants to purchase equipment and implement safety programs

## Using Traffic Data as Evidence

If you've ever had to respond to citizen complaints of vehicles speeding continuously down their street, you know that after going through the process of assigning an officer with handheld Lidar to sit in the patrol car for extended periods of time, what you often find is that there really isn't a speeding problem—it's a perception problem. But when you go back to the citizen with the news, they don't believe it and insist that the officer stay.

Now picture a slightly different scenario in which you deploy not an officer, but a portable web-enabled Shield radar speed sign from All Traffic Solutions on the street. You don't switch on the display. Instead, you leave it off, causing motorists to assume that the sign is not operational. They pass by at their usual speeds, and the sign covertly gathers speed data over a 7-day period and automatically sends that information to your TraffiCloud™ traffic management platform. When the week is over you log in to TraffiCloud and generate a report in seconds that shows average speeds by hour and day using the data from your sign. You click a button and email the report to the citizen to say, "Here's a report based on the data we collected showing that the average speed on your street is in line with the speed limit." You retrieve your portable radar sign and the next day it's placed at another location.

**Fast. Definitive. Done.**



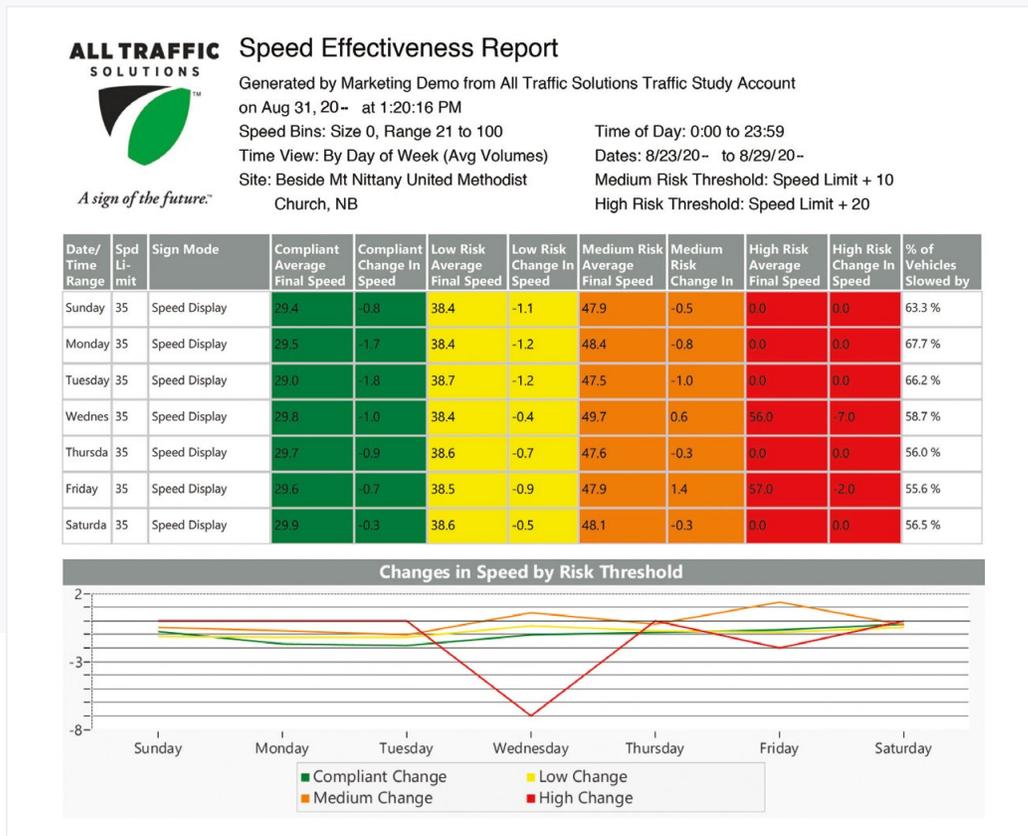
Reports, like the Compliance by Hour generated in TraffiCloud, display traffic data in a way that makes information immediately easy-to-understand and actionable.

## Strengthening Community Relations

When you let your traffic devices do the data gathering, calculating, charting, reporting and tracking, you free up your people to do what they do best—serve the community, build trust, and bring law enforcement and citizens together with the common goal of making roads safer for everyone.

Any police officer who has attended meetings at the town hall or a local HOA can attest that it can be challenging to convince both citizens and officials that your agency is responsive to their traffic concerns or that you are seeing success in your traffic safety efforts. Think how powerful it would be if you could hand out a report at your next community or HOA meeting with irrefutable data that illustrates all you are doing to calm traffic and alleviate congestion. Next time these folks see those radar speed signs, variable message signs and trailers they will make the connection and know you are working on their behalf.

Sharing the latest traffic management reports on your website and with local media also demonstrates your commitment to safety in your community.



The Speed Effectiveness Report shows changes in speed before and after a radar speed display was installed at a specific location over a 7-day period.

## Documentation for Budgeting and Funding Requests

Data and analytics are especially helpful at budgeting time when you make your case for funds to earmark for traffic safety devices and community safety programs. You can submit reports run over a period of time that show, for example, how you slowed traffic in one area by using a radar message display that tells motorists their speed and displays a speed-dependent message such as “Too Fast” or “Slow Down.” These reports show the budgeting committee that your signs are working and that by purchasing more of them you can calm traffic in more areas simultaneously. You are not stating opinion; you’re saying, “Look at the numbers. I am showing you objectively that this works. Traffic speeds have improved this percentage over this amount of time, and here is the data to back it up.”

This tactic works when applying for grant applications as well. You can gather speed data from one crash-prone area to demonstrate need for funds to implement a traffic safety program or purchase traffic calming devices. Later, you can submit reports to show that your safety program is getting good results.

“

Virtually every state grant application requires that you submit data as backup for your request. On the Federal Highway Administration’s website under [State Highway Safety Programs](#), it states that...

*“...states must agree to additional assurances ... including establishment of a data-driven enforcement program...”:*

*“A State is eligible for State Highway Safety Program grants by having and implementing an approved Highway Safety Plan (HSP). The HSP establishes goals, performance measures, targets, strategies and projects to improve highway safety in the State. It also documents the State’s efforts to coordinate the HSP, **data collection and information systems** with the State Strategic Highway Safety Plan (SHSP).*

*Under MAP- 21, States are required to develop and implement the State highway safety program using performance measures that are data-driven. States must also agree to additional assurances (or certifications) to receive Section 402 funds including State participation in national high-visibility law enforcement mobilizations, **establishment of a data-driven enforcement program** and coordination of the plan required under Section 402 with the State’s Strategic Highway Safety Plan (SHSP), which is a requirement of a State’s Highway Safety Improvement Program (HSIP) (23 USC 148). Coordinating these planning processes promotes a unified State approach to highway safety.”*

”

## Simpler Traffic Flow Analysis

Using a count and classify device to collect traffic volume data allows you to form a clear picture of traffic flow throughout your municipality for real-time intelligence and traffic flow analysis.

A versatile off-road counter classifier such as [StatTrak](#) from All Traffic Solutions, counts and classifies vehicles and gathers speed volume data on up to four lanes of bi-directional traffic. [SpeedLane Pro](#) counts traffic in up to sixteen lanes. Because both StatTrak and SpeedLane Pro are web-enabled, they automatically upload data to TraffiCloud for fast access from anywhere with an Internet connection. With this real-time information in hand, you can:

- Run speed evaluations on neighborhood streets and bi-directional interstate roads
- Monitor roadway usage on your busiest streets using both radar and video
- Identify where trucks are causing traffic issues on local streets
- Detect real-time traffic conditions for traffic management, such as using conditional messaging to divert traffic away from congested areas
- Share traffic conditions via your traveler information system, traffic app or social media

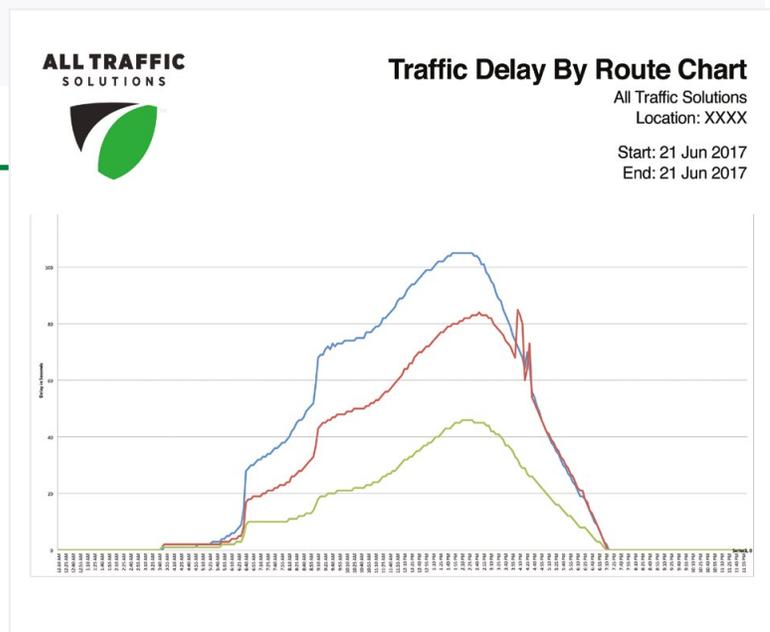
You can produce reports in literally seconds that compare delay times or peak traffic flows for different routes to the same destination (the Interstate, for example) over a specific period of time, such as a 1-hour, 24-hour or 7-day period.

Once you collect traffic data over a period of time, it becomes easy to spot anomalies and track trends in traffic flow. You can run reports to produce scenarios of what traffic flow will look like down the road if nothing is done to improve flow versus what will happen if, for example, a program is implemented to reroute traffic at specific times of the day. You may see that when the volume on one road reaches a certain point, you need to divert traffic elsewhere to avoid having a parking lot 30 minutes later.

### TRAFFIC DELAY BY ROUTE CHART

Charts delay times, measured in seconds, for one or more routes at 5-minute intervals over a 24-hour period for identifying peak traffic flow times by route.

TraffiCloud reports such as this one can assist Law Enforcement in identifying when and where congestion is at its worst, for additional enforcement and possible traffic diversion.





## Importance of Real-time Insights and Alerts

Having all this data at your fingertips leads to greater traffic transparency in your jurisdiction. You're no longer dealing with subjective observations about traffic; you have data intelligence that tells you where you have issues, where you need solutions and where you've had success.

But you can't respond quickly to issues unless you have this information in real time. That's why having access to real-time data reports is essential and why a central cloud-based traffic management platform like TraffiCloud is crucial. TraffiCloud collects data from all your traffic devices automatically so you can see snapshots of what is occurring, as it occurs.

You can set up alerts to receive an email or text when certain traffic conditions arise, such as when traffic volume exceeds a specific threshold at a particular intersection, when a driver passes a radar sign traveling at a speed that's greater than 15 miles over the speed limit, or when a wrong-way driver passes your bi-directional counter classifier on an exit ramp.

## Scheduled Report Subscriptions

Perhaps you want to receive volume and speed reports every hour. Your chief may want to see daily summaries when he or she arrives each morning. You can even share reports with other agencies and municipalities. With TraffiCloud you can set up subscriptions that send emailed reports to whoever needs to see them, when they need to see them, to eliminate having to log in to the system and download reports at specific intervals and distribute. You're sharing important, time-sensitive information proactively and it's costing you zero time to do so.

### VOLUME BY TIME BY DIRECTION

The report at right was generated using SpeedLane Pro count and classification data. It displays traffic volume by day of the week and direction of travel, as well as overall average traffic volume, for a specific date and time period at hourly intervals.

ALL TRAFFIC SOLUTIONS		Volume by Time by Direction							All Traffic Solutions	
		Grand Central pkwy - La Guardia								
		Direction Excluded: None							Start: 19 Jul 2017 00:00:00	
		Lanes Included: 1, 2, 3, 4, 5, 6, 7, 8							End: 26 Jul 2017 00:00:00	
Time	Direction	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Average	
0:00	L	277	165	148	129	140	194	288	192	
	R	123	70	66	70	62	64	107	80	
0:30	L	242	116	97	78	116	124	227	143	
	R	95	44	55	51	54	57	64	60	
1:00	L	184	88	71	62	85	94	203	112	
	R	73	38	38	41	55	54	71	53	
1:30	L	134	71	54	38	58	69	134	80	
	R	41	35	36	39	37	46	56	41	
2:00	L	128	34	40	28	46	56	129	66	
	R	56	40	38	32	33	34	40	39	
2:30	L	116	54	43	34	40	58	126	67	
	R	47	45	42	53	41	31	44	43	
3:00	L	109	47	35	27	51	48	84	57	
	R	32	36	36	30	35	37	37	35	
3:30	L	81	42	20	33	26	38	79	46	
	R	41	47	56	55	45	59	82	52	
4:00	L	76	41	42	45	37	53	65	51	
	R	45	52	38	53	53	48	50	48	
4:30	L	76	65	39	65	59	70	83	65	
	R	46	68	71	75	55	76	68	66	
5:00	L	64	72	60	93	81	110	92	82	
	R	67	89	62	89	87	84	70	78	
5:30	L	70	159	132	160	200	195	99	145	
	R	77	152	130	187	168	176	89	140	
6:00	L	129	249	207	281	289	256	149	223	
	R	84	212	180	248	246	213	121	186	
6:30	L	107	345	242	382	371	338	170	279	
	R	96	268	238	326	301	293	119	234	
7:00	L	136	406	296	399	431	412	195	325	
	R	94	320	258	368	362	360	119	289	



## How TraffiCloud Works

To implement and use TraffiCloud all you need is an Internet-ready device with a browser—in other words, a computer, a smartphone or a tablet—and a TraffiCloud login and password. Because the software is on a government Cloud that is CJIS-compliant, if your IT department later decides to upgrade the computers you're using or change the operating system, network infrastructure or firewall, it will not affect your ability to securely access and fully utilize your TraffiCloud subscription. And since TraffiCloud is an open, flexible and extensible platform it scales as your agency scales and integrates with your other systems and equipment.

## Technology and the Fear Factor

Law enforcement has traditionally been somewhat technology-averse. The perception is that technology is scary, but the truth is most of us already use technology in our daily lives. We'd be lost without our smartphones; we use streaming TV and email; we do our shopping and banking online. Why not use technology in police work, as well, to make traffic management easier, more productive and more effective?



## Conclusion

Connected technology is a game-changer and the good news is that the future of law enforcement is changing for the better—but we must take advantage of it by leveraging technology and data to make our roads safer.

## Download TraffiCloud Reports:

- [Speed, Volume and Enforcement reports](#)
- [Count, Classification and Speed reports](#)
- [DriveTimes Traffic Flow reports](#)



Ask us for a personal demo of TraffiCloud™, our traffic management solution that lets you control your traffic devices and data from any Internet-ready device 24/7, providing a new level of awareness while reducing the amount of time needed to manage your equipment and information.

Call 866 366 6602 or email us at [sales@alltrafficsolutions.com](mailto:sales@alltrafficsolutions.com) or visit [online](#).



**ALL TRAFFIC**  
SOLUTIONS



All Traffic Solutions delivers cloud-based traffic management solutions, including radar speed and variable message displays, imaging products and intelligent transportation systems for law enforcement, transportation and communities.

Our innovative TraffiCloud™ traffic management platform is changing the way communities solve their most complex traffic, transportation and parking challenges by allowing them to manage all their traffic equipment remotely, as well as leverage data to increase traffic safety, streamline their operations and achieve lasting results.

