

## **Continuity of Operations Leadership Series for Government**

# **Integrating Continuity of Operations (COOP) into the Enterprise Architecture**

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**Executive Summary**

*“COOP means an effort within individual executive departments and agencies to ensure that Primary Mission-Essential Functions continue to be performed during a wide range of emergencies...”*

HSPD-20 (May 2007)

#### Summary of FCP-65 COOP Objectives

- *Perform essential functions*
- *Minimize loss of life and damage*
- *Provide effective succession to office*
- *Mitigate disruptions to operations*
- *Establish alternate facilities for essential functions*
- *Protect essential facilities, equipment, vital records, and other assets*
- *Reconstitute operations in a timely way*
- *Ensure COOP readiness through training, testing, and exercise programs*

Continuity of operations (COOP) is one of the most important issues of the new millennium and is critical to all U.S. federal, state, and local government organizations. COOP is not a temporary fix or a bolt-on solution, but rather must be a permanent, integral part of an organization.

The Juniper Networks Continuity of Operations Leadership Series for Government delivers a clear understanding of the considerations and processes necessary to create a comprehensive, executable plan for COOP that fits into agencies' enterprise architecture and enhances their ability to achieve core missions.

This series provides a framework for U.S. government organizations to use to plan, update, and implement their COOP plans, delineating a clear path to development of the necessary strategies, policies, and operations and systems concepts that can provide continuity in a comprehensive fashion. In particular, the Juniper Networks Continuity of Operations Leadership Series equips readers with a better understanding of:

- Business drivers for COOP
- Critical aspects of an effective COOP program
- Requirements and mandates for COOP
- Integration of COOP into the enterprise architecture
- Maintenance and enhancement of current information systems

#### Understanding COOP

The essence of COOP is the capability to perform essential organizational functions during any disruptive situation. Maintaining this capability is a tall order, requiring that all agencies consider their operational strategies within various adverse scenarios. In the past, adverse scenarios considered may have emphasized known natural threats; however, the scope of COOP has expanded considerably over the past six years to include human-made adverse scenarios, among others. Organizations must make COOP a part of their business processes or enterprise architecture (EA) and an integral process in their development of information systems founded on organizational strategy.

When planning for COOP, an organization should use existing processes and take into account alternative scenarios. Before considering a COOP strategy or plan, an organization needs to understand its business strategy and objectives and the means at its disposal to accomplish both. By assessing the gap between where they are today and where they need to be (in alternative COOP environments), organizations can better understand the changes that must be enacted to prepare for COOP. These changes should then be integrated into the COOP strategy along with a plan of action and milestones for bridging the gaps with policy, operational profiles, systems, integration approaches, and available and future technologies.

## COOP Drivers and Benefits

COOP planning is an integral business process reinforced by a presidential policy that all federal agencies must perform. A viable plan's overall objective is to ensure continued operation of critical functions even during times of crisis. Although specific objectives may vary by government agency, Federal Preparedness Circular 65 (FPC-65) provides objectives applicable to a wide range of organizations. In most cases, agencies will find that proper development and implementation of COOP processes and functions leads to potentially significant increases in everyday organizational capabilities. Many COOP-based implementations also provide incremental, value-added functionality to an organization's standard operating procedures through dual-use technology. In fact, COOP capabilities are significantly more reliable and cost effective when implemented as a normal course of business. Proper COOP planning ultimately benefits the organization, even if an emergency situation does not actually stretch its COOP capability to the limits. COOP can deliver greater efficiency and security during normal operations and can help provide the public with responsible and reliable public institutions during a crisis. Put simply, COOP planning makes good business sense.

## A Framework for COOP

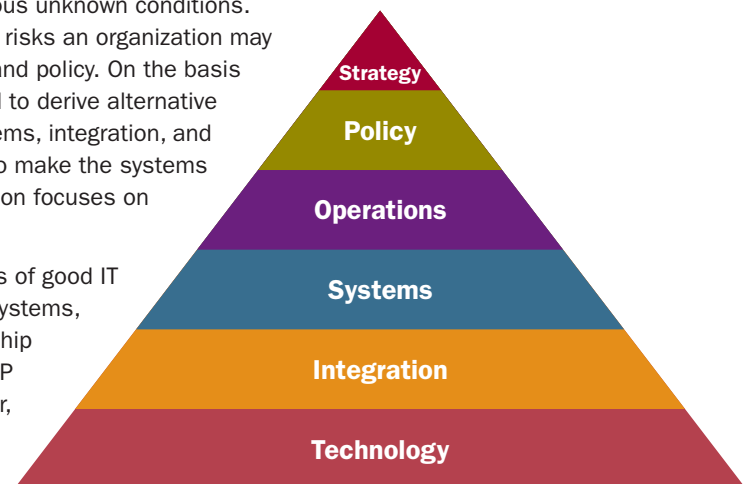
COOP should be considered an operational requirement embedded in organizational strategy: one dictating that an organization continue to operate under various unknown conditions. Before considering the probable operating conditions or potential risks an organization may face, planners must fully understand the organization's strategy and policy. On the basis of this strategy and policy, threats can be assessed and analyzed to derive alternative operational scenarios that can provide the requirements for systems, integration, and interoperation, including the people, facilities, and technologies to make the systems a reality. This top-down approach helps ensure that the organization focuses on essential functions.

Successful COOP planning depends on the fundamental elements of good IT architecture, such as organizational strategy, policy, operations, systems, integration, and technology. The Continuity of Operations Leadership Series for Government provides an overview of these critical COOP pillars and addresses each in a dedicated volume. Taken together, these volumes constitute a comprehensive guide for government agencies that offers a hierarchical view of the pillars of COOP and how they tie together. COOP is key to emergency preparedness and must be integrated into an organization's culture. The Continuity of Operations Leadership Series maps a path for making COOP part of an organization's strategic vision and concept of operations.

To be successful, an organization's missions and essential functions must be supported by all pillars, which can and should be addressed in a process of definition and refinement. However, there is an iterative component as well. Because each pillar depends on the other pillars, all pillars must be viable for the successful execution of essential functions during various operational scenarios.

Testing, practice, and execution form the foundation of organizational COOP capabilities, so it is critical that a COOP plan be verified before it is executed. Proper testing ensures, for instance, that people, components, facilities, and information used in COOP work together as expected. Additionally, testing can expose weaknesses so they can be remedied before disaster strikes.

The COOP pillars define the specific elements that all organizations should have in place. In fact, these pillars are the same elements that should already exist in government organizations, directly mapping to the enterprise architecture. The objective is to use and build on the existing architecture as much as possible, modifying it to meet COOP requirements.



COOP Framework

To request the entire  
COOP Leadership Series for  
Government, go to  
[www.juniper.net/coop](http://www.juniper.net/coop)

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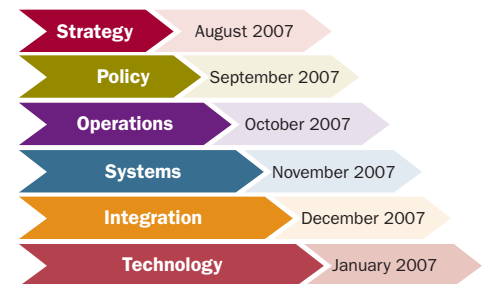
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## The Pillars of COOP

<p><b>I: Strategy</b></p> <p>Provides guidance in aligning the organization's business strategy with its IT concept of operations and infrastructure. This report delves into details about the strategic planning efforts of an organization and its business processes and decision making. It also discusses various approaches that show how business strategy and COOP solutions can be aligned from an enterprise architecture perspective.</p>	<p><b>II: Policy</b></p> <p>Establishes the governance for an organization's operational activities. This report provides an in-depth review of current national and organizational policy directives and governance. It also provides a brief history of COOP policy and current policy issues. Additionally, this report outlines policy needed to provide a link between organizational strategy and operational enactment.</p>	<p><b>III: Operations</b></p> <p>Addresses the enactment of organizational processes that must include some component of COOP functionality on a daily basis. This report outlines the specific elements of COOP operational profiles and describes scenarios and the planning elements that should exist to address them. It also presents the elements of an operational plan and the tools and checklists needed for success.</p>
<p><b>IV: Systems</b></p> <p>Addresses the physical reality of definition and enactment of the systems in an organization and the application of systems. This report also reviews the development of engineering and management principles and describes validation (building the right systems), verification (building the systems right), and organizational system elements and how they need to address COOP.</p>	<p><b>V: Integration</b></p> <p>Provides an overview of interoperations and describes the interactions among business activities and organizational functions. This report addresses the integration of multilevel government and private-sector enterprises and underscores the need for federal, state, and local government coordination to achieve COOP and provide continuity of security and information assurance.</p>	<p><b>VI: Technology</b></p> <p>Discusses the need for government wide, standard criteria-based technology requirements for the easy integration of COOP efforts at the technological and system levels. This report examines the need for COOP technologies and specifications, focusing on the differences among organizational, functional, product, and interface specifications and how to address them.</p>

## COOP Leadership Series Release Schedule

The Integrating Continuity of Operations into the Enterprise Architecture foundational document establishes the underlying concepts of COOP and introduces the pillars of COOP. Each pillar is examined to provide a sophisticated understanding of COOP so that existing architecture and operations can be integrated into COOP planning and execution. The Continuity of Operations Leadership Series for Government includes six future supplements, each dedicated to an individual COOP pillar.



For more information about integrating COOP into your enterprise architecture and to download the Continuity of Operations Leadership Series for Government, please visit [www.juniper.net/coop](http://www.juniper.net/coop) or call 866.298.6428.