

All Together Now: PSAP Consolidation

TABLE OF CONTENTS

DEFINING CONSOLIDATION	4
1. PSAP Consolidation Drivers	4
2. What Does Consolidation Look Like Today?	4
3. One Big Room	4
4. Going Forward	4
VIRTUAL CONSOLIDATION	5
MULTI-TENANCY	6
1. Jefferson County, Colorado	6
2. Los Angeles International Airport Response Coordination Center (ARCC)	6
3. Pros and Cons of Multi-Tenancy	6

TABLE OF CONTENTS

LOGGING AND PERFORMANCE MANAGEMENT FOR CONSOLIDATED PSAP	7
1. Hosted Logging Solution Brings Everything Together	7
2. Incident Information Management	7
3. Quality Management	7
4. Workforce Management	7
 SUMMARY	 8

Defining ‘Consolidation’

As most people involved in Public Safety know, one of the leading trends for PSAPs (Public Safety Answering Point / 9-1-1 Call Center) is consolidation. Not a new idea for PSAPs, the concept has been around for a while and in various forms. Today though, advancing technologies are making it feasible and more beneficial than ever before.

PSAP Consolidation Drivers

There are two main drivers of consolidation, both of which are important. Let’s start with the one that’s both more familiar and more associated with consolidation: money. As is the case in any business or organization, streamlining resources and efforts to eliminate duplication, saves money. And in today’s reality, that is very important — sometimes critical. The second driver — and arguably the more important one — is to create a more efficient organization that responds more effectively.

Local and state governmental agencies are all under pressure to do more with less. The tough economic reality over the past several years has left many municipalities facing real budgetary issues that include:

- The constant need to reduce expenses
- A lack of funding for upgrading or replacing obsolete systems
- Mandates at the state level to reduce the cost of state-funded infrastructure
- Insufficient local budgets to support operations

To compound the issue, the demand and expectation for effective, reliable public safety and emergency services hasn’t diminished along with budgets. If anything, the public expects a constant improvement of services — and rightly so.

Thus, what we have are seemingly diametrically opposed market demands. On the one hand, spend less and save cost; while on the other hand provide better, more efficient and effective services. Fortunately, with today’s technology such as IP-based networks, and new trends in consolidation, these are no longer conflicting objectives.

What Does Consolidation Look Like Today?

Though we once thought of consolidation as simply uniting people, places and things into a single physical location, that’s not necessarily the case today. That general concept of consolidation is still applicable, but how it’s done and what’s being consolidated has changed. Here’s how consolidation has evolved.

One Big Room

As mentioned above, consolidation used to mean moving people and equipment from multiple locations into a single, larger location. The intent was to enable PSAP call centers to better leverage economies of scale. Everyone is in the same room, using the same equipment and following the same procedures. And in fact, this can reduce costs. There may be a reduced need for personnel, less duplication of equipment, and a potential reduction in the cost of physical space, among other things.

However, those same benefits have another side to them. Staff is often required to relocate, in many cases to a more distant location. Also, personnel can experience apprehension and resistance due to uncertainty about whether their positions will be eliminated. And in some cases the cost of communication actually increases, as the centralized location may be more remote than the previous ones.

Going Forward

After the “one big room” concept and before we get to virtualization (the step we’ll discuss next), consolidation passed through several evolutionary stages. These stages are becoming increasingly less relevant however as advancements in technology have allowed us to create far better solutions. Consolidation now takes a more holistic and strategic view of emergency call centers and how they operate. Today, we can look at the bigger operational picture and use consolidation not just to reduce costs, but — perhaps as valuable, or more — to create more efficient operations and more effective responses.

Virtual Consolidation

As the name implies, in this case consolidation is virtual as opposed to physical. Call centers are unified by a common platform (hardware, software and applications), irrespective of location, which allows sites and employees to be connected via a private consolidated network. They all share technical resources and all work on the same platform, using the same systems.

Today's unified call center is managed as one, and thus economies of scale can be leveraged, but on a higher, more strategic level. The reduction in costs no longer comes from the elimination of staff, but from the savings generated as a result of the consolidation of technical resources. Another monetary benefit comes from the ability to combine funds. This gives the call center increased buying power and the ability to access more powerful systems with the latest features. The benefits extend further and also provide:

- A. Increased efficiency gained through:
 - Well executed load balancing — all agents, regardless of location, can be consolidated into a single group available to take calls
 - The same number of agents handling more calls
 - Sharing platform resources maximizes equipment utilization

- B. Increased effectiveness is achieved via:
 - Coordinated responses
 - Increased interoperability, especially when responding agencies (fire, police and ambulatory) are also on the same platform

- C. Simplified implementation of technologies and processes through:
 - Ease of maintenance
 - Affordability of new technologies
 - Greater control over dedicated IT staff
 - Improved ease of training, managing and communicating with staff in fewer centers

With Virtualization, the focus is on consolidating technology, systems, and operations, rather than simply locations and people. As such, the impact is far greater than just monetary. And once Virtualization has consolidated networks and IT infrastructure, organizations can move toward a supporting concept called *multi-tenancy*.

Multi-Tenancy

In a multi-tenancy environment, multiple organizations can share the same application, running on the same operating system and hardware, and with the same data-storage mechanism. The distinction between users is achieved during the application design, thus users do not share or see each other's data — unless sharing is deliberately and mutually enabled. Now imagine having all stakeholders linked to the call center working on the same platform. Information is distributed faster, everyone sees and hears the same story, and with everyone's communication input, a clearer and more complete picture becomes possible. An example of this type of consolidation recently took place in Jefferson County, CO.

Jefferson County, Colorado

Throughout Jefferson County there are eight PSAPs. Recently they've moved to a virtualized, multi-tenancy consolidation setup that includes the West Metro Fire Department, the Lakewood Police Department, and the Wheat Ridge Police Department. Aiming to reduce costs and increase efficiencies, now all the organizations share a multi-tenancy platform for their radio, phone and audio logging systems (NICE Inform).

With the consolidation, all the organizations work from the same systems and applications. Each organization has access to the system based on what data they need to carry out their specific functions and the ability to share what is relevant with others. While they've been successful in substantially reducing costs, they've also achieved efficiencies that weren't possible prior to the consolidation. By working with the same systems and applications, they are able to compile complete incident information files that contain every detail related to any particular incident. This not only provides an accurate reconstruction of events, it allows them to review incident responses, gain insight from them, and take steps to improve if necessary.

Additionally, the organizations have enhanced their interoperability. By working with the same systems and following standardized procedures, both communication and work processes are improved. Increased redundancy is also something that the organizations benefit from, individually and collectively.

Los Angeles International Airport Response Coordination Center (ARCC)

Another good example of how all of the types of consolidation previously discussed — “one big room,” virtualization, and multi-tenancy — come together can be seen at Los Angeles International Airport's (LAX) ARCC. In this example we see how a range of interconnected agencies, working together with PSAPs, can achieve better interoperability to meet specific objectives.

LAX's recently built ARCC not only places members of the various operational and response organizations within the airport in the same space, it also gives them a unified platform. As a result, call center personnel, airport police, operations, the TSA and others, all work from the same playbook, have access to the same event information, and communicate with each other much more efficiently. The outcome has been increased efficiency, more effective response and coordination, and better resource utilization. All agencies work together with increased and deeper collaboration ability to create a safer environment for everyone.

One of the major benefits to both Jefferson County and LAX ARCC is their multimedia incident information management capabilities. The ability to capture, record and correlate information in a centralized location that is accessible to all stakeholders and can be used as an incident unfolds and for post-event investigation, is extremely valuable.

Pros and Cons of Multi-Tenancy

Pros	Cons
<ul style="list-style-type: none"> Each site/tenant can focus on their data/ recordings and be freed from the system maintenance, which is done centrally. The cost of the system and IT infrastructure is shared between all sites/tenants. Each tenant has access to a more powerful and robust system that collectively multi-tenants can afford compared as opposed to being cost-prohibitive for a single site. 	<ul style="list-style-type: none"> The individual tenant has less control over the introduction of new features and their need is prioritized against other tenants' needs. Security and privacy of data must to be strictly managed. There needs to be more coordination between the tenants over maintenance, usability and information sharing procedures.

Logging and Performance Management for Consolidated PSAP

Hosted Logging Solution Brings Everything Together

A hosted incident information management solution can do much more than just capture and record the information being transmitted; it can seamlessly blend onsite and shared hosted recording solutions into one system. NICE Inform is one of those solutions and is being used by both LAX's ARCC and Jefferson County. It connects a PSAP, wherever it's located, with first responders such as police, sheriff and fire departments for true interoperability.

NICE's solution captures and records radio and conventional telephony communications. It also contains a multimedia recording system that can capture all types of media such as video, GIS information, operator's CAD screen, email and SMS messages, and more. NICE Inform takes all of this information and places it in context by location and event. Furthermore, all event-related information is centralized into one centralized incident file, so that it's easy to access in real-time for those who need it.

NICE Inform allows blending of local recording systems to integrate with central, cloud based NG9-1-1 recording systems as well as shared regional radio network. In many cases, even if the main 911 services are recorded centrally, there will be local administration services that need recording. NICE Inform allows a mixture of on-site and cloud recording to be accessed through one application suite.

Incident Information Management

With a centralized incident file, all of the information contained therein can be accessed and shared in real time with all of the connected stakeholders. The data is digitally secure and provides a complete incident picture.

Incident information management is not only relevant and crucial during an event, but also when it's over. Incident files can then be used for investigations as evidence and for prosecutorial purposes. They are also valuable for the reconstruction of incidents, which can provide additional insights for learning and training objectives.

Quality Management

Along with advanced consolidation comes the formation of larger organizations. The result is a more complex environment to manage. Using the right tools, management can help ensure that an organization has the right number of people with the skill levels required to maintain quality standards.

With all information captured and recorded to form complete incident information files, this data can provide insight into quality management. For example, managers can access files relating a specific incident, review them and identify knowledge gaps, then address those gaps with personnel. This not only improves personnel retention by helping them succeed, but it also results in a more efficient staff who are able to shorten incident handling times.

Workforce Management

Certain solutions can also assist with workforce management. For example NICE IEX TotalView contains tools that help manage resources, including personnel who are multi-tenants on the platform — PSAP personnel, police, fire, ambulance units, school buses and others — so they can be optimally utilized. With an effective resource-planning tool, managers are able to align skills and availability against forecasted demand and union rules and respond to the following:

- Does the organization have the right coaching strategy?
- Can the operation accurately measure success against strategy?
- Are coaching practices consistent across the operation?
- What are the operation's strengths and opportunities?

Summary

The difference in what consolidation used to imply — “one big room” — to what it now connotes are similar in name alone. The benefits of transitioning to a virtualized and multi-tenancy consolidation platform can be further reaching than the cost benefits it provides. Consolidation done with today’s tools, using technology such as NICE Inform, can affect PSAP operations on a completely different level: one that touches the operational functionality of every organization that is connected.

With over 5,000 installations in the Public Safety sector, NICE has the experience and insight to provide comprehensive field-proven solutions. PSAP centers that are trusted by the largest cities in the world rely on NICE expertise to deliver the most robust and utilitarian solutions for consolidating today

CONTACTS

Global International HQ, Israel,

T +972 9 775 3777, F +972 9 743 4282

EMEA, Europe & Middle East,

T +44 0 1489 771 200, F +44 0 1489 771 665

Americas, North America,

T +1 201 964 2600, F +1 201 964 2610

Asia Pacific, Singapore Office

T + 65 6222 5123, F +65 6222 5459

The full list of NICE marks are the trademarks or registered trademarks of Nice Systems Ltd. For the full list of NICE trademarks, visit www.nice.com/nice-trademarks. All other marks used are the property of their respective proprietors.

ABOUT NICE SYSTEMS INC.

NICE Systems Ltd. (NASDAQ: NICE) is the worldwide leader of software solutions that deliver strategic insights by capturing and analyzing mass quantities of structured and unstructured data in real time from multiple sources, including, phone calls, mobile apps, emails, chat, social media, and video. NICE solutions enable organizations to take the Next-Best-Action to improve customer experience and business results, ensure compliance, fight financial crime, and safeguard people and assets. NICE solutions are used by over 25,000 organizations in more than 150 countries, including over 80 of the Fortune 100 companies. www.nice.com.