Business Continuity Program Overview

Corporate Business Continuity Team
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Subject To Change Without Notice

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EXECUTIVE SUMMARY

Business continuity planning is an essential component of Level 3 Communicattions' business operating model. Due to the nature of the telecommunications industry, the products and services Level 3 provides are expected by customers to meet remarkably high standards for availability. Level 3 respects this responsibility and ensures a robust Policy and Program is in place to maintain uninterrupted services whenever possible and, when necessary, to recover from unavoidable disruptions quickly and efficiently.

Introduction

The Level 3® Network, an acknowledged part of our global telecommunications critical infrastructure, was built with business continuity in mind, using physical plant components and redundant systems to support continuous, uninterrupted services for our customers. Hardware, however, is only part of the solution. Advance planning to develop and rehearse strategies that capitalize on all of our capabilities and enable us to recover our services quickly remains key to Level 3's resiliency. To engage in effective planning, a cross-functional business continuity planning structure spans across all regions of the company, adhering to the business continuity policy and framework. As a result, Level 3 plans for and works everyday to deliver uninterrupted service.

Level 3's development, implementation, and maintenance of the Program's life cycle can give our customers confidence that our services will run with minimal interruptions, regardless of the event experienced.

Figure 1: Life Cycle of Level 3's BCP Program

Mission

The mission of Level 3's Program is to:

- Identify the threats/hazards and their potential impacts and provide a framework for building enterprise resilience
- Safeguard employees, key stakeholders, and long-term market share in the event of an unplanned interruption to the business
- Maintain uninterrupted service whenever possible, and when necessary, effectively coordinate recovery from unavoidable disruptions quickly and efficiently
- Respond to emergency situations in a safe, effective and timely manner

Strategy

The Program has been designed to protect shareholder value by ensuring that business continuity related risk is effectively identified, assessed, and managed, and where feasible, mitigated. The Corporate BCP Team is responsible for the formulation of policy, developing the framework, and governance of the Program. Each Functional Group owning critical functions is responsible for developing, maintaining, and exercising plans.

A Business Impact Analysis (BIA) identifies criticality and determines how soon after an event processes/systems need to be available. Those time intervals are then used to prioritize the recovery and implement recovery solutions for essential operations. Business continuity planning focuses on planning for the impacts that could be caused by any scenario and defining the appropriate tactical recovery.

The key principles upon which the Program strategies and capabilities are based include:

Incident Prevention – Protecting services from threats (environment, hardware/software, operational errors, malicious attacks and natural disasters)

Incident Detection – Detecting incidents at the earliest opportunity to minimize impact

Response – Responding to incidents in the most appropriate manner providing for an efficient recovery and minimizing downtime

Recovery – Implementing appropriate recovery strategies and solutions that will ensure timely and prioritized resumption of operations

Improvement – Incorporating lessons learned from incidents, exercises and tests to enhance our level of preparedness

GLOBAL BUSINESS CONTINUITY PROGRAM

The Program is a holistic process designed to provide a methodology for identifying and assessing threats and hazards, understanding their impacts to Level 3 operations, and developing a framework for planning and responding to unavoidable disruptions. The components of the Program are outlined here.

Program Management

Program Accountability: Program management is the heart of the BCP Program. Accountability of the Program is held at the senior management level so it receives the proper focus and alignment with enterprise priorities for a successful implementation. Program management includes making sure goals have been met and providing for a continual review of the Program to ensure its continuing suitability, adequacy and effectiveness.

Resource Commitment and Training: Based on the results of the BIA and Risk Assessment, management commits the resources to execute the Program and makes sure they are trained and competent. The Program utilizes role-based training modules to train its employees. The instructional modules are designed to provide training on the Program objectives as well as an explanation of how to complete the tasks to meet the requirements.

Embed BCP into Culture: The participation of senior management is key in making sure that the BCP Program is correctly introduced, adequately supported and is properly embedded as part of Level 3's culture.

Understanding the Business

Business Impact Analysis: A BIA is conducted to identify the impacts resulting from business interruptions and provide the criteria to quantify and qualify those impacts to determine what is most critical to our operations. This analysis identifies time-critical functions, their recovery priorities, and interdependencies so recovery time objectives can be established and approved. This data then drives the priorities for continuity planning and developing/implementing recovery strategies and solutions to support the recovery time objectives.

Risk Assessment: A Risk Assessment is conducted to evaluate the threats and hazards and identify potential causes of interruptions, the probability of their occurrence, their severity and their impact when they do occur. Measures can then be identified to reduce the probability of occurrence or reduce the impact of an incident.

Risk Management: After the risk to operational disruptions is assessed and understood, Level 3 evaluates the risks and impacts it can control or influence. Management can then make informed decisions on managing unacceptable levels of risk.

Determine Strategies

Strategy Development and Implementation: The results from the BIA and Risk Assessment are used to assess and implement appropriate strategies to reduce the likelihood and impacts of incidents or disruptions. This requires identifying continuity strategies that will improve Level 3's resiliency to a disruption by ensuring critical activities continue at, or are recovered to, an acceptable level and meet agreed upon recovery timeframes. The strategies define the required resiliency solutions so that controls around incident prevention, detection, response, recovery and restoration are put into place.

Vendor Resiliency Management: Level 3 analyzes the resiliency of its critical vendors that support critical functions/processes, facilities and systems to proactively manage unacceptable levels of risk.

Develop and Implement Response

Incident Management Response Structure: Level 3 employs a multi-layer scalable response structure to efficiently respond to disruptions that span its global operations.

Plan Development: Level 3's resiliency planning concentrates on sustaining its critical business operations and its supporting infrastructure (i.e., network, people, systems, facilities, vendors, etc.). Planning focuses on the impacts that could be caused by any scenario and provides the procedures for maintaining the continuity of operations. Level 3's BCP Program includes the following suite of plans:

- Enterprise Business Continuity Plan – Company overarching strategies
- Crisis Management Plan – protect Company brand
- Incident Management Plans – provide command, control and coordination over recovery
- Business Continuity Plans – continue critical operations
- Facility Recovery Plans – recover critical infrastructure of facilities
- Application Recovery Plans – recover applications
- Pandemic Plans

Exercising, Maintaining and Reviewing Response

Exercise and Maintenance: Business continuity and incident management planning is exercised and maintained to validate their viability. Level 3 exercises its plans to develop teamwork, competence, and confidence among its recovery teams. Plans are maintained in a state of readiness.

QA Reviews: To maintain a consistent level of Program execution, Level 3 conducts QA reviews on planning.

Post-Event Review: Level 3 assesses its response to and recovery from events to measure the effectiveness of its response and recovery capabilities. Post-event reviews provide the impacted/activated groups with an opportunity to seek feedback on their recovery and their incident management performance. A summary of the event incorporates any corrective actions for improvement which become part of ongoing detection, analysis, and elimination of actual or potential causes of disruptions.

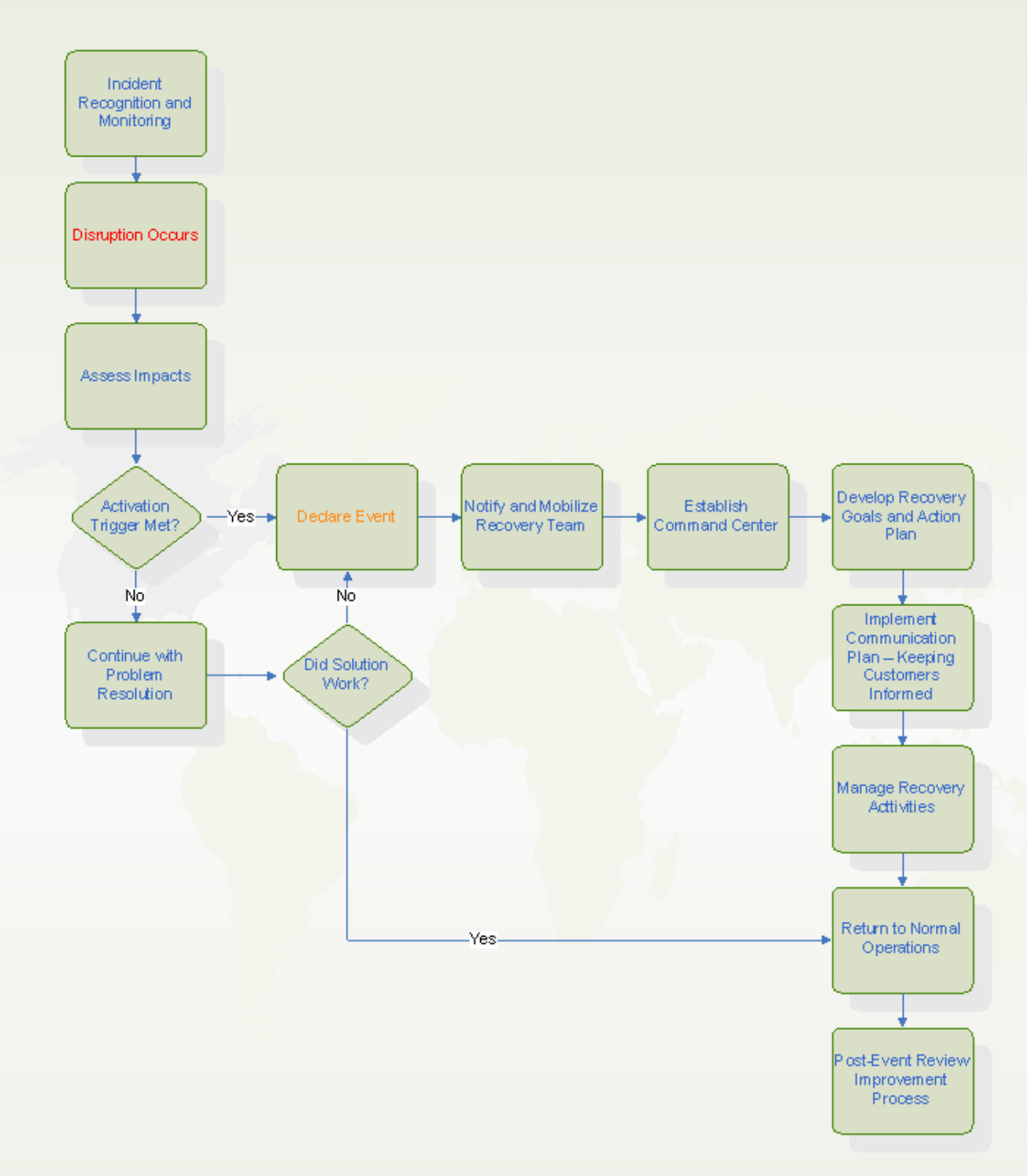
Standards and Practices

Level 3 utilizes the following Standards for modeling its BCP Program:

- British Standards Institution (BSI), BS 25999: "25999-1:2006 Business Continuity Management. Code of Practice" and "BS 25999-2:2007 Specification for Business Continuity Management"
- British Standards BS ISO/IEC 27031:2011: "Information Technology – Security techniques – Guidelines for information and communication technology readiness for business continuity"
- American Society for Industrial Security (ASIS) "Business Continuity Guideline: A Practical Approach for Emergency Preparedness, Crisis Management, and Disaster Recovery"
- American Society for Industrial Security(ASIS) /British Standards Institution (BSI) ASIS/BSI BCM.01-2010 "Business Continuity Management Systems: Requirements with Guidance for Use"
- NFPA 1600: "Standard on Disaster/Emergency Management and Business Continuity Programs" 2010 Edition
- NIST Special Publication 800-34 Rev 1. "Contingency Planning Guide for Federal Information Systems"
- BSI PAS 200:2011: "Crisis Management – Guidance and Good Practice"
- The Homeland Security Exercise and Evaluation Program (HSEEP)
- Disaster Recovery International Institute: "Professional Practices for Business Continuity Practitioners"

CONCEPT OF OPERATION – RESPONSE AND RECOVERY

Level 3 utilizes the following process for monitoring, declaring and managing recovery from events. Keeping our customers apprised of unavoidable disruptions is a high priority when triggered events require us to implement a communication plan.



RESILIENCY AND PREPAREDNESS CAPABILITIES

Level 3's preparedness capabilities and strategies include, but are not limited to:

Network Operating Centers

Redundant Network Operating Centers (NOCs) geographically disbursed enabling Level 3 to identify and isolate causes of potential network disruptions and quickly coordinate resolution of system outages.

Network Facilities

All critical facilities have plans for recovering their critical infrastructure from loss of access, power, HVAC or employees, etc. These facilities also maintain, post and conduct emergency response and evacuation drills to protect the life safety of our employees, customers and vendors.

Technical Support Centers

Technical Support Centers are geographically disbursed and staffed 24 x 7 to provide dedicated support to our customers.

Data Centers

Alternate Processing Site: Level 3 owns and self-manages a geographically dispersed alternate data center, which is utilized when the primary processing capabilities are not available. The alternate data center is a hot site that is comparable in size, power capacity, and HVAC capacity to the primary data center. The alternate data center is equipped with the infrastructure, environment and connectivity to support recovery of its critical systems and applications for essential business functions within their recovery time objectives.

Alternate Storage Site: Numerous data replication strategies are employed by Level 3 to manage data storage in a safe and secure manner. Data from our primary data center may be replicated through various technologies to repositories located in our self-managed geographically dispersed backup data centers. This capability facilitates meeting our recovery time objectives and mitigates risk of physical access and retrieval of backup information.

Information System Backup: Level 3 has implemented a hot standby solution in its alternate processing and storage site. Periodic testing is conducted on media reliability and information integrity.

Information System Recovery: System recovery is sequenced based on the criticality of the functions the information systems support and the recovery time objectives and recovery point objectives defined by the business. Each information system's failover capability utilizes recovery solutions designed to meet those recovery objectives.

Supply Chain/Critical Vendors

Level 3 critical vendors and suppliers are asked to demonstrate their business resiliency capabilities. This provides Level 3 the ability to manage any risk to their supply chain. Level 3 incorporates its partners in its exercise program.

Pandemic Preparedness

Level 3 recognizes its responsibility to our employees, customers and shareholders to minimize the potential for business disruption and to recover operations as rapidly as possible should a disruption occur as a result of a pandemic outbreak. Through effective, ongoing preparation and planning, Level 3 employees are provided with public and private resources to enhance awareness and recommend precautions.

Level 3 maintains both Global and Business Unit Pandemic Influenza Plans, which are integrated into its Business Continuity Program. Pandemic preparedness focuses on:

- Ensuring mission critical functions remain operational
- Personnel remote access and staff reduction contingency strategies
- Providing an appropriate level of awareness for our employees and customers
- Anticipating and responding to our customer's needs and possible disruptions to our supply chain

Communications

Backup Communications: Level 3 has implemented redundant communications capabilities utilizing alternate carriers. Primary and backup conference bridges are supplied by separate vendors using diverse networks and routes. An automated paging system, utilized for notifying and communicating during an event, is also geographically redundant.

Remote Network Access: Level 3's network security architecture allows near-immediate and sustained remote access into our internal network to access critical applications and data through any ISP, regardless of provider.

Government Emergency Telecommunication Service (GETS) Cards: During national security emergencies, Level 3 utilizes the Government Emergency Telecommunications System (GETS) cards to gain priority access to the public switched telephone network (PSTN) when the public telecommunications networks are overloaded. Executives and incident management teams are issued the GETS cards and are trained on their purpose and use.

Information Intelligence

Level 3 is committed to an effective monitoring of intelligence sources to foster the ability to detect, prevent, disrupt, preempt and mitigate the effects of a disruption on our business or operations. In support of this commitment, we have established and maintain relationships which include, but are not limited to:

Critical Infrastructure Warning Information Network (CWIN): Level 3 maintains awareness and shares information through the Critical Infrastructure Warning Information Network (CWIN). CWIN is the critical, survivable network connecting the Department of Homeland Security (DHS) with the vital sectors that are essential in restoring the Nation's infrastructure during incidents of national significance.

Homeland Security Information Network: Level 3 maintains situational awareness via the Homeland Security Information Network (HSIN). HSIN is a national secure and trusted web-based portal for information sharing and collaboration between federal, state, local, private sector and international partners engaged in the Homeland Security mission.

National Communications System: The Level 3 Network is an acknowledged component of the nation's telecommunications critical infrastructure and is an active participant in the National Communications System's (NCS) National Coordinating Center (NCC) for Telecommunications. Level 3 has designated resources to ensure visibility and allows access to impacted areas to restore or install services that support National Security or Emergency Preparedness during times of disaster and to also receive priority restoration when we partner with other carriers to support a critical mission.

Professional Relationships: Level 3 builds and maintains international relationships with external organizations that are part of the business continuity, critical infrastructure, emergency management and Homeland Security communities.