



Kansas NG911 Change Management Plan

Originated May 8, 2014
Last Revised October 27, 2016

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Prepared for 9-1-1 Coordinating Council



Document Change Log

Date	Author	Change	Reason
08/12/15	Scott Ekberg	Minor content editing	Better alignment with CM Policies
07/12/16	Randall White	Page-8 CM from PM to Liaison	Liaison now assigned
09/30/16	Lori Alexander	Minor content editing	Liaison now assigned
10/27/16	Lori Alexander	Minor editing	Logo change



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1 Executive Summary

Change Management is an integral part of the Council’s overall Governance Plan. It provides not only processes and procedures for managing changes to the NG9-1-1 (“NG911”) system, but is also integrated into our NG911 Communication Plan to ensure consistent and thorough communication regarding changes.

This NG911 Change Management (CM) Plan helps the Kansas 9-1-1 Coordinating Council to both understand and to minimize the risk of changes to our statewide Next Generation 911 service. The CM Plan establishes the change methodology for NG911. It is supported by various change policies. These change management policies establish the process and procedure for reviewing and implementing change. Because each Committee (Administration, Operations, Technical, GIS) has different roles and responsibilities, each has developed their own CM Policy. Each CM Policy is slightly modified and tailored to manage within their respective circle of influence. Nevertheless, each CM policy is completely compatible with this overarching NG911 CM Plan as shown in Figure 1.

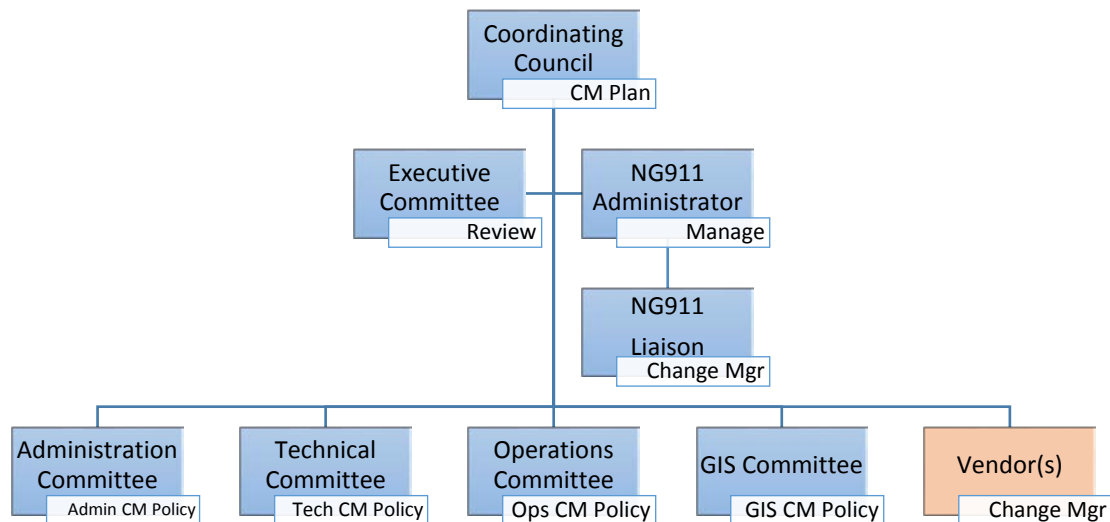


Figure 1 Kansas NG911 Change Management Hierarchy

The CM Plan of all vendors and providers must be compatible with this Council CM Plan. For example, some aspects of a vendor’s CM process are independent of our NG911 solution because the respective change has nothing to do with the requirements of the delivered solution. In this case, the vendor is free to make changes without the knowledge and consent of the Council. On the other hand, changes in the delivered solution, that effects the requirements of the delivered solution, either directly or indirectly, must be considered first by the Council before implementation of the requested change. In this case, the vendor has a seat on the Change Control Board (CCB) of the respective Council Committee (Figure 1).



2 Scope

This CM Plan is an approach to transitioning NG911 individuals, teams, products and services to a desired future state. The goal of change management is to efficiently and effectively deploy required modifications within NG911 by mitigating known risks that lead to incidents and/or problems in order to ensure the integrity of NG911 at all levels.

Change management provides understanding of a proposed change and the effects of that change on NG911 organization and end users. All changes, regardless of size or impact, must be initiated with a Change Order Request (COR). Key personnel and groups required to implement the COR are identified to minimize disruption, contain costs, and allow efficient response to customer demands, while increasing the overall effectiveness of support.

The Change Management Plan and supporting policies provide the processes and procedures for four (4) types of changes:

- **Minor Change**
A minor change is a change that will have minimum impact on current process and would allow for the implementation of low-risk, well-understood changes which do not require release of deployment management.
- **Normal Change**
A standard change is a change where the Method of Procedure (MOP) is pre-approved by the Change Manager, evaluated low-risk, relatively common and performed according to a procedure or work instructions. It may also be a change that follows a pre-defined workflow within the documented Change Management processes. A standard change is frequently handled more as a service request than a change request. An example of a normal change is setting up usernames and passwords for new PSAP employees. Another example is that our infrastructure provider might rely on service requests to implement common configuration changes. These service requests would be converted to a normal change for review by the Council prior to implementation.
- **Emergency Change**
Time-critical and potentially high-impact changes that require change outside of the normal process and would require the involvement of the Emergency Change Advisory Board (ECAB). ECAB membership depends on the nature of the emergency change and the availability of Council members at the time of the Emergency Change request.
- **High Risk Change**
A High Risk Change can most often be attributed to inadequate planning. A High-Risk Change is a change that must be implemented as soon as possible. Essentially, it will follow the same Normal Change procedure with a few exceptions. Most notable are potential process changes that may require the consensus of the Change Advisory Board (CAB) described below. Or may require prior testing to fully document the change and configuration data. High risk changes may require following Emergency Procedures.



3 Purpose

The primary purpose of this CM Plan is to provide our high-level methodology while relying on our supporting CM Policies to do the “heavy lifting” aspects of change management within their specific areas. For example, since the NG911 infrastructure (ESInet, Network Monitoring and Management (NMM), Data Centers, Call Handling) is furnished as a turn-key fully-integrated solution and service, the infrastructure vendor has primary responsibility for change within their span of control. As the i3 systems and service are implemented, those too will come under the purview of this CM Plan.

Typical aspects of change management are:

- **Availability Management:** assesses the impact of changes on service(s) accessibility.
- **Capacity Management:** verifies the impact of changes on services over an extended period of time.
- **Configuration Management:** verifies the impact of changes in relationship to other equipment or services of NG911.
- **IT Service Continuity Management:** verifies the potential impact on business and service continuity.
- **Incident Management:** requests changes to resolve incidents including those caused by other changes.
- **Problem Management:** identifies new errors, including those resulting from a change, and resolves those errors.
- **Release Management:** assesses the implementation of new releases to include hardware, software, and processes, verifying the impact of a potential change using testing where feasible.
- **Service Level Management:** determines the impact of changes to business services, discussing high visibility or potential high-impact change with customers prior to implementing the change.

4 Reference Documents

- Kansas NG911 Strategic Plan
- Kansas NG911 Governance Plan
- Kansas NG911 Communication Plan
- Kansas NG911 Administration Change Management Policy
- Kansas NG911 GIS Change Management Policy
- Kansas NG911 Technical Change Management Policy
- Kansas NG911 Operations Change Management Policy

5 Aspects of Change Management

This CM Plan considers its relationship with other NG911 supporting documents such as our Strategic Plan and Governance Plan including the tactical application of supporting policies and procedures.

5.1 Strategic Plan Relationship

The Coordinating Council Strategic Plan establishes our roadmap for the future on an annual basis. Therefore, to ensure that any changes to our business or technical policies, plans and processes are consistent with our future vision, CORs must be evaluated, in part, based on our Strategic Plan. The CM



Structure shown in Figure 2 ensures that team members who are knowledgeable and versed in our strategic plan are part of the COR decision making process.

5.2 Governance Plan Relationship

Our Coordinating Council Governance Plan establishes governance policy and consequential compliance among all NG911 stakeholders. Therefore, to ensure that any changes to our business or technical policies, plans and processes are consistent with our governance vision, CORs must be evaluated, in part, based on our Governance Plan. The CM Structure shown in Figure 2 ensures that team members who are knowledgeable and versed in our Governance Plan are part of the COR decision making process.

5.3 Communication Plan Relationship

Our Coordinating Council Communication Plan establishes a comprehensive methodology for keeping all Kansas NG911 stakeholders informed about all aspects of NG911. “Communication” is at the very core of change management. The only way we can effectively control NG911 change is by ensuring change is communicated both horizontally and vertically in both directions. Therefore, this parent CM Plan and its children CM Policies are an integral part of the Council Communication Plan.

6 Change Management Authority

The Change Management Structure consists of five (5) management tiers for approval and/or disapproval of non-standard change as shown in Figure 2.

1. **Coordinating Council** provides final authority to change agents, when and if required, and is the 911 Coordinating Council.
2. **Change Advisory Board (CAB)** ensures that all NG911 Committees are informed of potential changes. The CAB also ensures that contemplated changes of one Committee do not adversely affect the other Committees. CAB membership includes the chairperson of each Committee, NG911 Administrator, NG911 Liaison, and Program Manager. For emergency changes, the CAB becomes the ECAB.
3. **Committee Change Control Board (CCB)** serves as the administrative entity providing management and operation of NG911. The CCB provides tactical approval of all changes associated with their Committee. Membership includes the NG911 Administrator, Committee Members, vendor(s) associated with Committee, and is chaired by the Committee Chairperson.
4. **Change Manager** is responsible for the receiving, recording, processing and handling of all Change Order Requests (CORs). The Change Manager is the NG911 Liaison.
5. **Change Requestor** is the person who is submitting the COR. Any stakeholder may submit a COR using the COR form as described below.

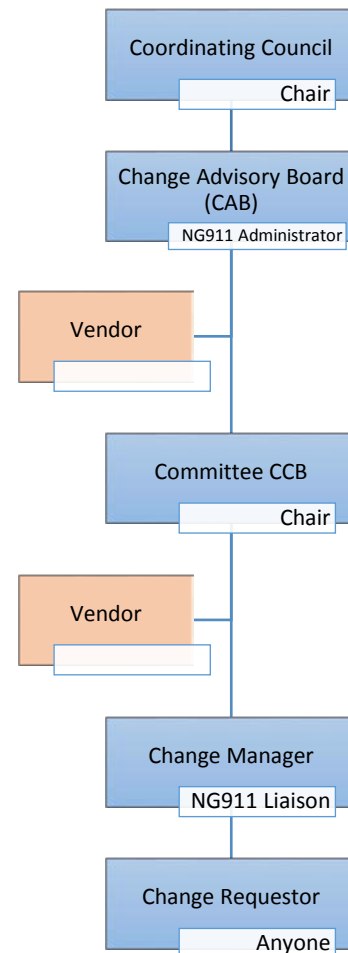


Figure 2 NG911 Change Mgt. Structure



Table 1 summarizes our Change Management Authority.

Table 1 Change Authority Matrix

Scope/Type of Change	Change Authority Level	Operational Impact Review (Operations Subcommittee)	Technical Review Process	Policy/Governance/ Public Information (State-level NG9-1-1 IP Network Advisory Council)
Minor (minimal impact & current processes sufficient)	Change Manager and Administrator	Identify local/ regional/ state level operational impacts, mitigation strategies, and address modifications to established practices at appropriate level	Committee CCB	N/A
Normal (routine system-wide, and proceed through regular CAB change process)	Committee CCB	State Level Operational Committee	Committee CCB CAB	N/A
Emergency (Time critical, and potentially high impact)	ECAB	Assess Operational impacts, short & long-term mitigation strategies, determine immediate notifications & actions to be taken at appropriate level	Committee CCB CAB Executive Committee	Pending projected service outage impact service level agreements (SLAs) and service availability
High Risk (System-wide impacts, potential impact beyond normal)	CAB	Assess Operational impacts, short & long-term mitigation plan, determine and oversee the plan, make necessary notifications, and review affected operational processes at appropriate level	Committee CCB CAB Executive Committee	Pending projected service outage impact SLAs and service availability

All change management activities are based on a Change Order Request (COR). CORs are documented and maintained by this Change Management Plan. Once recorded, the Change Manager analyzes each COR for completeness by verifying a complete MOP, back-out/restoration plan, and required resources. Upon verification of the COR, the Change Manager categorizes, prioritizes and, in some cases, consolidates CORs, before forwarding to the NG911 Administrator, NG911 Liaison, and the respective Committee CCB.



COR's are reviewed in detail by the respective Committee CCB to determine disposition. In cases where the COR is classified as "Emergency Change" or "High Risk Change", additional conditions may be stipulated with the COR. For example, the CCB may approve the COR on the condition that the change is first proven in our Lab Trials, or the Pilot site program, before implementing the change globally. In such a case, the CCB may require a MOP attached to the COR before approval.

After review by the respective CCB, the COR may be forwarded to the CAB for review. This is a crucial step in the change process if the COR has system-level implications. Since the CAB is comprised of the chairperson of each Committee, NG911 Administrator, NG911 Liaison and Program Manager, the core team is aware of all changes and can determine if there is only a local impact or a global impact to NG911. For example, system-wide hardware (ESInet) and software (Call Handling) upgrades constitute High Risk or perhaps Emergency changes having system-wide implications that must be considered by all Council CCBs.

After application of the COR, the respective CCB verifies the correct implementation of previously scheduled changes and/or makes the required adjustments by capturing written and verbal feedback, forwarding notes or adjusting organizational level agreements and service level agreements where appropriate.

Not only must the Council understand the change control process, but also all providers. During the Program Kickoff for each provider, the change management process is explained. For those vendors having their own internal change management plan and process, the vendor will adapt their process for compatibility with the Council CM Plan.

7 Change Management Activities

7.1 Meetings

Committee Change Control Boards and the Change Advisory Board will meet as needed to efficiently deal with CORs. These meetings may be via web conference or in-person as deemed necessary and appropriate by the Change Manager.

7.2 Change Advisory Board Documentation

Typical CAB documentation includes meeting agenda, minutes and reports.

Agenda. The CAB agenda is published prior to meetings to ensure all parties are prepared to effectively and efficiently discuss CORs. The CAB agenda typically includes:

- CORs to be assessed by CAB members in structured and priority order
- Status of CORs previously assessed by CAB members
 - Scheduling of changes and update of change schedule and projected service outage
 - Failed changes
 - Changes applied without reference to the CAB by incident management, problem management, or change management
 - Unauthorized changes detected through configuration management
 - Changes backed out before completion
 - Outstanding changes and changes in progress
- Advance notice of CORs expected for review at next CAB meeting



Minutes. Minutes document discussions, decisions and action items resulting from the CAB meetings are official program documents and are published, posted and archived on our Program Portal.

Reports. Reports summarizing actions of the committee CCB's and the CAB will be provided to the Coordinating Council at its regular meetings.

7.3 Change Order Request

A COR is a request to change any aspect of the statewide NG911 program. Some examples are:

- Change in Council policy
- Change in Committee plan
- Change in process or Method of Procedure (MOP)
- Change in configuration
- Change in process.

Anyone may submit a COR. The COR should be submitted to the Change Manager via the Council's web portal or via email on the approved COR form. The form is available as an online form at the [web portal](#) or as a PDF form at <http://kansas911.org>. It is also attached as Appendix A to this document.

After the Change Manager reviews and accepts the COR, it is forwarded to the NG911 Liaison, NG911 Administrator, and the appropriate Committee CCB for their assessment. The CCB will forward the COR with their recommendation to the CAB. The CAB may decide directly on the COR, or may choose to submit the COR to the Council for their opinion and decision.

Our COR form collects the following type of information:

- Requestor's name, location, phone number, email address
- Submission date
- COR identification number
- Priority of change (High, Medium, Low)
- Type of change (Minor, Normal, Emergency, High Risk)
- Description of change
- Justification and business benefit for change
- Impact Assessment (financial, schedule, performance...)
- Documents (Mini-plan, release notes, etc.)

7.4 Change Control Log

All CORs shall be logged into the Change Control Log. The Change Control Log shall interface with the Incident Management (IcM) Plan for proper correlation of changes and outages. The Council and vendor(s) shall compare monthly the status of COR's opened, resolved, and pending.

8 NG911 Change Order Request Form

The NG911 Program Portal is designed to handle all COR's. That is, a COR can be initiated, processed and archived through our Portal. The Portal is constructed to emulate and replace the manual forms originally used for our COR's, as shown below. The use of manual COR forms is discouraged.



Type Change: see CM Plan		Date of Request:		Requestor: name	
Requestor's Org / Dept:			Requestor's Phone:		
Priority:		Risk:		Program Area:	
				Service-affecting?	
Scope / Description: Enter here					
Reason or Purpose of Change:					
Performance Impact:		Schedule Impact:		Estimated Cost Impact:	
Attach Documentation (optional):					
Received: date		Reviewed: date		Change Mgr: NG911 Liaison	
				Phone:	
ID:					
Recommendation:					
Disposition:					
Received: date		Reviewed: date		CCB Chair:	
				Phone:	
Recommendation:					
Disposition:					
Received: date		Reviewed: date		CAB Chair: NG911 Administrator	
				Phone:	
Recommendation:					
Disposition:					
Received: date		Reviewed: date		Exec Chair: Vice Chair	
				Phone:	
Recommendation:					
Disposition:					
Received: date		Reviewed: date		CAB Chair: NG911 Administrator	
				Phone:	
Recommendation:					
Disposition:					
Signature		Date		Signature	
NG911 Liaison				NG911 Administrator	



9 Abbreviations, Acronyms, Definitions

CCB	Change Control Board is to approve changes at a level established by the Change Advisory Board. The Board should consist of the Change Manager, key technical and management staff of the respective Council Committee, and, as required, representation from the Change Advisory Board, stakeholders, user communities and vendor(s).
Change	An increase or decrease in any of the project characteristics, usually referring to specifications.
Change Control	The process of controlling, documenting, and storing the changes to control items. This includes proposing the change, evaluating it, approving or rejecting it, scheduling it and tracking it.
Change in Scope	A change in objectives, specifications, work plan, cost or schedule that results in a material difference from the terms of previously granted approval to proceed.
Change Management Process	A set of tasks or procedures established to ensure that project performance is measured to the baseline and changes are reviewed, approved or rejected, and the baseline updated.
Change Order Request	A documented request from anyone to change an aspect of NG911. Typical examples include, but are not limited to, change in policy, hardware, software, method of procedure.