

Communications Security, Reliability and Interoperability Council

Final Report Briefing

Working Group 1A

Public Safety Consolidation
Effective Practices and
Recommendations

October 7, 2010

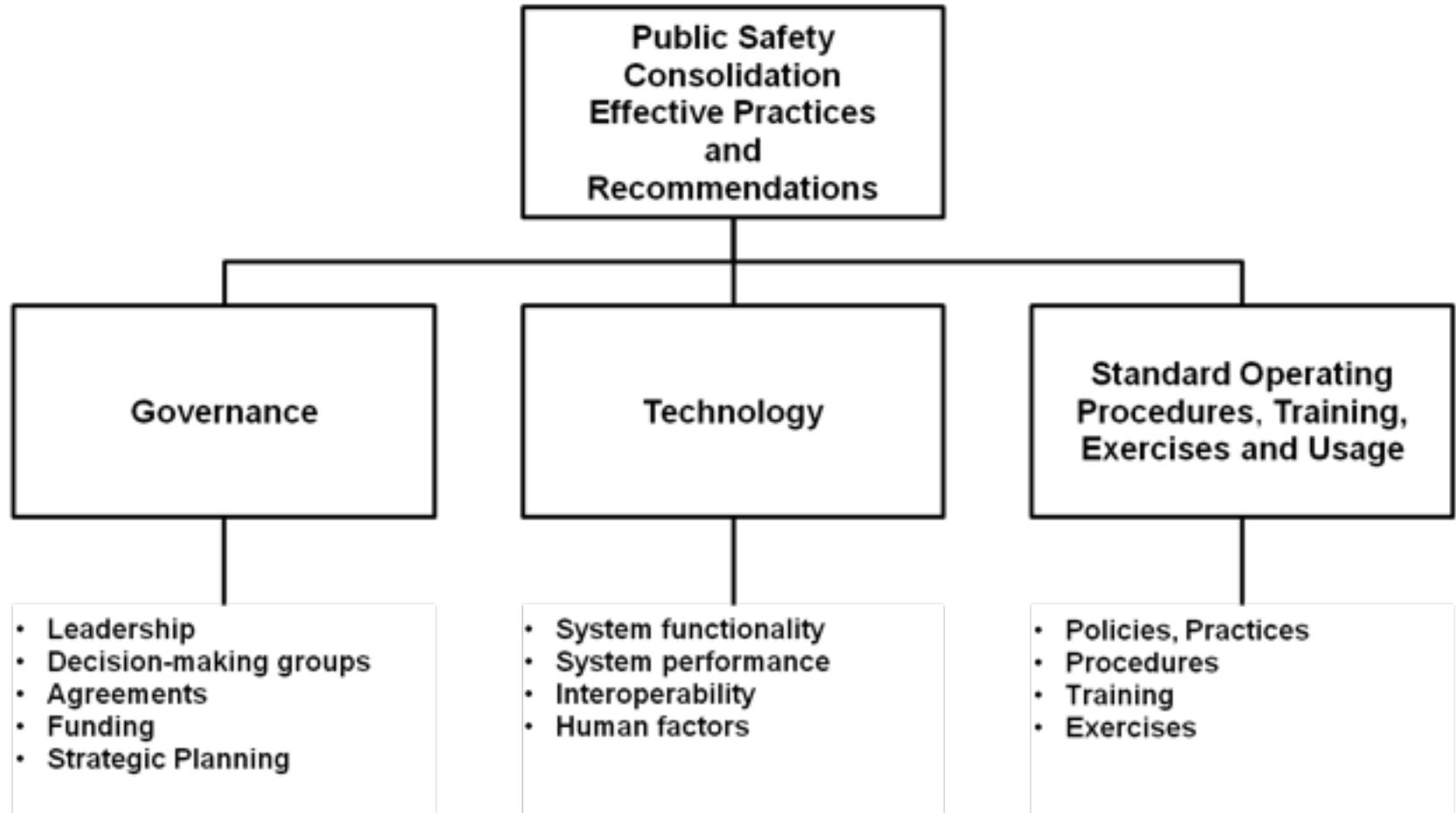
Current Events/Status

- ☐ Group 1A draft report delivered to CSRIC Executive Steering Committee on Sept 6.
- ☐ Steering Committee provided comments and edits incorporated into final report on Sept 16.
- ☐ This presentation delivered to Steering Committee on Sept 30.

Charter Directive

- ❑ Public safety radio systems and communications/dispatch centers were historically designed to meet unique local requirements, often led to incompatibility, inefficient use of scarce resources, and higher costs for specialized equipment and procedures with little opportunity to benefit from economies of scale.
- ❑ Clear trend over the last 20 years towards public safety system consolidation, the consolidation process poses numerous challenges, however, from operational, governance, funding and technical perspectives.
- ❑ This Working Group defined challenges and developed

Methodology - Work Breakdown



Methodology (cont.)

- ❑ Working group participants identified agencies representing the various categories of consolidation and developed a set of interview questions.
- ❑ These projects were representative of the spectrum of consolidation types, ranging from 9-1-1 network or infrastructure only, to full consolidation of 9-1-1 and dispatch, communications systems and related technology.

Case Study	Discipline
Arlington, Virginia	PSAP & Communications
Dakota County, Minnesota	PSAP
Denco - area (Dallas, TX)	PSAP
DHS Office of Emergency Communications	Communications
Hamilton County, Ohio	PSAP
Metropolitan Emergency Services Board	PSAP Management & Oversight; Regional Emergency Communications System
Pacific County, Washington	PSAP & Communications
State of Michigan	Communications
State of Minnesota	Communications
State of Vermont	9-1-1 Network Infrastructure
State of Washington	9-1-1 Network
Walla Walla, Washington	Operations and Facility Technology Consolidation

Working Group #1A gratefully acknowledges the assistance of the case study participants in preparing this report.

Approach

- ❑ After collecting data on each of the consolidation projects, each survey result was analyzed according to the consolidation drivers - political, economic, or service related.
- ❑ Working group members conducted parallel reviews of technology and operational issues related to consolidation efforts broadly.
- ❑ Also completed a review of recent reports, standards, previous recommendations and best practices developed by public safety practitioners, industry, and past advisory committees.

Drivers

❑ Public safety agencies choosing consolidation stated that their decisions were often driven by:

- service quality levels
- operational concerns
- technology obsolescence, and
- funding

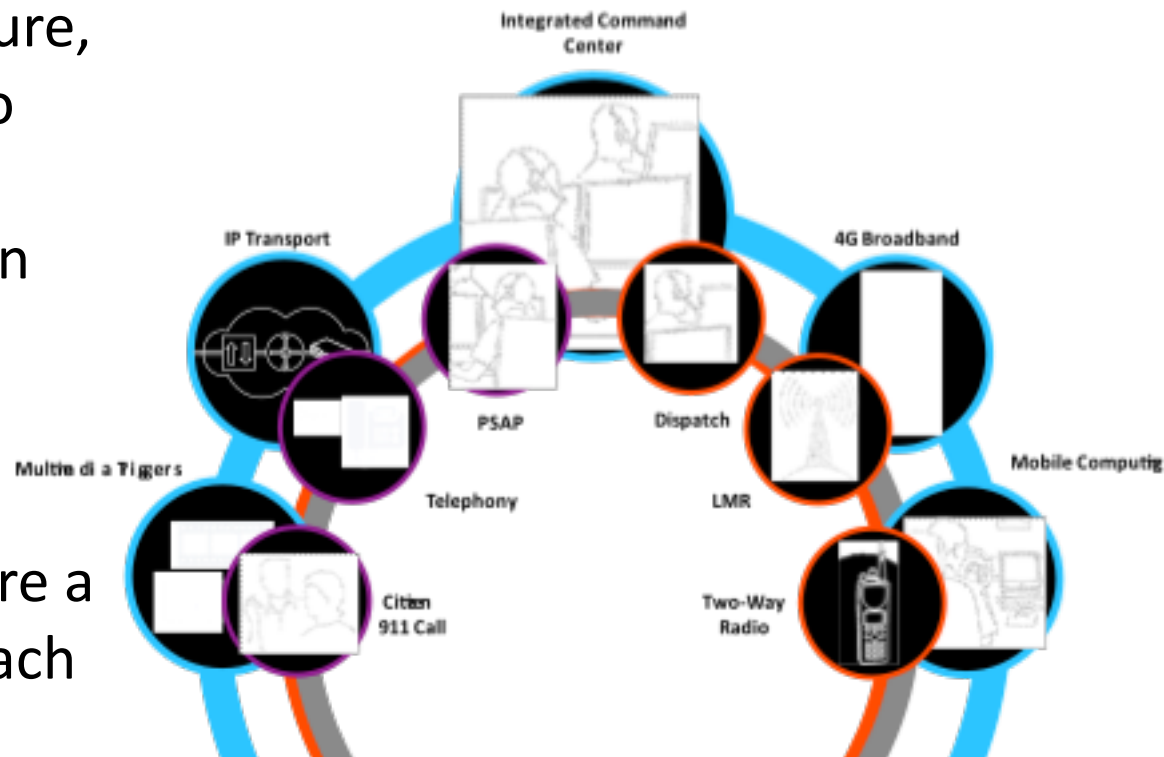


❑ The challenges practitioners reported included:

- transferring 9-1-1 calls among multiple communications centers
- difficulty in coordinating multi-agency/multi-jurisdictional responses among different dispatch centers

Technical Architecture

- ❑ As technology continues to transition, need to assimilate, assess and integrate applications using available voice, data and video streams for incident response.
- ❑ In the immediate future, it will be necessary to converge voice, data, and video information to optimize real-time decision making.
- ❑ Next generation technology will require a more regional approach and effective partnerships across agencies.



(6) Phases of Consolidation Process

1. Identification of an Effective Champion - a well-respected champion to lead and spearhead the process.
2. Interest Building – The process of developing interest in consolidation among decision-makers and stakeholders is often met with skepticism and rejection.
3. Feasibility Study – A comprehensive study that benchmarks current services, determines if consolidation makes sense, makes recommendations.
4. Planning Phase – Decisions regarding participation, funding, organizational structure, governance, human resources, facility and technology needs.

Findings

- ❑ The findings and effective practices as outlined in the following section are based upon the results of interviews with public safety communications agencies and through the development of the twelve case studies and survey data.
- ❑ Although this is a small sampling and it is not intended to be representative of all, it became apparent that there are central themes, which inform key findings and effective practices for the consolidation process.
- ❑ Due to the wide variety of public safety consolidation efforts, the working group found that consolidation strategies are most effectively applied by leaving specific implementation decisions to individual participants.

Finding #1 - Successful consolidations require that a trusted and secure governance structure be established, a champion must lead the project and the political leadership must be in place to support the effort.

- ❑ In some cases there will be tremendous resistance to consolidate operations from key stakeholders and lobbying groups within individual jurisdictions as it might mean fewer jobs and less control for participants.
- ❑ The political leaders must objectively determine if consolidation can better serve their citizens and this should be the overriding factor in their decision making process.
 - *Consolidation efforts cannot begin until the political 'will' exists to see the process through to completion.*
 - *Successful consolidations usually have one trait in common, a well-respected champion to spearhead the process from beginning to end.*

Finding #2 - Securing “agency buy-in” was the next biggest challenge.

- ❑ A primary issue for the partner agencies is to overcome the fear from loss of control and shared responsibility.
- ❑ Agencies need to be convinced that loss of control is more than offset by the benefits of joining a consolidated system, such as access to technology they could not afford on their own, standardized procedures, and interoperability.
 - *All participants, regardless of size must have a sense of equal status in both governance and service delivery.*
 - *Communicate honestly, meet to resolve issues often, anticipate turf battles and unforeseen problems, allow for contingencies, and treat all stakeholders equally.*

Finding #3 - Legislation may be necessary to create a sustainable funding mechanism or codify relationships between the parties.

- ❑ Although the technology and training requirements have changed drastically over the past 20 years, most of the funding legislation has not kept pace.
- ❑ Funding legislation has been altered in many states , these changes in the law have rarely taken into account the additional burdens being placed on 9-1-1 centers throughout the United States.
 - *More often than not, legislation was required to establish a sustainable funding mechanism and in some cases define structure.*
 - *In each case, an education campaign for all stakeholders and the public was necessary to gain approval of the legislation.*

Finding #4 - Formalize the arrangement through some sort of legal agreement and to establish strong and clear membership structures.

- ❑ The agreement can take many forms; the most important being that the agreement be clear, well defined, and should define major responsibilities, expectations and dispute resolutions procedures.
 - *Agreements must be clear, well defined, and should define major responsibilities, expectations and dispute resolution procedures.*
 - *Whatever governance structure is agreed upon, it is essential that an individual is appointed or hired who is responsible for executing according to the policies and direction given by the Board.*
 - *A consolidation that provides the supporting functions to its members has many benefits and can easily be expanded to a complete consolidation as needed.*
 - *Emergency communication regions should be aligned with other governance regions, e.g. EMS, Fire, Public Health, for maximum efficiencies in governance.*

Finding #5 - Personnel issues are difficult and troubling in any consolidation and require a great deal of thought at the policy level early on.

- ❑ The responsibility for fostering of an organizational cultural that enhances the ability of the participating entities to succeed falls on the shoulders of the governance model chosen and adopted by the partner agencies.
 - *Employees at all levels affected by the consolidation should be advised well in advance how the consolidation will impact their income and benefits.*
 - *Personnel policy and structure should be created at the inception of consolidation planning and codified in official agreements.*
 - *Personnel cannot be effectively managed by a committee so one entity needs to step up and assume this role for the consolidation.*

Finding #6 - Well defined communication channels among stakeholders and the governing body is critical to successful consolidation.

- ❑ Consolidation efforts are often met with seemingly unforeseen challenges, open communications and frequent discussions to identify and address issues of concern will help to alleviate the perceived threats and problems.
 - *Stakeholder communication can be facilitated through board members who represent stakeholder groups.*
 - *Mandated meetings for stakeholder groups or user group meetings are necessary to keep staff informed.*
 - *Communications tools are used to update stakeholders including policy-level officials.*
 - *Open communications and frequent discussions help to identify and address issues of concern.*

Finding #7 - Consolidation can produce long term cost efficiencies by reducing operations and technology duplication.

- ❑ Not all consolidations result in cost savings, the realization of savings may not occur for several years due to capital and other start-up costs.
 - *Having an emphasis on improving service with cost saving as a result was a much more realistic goal.*
 - *The benefit of technology consolidation is the shared infrastructure that improves quality of service.*
 - *Stakeholders define what is equitable for the established funding mechanism or cost allocation structure.*
 - *Incentivizing consolidation will bring more benefit and eliminate more challenges than mandating a consolidation.*
 - *Capital costs should be planned and budgeted for by the stakeholders and based on an equitable formula that is codified in the organizations governing agreements.*

Finding #8 - Consolidation results in better trained and more focused work force, increasing the level of public safety.

❑ Consolidation has a positive impact on staff training and professionalism, which improves service level overall.

- *Set standards for trained and certified personnel employed by local agencies.*
- *Career path planning for staff aids in employee retention.*

Finding #9 - The technical infrastructure has become increasingly complex over the last decade, translating into both higher maintenance costs as well as increased training requirements.

- ❑ Next generation features, such as NG9-1-1, video, converged voice, messaging, data, and video will introduce multimedia to current workflows.
 - *Technology must reduce the complexity in how solutions integrate and interface to the public safety operator.*
 - *Integrated command and control through a standardized / common technology platform can reduce the cost of ownership, maintenance, training, and operational efficiencies.*
 - *It is not practical to attempt the migration to NG9-1-1 systems on less than a major metropolitan area, regional (multi-County), state, , or even multi-state basis, as applicable, due to economic and overall system and operational management considerations.*

Finding #10 - Interoperating across technologies is critical.

- ❑ Using a common technology platform approach in developing public safety applications and building on a standards-based technology enables common user experiences across the operator positions with meaningful interactions across the applications.
 - *Standards-based technology enables common user experiences across the operator positions with meaningful interactions across the applications.*
 - *Recent trends towards regional, multi-jurisdictional and multi-disciplinary approaches improve day-to-day mission effectiveness and incident response.*

Finding #11 - Shared, standards based systems lead to technical, operational, and financial advantages.

- ❑ Shared radio systems support multiple Federal, State, local, and tribal agencies, and consolidate the communications of multiple agencies, leading to technical, operational, and financial advantages gained by combining multiple agencies onto a common shared radio system.
 - *Much of the communications equipment used by emergency responders is being upgraded to the Project 25 (P25) suite of standards based digital equipment.*
 - *Shared radio systems provide the optimal level of interoperability.*
 - *Standards based public safety wireless communications systems are becoming increasingly important for grant funding.*

Finding #12 - The traditional revenue streams to fund capabilities are not keeping pace with the costs to refresh and maintain technology.

- ❑ As technology has evolved consumers have migrated from traditional wireline services to new communications services.
- ❑ Typically, PSAPs are self-funded and provide 9-1-1 services to their citizens without having to turn to local, state or federal governments for the appropriation of funds.
 - *Developing a sustainable funding mechanism that is separate from the normal appropriation mechanism is needed.*
 - *A state by state review of enabling legislation is required to update the policies and regulatory environment to keep pace with new technology.*
 - *A review of current fiscal regulations and practices is required to assure that public safety has the necessary control over potential funding sources.*

Finding #13 - Successful implementation of technology is supported by a secure governance structure is highly dependent on effective operational procedures and consistent training of practitioners.

- ❑ Consolidation is a complex, multi-dimensional issue that involves a technological, strategic, tactical, and cultural change.
- *Technology may be a big hurdle to consolidation but experience has shown that governance and political issues are harder to solve.*
 - *A monthly survey of the participating agencies is used to ensure that performance meets expectations.*
 - *Metrics, such as average time to answer, is tracked regularly to ensure high performance.*

Finding #14 - SOPs must be developed reviewed and vetted by operations personnel prior to consolidation to ensure they are consistent.

- ❑ Communication center and customer standard operating procedures (SOPs) may conflict and cause confusion for command and field personnel.
 - *Administrative and operational SOPs be drafted by management with input from field operational personnel.*
 - *SOPs should be reviewed and approved by operational boards then the governance board.*

Finding #15 - Uniform training is required to ensure agencies coordinate training personnel, standards, policies, procedures and systems.

- ❑ A heavy burden is placed on the center operation if the operators are not trained in all disciplines.
 - *A training blueprint should be determined and have clear expectations prior to consolidation.*
 - *The unified training concept improves operational efficiency, specifically in staffing, utilization of overtime, call handling performance, and morale.*
 - *All personnel entrusted with the responsibility for answering 9-1-1 calls should at a minimum complete the APCO Basic Telecommunicator Training Program. If call takers are also responsible for processing calls for medical assistance they should be required to be trained in an approved Emergency Medical Dispatch Training Program. And all call takers should receive formal training that meets the ANSI national standard for processing calls reporting missing and abducted children.*

Finding #16 - Training among the consolidated agencies should be supplemented with exercises that provide reinforcement and practical firsthand experience in handling disasters and

- ❑ New personnel do not have the luxury of learning from their mistakes, so all personnel must receive sufficient supervised training to insure that learning has occurred and that they have been responsibly prepared to perform their assignments.
 - *Exercises not only reinforces training but provide extremely valuable lessons that improve performance and efficiency during unanticipated catastrophic events.*

Recommendations

1. The Federal Communications Commission (FCC) should consider promoting the development of new funding strategies to assist public safety agencies in their consolidation efforts. Absent new and sustainable funding solutions, local government leaders will be truly challenged to discard legacy systems and their investments via local tax dollars, in favor of new and more capable technology. Some funding approaches for consideration:
 - a) The FCC should work in collaboration with the relevant federal agencies, specifically the Department of Homeland Security and Department of Transportation, to determine if public safety infrastructure projects can be eligible under any new or existing

Recommendations (cont.)

- b) The FCC should issue a public notice to receive comments on the funding status of Public Safety Answering Points (PSAPs) to fully understand the extent that 9-1-1 funds are used for purposes other than 9-1-1 as noted in National Broadband Plan (NBP) recommendation 16.14 and to understand the impact of IP-based NG9-1-1 services will place on PSAPs as noted in NBP recommendation 16.15.
- c) As a complementary component to existing grant programs, the FCC should also consider creating or recommending a revolving loan fund for public safety system consolidation efforts.
- d) The FCC should work with federal agencies and explore developing grant guidance that creates incentives for consolidation efforts.

Recommendations (cont.)

2. The FCC should consider the development of concepts of operation and requirements, technical and operational standards (human factors, training) to provide a roadmap for public safety agencies as they migrate to next generation solutions. New technology will enable consolidation, in the future, it will be necessary to aggregate voice, data, and video information to optimize real-time decision making. Potentially this can be considered under recommendation 16.14 of the National Broadband Plan.

Recommendations (cont.)

3. The FCC should consider the establishment of a repository of effective practices with respect to Policies, Practices, Procedures, Technology, Training and Exercises to guide consolidation efforts from lessons learned. A longer term plan is required for gathering data on consolidated public safety operations in order to obtain a sufficient/larger sampling to draw more substantiated conclusions on consolidation and the accompanying best practices.
4. The FCC should collaborate with the Department of Homeland Security as it updates the National Emergency Communications Plan (NECP). The FCC and its supporting

Recommendations (cont.)

5. The FCC should issue guidance to agencies contemplating consolidation to undertake a comprehensive study. The consolidation process poses numerous challenges from operational, governance, funding and technical perspectives, the study should include:
 - a) Benchmarks current services by examining a wide variety of issues. These issues include mission critical communications capability, staffing, call processing and dispatching, budget, technology, political environment, and facilities.
 - b) Determines if consolidation makes sense from a service level, political, technological, and financial perspective.
 - c) Makes recommendations for consolidation models, governance, funding, staffing, technology and facilities.

Recommendations (cont.)

6. The FCC should consider the reevaluation of CSRIC Working Group #1A findings, effective practices and recommendations as other working groups complete their areas of study.
7. The FCC should consider establishing a future work group to consider the findings of CSRIC Working Group #1A in addressing longer term transition to networks that are owned or operated, at least in part, by non-public safety entities. This would advance the findings of the current work group that focused on the transition to consolidated systems that continue to be operated and controlled by public safety entities.

Summary

- ❑ The CSRIC group #1A recognized early on that the very large national aspects of the consolidation process and the diversity of implementation strategies made the compilation of best practices very challenging.
- ❑ In fact, the level of resources to further advance the maturity of the consolidation best practices analysis is significant and exceeded the capacity of this study.
- ❑ However, the working group captured important findings and relevant effective practices that led to several specific recommendations.
- ❑ Upon completion of presentation we ask that the CSRIC vote to approve the report findings and recommendations.