OVERVIEW

Operational resiliency is a strategic priority for BNY. It is essential to BNY, to the clients we serve and to the global financial markets in which we operate.

BNY's enterprise resiliency strategy is to develop and sustain the capabilities necessary for maintaining or quickly resuming operations in the face of business disruptions and threats.

Guiding Principles
- Understand the impact of disruptions to our operations on markets, clients and our firm
- Design resiliency into our technology infrastructure to minimize outages and support disaster recovery
- Geographically diversify key operations and technology processing centers
- Avoid single points of failure; promote redundancy in data centers, recovery sites, networks, power and telecommunications
- Maintain robust contingency plans for the most time-sensitive and essential functions
- Plan and test extensively across lines of business, technologies, operations and solutions

Enterprise Resiliency Office

BNY's Enterprise Resiliency Office (ERO) coordinates the company's approach to Business Continuity (BC), Disaster Recovery (DR) and Incident and Crisis Management (ICM). It provides global expertise, regional focus and local support, with dedicated managers and incident officers throughout the world. Emphasis is on building resilient operations with modern technology to minimize disruptions.

When disruptions occur, BNY's focus shifts to timely and effective incident identification, impact assessment, escalation, communication and resolution. We help BNY businesses deliver resilient world-class products and services. We leverage best practices, lessons learned from our enterprise-wide resiliency testing and feedback from our partners to continuously improve our resiliency posture.

Governance/Oversight

BNY's ERO benefits from senior-level oversight, focus and support, including the Board of Directors, the Senior Risk and Control Committee, the Technology Oversight Committee and the Enterprise Resiliency Council.

Business resiliency leads, senior leaders and subject matter experts embedded in our platforms and businesses, coordinate activities supporting resiliency and manage the execution of the firm's resiliency objectives across platforms, businesses, operations and technology. They promote consistent management and approaches where appropriate, adherence to policies and processes and proper oversight and accountability.

FRAMEWORK

Business Services Framework

Through our Business Services Framework (BSF), we identify our Critical Business Services (CBS) as well as the resources (such as the functions, vendors, locations and IT assets) required to deliver them. This discipline provides an end-to-end view of how we deliver products and services to our clients and serves as the foundation for the firm's resiliency.

ENTERPRISE RESILIENCY

Business Continuity Overview

Strategy & Approach

BNY aims to minimize disruption of the delivery of its products and services to clients. As a global institution, the company is exposed to the risk of uncontrollable events that can cause varying degrees of disruption to normal business processes. Our BC Program is a critical component of our enterprise resiliency strategy and is designed to plan for, respond, and recover from business interruptions, with a view toward minimizing their impact and facilitating service continuity within recovery time objectives, based on prioritization of business objectives and operations.

BNY's BC Program is based on the current industry-standard Federal Financial Institutions Examination Council guidance and strives to follow best-practice recommendations from the Business Continuity Institute, the ISO standards and other finance and securities industry and regulatory bodies throughout the world.

Business Continuity Plan

To support recoverability and resilience, BNY has established enterprise-wide requirements governing development, maintenance, review, testing and senior management approval of business continuity plans. We plan for individual or combinations of disruptions stemming from all hazards, including loss of locations, technology, staff and/or a third party.

Each plan participates in the recurring BC Lifecycle, comprised of the business impact analysis, recovery, strategy/solution review, testing and certification. The plans are formally reviewed by the business units responsible for executing the activity, with senior management attesting to the viability of the plans' recovery strategies, at least annually; significant changes trigger an interim review.

Our all-hazards approach is scenario agnostic and focuses on the impact stemming from a wide range of possible scenarios, including but not limited to application failures, natural disasters, civil unrest and severe weather.

Recovery Solutions

The BC Program manages a global portfolio of recovery solutions to facilitate the response to disruptions such as the unavailability of a building, workforce, technology and/or third-party service. Our critical business services leverage BNY's global footprint to geographically disperse operations across multiple locations. This global approach to balancing workload provides the capability to utilize work transfer as a solution for recovering business operations by transferring workload from one geographic location to another.

BNY contingency data centers are dedicated facilities controlled and supported by BNY staff and management. Our business contingency sites as well as the remote strategy are designed to satisfy recovery requirements and support business processes and operations. Sites are located at sufficient distances from the primary facility to mitigate impact from the same event, but within a reasonable travel distance to enable staff to assemble there promptly.

BC Testing Strategy

Our resiliency posture is continuously enhanced through a rigorous testing and quality program. A variety of testing helps enable us to demonstrate and challenge our ability to mitigate disruption risk/impact, identify improvements and validate recovery capabilities.

- *Call notification testing:* to validate our ability to communicate instructions and ascertain staff well-being and availability
- *Alternate site testing:* to demonstrate our ability to continue working from an alternate facility when the primary facility is unavailable
- *Work transfer testing:* to assess our ability to transfer work among multiple locations

- *Alternate procedures testing:* to assess our ability to implement workarounds to maintain operations
- *Third-Party strategy testing:* to validate our ability to either absorb work, utilize an alternate onboarded provider or validate a third party's ability to maintain continuity
- *Industry collaboration and testing:* to facilitate smooth integration with industry and market partners, we participate in industry forums and sector exercises

Training and Awareness

Enterprise resiliency is an extension of ongoing business, and all employees are responsible for maintaining a state of preparedness. Staff are provided training regarding BC concepts to prepare them to react, respond and recover from a disruption event. In addition, employees with BC roles are required to take annual training to review key responsibilities and accountabilities to properly assess, plan, manage and verify recovery capabilities, as well as execute and lead during a disruption.

Disaster Recovery Overview

BNY maintains a formal disaster recovery and resiliency testing program for restoring technology and information assets in the event of a disruption.

BNY has a robust testing program that covers a wide array of severe but plausible scenarios. DR exercises are conducted on a regular basis to help ensure that, in the event of loss of technology or cyber disruption, we are prepared to maintain the highest level of availability and processing for our clients.

DR Testing Strategy

Our disaster recovery and resiliency testing program includes a variety of exercises throughout the year. This includes testing initiated and hosted by BNY, often with third-party participants invited to test with us, as well as participation in global forums and sector exercises hosted by trade associations or other market participants.

As we look ahead, we will continue challenging ourselves through a rigorous resiliency testing program to demonstrate our ability to mitigate disruption risk/impact, validate recovery capabilities and identify improvements.

Incident and Crisis Management

Strategy & Approach

ICM is an essential component of BNY's enterprise resiliency approach. The ICM team coordinates an enterprise response to incidents in conjunction with the platforms, lines of business and our corporate support teams, which includes the facilitation of recovery efforts and the provision of updates to key stakeholders.

As a global institution, the firm is exposed to events that cause varying degrees of disruption to normal business processes. By managing across functions, regions and lines of business, communicating internally and externally, and escalating as appropriate, the ICM team works to limit the impact of incidents, including incidents that have the potential to disrupt BNY's ability to deliver products and services to clients, adversely affect the market, have a material cross-business impact and/or affect a wide range of clients or other third parties.

The ICM team maintains an incident and crisis management plan that drives BNY's response protocols at the enterprise, regional and local levels. With incident officers located globally to provide comprehensive 24x7 follow-the-sun coverage, the ICM team engages appropriate resources to triage and assess impact, respond and manage incidents to closure, as well as manage the flow and, when appropriate, escalation of internal and external communications to ensure timely, consistent and accurate messaging to key stakeholders.

Incident Process Flow

The ICM team receives reports and alerts, identifies scope, assesses business impact, engages appropriate resources, escalates to management, communicates information and reviews other processes directly impacting the management of incidents and crises.

Incidents are detected or identified in a variety of ways, including through technology alerts, corporate security alerts, media monitoring and alerts from our information security division/cybersecurity team. The ICM team works in coordination with the platforms, lines of business, operations, technology and response partners to manage incidents with the goal of limiting the impact of disruptive events to the firm and its clients. When disruption occurs, efforts to restore business services are led by these teams with support and coordination from the ERO and ICM under this framework.

Testing Strategy

The ICM team validates the response function at least annually by either a simulated crisis management meeting, or an actual event triggering the response process.

The ICM team manages an active, continuous improvement program that initiates lessons learned exercises and reviews following all simulations and major incidents.

Third-Party Risk Management

BNY relies on third parties to execute a range of functions in support of our business, clients and employees. Utilizing third-party arrangements may provide access to certain specialized skills and capabilities and help recognize efficiencies in delivering excellence. We acknowledge our responsibility to oversee the third parties we engage to deliver products or services or to perform activities on our behalf, and to confirm that they do so in a safe and sound manner, and in compliance with BNY policies and standards, as well as applicable global laws and regulations.

Risk Management Responsibility

BNY recognizes its responsibility to identify, assess and manage the risks associated with the use of third parties and maintains risk management practices that are commensurate with the level of risk posed by such third parties to our businesses and clients. Our management of third-party risk is founded on enterprise policies, industry trends and regulatory guidelines and looks to minimize financial, reputational, regulatory, compliance and operational risks, as well as to minimize potential impacts to our clients or, more broadly, the markets.

Enterprise Sourcing Office Governance

The Enterprise Sourcing Office (ESO) owns the enterprise-wide policies for managing the risks associated with third parties. ESO monitors the effectiveness of the third-party framework through quality assurance, risk-control self-assessments and oversight. ESO has an established process to review BNY's third-party risk management practices for alignment with relevant local, national and international regulations and regulatory guidance. Additionally, ESO supports businesses' adherence to applicable enterprise policies, guidance through lines of business and comprehensive training, communications and reporting functions.

Enterprise Sourcing Office Risk Management

ESO conducts the centralized execution of external third-party risk assessments in collaboration with risk domain experts and business stakeholders. It is also responsible for issue management and escalation, ongoing monitoring activities and third-party management systems. Due diligence assessment and risk management practices include a focus on third-party technology, operational resilience and information security in line with industry standards such as ISO 27001 and the National Institute of Standards and Technology (NIST).

Third-Party Engagement Lifecycle

Engagement managers (business stakeholders) must manage their third-party engagements in accordance with the approved Third-Party Engagement Lifecycle and Policy. The requirements throughout the lifecycle are aligned to the level of risk and complexity of an engagement.

An assessment of inherent risk drives the nature and level of due diligence, which is conducted prior to contracting and onboarding of the third-party provider. Risk factors assessed include anti-corruption, anti-tax evasion, business resiliency, compliance, cybersecurity, cloud, financial health, human resource and ethics, incident management, privacy and subcontractor management (4th parties).

BNY exercises oversight of the third-party relationship throughout the life of the engagement through continuous monitoring activities, commensurate with the level of risk the engagement poses.

REGULATORY

BNY's resiliency planning activities are based on industry guidelines (e.g., the Federal Financial Institutions Examination Council handbook), best-practices and adherence with resiliency-related rules/regulations, where applicable.

As a Global Systemically Important Bank (GSIB), we are supervised by multiple regulatory authorities across the regions in which we operate. Our primary regulator is the Federal Reserve Board (FRB); in addition, we are subject to extensive regulation and examination by many other global regulators.

The ERO and the ESO closely follow developments in global regulations and actively participate in industry associations to maintain a current alignment to the changing regulatory landscape. The firm also contributes to setting best practices and future expectations.

ADDITIONAL INFORMATION

Client Inquiries

This document provides an overview of the firm's Enterprise Resiliency Program. If you have additional questions, please contact your BNY representative.