



9-1-1 Quality Assurance Best Practices: How Do Your Calls Score?

Effective Implementation of the Public
Safety QA/QI Standard

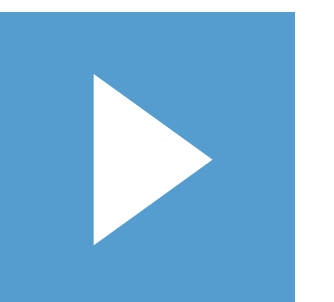


Table of Contents



3	QA/QI Standard for PSAPs	9,10	Setting Up QA Forms	16	QA Program Requirements	22	Introducing NICE Evaluator	28	Results for the City of Ft. Worth
4	New APCO/NENA QA/QI Standard for PSAPs	11	QA Evaluators (QAEs)	17	New QA Program	23	A Closer Look at Screen Recording	29	About NICE Inform
5	Collaborative Effort	12	Calibrate for Consistency	18	Program Supports Management & Staff	24	Screen Recording IT Challenges	30	Learn more
6	Overview	13	Implementation Overview	19	Value of the New QA Program	25	Screen Recording and Storage		
7	Position and Discipline Monitoring	14	About the Ft. Worth PSAP	20	The Move From Manual to Automated	26	Managing Evaluations		
8	QA Review Process Guidelines	15	Ft. Worth QA Program in 2015	21	NICE Inform QA at Work	27	Reporting		





Eric Parry, ENP

- Program Manager of State of Utah 9-1-1 Program
- Chair of the working group for the APCO/NENA QA/QI standard for PSAPs
- Denise Amber Lee Foundation board member
- Email address: EParry@uca911.org



Sherrill Ornberg, ENP, RPL

- Former Executive Director of a multi-jurisdictional PSAP in IL
- Past president of Illinois APCO and chairman of Illinois Telecommunicator Training Standards and Certification Initiative Committee
- Member of national Quality Assurance Committee
- Denise Amber Lee Foundation's board member and QA Director



Denise Amber Lee
F O U N D A T I O N

Mark Lee, marklee@deniseamberlee.org or 941.830.2035

New APCO/NENA QA/QI Standard for PSAPs



The new standard was published in April 2015 with the goal of helping PSAPs of all sizes to implement robust QA/QI programs, ensuring that call taking and radio dispatch are delivered at the highest possible level. The standard will make PSAP staff training more effective by continuously monitoring and reinforcing it.

APCO/NENA ANS 1.107.1.2015 Standard for the Establishment of a Quality Assurance and Quality Improvement Program for Public Safety Answering Points



Collaborative Effort

- APCO
- Denise Amber Lee Foundation
- IAED
- NENA
- PowerPhone
- PSAP Leaders



The standard was a shared effort involving a number of key stakeholders to achieve the best result.



The APCO/NENA QA/QI standard defines the recommended minimum components and best practices of a QA/QI program within a PSAP. It recommends minimum requirements for the evaluation and QA of call processing to ensure a consistent, effective, and efficient level of service.

- Starting point for any size agency
- No cost
- Voluntary (not mandatory)
- Easy to implement
- Complete system for all call types
- Vendor/product agnostic

Consistently administered and randomly selected review of recordings

- Call taking for police incidents
- Dispatching police incidents
- Call taking for fire incidents
- Dispatching fire incidents
- Call taking for EMS incidents
- Dispatching EMS incidents



Review in the normal course of business:

- **At least 2% of all calls for service**

When the 2% factor would not apply or be overly burdensome due to low or excessively high call volumes, agencies must decide on realistic levels of case review.

- **All cases involving catastrophic loss and/or high-acuity events** – as soon as possible after the receipt of the call and/or following the radio dispatch or at least within 5 days.
- **Any other call or event types as defined by your agency**

Source: APCO/NENA ANS 1.107.1.201 Standard for the Establishment of a Quality Assurance and Quality Improvement Program for Public Safety Answering Points.

Setting Up QA Forms

Question Answer Choices

- Yes/No
- Refused (when the caller refuses to provide information)
- Not Applicable

Calltaker's name -	CAD/RD Number - 201X-XXXXXX				
Evaluator's Name - QAE XXXX	Date and Time of Call - 5/2/1X 14:16:22				
Nature of Call - Difficulty Breathing	Address of Call - 123 South St, Any town				
Call Taking for EMS Incidents					
Interview Questions	Points	Yes	Refused	No	NA
Verified address of occurrence?	200	200			
Verified caller's telephone number?	30	30			
Determined why an ambulance is needed?	25	25			
Determined if the caller is with the patient?	25	25			
Determined the approximate age of the patient?	20	20			
Determined if the patient is conscious/awake?	25	25			
Determine if the patient is breathing?	25	25			
Followed Agency's prescribed protocols/policies regarding further questioning for additional information?	30	30			
Gave appropriate instructions to the caller/patient regarding bleeding control, airway maintenance, CPR, or childbirth according to Agency's prescribed protocols/policies?	30	30			
Gave appropriate instructions to the caller to assist the responders?	30	30			
Questioned about the number of injured persons?	15	15			
Caller's name obtained?	10	10			
Caller's address obtained?	5	5			
	470	470	0		
					100.00%
CAD Skills					
Points	Yes	No	NA		
Checked prior incidents at address?			NA		
Complete info added to CAD?	50	50			
Accurate info added to CAD?	50	50			
	100	100		100.00%	

**Informative material and not a part of this American National Standard (ANS)*

APCO-ANS 1.107.1-2015

Tools: Sample QA Evaluations Templates

- for EMS, Fire and Police call taking and dispatching

Calltaker's name -	CAD/RD Number - 201X-XXXXXX			
Evaluator's Name - QAE XXXX	Date and Time of Call - 5/2/1X 14:16:22			
Nature of Incident - Chest Pains	Address of Call - 842 Third St, Any town			
Dispatching for EMS incidents				
Assignment of Call	Points	Yes	No	NA
Processes incident promptly (under 1 minute)?	25	25		
Nature given with initial dispatch?	15	15		
Followed Agency's dispatch protocol?	40	40		
Immediately notify out of quarters apparatus/units?				NA
Dispatched info accurately?	40	40		
Dispatched info concisely?	20	20		
Notified EMS personnel of prior incidents?				NA
	140	140		
				100.00%
Summarization	Points	Yes	No	NA
Notified responders of scene safety issues?				NA
All pertinent info from CAD disseminated?	30	30		
	30	30		
				100.00%
Information Flow	Points	Yes	No	NA
Answered radio traffic in a timely fashion?	20		0	
Correctly identified apparatus requesting info?	20	20		
Correctly identified info requested?	20		0	
Correctly identified info given?	20		0	
Complete info added to CAD?	25	25		
Accurate info added to CAD?	25	25		
Dissemination of critical/confidential information appropriately?				NA
	130	70		
				53.85%

**Informative material and not a part of this American National Standard (ANS)*

It is highly recommended to thoroughly explain the QA process to PSAP staff to get their buy-in prior to implementing the program. It will be better accepted when you start out selecting calls or dispatches that have positive results so that telecommunicators do not become fearful of the QA process.

Forms should mirror PSAP standard operating procedures.

Remember to use the review process to recognize excellence as well as learning opportunities.



Evaluation Result Categories

- Exceeds requirements
- Meets requirements
- Needs improvement
- Prompt employee review and obtain TC signature



Feedback: Dissemination of Results

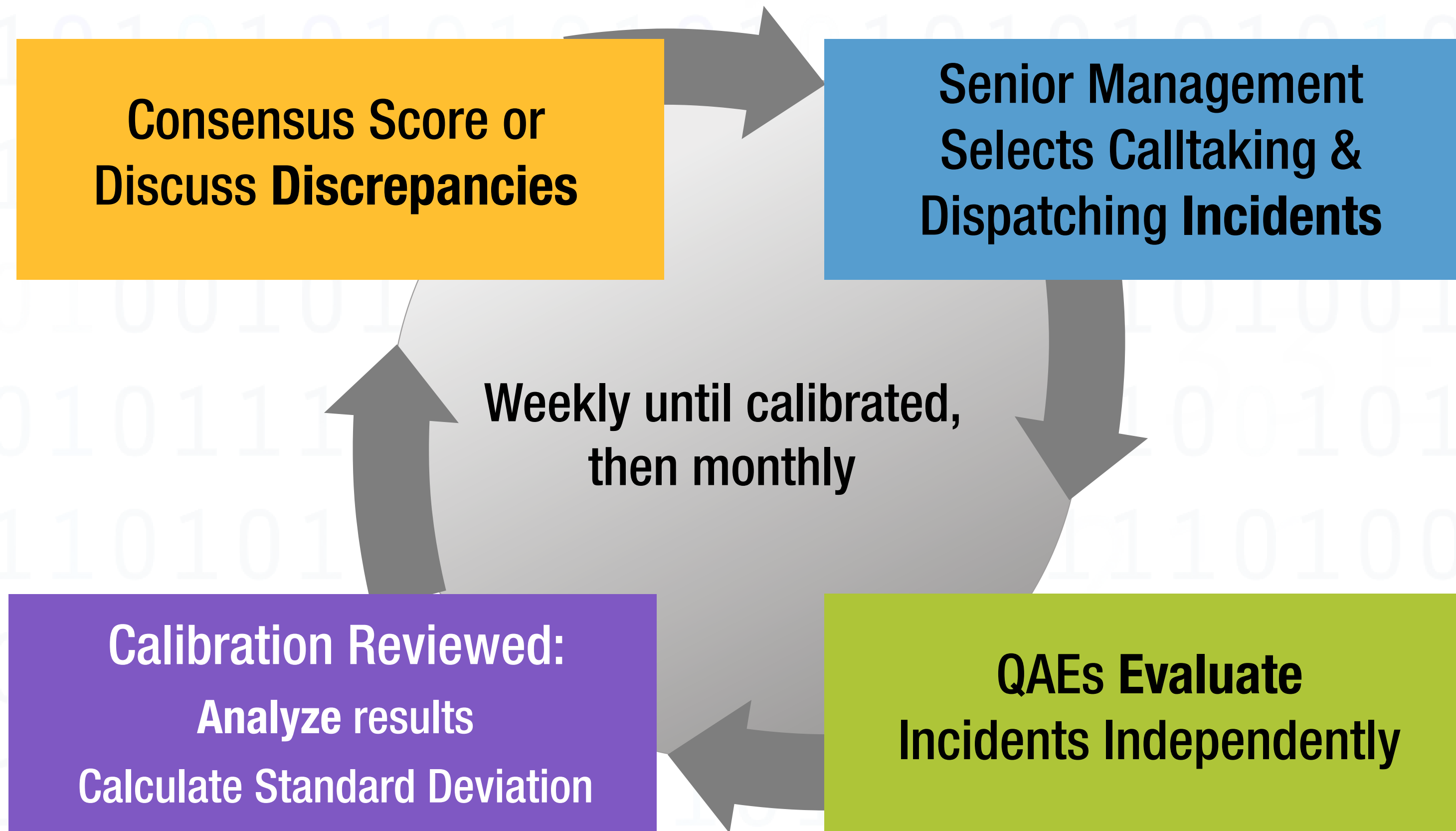
- Share completed QA evaluation as soon as possible.
- Have the staff member review incident and grade themselves.
- Place evaluation in the personnel file to be incorporated as part of their annual and quarterly periodic performance evaluation.

You'll need to determine the desired point value for each question. The more important the question, the larger the point value should be. Each category is scored separately based on the percentage of total points for that skillset.

A target for the total score for each evaluation should be at least 90%, though you may start lower such as at 75% and work up to this target over time, such as in steps of 2% or 5%. For telecommunicators with inadequate performance (i.e., poor customer service), you may want to use more frequent evaluation to determine patterns of improvement or further assistance needed.

- **Selecting Evaluators**
 - **Supervisors and Managers who are:**
 - Well-versed in your agency's policies and procedures
 - Dedicated to the betterment of your agency
 - Honest, fair and ethical
 - Willing to to set a positive example
 - **QAE Responsibilities**
 - Rate thoroughly, consistently and objectively
 - Provide fast feedback
 - Disseminate QA reports





QA evaluators need to be periodically assessed to ensure that they are being fair and that the calls are being scored consistently based on agreed-upon interpretation of applicable protocols across all QAEs. It is therefore very important for senior management to periodically review QAE evaluations and to calibrate weekly at the beginning of the program and then move to bi-monthly or monthly if within the target SD point goal.

Senior management can select at least one call taking and one dispatching incident for review. Grade the incidents and then ask the evaluator(s) to do the same. If the scores do not match, discuss the discrepancies. Remind the evaluator(s) that there is no room for opinions or friendship discounts. The questions should be objectively answered with either “yes” or “no”, not “sort of” or “maybe”.

Not calibrating will undermine a QA program and most likely cause it to fail because consistency and fairness will be compromised.

Implementation Overview

INTRODUCTION

- Scope
- Purpose
- Definitions

AGENCY RESPONSIBILITIES

- Program Implementation
 - Written Performance Standards
 - Qualified QAEs
 - Training
 - Scoring
 - Guidance
 - Feedback
 - Calibration

DUTIES AND RESPONSIBILITIES OF THE QUALITY ASSURANCE EVALUATOR (QAE)

- Be Objective, Fair, Accurate
 - Collect Available Records
 - Evaluate Against Policies & Procedures
 - Provide Feedback
 - Create and Share Reports

REQUIRED COMPONENTS OF A QA/QI PROGRAM

- Written Directives
- Case Review Criteria
- Mentoring
- Monitoring

REVIEW PROCESS REQUIREMENTS

- Call Selection Criteria
 - Minimum of 2% Random
 - Define Exceptions
 - Timeliness
 - Review
 - Documentation
 - Reporting

REVIEW PROCESS REQUIREMENTS (CONT'D)

- Acknowledging Great Work
- Recommendations For Improvement (QI)
- Feed Back Criteria
- Action Plans (as required)

About the Fort Worth PSAP



**ANNUAL CALLS
DISPATCHED: 1.2M**

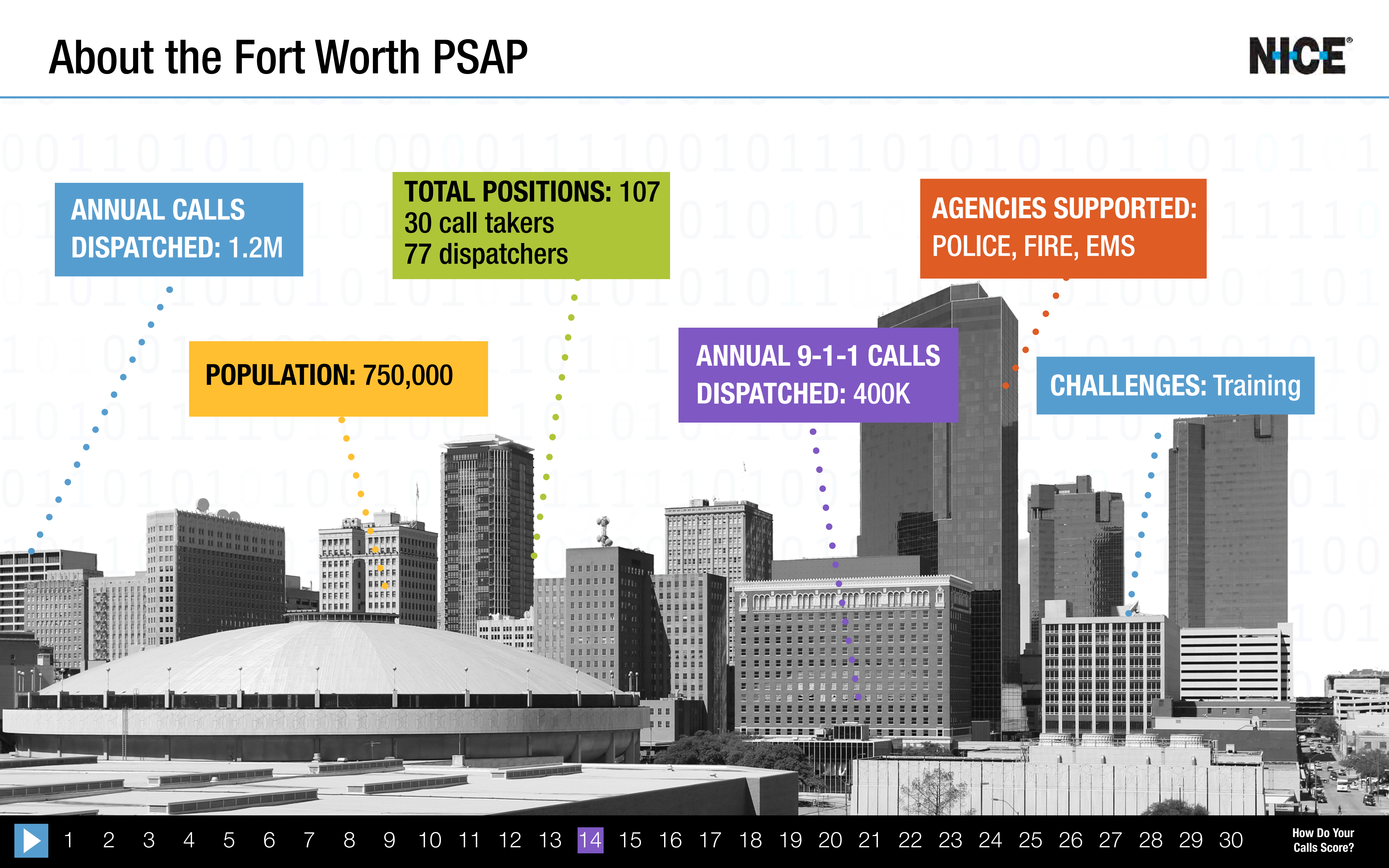
TOTAL POSITIONS: 107
30 call takers
77 dispatchers

**AGENCIES SUPPORTED:
POLICE, FIRE, EMS**

POPULATION: 750,000

**ANNUAL 9-1-1 CALLS
DISPATCHED: 400K**

CHALLENGES: Training



Ft. Worth QA Program in 2015

In early 2015, the supervisors at the Ft. Worth PSAP were still filling out paper evaluation forms.

They didn't have a tracking system to identify issues and so had no training efficiencies. They couldn't identify if just one person had an issue or if everyone had an issue so they ended up training everyone and spending a lot of extra time and money doing it.

QA Program Requirements



Seamless/Non-intrusive

Comprehensive

Ongoing

Consistent

Random/Objective

Documented

Automated

Support for CALEA and APCO/NENA QA/QI standard

When the Ft. Worth PSAP went looking for QA program solution, these were their requirements.

They wanted something that was seamless/non-intrusive so that the QA process would not impact operators' behavior in real-time.

Their ideal a solution should be comprehensive, ongoing and consistent, including both call takers and dispatchers as well as all incident related material, be part of a continuous standard operations process and use the same measurement methods for all, all the time.

An important criterion was that the solution be random/objective and enable a fair process that did not pick out bad or good calls or a specific operator.

Other solution requirements were that the solution should be documented, automated and support the CALEA and APCO/NENA QA/QI standard.



New QA Program



The screenshot displays the NICE Inform R7.1 Evaluator interface. The main window is titled "NICE Inform™" and "Evaluator". The interface is divided into several sections:

- Properties:** Call ID: 127324, Call Type: SCR, Channel: 10003, Logger: 677000000, Media Type: screen, Paired Item Type: screen, Relative Path: 14-03-30\12-17\d5f8d469-c858-41d0-9f58-fb371fa0510...
- 8 results:** View by: Resource. A timeline view shows resources: David Smith, David Smith - Screen, R11308701V002_L:1..., TG5 - West, and TG7 - NEast.
- Results Table:**

Resource	Start Time	Duration
David Smith - ...	30/03/2014 1...	00:01:09
David Smith	30/03/2014 1...	00:01:08
R11308701V0...	30/03/2014 1...	00:00:59
TG5 - West	30/03/2014 1...	00:00:06
TG7 - NEast	30/03/2014 1...	00:00:13
TG5 - West	30/03/2014 1...	00:00:07
TG5 - West	30/03/2014 1...	00:00:06
TG7 - NEast	30/03/2014 1...	00:00:14
- In Progress - Score: 25%**
 - 1 Location**
 - 1.1 Verified Address: No Yes N/A
 - 1.2 Entered Address Correctly: No Yes N/A
 - 1.3 Entered Location Field Correctly: No Yes N/A
 - 2 Caller Information**
 - 2.1 Verified Phone Number: False True N/A
 - 2.2 Entered Phone Number Correctly: False True N/A
 - 2.3 Entered Caller Name: No Yes N/A

After looking at the leading products in the market, the Ft. Worth PSAP chose NICE Inform Evaluator as the basis for their automated QA program.

It met all of their criteria including support for the APCO/NENA QA/QI standard as well as the CALEA Public Safety Communications Accreditation Program which they are working toward. They found Inform QA easy to implement and were able to start benefiting from it right away.

Program Supports Management & Staff



NICE Inform Evaluator supports both management and staff. The Ft. Worth PSAP supervisors use it to evaluate their teams while their training manager uses it to identify knowledge gaps and training opportunities. It lets their call takers and dispatchers receive and sign off on performance feedback via evaluations, and it provides the Ft. Worth PSAP managers with periodic reports to help them gauge the overall performance of the PSAP and identify actionable issues.

Value of the New QA Program

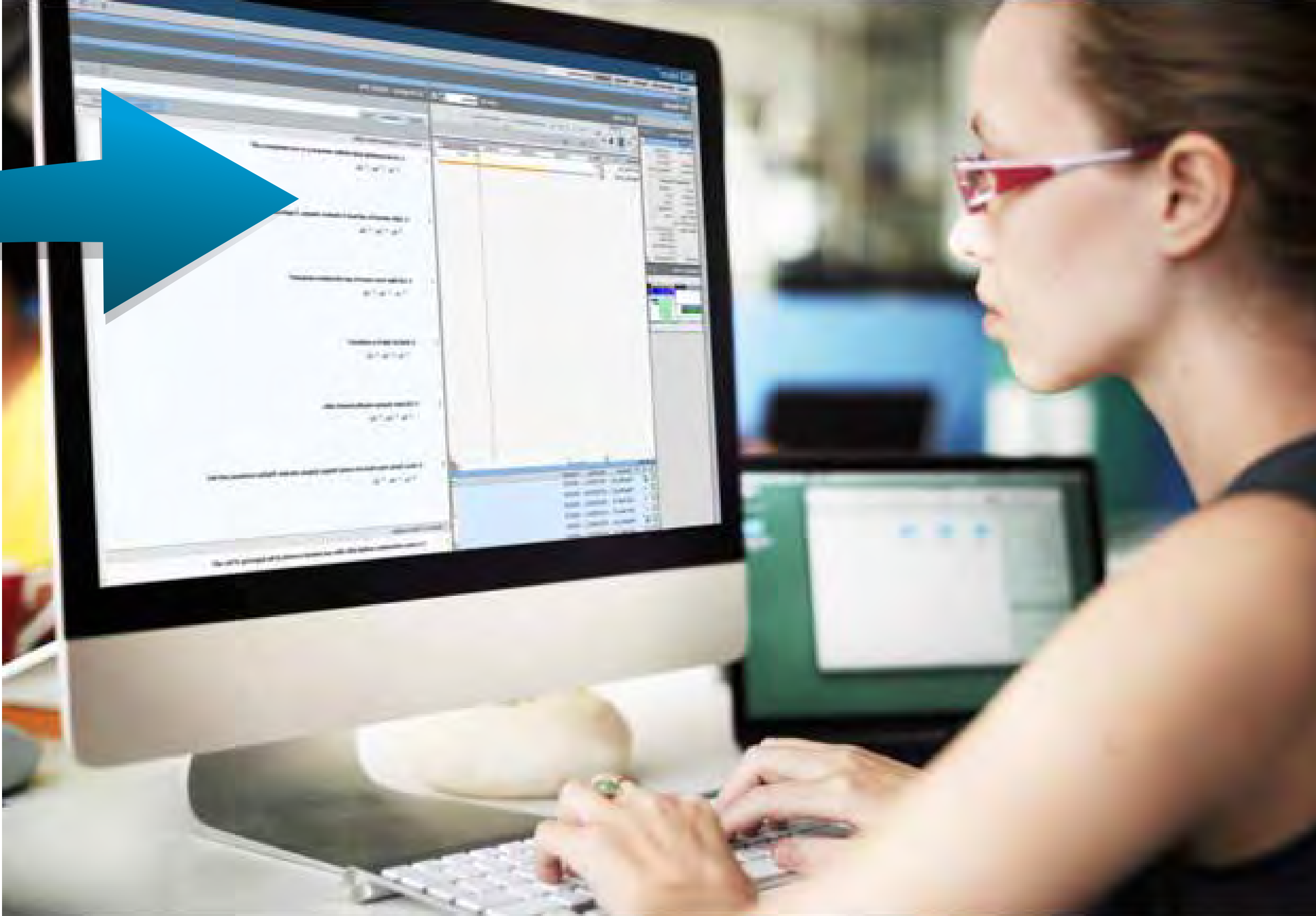


NICE Inform Evaluator has made the Ft. Worth PSAP much more efficient and effective. It's helped them identify situations where their protocol was not being followed and that needed further training and then shown them whether that training was effective or not. The bottom line is that they now receive more value from the time and budget they put into training and they've seen a marked increase in the professionalism of their staff.

The Move From Manual to Automated



The Ft. Worth PSAP's paper-based process was very time-consuming and sometimes raised employees' concerns about objectivity. These were two of the key concerns that motivated them to implement an automated QA system.



This system, based on NICE Inform QA, helps them evaluate calls handled by both call takers and dispatchers fairly using a random call selection process. It saves time by automating the scoring, results and trends display and providing editable templates for evaluations.




NICE Inform QA is the basis of the Ft. Worth automated, continuous and consistent QA Program.

It consists of two primary components: Evaluator and Reporter. NICE Evaluator is used for performance management while NICE Reporter displays performance results.



EVALUATOR

- Manage evaluations
- Provide online evaluation forms
- Automatically score evaluations



REPORTER

- Display evaluation results
- Show evaluation trends

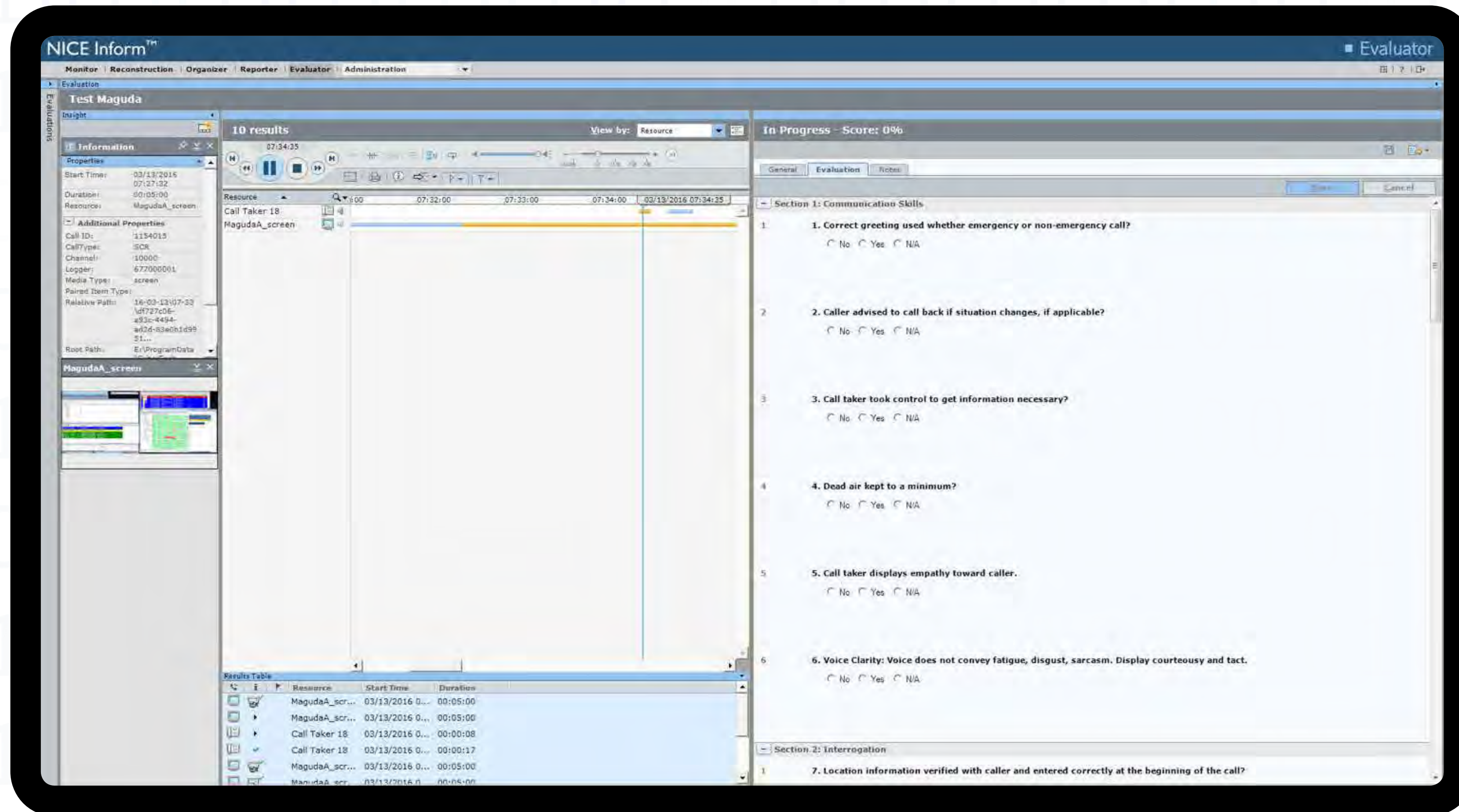
The Ft. Worth PSAP deployed NICE Evaluator to manage evaluation online including:

1. Recommending calls for evaluation
2. Random scheduling of incidents
3. Ensuring specified criteria such as frequency and number of evaluations are met

Introducing NICE Evaluator



Inform Evaluator helps the Ft. Worth PSAP evaluate and improve their incident response performance by identifying performance issues, knowledge gaps and compliance violations. It lets them evaluate a single call or multiple recordings related to one incident.



One of the features they like best is screen recording which allows them to capture what the call taker or dispatcher does on their screens in addition to their voice recordings.

You can see the screen video playback on the bottom left of this screen.

In the top middle is an incident reconstruction with multiple recordings.

In the bottom middle is the result of the search for recordings related to this incident.

And on the far right is the evaluation form with the current score at the top.

Once the form has been filled out and saved, the call taker or dispatcher being evaluated can see it along with any notes that the supervisor puts in.

A Closer Look at Screen Recording




"I love the screen recorder. It's so helpful when reviewing complaints because it lets me see exactly what the call taker or dispatcher was doing on their screen in addition to what they were saying."

-Anne Wiggs, QA Supervisor, Fort Worth Police Department, Communications Division

Screen Recording IT Challenges



Software Installation



Coordination with internal IT staff

Planning for a QA program that includes screen recording is key. Be sure to involve internal IT staff early as there will be a small client/server software that must run on each computer being recorded. Consider that ports will need to be opened on security firewalls to allow traffic between that software and the server. While this effort is not huge, plan ahead as internal IT staff availability is not always guaranteed.

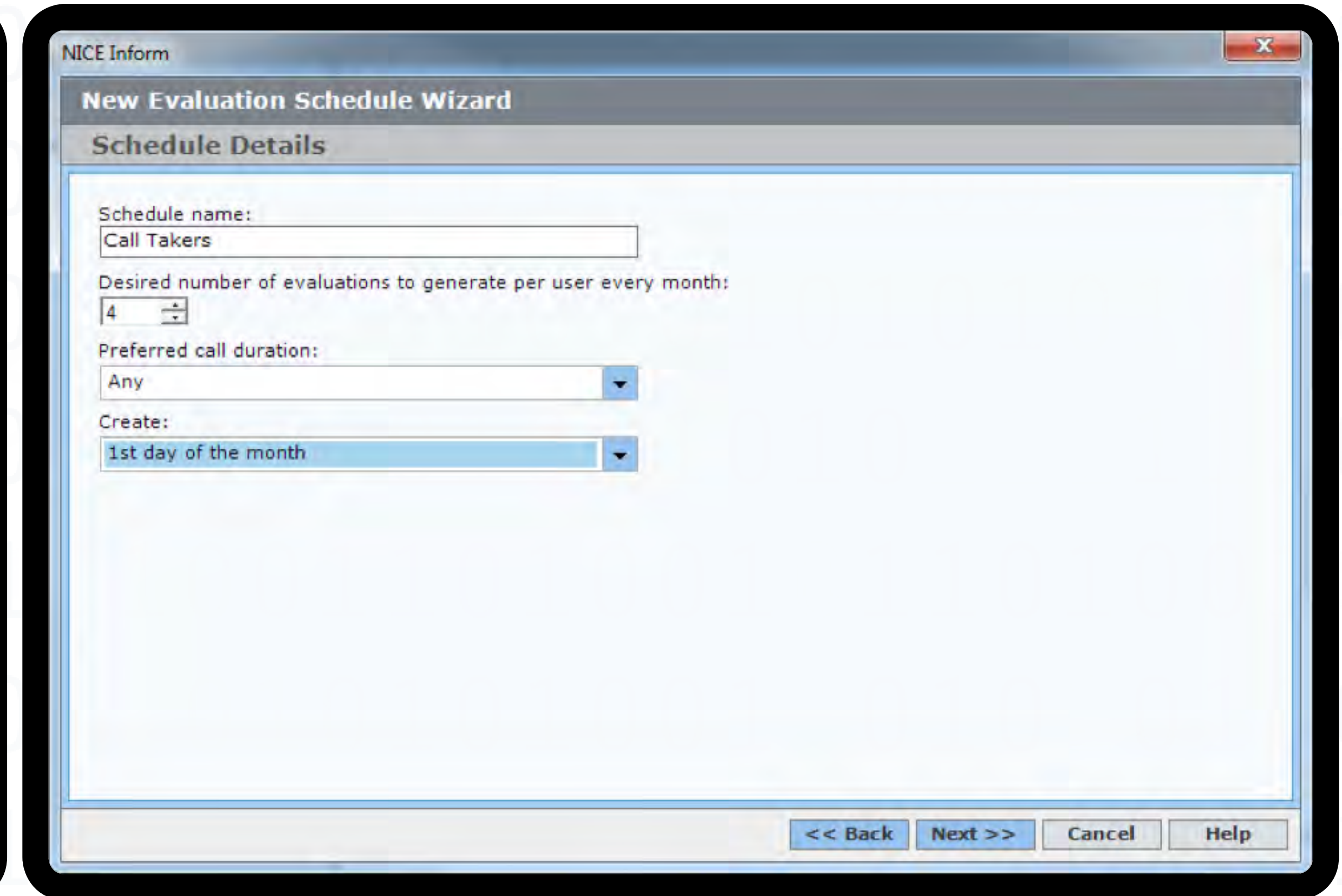
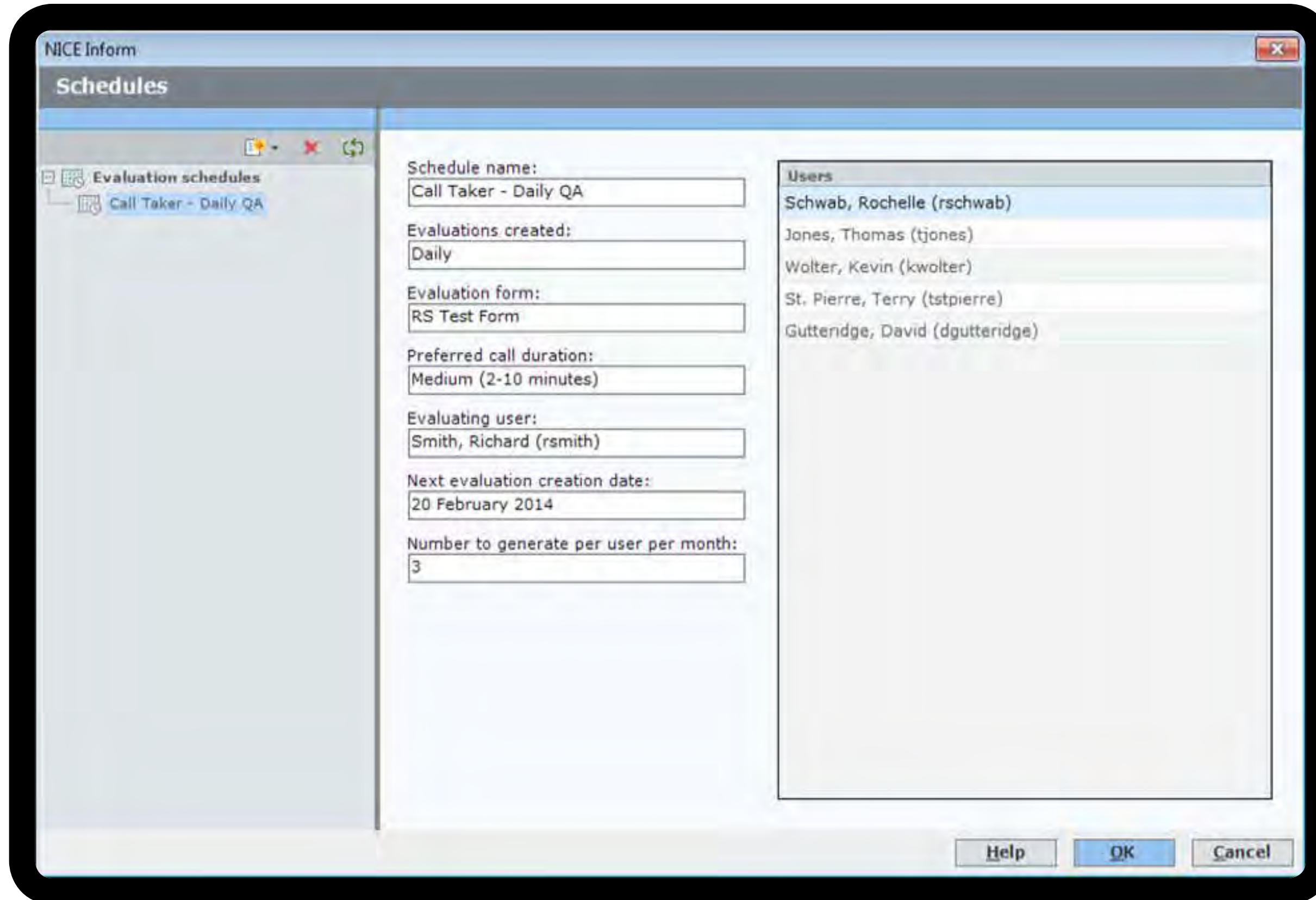


Screen Recording and Storage

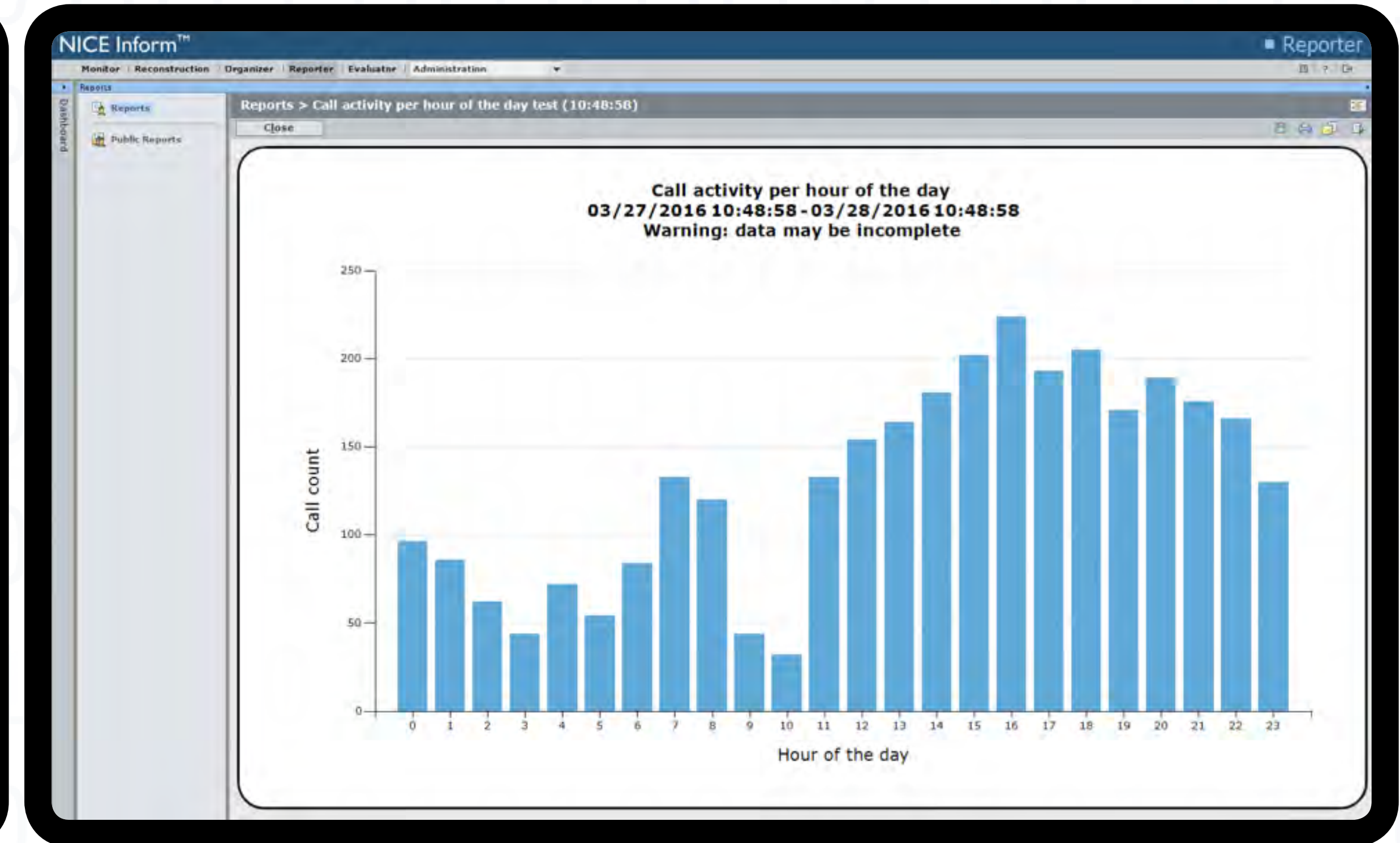
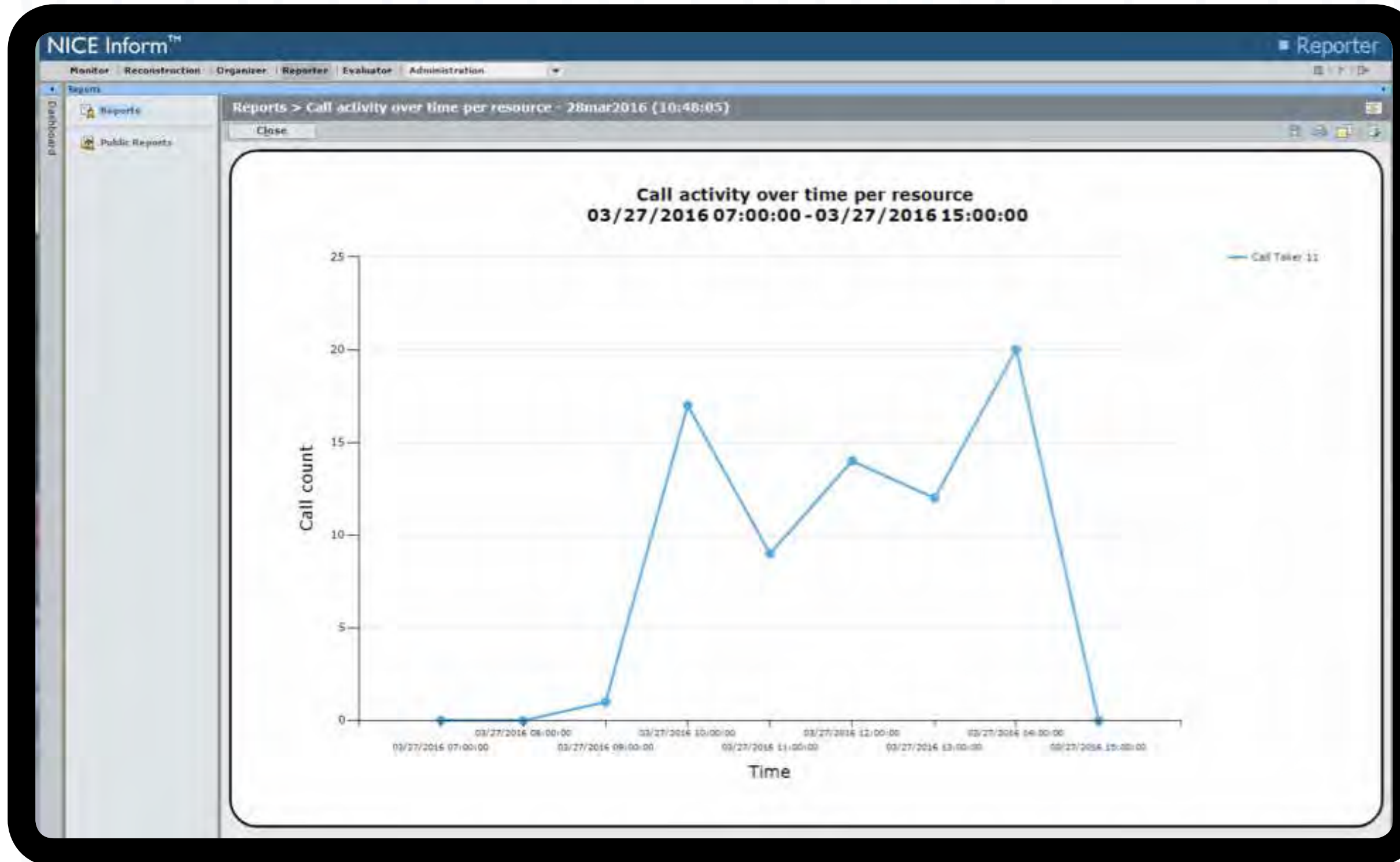


Recording screen captures at a rate to allow near real-time playback creates some large data files. Storage media for servers is relatively inexpensive. Plan according to average call volume and staff count during peak time periods to assure that you have sufficient space. Ft. Worth bought 18 terabytes of storage and currently purges its screen recordings after sixty days.

Scheduler capability of NICE Inform Evaluator



The Ft. Worth PSAP uses the Scheduler for random scheduling of calls to be evaluated according to frequency and number of calls per operator. It automatically creates a recommended schedule for evaluations for selected positions.



The Ft. Worth PSAP also uses NICE Inform Reporter to review call activity over time per resource, such as staff name, position or radio talkgroup, and per hour of the day. Reports on busiest radios and call duration are also available as well as custom reports. In addition to call volume reports, NICE Reporter offers evaluation reports: number of evaluations by status, average % score per operator, average % score per group, average score per question and scoring trends.

Ft. Worth managers are transitioning from manual reporting using Excel and appreciate the fact that Reporter generates all reports automatically. Any reports can be exported into .csv or xls format when needed.

Results for the City of Ft. Worth



The Ft. Worth PSAP has been very happy with the results of their automated NICE Inform-based QA solution.

One of the most important things that they did to make the program successful was to create a dedicated QA supervisor position – this really helped ensure that their training worked.

“We estimate our overall savings at \$400K. But cost savings was only one benefit. In addition, we experienced improved employee morale at the same time that our staff was becoming more efficient and professional.”

Our training savings alone is \$250K. And we’ve reduced the time to reconstruct incidents and track call by 600% and 300% respectively.”

- Jhonnie Ortiz, Public Safety Support Manager, Fort Worth Police Department, Communications Division

Overall Savings

\$400K

Tracking Time

300% Faster

Training Savings

\$250K

Reconstruction Time

600% Faster



NICE[®] - Inform



As the industry-leading digital evidence management solution, over three thousand satisfied agencies globally use NICE Inform to solve their public safety challenges.

> 3,000 deployments globally

“Without NICE’s solutions for incident reconstruction, we would have wasted valuable time.”
– Claude Armstrong, Retired Commanding Officer, Tape & Records Unit, NYPD

15 years of radio over IP (RoIP) experience

Integrates multiple channels and multimedia sources: voice calls, radio calls, text, video, photos, location display (GIS), CAD screen captures

“The integration of these elements gives us a complete and seamless record of events.”
– Captain Robert J. Haffner
Bethlehem Police Department Support Services Division

“With NICE Inform, we were ready to capture Next Gen data, even before the telcos were ready to give it to us.”
– Karin Marquez,
Communications Supervisor
City of Westminster, CO

Next steps

Get a demo/Contact us
Psinfo@nice.com

Check out www.digital-policing.com

