

NEW JERSEY BUSINESS FORCE



TOPOFF 4 LOOKING GLASS EXERCISE

AFTER-ACTION REPORT

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The New Jersey Institute of Technology



The New Jersey Business Force is a non-profit, non-partisan consortium of companies and institutions dedicated to improving Homeland Security through effective Public-Private partnerships

AFTER-ACTION REPORT

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THE GENESIS OF LOOKING GLASS

"We can see the past but not influence it, we can influence the future but not see it" - Stewart Brand

The Looking Glass initiative along with other TOPOFF 4 activities was the fourth exercise held to date under the congressionally mandated TOPOFF (Top Officials) program. Each TOPOFF cycle involves an arduous two-year schedule of seminars and planning sessions culminating in a comprehensive assessment of the nation's capacity to prevent, prepare for, respond to, and recover from terrorist attacks involving Weapons of Mass Destruction (WMD). During April 2005, New Jersey served as one of the TOPOFF 3 (T3) full-scale exercise venues. The New Jersey Business Force subsequently sponsored a nationally acclaimed T3 Private Sector Roundtable where participants reinforced the Private Sector's value-added role in response and recovery.

This year Arizona, Oregon & Guam hosted TOPOFF 4 (T4) on-the-ground exercises. In addition to the full-scale exercises, the U.S. Department of Homeland Security (DHS) solicited Private Sector involvement in a parallel program entitled Looking Glass. Looking Glass was a self-generated, localized activity conducted within the larger context of T4 but segregated from venue events in the Guam, Oregon and Arizona.

Looking Glass allowed Private Sector groups tremendous flexibility and freedom to tailor approaches for local needs. DHS kept T4 exercise play and Looking Glass separated or "fire walled." Looking Glass participants even had the opportunity to monitor T4 events and generalized scenario information was available on VNN.com (T4 Virtual News Network) to anyone with a log-in. Simulated attacks using radiological dispersal devices (RDD) established a common thread between the two exercise tracks. Yet, at no time did the two overlap.

DHS organized Looking Glass exclusively for companies, associations and consortiums who sought to assess or test internal plans and procedures. Participants reacted to a potentially hazardous plume from a Radiological Dispersal Device (RDD) detonated at a pre-designated site. Looking Glass organizers offered modeling support for educational and demonstration purposes. Local circumstances and factors guided the direction of exercise play – not the sequence of events scripted for the three primary venues.

The New Jersey Business Force (NJBF) leveraged Looking Glass to conduct an experimental, interactive tabletop exercise from 17 – 18 October 2007 at the New Jersey Institute of Technology (NJIT), Newark, NJ. Looking Glass conveniently offered a forum to beta test essential Business Emergency Operations Center constructs and functions. A total of 15 NJBF and Private Sector members attended along with 10 public sector representatives from the Port Authority of New York/New Jersey, the New Jersey State Exercise Support Team and county, state and Federal agencies.

The NJBF Looking Glass tabletop format highlighted Business Emergency Operations Center principles by employing extant technologies and proof-of-concept demonstrations. Prior to October 17th, exercise participants received selected injects and information gleaned from the T4 Virtual News Network. Scenario-based questions drawn from the NJBF Looking Glass Master Scenario Events List (MSEL) framed the ensuing discussion from the initiation of incident response through the first stages of recovery. Looking Glass proved valuable for a number of reasons but more importantly it marked the BEOC's transition from concept to reality.

NJBF LOOKING GLASS GOALS AND OBJECTIVES

While NJBF Looking Glass goals primarily reflected those of the national Looking Glass project, NJBF Looking Glass objectives concentrated specifically on the operational aspects of the emerging Business Emergency Operations Center model.

NJBF LOOKING GLASS GOALS

1. Adopt Looking Glass programmatic elements to promote a greater private sector involvement in the TOPOFF program through a self-generated exercise emphasizing local circumstances.
2. Provide an educational forum for the Private Sector to understand what government does in emergencies and why.
3. Introspectively examine internal processes by assessing response and continuity of operations plans/procedures.
4. Apply Business Emergency Operations Center concepts in an experimental setting.
 - a. Gather data to validate and illustrate the efficacy of BEOC principles.
 - b. Explore opportunities for integrating available technology systems.

NJBF LOOKING GLASS OBJECTIVES

1. Identify requirements necessary to transform the Business Emergency Operations Center model from construct to practical application.
2. Demonstrate how existing NJBF technologies can support and enhance Business Emergency Operations Center functions using NC4, the Business Response Network and NJEdge/Access NJ.
3. Increase opportunities to share situation awareness through collaboration.

THE BUSINESS EMERGENCY OPERATION CENTER – A PARADIGM SHIFT

An operation center conceived, engineered and administered by business to help businesses during crises offers many advantages – both tangible and intangible. In principle, a Business Emergency Operations Center (BEOC) is innately attuned to the rhythms of business operations and, through information collection and sharing, contributes to improved situation awareness, decision making, planning, and procedural efficiencies. By demonstrating three different communication systems during Looking Glass - NC4 alert and warning, the Business Response Network and NJEdge/Access NJ – the NJBF assessed the ability to execute critical BEOC functions while gauging the capacities of these technological systems to support an array of activities.

The NJBF believes the Private Sector can assist and complement the state's emergency management agencies by establishing virtual and physical BEOCs. A rapid transition at the onset of a crisis from a virtual presence to a physical modality can facilitate the flow of information and intelligence needed to attenuate and hopefully shorten the resulting chaos period once the emergency erupts with full force and fury. Yet, there is another compelling reason to integrate existing technologies to aid collaboration and coordination among private sector entities – self-reliance and self-sufficiency during catastrophes when businesses, out of necessity, may have to assist other businesses to ensure continuity of community.

Looking Glass, for the New Jersey Business Force, became a medium for demonstrating many of the core capabilities a Business Emergency Operations Center should optimally exhibit: Alert/warning, emergency communications (including first-hour); data collection and analysis; information sharing; coordination and liaison; issues clarification; repositories of expertise; decision-making; asset/resource mobilization, monitoring and management; operational planning; documentation and reporting; and shared situational awareness for an enhanced operational picture. The functions exercised during the NJBF Looking Glass included: (1) Alert and warning, (2) resource registration, (3) resource mobilization, (4) registration of spontaneous volunteers, (5) just-in-time training (spot training) of spontaneous volunteers by World Cares Center (NYC), and (6) demonstrations involving information exchanges with non-NJBF NC 4 system subscribers and a secure high-bandwidth conferencing network (NJEdge/Access NJ).

One observation quickly surfaced: the capability a BEOC ultimately possesses is directly proportional to the breadth and depth of its supporting technology systems. Looking Glass also examined the potential effectiveness of these communication technologies. Besides serving as a "BEOC proof of concept," the outcomes derived from Looking Glass are being studied by an NJIT graduate-level Command and Control Systems class as part of a year-long action research project.

LOOKING GLASS THEME – RADIOACTIVE DISPERSAL DEVICES

A tabletop exercise, conducted against the backdrop of a Master Scenario Events List (MSEL), demonstrated how conditions emanating from a Radiological Dispersal Device (RDD) could quickly overwhelm local resources, exceed the parameters of standard continuity of operations planning, and pose serious Response and Recovery challenges. Looking Glass like TOPOFF 4 featured an RDD or "dirty bomb" in locally executed scenarios. Hence, the New Jersey Business Force exercise depicted a large detonation in the vicinity of Christopher Columbus Drive and Washington Street in Jersey City near the "Gold Coast" – the financial district directly opposite from Manhattan. Jersey City, like several other Garden State cities and communities, typifies the state's geographic, demographic, economic attributes and sits astride the strategic transportation routes running along the Northeast Corridor.

According to the fictitious scenario, terrorists constructed a Vehicle Born Improvised Explosive Device (VBIED) truck bomb consisting of Cesium 137, Americium-241 and Cobalt-60 to spread a toxic cocktail of gamma and alpha particulates. The blast triggered by an estimated 750 – 1000 lbs of TNT also produced Cesium Chloride. Experts say the effects of an RDD or dirty bomb are 80% psychological and 20% physiological. An actual 1987 incident lends credence to such contentions.

An RDD does not necessarily depend on explosives or kinetic energy for wide-area contamination to occur. Someone could dispense radioactive material in a variety of ways much like the 1987 Radiological Accident in Goiania, Brazil when scrap metal hunters and children unknowingly spread Cesium Chloride throughout the village. The loss of life was minor when compared to the social, economic and environmental repercussions Goiania suffered.

The intentional release of radioactive materials or radionuclides commonly used in industry, medicine and scientific research is meant to cause serious disruptions and dislocations by contaminating facilities or localities. The goal is simple - inflict long-term economic loss and instill anxiety and uncertainty among the populace. The immediate threats from an RDD are the injuries caused by the detonation, direct exposure to radioactive dust and smoke and contamination/cross-contamination.

The Health Care, Financial Services, Transportation, and Utility Sectors would endure immediate and long-term tangible and intangible impacts from a "dirty bomb." The resulting shock would literally jolt the New York Metropolitan region and country by affecting millions and forestalling a speedy recovery.

An RDD would also exacerbate emotional reactions and exploit societal vulnerabilities leading to stressed social service institutions, degraded corporate and government revenue streams and serious disruptions across the national supply network. The NJBF Looking Glass participants had to factor these possible consequences into their discussions on how the business community might respond to and recover from such an incident.

NJBF LOOKING GLASS PARTICIPANTS

Fifteen Private Sector and non-profit organizations participated in Looking Glass. Ten other representatives from academia, government and the Port Authority of New York/New Jersey actively “observed” the discussions and provided subject matter expertise in the realm of government preparedness and response. Those in attendance included:

- NJ Natural Gas (NJR)
- NJ Institute of Technology (NJIT)
- Prudential
- World Cares Center
- Bayonne Visiting Nursing Association
- Christ Hospital Home Health Services
- Visiting Homemaker Service of Hudson County
- Hackensack University Medical Center Home Health and Hospice Agency
- Atlantic Health
- NC 4 (National Center for Crisis and Continuity Coordination)
- Goldman Sachs
- ADP
- ARC - New Jersey Chapter
- AIG – NYC (Remote)
- Apex Innovations (Remote)
- US NORTHCOM (Remote)
- Observers
 - Hudson County OEM
 - Hudson Regional Health Dept
 - Hudson County Prosecutor’s Office
 - Port Authority of NY/NJ
 - State Exercise Support Team
 - Office of Homeland Security & Preparedness
 - DHS Science and Technology Directorate
 - NJ Department of Health & Senior Services
 - Rutgers University – Center for Information Management, Integration and Connectivity (IMIC)

EXERCISE ASSUMPTIONS

A comprehensive Looking Glass Master Scenario Events List (MSEL) was built around six general planning assumptions unique to Radiological Dispersal Devices.

1. A terrorist attack is inevitable.
2. Attacks will cause confusion and produce a temporary state of chaos.
3. If employed, Radiological Dispersal Devices will quickly overwhelm local responders.

4. Event impacts will ripple rapidly across all economic sectors.
5. The Private Sector will face critical operational challenges in the aftermath of an RDD compounded by widespread contamination and environmental hazards.
6. Integrated technology will improve the speed and quality of reactive decision making.

EXERCISE METHODOLOGY

SUPPLEMENTAL MATERIALS

VNN.com once again served as TOPOFF's media outlet. On its Website, daily entries contained a wealth of news articles and supplemental materials. NJBF Looking Glass participants received selected items prior before the tabletop to acquaint them with the "threat environment" and help build familiarity with a multiplicity of homeland security issues.

- o VNN.com – "Deteriorating U.S.-Iran Relations Increase Worries About Fariqallah"
- o VNN.com – "Nuclear Material Vulnerable to Theft"
- o VNN.com – "Water Plants Told to Keep Chlorine Gas Under Wraps"
- o VNN.com – "Gaps Exist in Security of Critical U.S. Infrastructure"
- o VNN.com – "The Best Disaster Plan for Families Is to Have a Plan"
- o VNN.com – "Terror Threat Groups Numerous, as Are Their Beliefs"
- o VNN.com – "Threat from Homegrown Terrorism"
- o VNN.com – "Terror Plots in Europe More Advanced, Threatening Than in the U.S."
- o VNN.com – "Combating IEDs"
- o VNN.com – "Weaving a 21st-Century Web of Terror"
- o VNN.com – "Mass Transit Remains Vulnerable to Attack"
- o Article - October 9, *The Associated Press* – "Panel wants tighter radiation security"
- o VNN.com – "No Attack in the U.S. Since 9/11 Not Just Luck, Chertoff Says"
- o VNN.com – "An Alarming Trend: More Women Are Carrying Out Jihadist Suicide Missions"
- o VNN.com – "Revised Disaster Response Plan Draws Mixed Reviews"
- o VNN.com – "Fusion Centers Share Counterterrorism Intelligence from the Ground Up"
- o VNN.com – "New Canadian Report Describes 'Devastating' Impact of a 'Dirty Bomb'"
- o VNN.com – "The ABCs of Bio-Terror"
- o Illustrative Case Study: 1987 Radiological Accident in Goiania, Brazil

NJBF LOOKING GLASS INTELLIGENCE INJECTS

The NJBF Looking Glass exercise commenced on Monday, October 15th with the posting of "intelligence reports" on the NC4 system's New Jersey Business Force channel (a BEOC

technology). The purpose was to replicate the probable “up-ticks” in precursory activities security and continuity planners could expect prior to a terrorists attack.

- el-Zahir clerics issue fatwa against U.S. for crimes against the Muslim peoples of the world.
- el-Zahir’s Al Zaman releases video calling for unrelenting attacks against the West and U.S. to avenge the war of annihilation being waged against all Muslims.
- Chechnya rebel leader decries civilian casualties resulting from a new government offensive. New postings on radical Islamic websites describe horrific scenes following repeated Coalition aircraft strikes within civilian areas in both Iraq and Afghanistan.
- The General Accounting Office releases study highly critical of security measures designed to protect toxic/radioactive products and waste at nation’s hospitals, universities and research laboratories.
- News outlets cite unnamed government sources who express concern about the increasing vitriolic tenor and message of English language Jihadi Websites.
- Major news outlets interrupt regular programming with breaking headlines about a large explosion with casualties in Hagatna, Guam.
- A local official calls the Hagatna explosion suspected terrorism.
- The Homeland Security Secretary during a VNN interview pledges investigative support and emergency relief assistance following the blast. He urges Americans everywhere to remain alert and on-guard for suspicious activity.
- October 17th - HAGATNA, Guam (VNN.com) — The source of the radiation released in the explosion that killed 13 people and injured 67 on Guam Tuesday morning was confirmed to be Cesium-137, according to the Joint Information Center on Guam. “The readings they’ve gotten in the hot zone haven’t been tremendously high,” said Jack Fernandez, an expert on radiation and detection for the center. “You could stand there for 10 days before getting the annual maximum for radiation, which is 5 REM per year.” However, he cautioned that the area where the blast occurred cannot be declared safe. If the Cesium is in the form of a fine powder, he said, it could be carried great distances like a gas. It would be dispersed based on wind speed and direction.

WEATHER

Weather is an essential planning imperative in any kind of coordinated operation particularly when assessing environmental conditions and hazards within the “hot zone.” For ill-intentioned perpetrators, weather can act as a force multiplier for achieving mission objectives while complicating the reactions/response of the other side. In the case of the NJBF Looking Glass scenario, a seasonal weather inversion kept released radionuclides suspended in a concentrated pattern for a longer than normal period while the plume gradually enveloped downwind locations.

Weather Forecast from the Business Emergency Operations Center

NJBF T4 LOOKING GLASS EXERCISE MESSAGE – A low cloud deck with accompanying fog will remain over the New York – New Jersey Region, including Jersey City today through tomorrow. A light

wind from the east to northeast at 5 mph will blow across Northern and Central New Jersey. The fog is expected to burn off by 10:30 a.m. Temperatures will range from a low of 68 degrees to a high of 81. The relative humidity will be 100% during the morning hours and lower to 58% in the afternoon under partly sunny skies. Very poor atmospheric ventilation conditions will exist in the morning with slight improvement as the low cloud and fog deck dissipates by the afternoon. *END EXERCISE MESSAGE*

NJBF LOOKING GLASS SCENARIO OVERVIEW

Held against the backdrop of a New Jersey-centric MSEL, the NJBF Looking Glass exercise exemplified how unfamiliar and dangerous conditions emanating from an RDD could quickly overwhelm local resources, transcend the parameters of day-to-day continuity of operations plans, and pose serious obstacles to response and recovery. The Jersey City scenario sought to stimulate cross-sector dialogue, identify onerous issues, evaluate the adequacy of normal decision-making processes, and force attendees to think about the unthinkable. Furthermore, the pace of events accelerated following the Hagatna, Guam explosion with the simulated activation of the New Jersey Regional Operations Intelligence Center and New Jersey Office of Emergency Management.

A series of vignettes guided participants through the preparatory steps the state and Federal authorities would take with the elevation of the Homeland Security Advisory Level to ORANGE and then RED. The Private Sector, as discussion revealed, would implement corresponding measures to protect facilities, infrastructure and employees. A serious concern arose about the timeliness and quality of analysis from government sources and the reliability of communications systems during the “first hour” of the event. Then suddenly at 8:23 a.m. a loud, reflective blast reverberated up and down Jersey City’s Christopher Columbus Drive shattering windows and damaging building facades. From this point forward, the Looking Glass scenario grew more intense and complex.

The MSEL outlined how a truck bomb disperses its deadly cargo of radionuclides and blows a large crater in the street. The kinetic energy from the explosion severs underground electric and telephone cables, fiber optic bundles and water and sewer lines. A massive electrical outage affects not only Jersey City but extends northward into Hoboken and Union City. Faced with mass casualties and fatalities, unprecedented transportation shutdowns, contagion, and an accumulating pile of unknowns, Jersey City declares a state of emergency. Hastily imposed security measures, carnage and confusion in the streets, contradictory news reporting, and spurious rumors also force businesses, non-profits and universities to take decisive action. Consequently, exercise participants had to address some very daunting problems. The following questions are representative of the considerations examined:

- What is the priority at this moment?
- Who does the Private Sector turn to for credible information?
- On what type of information do you base your decisions?
- What do you tell your employees and staff?
- Do you evacuate or shelter in place?
- With whom do you share information that your organization collects?
- Can employees who commute to work get home? If not, what then?
- Is there a policy governing the treatment of employees suspected of being contaminated?

Toward the end of the first day, the magnitude of the unfolding event becomes apparent. Health care is overwhelmed with injured and the worried well. Disruptions affect water service and leads to formal requests for water tankers. Authorities close the roadways into Jersey City and highways outside the disaster area are gridlocked. Police erect and enforce a tight security perimeter around the disaster scene to control ingress/egress. Smoke from the low-hanging plume spreads an estimated 20 blocks downwind of the burning fires. Schools are directed to lockdown and business and residences to shelter in place. City officials hold news conferences to allay the public's fears. As of mid-morning, there is no clear operating picture.

Jersey City's mayor and the Hudson County Prosecutor hold a joint late-morning news conference. They praise the efforts of first responders and thank the surrounding communities and state agencies who sent assistance. For the first time, the number of fatalities and injured are given. It is not good news. What is said next gives cause for even greater concern.

The mayor confirms the presence of radioactive contaminants and issues a warning about inhalation and ingestion hazards. The public is asked to avoid the affected area and remain in doors. Damage to the city's water and sewer systems prompts a prohibition on drinking tap water until testing rules out contamination. The Red Cross and other volunteer groups have established emergency shelters and authorities announce the locations where the displaced and stranded can go for aid.

With response gaining momentum as each hour passes, requests are made for Private Sector resources. Items and equipment most in need include: water, refrigerator trucks, tyvex suits, NRP respirators, light generators, and front-end loaders, dump trucks and bull dozers. A Looking Glass donations link is quickly constructed by Apex Innovations and placed on the Business Response Network (BRN) Webpage where companies and other organizations can peruse a prioritized list of high demand items and complete an on-line registration form. The link's capabilities are demonstrated on Day 2 of Looking Glass.

DAY 2 - RECOVERY

The RDD scenario identified several difficult challenges the Private Sector could encounter when attempting to restore operations and a sense of normalcy. The most prominent concerns brought out during Looking Glass included:

- Wide-area decontamination
- Re-occupancy of enterprises, schools & universities and government offices
- Reopening of highways, rail lines, airports, and waterways
- Restoration of utilities in a contaminated environment
- Re-establishing the supply chain and revenue streams
- Resolving health care recovery issues
- Addressing large-scale physical and mental health needs
- Restoring citizen, customer and employee confidence

Unfortunately, time did not permit an in-depth look at all of the potential ramifications associated with Private Sector recovery. Instead, participants received a brief overview of possible short-term and long-term considerations they could confront if Looking Glass had happened for real.

Short-Term Recovery Considerations

1. How will information "flow" between your company and local/state authorities?

2. What critical actions must take place to restore a semblance of “normalcy?”
3. Does one sector deserve precedence over another?
4. What decisions made by government during response may affect the Private Sector’s ability to recover?
5. How do you convince employees that it’s safe to return to work following a radiological event?

Long-Term Recovery Considerations

1. Who performs the extensive decontamination required?
 - a. How clean is clean?
 - b. How safe is safe?
2. Can companies mitigate the potential impacts of extended employee absenteeism from work?
3. Who will pay for emergency supplies and patient treatment? Will there be medical reimbursement?
4. Will employees receive pay and guaranteed health coverage even if facilities cease operations during the initial phase of Recovery?
5. How can companies ease the psychological stress and trauma experienced by employees?

FINDINGS

1. **Private/ Public Sector Collaborations** - New Jersey’s geographic, demographic, economic features and its prominence within the New York and Philadelphia Metropolitan Regions make it an inviting target to those harboring insidious motives. The threats are real and the Private Sector is willing to marshal its expertise, experience and resources so it can help devise solutions to some very vexing security problems. Doing so involves relationship building based on unqualified cooperation. In addition, the Private Sector recognizes its role in protecting its workforces, facilities and the communities with whom they interact. A major event like the detonation of a radiological dispersal device or a catastrophic disaster will likely exceed the available resources of local, county and even state governments. Yet, to assist, the Private Sector requires unimpeded intelligence and information. Such collaboration and exchanges should begin now in the pre-event stage. In other words, information sharing is on-going and not event driven.

2. **Integration of Private Sector Information Sources** - The Private Sector is frequently impacted by events occurring across the globe and will likely make expedient personnel and policy decisions well before the homeland is directly threatened. Daily vigilance is paramount for companies with international operations. Presently, Public Sector agencies have not fully leveraged Private Sector information sources to achieve a mutual and shared situational awareness. For the Private Sector to be a viable contributor to homeland security or disaster mitigation, this amorphous and diverse community of businesses, non-profits, educational institutions, and faith-based groups must have discernable touch-points, i.e., Business Emergency Operation Centers, with whom government authorities can interface during major emergencies.

3. **System of Systems** - Looking Glass provided an interactive forum to experiment with technologies available to the NJ Business Force in new and adaptive ways. Succinctly stated, experiential knowledge was gained by stretching the boundaries of current capabilities and introducing new circumstances and operating parameters. The testing of communication technologies in innovative combinations is evolving toward a mutually supportive system of systems with a goal of gaining (1) greater situation awareness and (2) access to actionable information for calculated decisions especially when emergent conditions go beyond routine business continuity challenges and right to matters of survival.

4. **Continuity of Operations/ Supply Chain** – The NJBF Looking Glass activity revealed interplay between the psychological dynamics produced by an RDD event and the capacity of government and the Private Sector to sustain continuity of operations and, ultimately, the supply chain during an “unfamiliar” crisis. Human emotional and visceral reactions will stress multiple economic sectors and continuity of operation plans simultaneously.

5. **Role of Information Technologies and Information Sciences** - Reliable, user-friendly and complementary IT systems, when properly employed, enhance BEOC capabilities and facilitate the formation of collaborative networks; thereby, allowing the sharing of preparatory and operational information to create synergy among disparate functions and disciplines. Upcoming exercises will experiment with the blending and integration of additional systems.

6. **Parallel vs. Sequential Communication** - An inability to communicate omni-directionally during a crisis potentially affects revenue streams, the delivery of human services, disrupts the supply chain, and compounds the fear, confusion and uncertainty felt by employees and the public.

SPECIFIC ISSUES IDENTIFIED BY NJBF LOOKING GLASS

1. **Credentialing** - The credentialing of critical workers, home health care aides/visiting nurses and utility repair teams who enter restricted areas is a high priority for the Private Sector but remains an unresolved issue in New Jersey.

2. **Staffing** - Proper staffing of the Private Sector Desk in the Regional Operations Intelligence Center will insure collaboration with the business, academic and non-profit communities. The final composition of the Private Sector Desk is pending.

3. **Information Sources** - The lack of credible information can cause dilemmas when expeditious decisions involving evacuation vs. in-place sheltering must be made.

4. **Special Needs** – The confusion produced by the RDD, the spread of contaminants across portions of Jersey City and hastily imposed security measures prevented home health care agencies from delivering critical services to special needs and elderly populations inside the impact zone.

5. **Cascading Problems** - A no-notice, sudden shutdown/suspension of mass transit systems caused a series of cascading problems for most sectors.

6. **Reliable Information Sources** - Access to reliable sources and redundant technologies for collecting credible information especially at the outset of an event proved a formidable Private Sector challenge.

7. **Communication Systems** - Ensuring the availability and operability of first-hour IT systems is critical to continuing business operations should other means of communication fail.

8. **Health Care Systems** - A very real possibility exists that the worried-well will overwhelm and seriously degrade area health care systems during an emergency involving chemical, biological or radiological agents.

9. **Non-Government Organization (NGO) Integration** - Volunteer-based organizations like Red Cross, Salvation Army, CERT, etc, frequently rely on the same pool of individuals during emergencies. Shortages of trained volunteers could result without a system to rapidly identify and mobilize fresh sources of manpower during catastrophes.

10. **Volunteer Database** - Establishing a pre-event volunteer database consisting of individual certifications and training courses completed could speed the mobilization and deployment of spontaneous volunteers.

11. **Information Focus** – An inability to discriminate between critical and extraneous data while attempting to manage the growing volume of information being generated during a large-scale event could quickly overload analysts and decision-makers alike and delay the dissemination of actionable intelligence.

12. **Information Sharing** – An understanding of constraints and limitations, harmonious cooperation and the unhindered sharing of information will facilitate situational assessments, the design of appropriate and proportional responses and expedient but safe recovery actions.

LESSONS LEARNED

1. **Role Identification and Integrating the BEOC Model into Coordinated Responses** - Looking Glass in New Jersey highlighted various core capabilities a fully functional Business Emergency Operations Center should possess: Alert/warning, emergency communications (including first-hour); data collection and analysis; coordination and liaison; information sharing; synchronous collaboration; decision-making; issues clarification; repository of expertise; asset/resource mobilization, monitoring and management; operational planning; documentation and reporting; and shared situational awareness for an enhanced operational picture. A primary reason for establishing Business Emergency Operation Centers is to make the Private Sector more self-reliance and self-sufficient during catastrophes. A resilient Private Sector can lend valuable assistance during Recovery and greatly contribute to the economic restoration of devastated communities.

2. **BEOC Systems and Technologies** - One immutable principle emerged during the exercise: the capability a BEOC eventually possesses is directly proportional to the breadth and depth of supporting technological systems. Going into Looking Glass, the NJBF Technology Committee recognized how the issue of systems compatibility and integration would be an item of exploration. Over two days of exercise play (Oct 17-18), the exercise design team professionally explained the integration of “edge” systems and devices and, when “blended” into BEOC and Business Response Network (BRN) processes, how the Private Sector developed the necessary situation awareness to contribute (all notionally) constructively to overall response and recovery efforts through threat mitigation, employee protection, organization and training of spontaneous volunteers, registry of donations, and the mobilization, deployment and tracking of assets and resources.

3. **Develop a System of Systems** - Individual technologies became tools for bridging gaps in capabilities by providing alert and warning (NC4), rapid resource identification and mobilization (BRN) and operational and strategic collaboration (NJEdge/Access NJ). When synchronized, these individual technologies together constituted a system of systems, thus increasing the potential roles of the Private Sector during Response and Recovery.

4. **Experiential Learning** - Employees must “know” the organizational plan if they are to follow emergency procedures in a crisis. Exercises and drills are proven methods for reinforcing desired behaviors and raising collective awareness about what is expected from employees.

OUTCOMES

1. **Technology Adaptation** - Looking Glass illustrated the benefits of adapting and linking existing information systems in new ways and validated the functions a BEOC could readily perform. A “mental corner” was turned by transforming the BEOC from an abstract concept to a concrete “operating” environment. Open communication among the participants fostered a free-flow of information and ideas. An emerging group of “converts” now understand the tenets underlying the BEOC model and can articulate its key roles and functions.

2. **Technology Enabled Responses** –Looking Glass demonstrated the Private Sector’s capacity to rapidly construct an incident-specific, streamlined donations Website using the Business Response Network (BRN). Furthermore, World Cares Center employed the BRN to register and screen spontaneous volunteers who would later assist with relief efforts when called upon.

3. **BEOC “Action Research” Program** - The New Jersey Business Force will continue to pursue its BEOC technology interface and integration project in the coming months. Planning for a December 2007 virtual “communications” exercise is already underway and stakeholders are being identified. Once again, the New Jersey Institute of Technology under the leadership of Dr. Michael Chumer and BG (Ret.) William Marshall will sponsor the activity. Furthermore, Dr. Chumer has recruited graduate students who possess the commensurate level of technological expertise. While the exercise features a major hurricane strike in the NJ-NY Metropolitan Region, the emphasis will remain on information gathering, information sharing and the synchronization of existing networks and systems.

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